## Detailed Balance Limit of Efficiency of pâ€n Junction So

Journal of Applied Physics 32, 510-519 DOI: 10.1063/1.1736034

Citation Report

#	Article	IF	CITATIONS
16	Theoretical Performance Of Two Ultra-high Efficiency Photovoltaic Concepts. , 0, , .		1
17	SOME THEORETICAL ASPECTS OF THE PHYSICS OF SOLAR CELLS**Paper presented at Space Power Systems Conference, Santa Monica, California, September 27–30, 1960.â€â€Research supported by Wright Air Development Center , 1961, , 317-323.		3
18	Slip Patterns on Boronâ€Ðoped Silicon Surfaces. Journal of Applied Physics, 1961, 32, 1776-1780.	1.1	157
19	Silicon Surfaceâ€Barrier Photocells. Journal of Applied Physics, 1962, 33, 2602-2606.	1.1	41
20	The Present Status of Silicon Solar Cells. IRE Transactions on Military Electronics, 1962, MIL-6, 5-14.	0.2	10
22	Effect of surface recombination and channel on P-N junction and transistor characteristics. IRE Transactions on Electron Devices, 1962, 9, 94-108.	0.3	118
23	Forward characteristics and efficiencies of silicon solar cells. Solid-State Electronics, 1962, 5, 1-10.	0.8	50
24	Internal power dissipation in gallium arsenide solar cells. Advanced Energy Conversion, 1963, 3, 551-563.	0.1	7
25	A Theoretical Study of the Effect of <i>p</i> -layer Resistance on the Efficiency of Photovoltaic Solar Energy Converters â€. Journal of Electronics and Control, 1963, 14, 427-436.	0.5	0
26	Proposed Distribution of Electron Energy in p–n Junctions and the Theory of Injection. Nature, 1964, 202, 864-868.	13.7	10
27	Thermodynamic Limitations on the Conversion of Radiant Energy into Work. Journal of Chemical Physics, 1966, 45, 1-7.	1.2	88
28	InAs diodes used for thermophotovoltaic conversion of energy. Advanced Energy Conversion, 1966, 6, 67-70.	0.1	1
29	Optoelectronic devices. , 1967, , 217-263.		0
30	Response of a Partially Illuminated Photovoltaic P-N Junction Cell. International Journal of Electronics, 1967, 22, 95-96.	0.9	0
31	Some Thermodynamics of Photochemical Systems. Journal of Chemical Physics, 1967, 46, 4590-4593.	1.2	316
32	Injection Electroluminescence from Diffused Galliumâ€Aluminum Arsenide Diodes. Journal of Applied Physics, 1969, 40, 2325-2329.	1.1	10
33	Impurity photovoltaic effect in silicon. Energy Conversion, 1970, 10, 51-55.	0.3	77
34	Berechnung des Rekombinationsstromes in Durchlaßrichtung von abrupten p+-n-Übergägen bei ortsabhägiger Rekombinationszentrendichte. Physica Status Solidi A, 1970, 3, 457-464.	1.7	1

ιτλτιώνι Ρερώ

IF ARTICLE CITATIONS # Deep impurities., 1971,, 45-64. 35 8 An experimental verification of the electrostatic field gradient theory for diffused semiconductors. 0.8 Solid-State Electronics, 1971, 14, 1015-1021. A new look at silicon solar cell performance. Energy Conversion, 1971, 11, 63-73. 37 0.3 121 Predicted effects of gamma and neutron irradiation on silicon solar cells. Optical and Quantum Electronics, 1973, 5, 223-236. REFERENCE LIST AND AUTHOR INDEX., 1973, , 403-436. 39 0 Physics and technology of photovoltaic solar energy conversion. Advances in Solid State Physics, 0.8 1974, , 153-182. Semiconductors used in optoelectronic devices â€" An overview. Journal of Electronic Materials, 1975, 42 1.0 6 4, 1229-1247. Epitaxy in solar cells. Journal of Crystal Growth, 1975, 31, 113-121. 44 An introduction to the theory of photovoltaic cells. Solid-State Electronics, 1975, 18, 1043-1052. 0.8 33 Electrochemical aspects of solar energy conversion. Journal of Applied Electrochemistry, 1975, 5, 17-38. 1.5 Electrochemical photo and solar cells principles and some experiments. Journal of Electroanalytical 46 0.3 435 Chemistry and Interfacial Electrochemistry, 1975, 58, 263-274. Enhancement of Schottky solar cell efficiency above its semiempirical limit. Applied Physics Letters, 1.5 1975, 27, 287-288. Direct conversion of solar energy through photovoltaic cells. Progress in Solid State Chemistry, 48 3.9 72 1975, 10, 71-102. Solar cells and their terrestrial applications., 1976, , 293-313. Resistivity dependence of silicon solar cell efficiency and its enhancement using a heavily doped back 50 1.6 16 contact region. IEEE Transactions on Electron Devices, 1976, 23, 11-16. Calculation of the maximum attainable efficiency of a single heterojunction solar cell. Energy 28 Conversion, 1976, 16, 67-78. Heterostructures and their application in optoelectronics. Thin Solid Films, 1976, 36, 441-457. 52 0.8 0 Optimum bulk series resistance of the Schottkyâ€barrier solar cell. Applied Physics Letters, 1976, 29, 1.5 435-437.

	CITATIO	N REPORT	
#	Article	IF	Citations
54	Upper limit of efficiency for photovoltaic solar cells. Journal of Applied Physics, 1977, 48, 3181-3182.	1.1	38
55	Limits on the yield of photochemical solar energy conversion. Journal of Applied Physics, 1977, 48, 4783-4785.	1.1	104
56	Performance of n <sup>+</sup> -p silicon solar cells in concentrated sunlight. IEEE Transactions on Electron Devices, 1977, 24, 433-438.	1.6	21
57	Low-cost solar cells based on large-area unconventional silicon. IEEE Transactions on Electron Devices, 1977, 24, 438-442.	1.6	41
58	General solar cell curve factors including the effects of ideality factor, temperature and series resistance. Solid-State Electronics, 1977, 20, 265-266.	0.8	47
59	Silicon solar cells for terrestrial applications. Journal of Materials Science, 1977, 12, 602-615.	1.7	1
60	Solar cell materials and their basic parameters. Applied Physics Berlin, 1978, 17, 1-26.	1.4	95
61	The fraction of solar energy available for direct conversion processes. Solar Energy, 1978, 20, 167-169.	2.9	10
62	Recombination at deep traps. Solid-State Electronics, 1978, 21, 1495-1503.	0.8	40
63	Solar-cell operation under concentrated illumination. IEEE Transactions on Electron Devices, 1978, 25, 1290-1297.	1.6	20
64	SILICON SOLAR CELLS (1) — BASICS. , 1979, , 785-803.		0
65	The limiting efficiency of an edge-illuminated multigap solar cell. Journal Physics D: Applied Physics, 1979, 12, 441-450.	1.3	19
66	Efficiency of quantumâ€utilizing solar energy converters in the absence of intraband thermalization. Applied Physics Letters, 1979, 35, 707-708.	1.5	4
67	Criteria for the Efficiency, Stability, and Capacity of Abiotic Photochemical Solar Energy Storage Systems. Angewandte Chemie International Edition in English, 1979, 18, 652-662.	4.4	75
68	Kriterien für Wirkungsgrad, Stabilitäund Kapazitäabiotischer photochemischer Solarenergiespeicher. Angewandte Chemie, 1979, 91, 696-707.	1.6	47
69	Electrochemical solar cells based on layer-type transition metal compounds: Performance of electrode material. Solar Energy Materials and Solar Cells, 1979, 1, 257-269.	0.4	120
70	The physics and chemistry of solar cells. Journal of Photochemistry and Photobiology, 1979, 10, 77-110.	0.6	6
71	Temperature dependence of photovoltaic solar energy conversion for GaAs homojunction solar cell. Solid-State Electronics, 1979, 22, 111-112.	0.8	0

#	Article	IF	CITATIONS
72	Possibilities of solar energy utilization. Die Naturwissenschaften, 1979, 66, 1-8.	0.6	8
73	Integrated tandem solar cells. Solar Energy, 1979, 22, 383-388.	2.9	14
74	Solar photoelectrolysis with semiconductor electrodes. Topics in Applied Physics, 1979, , 115-172.	0.4	175
75	Some relations governing major solar cell parameters. Solar Energy Materials and Solar Cells, 1979, 1, 59-62.	0.4	4
76	Photochemical Aspects of Solar Energy Conversion and Storage. ACS Symposium Series, 1979, , 202-220.	0.5	3
77	Direct energy conversion: An attractive option for developing countries. Energy, 1980, 5, 1257-1259.	4.5	0
78	State-of-the art and prospects of AllIBV science and technology. European Physical Journal D, 1980, 30, 245-261.	0.4	3
79	Upper limit for the conversion of solar energy. IEEE Transactions on Electron Devices, 1980, 27, 877-882.	1.6	104
80	Photovoltaic devices. Critical Reviews in Solid State and Materials Sciences, 1980, 9, 107-209.	6.8	9
81	Polycrystalline thinâ€film CdS liquid junction photovoltaic cell. Journal of Applied Physics, 1980, 51, 455-458.	1.1	25
82	Detailed balance limit of the efficiency of tandem solar cells. Journal Physics D: Applied Physics, 1980, 13, 839-846.	1.3	766
83	Thermodynamic energy conversion efficiencies. Journal of Applied Physics, 1980, 51, R1-R20.	1.1	248
84	Scattering by ionization and phonon emission in semiconductors. Physical Review B, 1980, 22, 5565-5582.	1.1	297
85	Thermodynamics of the fluorescent planar concentrator. Journal of the Optical Society of America, 1980, 70, 1362.	1.2	146
86	Limiting efficiencies of ideal single and multiple energy gap terrestrial solar cells. Journal of Applied Physics, 1980, 51, 4494-4500.	1.1	890
87	Efficiency of quantumâ€utilizing solar energy converters in the presence of recombination losses. Journal of Applied Physics, 1980, 51, 4504-4507.	1.1	28
88	Short circuit current in indium tin oxide/silicon solar cells. Journal of Applied Physics, 1980, 51, 5064-5065.	1.1	2
89	PHOTOCHEMICAL ENERGY STORAGE: AN ANALYSIS OF LIMITS. , 1981, , 297-339.		27

	CHATION N	EPUKI	
#	Article	IF	Citations
90	On the thermodynamic limit of photovoltaic energy conversion. Applied Physics Berlin, 1981, 25, 119-125.	1.4	159
91	The effects of temperature on the power outputs of two metal dichalcogenide liquid junction cells. Solar Energy Materials and Solar Cells, 1981, 4, 215-222.	0.4	7
92	Surface recombination effects on the performance of n+p step and diffused junction silicon solar cells. Solid-State Electronics, 1981, 24, 739-747.	0.8	17
93	Determination of the maximum efficiency solar cell structure. Solid-State Electronics, 1981, 24, 835-843.	0.8	35
94	Silicon photovoltaic cells. Solid-State Electronics, 1981, 24, 595-616.	0.8	98
95	Photovoltaic Effect. Advances in Electronics and Electron Physics, 1981, 56, 163-217.	0.6	17
96	On the upper limit of the energy conversion efficiency in tandem solar cells. Journal Physics D: Applied Physics, 1981, 14, 883-894.	1.3	10
97	Band tail recombination limit to the output voltage of amorphous silicon solar cells. Applied Physics Letters, 1982, 40, 627-629.	1.5	115
98	Efficiency of lightâ€energy conversion in photogalvanic cells and water cleavage systems. Journal of Chemical Physics, 1982, 77, 3246-3257.	1.2	4
99	Evaluation of thermophotovoltaic conversion efficiency. Journal of Applied Physics, 1982, 53, 9098-9104.	1.1	16
100	Meaning of the photovoltaic band gap for amorphous semiconductors. Applied Physics Letters, 1982, 41, 953-955.	1.5	9
101	Thermodynamic limits to the conversion of blackbody radiation by quantum systems. Journal of Applied Physics, 1982, 53, 5382-5386.	1.1	6
102	Title is missing!. Reports on Progress in Physics, 1982, 45, 1041-1111.	8.1	6
103	On the formula for the upper limit of photovoltaic solar energy conversion efficiency. Journal Physics D: Applied Physics, 1982, 15, 2003-2015.	1.3	16
104	Efficiency of hot arrier solar energy converters. Journal of Applied Physics, 1982, 53, 3813-3818.	1.1	850
105	Photoelectrochemical energy conversion involving transition metal d-states and intercalation of layer compounds. Structure and Bonding, 1982, , 127-175.	1.0	77
106	KINETIC PHOTOCHEMICAL AND PHOTOVOLTAIC ENERGY CONVERSION MODELS. Photochemistry and Photobiology, 1982, 35, 769-781.	1.3	8
107	Hydrogenated amorphous silicon solar cells. Thin Solid Films, 1982, 90, 441-449.	0.8	14

		CITATION RE	PORT	
#	Article		IF	CITATIONS
108	Fundamental diode-noise. Physica A: Statistical Mechanics and Its Applications, 1982, 113, 23	5-252.	1.2	1
109	Solar cells—A technology assessment. Solar Energy, 1983, 31, 483-502.		2.9	8
110	Organic solar cells: A review. Solar Cells, 1983, 8, 47-83.		0.6	387
111	The fill factor of a solar cell from a mathematical point of view. Solar Cells, 1983, 8, 283-296.		0.6	43
112	Limiting efficiencies for multiple energyâ€gap quantum devices. Journal of Applied Physics, 19 6721-6724.	83, 54,	1.1	15
113	Theory of electron–hole kinetics in amorphous semiconductors under illumination: Applicat solar cells. Journal of Applied Physics, 1983, 54, 3951-3957.	ion to	1.1	7
114	High efficiency in â€~â€~semithermal'' solar energy converters. Journal of Applied Phys 2883-2884.	sics, 1983, 54,	1.1	4
115	Limits to Solar Power Conversion Efficiency with Applications to Quantum and Thermal Syster Journal of Energy, 1983, 7, 581-588.	ms.	0.2	4
116	JUNCTIONS. , 1983, , 105-209.			5
117	THE CALCULATION OF SOLAR EFFICIENCY. , 1983, , 210-244.			3
118	The compositional dependence of the optical and electrical properties of hydrogenated amorp Si-Ge films prepared by co-sputtering. Thin Solid Films, 1984, 119, 59-65.	bhous	0.8	13
119	Thermodynamic limits on conversion of solar energy to work or stored energy—Effects of temperature, intensity and atmospheric conditions. Solar Energy, 1984, 32, 75-84.		2.9	10
120	Solitons and solar cells: The non-equilibrium thermodynamics of the photovoltaic effect in polyacetylene. Solid State Communications, 1984, 51, 167-170.		0.9	2
121	Limits on the open-circuit voltage and efficiency of silicon solar cells imposed by intrinsic Augo processes. IEEE Transactions on Electron Devices, 1984, 31, 671-678.	er	1.6	276
122	Limiting efficiency of silicon solar cells. IEEE Transactions on Electron Devices, 1984, 31, 711-	716.	1.6	725
123	On the efficiency and stability of photoelectrochemical devices. Accounts of Chemical Researce 17, 431-437.	ch, 1984,	7.6	156
124	Limiting and realizable efficiencies of solar photolysis of water. Nature, 1985, 316, 495-500.		13.7	509
125	A critical study of the effectiveness of the single and double exponential models for l–V characterization of solar cells. Solid-State Electronics, 1985, 28, 807-820.		0.8	99

		CITATION REPORT		
#	Article		IF	CITATIONS
126	Solar thermophotovoltaics: An assessment. Journal of Applied Physics, 1985, 57, 4409	-4414.	1.1	57
127	Photoluminescence Studies of CuInS2-CuInSe2 Alloy Crystals. Journal of Electronic Ma 667-676.	terials, 1985, 14,	1.0	26
128	A twoâ€level system as a model for a photovoltaic solar cell. Journal of Applied Physics 1347-1355.	, 1985, 57,	1.1	32
129	Minimum probability of electronâ€hole pair generation by blackbody radiation. Journal Physics, 1985, 58, 575-578.	of Applied	1.1	7
130	The flow equilibrium of a body in a radiation field. Journal of Physics C: Solid State Phys 2987-3000.	sics, 1985, 18,	1.5	10
131	Semiconductor Electrodes and Their Interaction with Light. , 1985, , 39-106.			10
132	On the thermodynamic efficiency of solar energy converters: Solar cells. Journal of App 1986, 59, 1678-1681.	lied Physics,	1.1	9
133	CHEMICAL CONVERSION AND STORAGE OF SOLAR ENERGY - AN OVERVIEW. , 1986, ,	1843-1859.		2
134	Identification of some key parameters limiting the performance of high-efficiency silico Solar Cells, 1986, 19, 9-17.	on solar cells.	0.6	0
135	Toward a systematic design theory for silicon solar cells using optimization techniques 1986, 17, 29-52.	s. Solar Cells,	0.6	13
136	Splitting water with semiconducting photoelectrodes—Efficiency considerations. Int Journal of Hydrogen Energy, 1986, 11, 225-232.	ernational	3.8	124
137	Photosynthetic efficiency. Radiation and Environmental Biophysics, 1986, 25, 275-288	3.	0.6	6
138	Exploration of parametric mechanisms of photon energy conversion. Solar Energy, 198	36, 37, 65-69.	2.9	5
139	Shunt resistance and soft reverse characteristics of silicon diffused-junction solar cells Electronics, 1986, 29, 1015-1023.	. Solid-State	0.8	8
140	Self-consistent detailed balance treatment of the solar cell. IEE Proceedings, Part J: Op 1986, 133, 314.	toelectronics,	0.4	10
141	An introduction to nonequilibrium problems involving electromagnetic radiation. , 198	6,,224-267.		4
142	The diode quality factor of solar cells under illumination. Journal Physics D: Applied Phy 483-492.	vsics, 1986, 19,	1.3	24
143	Entropy and the Unity of Knowledge II. Journal of Non-Equilibrium Thermodynamics, 19	987, 12, .	2.4	6

#	Article	IF	CITATIONS
144	Photochemische Umwandlung und Speicherung der Sonnenenergie. Chemie in Unserer Zeit, 1987, 21, 161-174.	0.1	6
145	Photovoltaics in a single dimension. Solid-State Electronics, 1987, 30, 853-858.	0.8	7
146	Transport and related properties of (Ga, Al)As/GaAs double heterostructure bipolar junction transistors. IEEE Transactions on Electron Devices, 1987, 34, 185-198.	1.6	92
147	The spectral p-n junction model for tandem solar-cell design. IEEE Transactions on Electron Devices, 1987, 34, 257-266.	1.6	115
148	Thermodynamics of radiation energy conversion in one and in three physical dimensions. Journal of Physics and Chemistry of Solids, 1988, 49, 725-730.	1.9	12
149	Amorphous silicon solar cells: Thermodynamic models for realistic performance characteristics. Solar Cells, 1988, 23, 201-215.	0.6	2
150	On the feasibility of PV concentrators operating over 1000*. , 1988, , .		0
151	Limiting efficiency of GaAs solar cells. , 1988, , .		2
152	Integrated Selectivity for AM-Receivers. , 1988, , .		0
153	The thermodynamics of the conversion of radiation energy for photovoltaics. Journal of Physics A, 1989, 22, 1911-1926.	1.6	57
154	Limiting efficiencies of GaAs solar cells. IEEE Transactions on Electron Devices, 1990, 37, 1402-1405.	1.6	17
155	A thermodynamic cycle for photovoltaic energy conversion. Journal Physics D: Applied Physics, 1990, 23, 739-743.	1.3	20
156	High efficiency crystalline silicon solar cells. , 1990, , 403-423.		10
157	Energy and free energy analyses of photovoltaic energy conversion. , 0, , .		0
158	Photovoltaics: coming of age. , 0, , .		11
159	Chemical potential and temperature of light. Journal of Photochemistry and Photobiology A: Chemistry, 1991, 59, 11-18.	2.0	43
160	Semiconductors for solar cell applications. Progress in Materials Science, 1991, 35, 205-418.	16.0	31
161	Amorphous thin-film solar cells. Applied Physics A: Solids and Surfaces, 1991, 53, 54-61.	1.4	16

#	Article	IF	CITATIONS
162	Indium phosphide solar cells: P/sup +/-N or N/sup +/-P?. , 0, , .		3
163	On the detailed balance limit of ideal multiple bandgap solar cells. , 0, , .		3
164	A comparison of some efficiency factors in photovoltaics. Journal of Physics Condensed Matter, 1991, 3, 6415-6424.	0.7	10
165	Efficiencies of single and graded gap solar cells at terrestrial solar spectra. Journal of Applied Physics, 1992, 71, 5957-5963.	1.1	6
166	Perfecting the Solid State. Annual Review of Materials Research, 1992, 22, 1-23.	5.5	4
167	Verification of a generalized Planck law for luminescence radiation from silicon solar cells. Applied Physics A: Solids and Surfaces, 1992, 54, 109-114.	1.4	98
168	Investigation of N+-P diffused junction silicon solar cells. Solid-State Electronics, 1992, 35, 1661-1665.	0.8	2
169	Thermodynamics of solar cell efficiency. Solar Energy Materials and Solar Cells, 1992, 25, 73-85.	3.0	33
170	Luminescence and current-voltage characteristics of solar cells and optoelectronic devices. Solar Energy Materials and Solar Cells, 1992, 25, 51-71.	3.0	121
171	The endoreversible theory of solar energy conversion: a tutorial. Solar Energy Materials and Solar Cells, 1993, 31, 75-93.	3.0	62
172	Radiative recombination and photon recycling in photovoltaic solar cells. Solar Energy Materials and Solar Cells, 1993, 30, 221-231.	3.0	48
173	Bandâ€band impact ionization and solar cell efficiency. Journal of Applied Physics, 1993, 74, 1451-1452.	1.1	143
174	Quantum efficiencies exceeding unity due to impact ionization in silicon solar cells. Applied Physics Letters, 1993, 63, 2405-2407.	1.5	292
175	Solar cells. Critical Reviews in Solid State and Materials Sciences, 1993, 18, 261-326.	6.8	29
176	A new L-H interface concept for very high efficiency silicon solar cells. , 0, , .		6
177	Silicon solar cells: evolution, high-efficiency design and efficiency enhancements. Semiconductor Science and Technology, 1993, 8, 1-12.	1.0	97
178	Comment on â€~ã€~35% efficient nonconcentrating novel silicon solar cell''. Applied Physics Letters, 1993 63, 848-848.	<sup>3</sup> ,1.5	15
179	Polycrystalline silicon for thin film solar cells. , 0, , .		3

#	Article	IF	Citations
180	Modeling p-i(multi quantum well)-n solar cells: a contribution for a near optimum design. , 0, , .		8
181	Novel parallel multijunction solar cell. Applied Physics Letters, 1994, 65, 2907-2909.	1.5	80
182	Absolute limiting efficiencies for photovoltaic energy conversion. Solar Energy Materials and Solar Cells, 1994, 33, 213-240.	3.0	277
183	Quantum efficiencies exceeding unity in silicon leading to novel selection principles for solar cell materials. Solar Energy Materials and Solar Cells, 1994, 33, 275-285.	3.0	38
184	On the efficiency of photon recycling in solar cells. Solar Energy Materials and Solar Cells, 1994, 33, 369-377.	3.0	7
185	Testing of dye sensitized TiO2 solar cells II: Theoretical voltage output and photoluminescence efficiencies. Solar Energy Materials and Solar Cells, 1994, 32, 273-288.	3.0	83
186	Solar thermophotovoltaics: brief review and a new look. Solar Energy Materials and Solar Cells, 1994, 33, 11-22.	3.0	59
187	New upper efficiency limits for semiconductor solar cells. , 0, , .		13
188	Efficiency improvements of silicon solar cells by the impurity photovoltaic effect. Journal of Applied Physics, 1994, 75, 4022-4031.	1.1	245
189	Novel optimization principles and efficiency limits for semiconductor solar cells. Physical Review Letters, 1994, 72, 3851-3854.	2.9	201
190	Limits to the efficiency of silicon multilayer thin film solar cells. , 0, , .		3
191	The challenge of crystalline thin film silicon solar cells. , 1995, , 115-146.		36
192	On some thermodynamic aspects of photovoltaic solar energy conversion. Solar Energy Materials and Solar Cells, 1995, 36, 201-222.	3.0	88
193	A generalized Kirchhoff Law for quantum absorption and luminescence. Solar Energy Materials and Solar Cells, 1995, 38, 39-44.	3.0	7
194	Maximum performance of omnicolor photothermal and photovoltaic converters in our planetary system. Renewable Energy, 1995, 6, 765-777.	4.3	8
195	Maximum likelihood parameter estimation of textures using a wold-decomposition based model. IEEE Transactions on Image Processing, 1995, 4, 1655-1666.	6.0	48
196	Principles and technology of photovoltaic energy conversion. , 0, , .		3
197	Radiative efficiency limit of terrestrial solar cells with internal carrier multiplication. Applied Physics Letters, 1995, 67, 1028-1030.	1.5	43

#	Article	IF	CITATIONS
198	Luminescence and efficiency of an ideal photovoltaic cell with charge carrier multiplication. Physical Review B, 1995, 52, 11319-11325.	1.1	31
199	Statistical thermodynamics foundation for photovoltaic and photothermal conversion. II. Application to photovoltaic conversion. Journal of Applied Physics, 1995, 78, 2793-2802.	1.1	35
200	Potential of Si1â^'xGex alloys for Auger generation in highly efficient solar cells. Applied Physics A: Materials Science and Processing, 1995, 61, 535-539.	1.1	14
201	Quantum noise in photonics. Reviews of Modern Physics, 1996, 68, 801-853.	16.4	147
202	Limits to the efficiency of silicon multilayer thin film solar cells. Solar Energy Materials and Solar Cells, 1996, 41-42, 3-17.	3.0	5
203	Thermodynamic efficiency limits for semiconductor solar cells with carrier multiplication. Solar Energy Materials and Solar Cells, 1996, 41-42, 419-425.	3.0	80
204	Limiting efficiencies for photovoltaic energy conversion in multigap systems. Solar Energy Materials and Solar Cells, 1996, 43, 203-222.	3.0	406
205	The efficiency and physical principles of photolysis of water by microalgae. International Journal of Hydrogen Energy, 1996, 21, 189-194.	3.8	6
206	Entropy production in photovoltaic conversion. Physical Review B, 1997, 55, 6994-6999.	1.1	48
207	Multiinterface Si solar cells with active substructures and active interfaces. , 0, , .		1
207 208	Multiinterface Si solar cells with active substructures and active interfaces. , 0, , . Dark currents in double-heterostructure and quantum-well solar cells. , 0, , .		1 8
207 208 209	Multiinterface Si solar cells with active substructures and active interfaces., 0, , .         Dark currents in double-heterostructure and quantum-well solar cells., 0, , .         Photon recycling and Shockley's diode equation. Journal of Applied Physics, 1997, 82, 4067-4075.	1.1	1 8 186
207 208 209 210	Multiinterface Si solar cells with active substructures and active interfaces., 0, , .         Dark currents in double-heterostructure and quantum-well solar cells., 0, , .         Photon recycling and Shockley's diode equation. Journal of Applied Physics, 1997, 82, 4067-4075.         Increasing the Efficiency of Ideal Solar Cells by Photon Induced Transitions at Intermediate Levels. Physical Review Letters, 1997, 78, 5014-5017.	1.1 2.9	1 8 186 2,207
207 208 209 210	Multiinterface Si solar cells with active substructures and active interfaces. , 0, , .         Dark currents in double-heterostructure and quantum-well solar cells. , 0, , .         Photon recycling and Shockley's diode equation. Journal of Applied Physics, 1997, 82, 4067-4075.         Increasing the Efficiency of Ideal Solar Cells by Photon Induced Transitions at Intermediate Levels. Physical Review Letters, 1997, 78, 5014-5017.         Low-cost industrial technologies of crystalline silicon solar cells. Proceedings of the IEEE, 1997, 85, 711-730.	1.1 2.9 16.4	1 8 186 2,207 93
207 208 209 210 211	Multiinterface Si solar cells with active substructures and active interfaces., 0, , .         Dark currents in double-heterostructure and quantum-well solar cells., 0, , .         Photon recycling and Shockley's diode equation. Journal of Applied Physics, 1997, 82, 4067-4075.         Increasing the Efficiency of Ideal Solar Cells by Photon Induced Transitions at Intermediate Levels.         Physical Review Letters, 1997, 78, 5014-5017.         Low-cost industrial technologies of crystalline silicon solar cells. Proceedings of the IEEE, 1997, 85, 711-730.         Novel Bandgap grading technique for enhancing the limiting efficiency of solar cells. Renewable Energy, 1997, 10, 129-134.	1.1 2.9 16.4 4.3	1 8 186 2,207 93 2
207 208 209 210 211 212	Multiinterface Si solar cells with active substructures and active interfaces., 0, , .         Dark currents in double-heterostructure and quantum-well solar cells., 0, , .         Photon recycling and Shockley's diode equation. Journal of Applied Physics, 1997, 82, 4067-4075.         Increasing the Efficiency of Ideal Solar Cells by Photon Induced Transitions at Intermediate Levels.         Physical Review Letters, 1997, 78, 5014-5017.         Low-cost industrial technologies of crystalline silicon solar cells. Proceedings of the IEEE, 1997, 85, 711-730.         Novel Bandgap grading technique for enhancing the limiting efficiency of solar cells. Renewable Energy, 1997, 10, 129-134.         The limiting efficiency of band gap graded solar cells. Solar Energy Materials and Solar Cells, 1998, 55, 341-361.	1.1 2.9 16.4 4.3 3.0	1 8 186 2,207 93 2
207 208 209 210 211 212 212	Multiinterface Si solar cells with active substructures and active interfaces., 0, , .         Dark currents in double-heterostructure and quantum-well solar cells., 0, , .         Photon recycling and Shockley's diode equation. Journal of Applied Physics, 1997, 82, 4067-4075.         Increasing the Efficiency of Ideal Solar Cells by Photon Induced Transitions at Intermediate Levels.         Physical Review Letters, 1997, 78, 5014-5017.         Low-cost industrial technologies of crystalline silicon solar cells. Proceedings of the IEEE, 1997, 85, 711-730.         Novel Bandgap grading technique for enhancing the limiting efficiency of solar cells. Renewable Energy, 1997, 10, 129-134.         The limiting efficiency of band gap graded solar cells. Solar Energy Materials and Solar Cells, 1998, 55, 341-361.         Solar energy conversion: list of efficiencies and some theoretical considerations Part lâ€"Theoretical considerations. Progress in Quantum Electronics, 1998, 22, 211-230.	1.1 2.9 16.4 4.3 3.0 3.5	1 8 186 2,207 93 2 20 30

ARTICLE IF CITATIONS # Solar cell efficiency and carrier multiplication in Si1â<sup>^</sup>xGex alloys. Journal of Applied Physics, 1998, 83, 216 1.1 130 4213-4221. W=Shockley, the transistor pioneer-portrait of an inventive genius. Proceedings of the IEEE, 1998, 86, 16.4 191-217. 218 Fundamental efficiency limit of solar power plants. Journal of Applied Physics, 1998, 84, 1109-1112. 1.1 1 Electrons and Defects in Semiconductors. Materials Research Society Symposia Proceedings, 1998, 510, 0.1 289. Limiting efficiency of coupled thermal and photovoltaic converters. Solar Energy Materials and Solar 220 3.0 52 Cells, 1999, 58, 147-165. immediately after the Third nrel Conference on Thermophotovoltaic Genertion of materials, devices, and system's; substantial gains in fundamental understanding and performance of the quaternary alloy GalnAsSb; the introduction of new radiator concepts; and more attention being paid to 8.2 modeling of both real and conceptual systems. There was also further evidence of interest in Detailed balance efficiency limits with quasi-Fermi level variations [QW solar cell]. IEEE Transactions 222 1.6 56 on Electron Devices, 1999, 46, 1932-1939. Very high efficiency silicon solar cells-science and technology. IEEE Transactions on Electron 223 1.6 99 Devices, 1999, 46, 1940-1947. High efficiency and high concentration in photovoltaics. IEEE Transactions on Electron Devices, 1999, 224 1.6 126 46, 2139-2144. Thermophotovoltaic and photovoltaic conversion at high-flux densities. IEEE Transactions on 1.6 44 Electron Devices, 1999, 46, 2145-2153. Theoretical maximum efficiencies for thermophotovoltaic devices. AIP Conference Proceedings, 1999, , 226 0.3 15 Porous TiO2: Electron Transport and Application to Dye Sensitized Injection Solar Cells. Physica Status Solidi A, 2000, 182, 447-455. Light harvesting for quantum solar energy conversion. Progress in Quantum Electronics, 2000, 24, 228 3.5 49 107-186. Potential for low dimensional structures in photovoltaics. Materials Science and Engineering B: 229 1.7 Solid-State Materials for Advanced Technology, 2000, 74, 118-124. Non-ideal recombination and transport mechanisms in multiple band gap solar cells. , 0, , . 230 4 Theoretical Bounds on Solar Cell Efficiencies., 2000, , 767-772. Carnot factor in solar cell efficiencies. Journal Physics D: Applied Physics, 2000, 33, 3004-3008. 232 1.331 Photovoltaic cell: efficiency of energy conversion. European Journal of Physics, 2000, 21, 159-166.

#	ARTICLE	IF	CITATIONS
234	Prospects for photovoltaic efficiency enhancement using low-dimensional structures. Nanotechnology, 2000, 11, 401-405.	1.3	41
235	Some Methods of Analyzing Solar Cell Efficiencies. , 2000, , 72-105.		6
236	Impurity photovoltaic effect in indium-doped silicon solar cells. Journal of Applied Physics, 2001, 89, 4030-4036.	1.1	31
237	Thermodynamic analysis of thermophotovoltaic efficiency and power density tradeoffs. Journal of Applied Physics, 2001, 89, 3319-3327.	1.1	88
238	LMI based stability analysis and controller design for a class of 2D discrete linear systems. , 0, , .		7
239	Progress and outlook for high-efficiency crystalline silicon solar cells. Solar Energy Materials and Solar Cells, 2001, 65, 9-16.	3.0	82
240	A metallic intermediate band high efficiency solar cell. Progress in Photovoltaics: Research and Applications, 2001, 9, 73-86.	4.4	256
241	Third generation photovoltaics: Ultra-high conversion efficiency at low cost. Progress in Photovoltaics: Research and Applications, 2001, 9, 123-135.	4.4	556
242	Multiple band and impurity photovoltaic solar cells: General theory and comparison to tandem cells. Progress in Photovoltaics: Research and Applications, 2001, 9, 137-144.	4.4	67
243	Efficient silicon light-emitting diodes. Nature, 2001, 412, 805-808.	13.7	496
243 244	Efficient silicon light-emitting diodes. Nature, 2001, 412, 805-808. Thermodynamic consistency of sub-bandgap absorbing solar cell proposals. IEEE Transactions on Electron Devices, 2001, 48, 2118-2124.	13.7 1.6	496 83
243 244 245	Efficient silicon light-emitting diodes. Nature, 2001, 412, 805-808. Thermodynamic consistency of sub-bandgap absorbing solar cell proposals. IEEE Transactions on Electron Devices, 2001, 48, 2118-2124. PRINCIPLES OF CELL DESIGN. Series on Photoconversion of Solar Energy, 2001, , 91-148.	13.7 1.6 0.2	496 83 1
243 244 245 246	Efficient silicon light-emitting diodes. Nature, 2001, 412, 805-808.         Thermodynamic consistency of sub-bandgap absorbing solar cell proposals. IEEE Transactions on Electron Devices, 2001, 48, 2118-2124.         PRINCIPLES OF CELL DESIGN. Series on Photoconversion of Solar Energy, 2001, , 91-148.         Device Analysis of Cu(In,Ga)Se <sub>2</sub> Heterojunction Solar Cells - Some Open Questions. Materials Research Society Symposia Proceedings, 2001, 668, 1.	13.7 1.6 0.2 0.1	496 83 1 31
243 244 245 246 247	Efficient silicon light-emitting diodes. Nature, 2001, 412, 805-808.         Thermodynamic consistency of sub-bandgap absorbing solar cell proposals. IEEE Transactions on Electron Devices, 2001, 48, 2118-2124.         PRINCIPLES OF CELL DESIGN. Series on Photoconversion of Solar Energy, 2001, , 91-148.         Device Analysis of Cu(In,Ga)Se <sub>2</sub> Heterojunction Solar Cells - Some Open Questions. Materials Research Society Symposia Proceedings, 2001, 668, 1.         Radiative coupling as a means to reduce spectral mismatch in monolithic tandem solar cell stacks theoretical considerations. , 0,	13.7 1.6 0.2 0.1	<ul> <li>496</li> <li>83</li> <li>1</li> <li>31</li> <li>24</li> </ul>
243 244 245 246 247 248	Efficient silicon light-emitting diodes. Nature, 2001, 412, 805-808.         Thermodynamic consistency of sub-bandgap absorbing solar cell proposals. IEEE Transactions on Electron Devices, 2001, 48, 2118-2124.         PRINCIPLES OF CELL DESIGN. Series on Photoconversion of Solar Energy, 2001, , 91-148.         Device Analysis of Cu(In,Ga)Se <sub>2 </sub> Heterojunction Solar Cells - Some Open Questions. Materials Research Society Symposia Proceedings, 2001, 668, 1.         Radiative coupling as a means to reduce spectral mismatch in monolithic tandem solar cell stacks theoretical considerations. , 0,         Nuclear Batteries Based on III-V Semiconductors. , 2002, ,.	13.7 1.6 0.2 0.1	<ul> <li>496</li> <li>83</li> <li>1</li> <li>31</li> <li>24</li> <li>2</li> </ul>
243 244 245 246 247 248 249	Efficient silicon light-emitting diodes. Nature, 2001, 412, 805-808.         Thermodynamic consistency of sub-bandgap absorbing solar cell proposals. IEEE Transactions on Electron Devices, 2001, 48, 2118-2124.         PRINCIPLES OF CELL DESIGN. Series on Photoconversion of Solar Energy, 2001, , 91-148.         Device Analysis of Cu(In,Ga)Se <sub>2</sub> Heterojunction Solar Cells - Some Open Questions. Materials Research Society Symposia Proceedings, 2001, 668, 1.         Radiative coupling as a means to reduce spectral mismatch in monolithic tandem solar cell stacks theoretical considerations. , 0, , .         Nuclear Batteries Based on III-V Semiconductors. , 2002, , .         Ab initioelectronic structure calculations for metallic intermediate band formation in photovoltaic materials. Physical Review B, 2002, 65, .	13.7 1.6 0.2 0.1	<ul> <li>496</li> <li>83</li> <li>1</li> <li>31</li> <li>24</li> <li>2</li> <li>122</li> </ul>
243 244 245 246 247 248 249	Efficient silicon light-emitting diodes. Nature, 2001, 412, 805-808.         Thermodynamic consistency of sub-bandgap absorbing solar cell proposals. IEEE Transactions on Electron Devices, 2001, 48, 2118-2124.         PRINCIPLES OF CELL DESIGN. Series on Photoconversion of Solar Energy, 2001, , 91-148.         Device Analysis of Cu(In,Ga)Se <sub>2</sub> Heterojunction Solar Cells - Some Open Questions.         Materials Research Society Symposia Proceedings, 2001, 668, 1.         Radiative coupling as a means to reduce spectral mismatch in monolithic tandem solar cell stacks theoretical considerations., 0, , .         Nuclear Batteries Based on Ill-V Semiconductors., 2002, , .         Ab initioelectronic structure calculations for metallic intermediate band formation in photovoltaic materials. Physical Review B, 2002, 65, .         Impurity photovoltaic effect: Fundamental energy conversion efficiency limits. Journal of Applied Physics, 2002, 92, 1329-1336.	13.7 1.6 0.2 0.1 1.1	<ul> <li>496</li> <li>83</li> <li>1</li> <li>31</li> <li>24</li> <li>2</li> <li>122</li> <li>90</li> </ul>

#	ARTICLE	IF	CITATIONS
" 252	Improving solar cell efficiencies by down-conversion of high-energy photons. Journal of Applied Physics, 2002, 92, 1668-1674.	1.1	890
253	Experimental and theoretical investigations of a new potential barrier due to sharp a-Si/c-Si heterointerfaces buried in the solar cell emitter. Solar Energy Materials and Solar Cells, 2002, 72, 613-619	3.0	8
254	Ideal efficiency and potential of solar thermophotonic converters under optically and thermally concentrated power flux. IEEE Transactions on Electron Devices, 2002, 49, 2024-2030.	1.6	27
255	Specifying targets of future research in photovoltaic devices containing pyrite (FeS2) by numerical modelling. Solar Energy Materials and Solar Cells, 2002, 71, 181-195.	3.0	154
256	Thermodynamics and reciprocity of solar energy conversion. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 71-77.	1.3	48
257	Photovoltaic conversion at reduced dimensions. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 1-10.	1.3	25
258	Photovoltaic principles. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 11-17.	1.3	121
259	Thermodynamic limitations to solar energy conversion. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 18-26.	1.3	91
260	Unexplored opportunities for nanostructures in photovoltaics. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 78-83.	1.3	5
261	Third generation photovoltaics: solar cells for 2020 and beyond. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 65-70.	1.3	343
262	Detailed balance limit for the series constrained two terminal tandem solar cell. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 96-100.	1.3	159
263	Thermoelectric field effects in low-dimensional structure solar cells. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 101-106.	1.3	14
264	Thermodynamics of solar energy conversion in novel structures. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 107-114.	1.3	27
265	Quantum dot solar cells. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 115-120.	1.3	2,193
266	Limiting efficiency for a multi-band solar cell containing three and four bands. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 121-125.	1.3	60
267	Design trade-offs and rules for multiple energy level solar cells. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 136-141.	1.3	18
268	Near-IR improvement of Si photovoltaic conversion by a nanoscale modification. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 14, 255-258.	1.3	5
269	Limiting efficiency for current-constrained two-terminal tandem cell stacks. Progress in Photovoltaics: Research and Applications, 2002, 10, 299-307.	4.4	72

#	Article	IF	CITATIONS
270	Ideal efficiency of monolithic, series-connected multijunction solar cells. Progress in Photovoltaics: Research and Applications, 2002, 10, 323-329.	4.4	67
271	The impurity photovoltaic (IPV) effect in wide-bandgap semiconductors: an opportunity for very-high-efficiency solar cells?. Progress in Photovoltaics: Research and Applications, 2002, 10, 345-353.	4.4	62
272	Quantum dot solar cells. Progress in Photovoltaics: Research and Applications, 2002, 10, 433-439.	4.4	129
273	Diluted II-VI Oxide Semiconductors with Multiple Band Gaps. Physical Review Letters, 2003, 91, 246403.	2.9	268
274	Evaluation of the photoinduced electron relaxation dynamics of Cu1.8S quantum dots. Physical Chemistry Chemical Physics, 2003, 5, 1091-1095.	1.3	94
275	Impact-ionization-assisted intermediate band solar cell. IEEE Transactions on Electron Devices, 2003, 50, 447-454.	1.6	56
276	High-efficiency silicon light emitting diodes. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 16, 351-358.	1.3	2
277	Low-mobility solar cells: a device physics primer with application to amorphous silicon. Solar Energy Materials and Solar Cells, 2003, 78, 567-595.	3.0	101
278	General temperature dependence of solar cell performance and implications for device modelling. Progress in Photovoltaics: Research and Applications, 2003, 11, 333-340.	4.4	267
279	Theoretical limits of thermophotovoltaic solar energy conversion. Semiconductor Science and Technology, 2003, 18, S151-S157.	1.0	266
280	Intermediate band solar cell with many bands: Ideal performance. Journal of Applied Physics, 2003, 94, 6150-6158.	1.1	48
281	Advantages of using piezoelectric quantum structures for photovoltaics. Journal of Applied Physics, 2003, 93, 626-631.	1.1	9
282	First principles characterization of direct transitions for high efficiency new photovoltaic materials. Computational Materials Science, 2003, 27, 58-64.	1.4	25
283	Efficiency enhancement of ideal photovoltaic solar cells by photonic excitations in multi-intermediate band structures. Applied Physics Letters, 2003, 83, 770-772.	1.5	33
284	Analysis of metallic intermediate-band formation in photovoltaic materials. Applied Physics Letters, 2003, 82, 151-153.	1.5	50
285	Ideal Efficiencies. , 2003, , 123-134.		8
286	Thermophotonics. Semiconductor Science and Technology, 2003, 18, S270-S278.	1.0	74
287	Synthesis and optical properties of II-O-VI highly mismatched alloys. Journal of Applied Physics, 2004, 95, 6232-6238.	1.1	82

#	Article	IF	CITATIONS
288	Improved spectral robustness of triple tandem solar cells by combined series/parallel interconnection. Journal of Applied Physics, 2004, 96, 2347-2351.	1.1	38
289	Impurity photovoltaic effect with defect relaxation: Implications for low band gap semiconductors such as silicon. Journal of Applied Physics, 2004, 96, 2603-2609.	1.1	21
290	Thermodynamics of Solar Cells. Springer Series in Solid-state Sciences, 2004, , 321-341.	0.3	0
291	FULLSPECTRUM: A new PV wave of more efficient use of the solar spectrum. Semiconductors, 2004, 38, 936-940.	0.2	3
292	Present status of intermediate band solar cell research. Thin Solid Films, 2004, 451-452, 593-599.	0.8	77
293	Synthesis and properties of highly mismatched II–O–VI alloys. IEE Proceedings: Optoelectronics, 2004, 151, 452-459.	0.8	3
294	Influence of the Overlap Between the Absorption Coefficients on the Efficiency of the Intermediate Band Solar Cell. IEEE Transactions on Electron Devices, 2004, 51, 1002-1007.	1.6	113
295	High Efficiency Carrier Multiplication in PbSe Nanocrystals: Implications for Solar Energy Conversion. Physical Review Letters, 2004, 92, 186601.	2.9	1,643
296	Diluted ZnMnTe oxide: a multi-band semiconductor for high efficiency solar cells. Physica Status Solidi (B): Basic Research, 2004, 241, 660-663.	0.7	25
297	Effect of reduced selectivity of contacts on the current-potential characteristics and conversion performance of solar cells. Solar Energy Materials and Solar Cells, 2004, 85, 51-51.	3.0	4
298	Photovoltaic Materials, Physics of. , 2004, , 47-59.		3
299	Radiative efficiency limits of solar cells with lateral band-gap fluctuations. Applied Physics Letters, 2004, 84, 3735-3737.	1.5	209
300	Efficient Inverse Auger Recombination at Threshold in CdSe Nanocrystals. Nano Letters, 2004, 4, 525-531.	4.5	77
301	Direct carrier multiplication due to inverse Auger scattering in CdSe quantum dots. Applied Physics Letters, 2004, 84, 2409-2411.	1.5	100
302	Conjugated Polymer Photovoltaic Cells. Chemistry of Materials, 2004, 16, 4533-4542.	3.2	2,055
303	Physical Chemical Principles of Photovoltaic Conversion with Nanoparticulate, Mesoporous Dye-Sensitized Solar Cells. Journal of Physical Chemistry B, 2004, 108, 8106-8118.	1.2	584
304	Comparative analysis of photovoltaic principles governing dye-sensitized solar cells and p-n junctions. , 2004, 5215, 49.		6
305	Quantum, cyclic, and particle-exchange heat engines. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 390-398.	1.3	41

#	Article	IF	CITATIONS
306	Efficiency limitations of polycrystalline thin film solar cells: case of Cu(In,Ga)Se2. Thin Solid Films, 2005, 480-481, 399-409.	0.8	223
307	A new method to determine the diode ideality factor of real solar cell using Lambert W-function. Solar Energy Materials and Solar Cells, 2005, 85, 391-396.	3.0	90
308	Properties of intermediate band materials. Solar Energy Materials and Solar Cells, 2005, 87, 323-331.	3.0	17
309	FULLSPECTRUM: a new PV wave making more efficient use of the solar spectrum. Solar Energy Materials and Solar Cells, 2005, 87, 467-479.	3.0	40
310	Organic-Based Photovoltaics: Toward Low-Cost Power Generation. MRS Bulletin, 2005, 30, 10-19.	1.7	500
311	Parametric study on non-vacuum chemical vapor deposition of CuInS2 from a single-source precursor. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 116, 403-408.	1.7	17
312	Particle conservation in the hot-carrier solar cell. Progress in Photovoltaics: Research and Applications, 2005, 13, 277-285.	4.4	107
313	SHORT COMMUNICATION: ACCELERATED PUBLICATION: Diode characteristics in state-of-the-art ZnO/CdS/Cu(In1?xGax)Se2 solar cells. Progress in Photovoltaics: Research and Applications, 2005, 13, 209-216.	4.4	548
314	Mechanically Stacked GaAs/GaInAsP Dual-Junction Solar Cell with High Conversion Efficiency of More than 31%. Japanese Journal of Applied Physics, 2005, 44, L988-L990.	0.8	3
315	On the Origin of Improved Conversion Efficiency of Solar Cells Based on SiGe with Compositional Distribution. Japanese Journal of Applied Physics, 2005, 44, 857-860.	0.8	5
316	Spectrally and angularly selective photothermal and photovoltaic converters under one-sun illumination. Journal Physics D: Applied Physics, 2005, 38, 2166-2172.	1.3	39
317	Theoretical Limits of Photovoltaic Conversion. , 2005, , 113-151.		13
318	Correlation effects and electronic properties of Cr-substituted SZn with an intermediate band. Journal of Chemical Physics, 2005, 123, 114709.	1.2	21
319	Low radiation temperature thermal photovoltaic cells. Journal of Applied Physics, 2005, 97, 044910.	1.1	2
320	Conversion of solar heat into work: A supplement to the actual thermodynamic description. Journal of Applied Physics, 2005, 98, 124905.	1.1	8
321	Optoelectronic properties analysis of Ti-substituted GaP. Journal of Chemical Physics, 2005, 123, 184703.	1.2	7
322	Signature of intermediate band materials from luminescence measurements. , 0, , .		13
323	Characterization of deposition parameters in aerosol assisted chemical vapor deposition of CuInS/sub 2/ from a single-source precursor. , 0, , .		0

# 324	ARTICLE Approaching the 29% limit efficiency of silicon solar cells. , 0, , .	IF	Citations 89
325	Band gap fluctuations in Cu(In,Ga)Se <sub>2</sub> thin films. Materials Research Society Symposia Proceedings, 2005, 865, 1641.	0.1	5
326	Highly Mismatched Alloys for Intermediate Band Solar Cells. Materials Research Society Symposia Proceedings, 2005, 865, 571.	0.1	8
327	Intensity-dependent equivalent circuit parameters of organic solar cells based on pentacene and C60. Journal of Applied Physics, 2005, 97, 103706.	1.1	176
328	The Photoconversion Mechanism of Excitonic Solar Cells. MRS Bulletin, 2005, 30, 20-22.	1.7	138
329	Lead sulfide nanocrystal: conducting polymer solar cells. Journal Physics D: Applied Physics, 2005, 38, 2006-2012.	1.3	147
330	Fe-dopedCuInSe2: Anab initiostudy of magnetic defects in a photovoltaic material. Physical Review B, 2005, 71, .	1.1	28
331	Chemisorption Determines the Photovoltage of a Ti/TiO2/Au/Dye Internal Electron Emission Photovoltaic Cell. Journal of Physical Chemistry B, 2005, 109, 9205-9208.	1.2	12
332	Photovoltaic effect in ideal carbon nanotube diodes. Applied Physics Letters, 2005, 87, 073101.	1.5	243
333	Status, Trends, Challenges and the Bright Future of Solar Electricity from Photovoltaics. , 2005, , 1-43.		21
334	Exciton Multiplication and Relaxation Dynamics in Quantum Dots:Â Applications to Ultrahigh-Efficiency Solar Photon Conversionâ€. Inorganic Chemistry, 2005, 44, 6893-6899.	1.9	303
335	Einstein relation for electron diffusion on arrays of weakly coupled quantum dots. Physical Review B, 2005, 72, .	1.1	12
336	Ideal efficiencies. , 2005, , 57-68.		0
337	Thermodynamic efficiency of an intermediate band photovoltaic cell with low threshold Auger generation. Journal of Applied Physics, 2005, 98, 044905.	1.1	53
338	Efficiency limits of photovoltaic fluorescent collectors. Applied Physics Letters, 2005, 87, 171101.	1.5	109
339	Quantum Structured Solar Cells. , 2006, , 485-516.		9
340	Intermediate Band Solar Cells (IBSC) Using Nanotechnology. , 2006, , 539-566.		21
341	Electronic and magnetic properties of ZnS doped with Cr. Physical Review B, 2006, 74, .	1.1	67

C	TAT	ON	DEE	ODT
	IAL		KEP	UKI

#	Article	IF	CITATIONS
342	Production of Photocurrent due to Intermediate-to-Conduction-Band Transitions: A Demonstration of a Key Operating Principle of the Intermediate-Band Solar Cell. Physical Review Letters, 2006, 97, 247701.	2.9	498
343	Detailed balance method for ideal single-stage fluorescent collectors. Journal of Applied Physics, 2006, 99, 026101.	1.1	55
344	Preparation of Nanocrystalline Silicon in Amorphous Silicon Carbide Matrix. Japanese Journal of Applied Physics, 2006, 45, L1064-L1066.	0.8	78
345	Photovoltaic Device Operation at Low Temperature. , 2006, , .		2
346	Multiexciton Generation by a Single Photon in Nanocrystals. Nano Letters, 2006, 6, 2856-2863.	4.5	287
347	Impact Ionization Can Explain Carrier Multiplication in PbSe Quantum Dots. Nano Letters, 2006, 6, 2191-2195.	4.5	227
348	Theoretical Solar-to-Electrical Energy-Conversion Efficiencies of Peryleneâ^'Porphyrin Light-Harvesting Arraysâ€. Journal of Physical Chemistry B, 2006, 110, 25430-25440.	1.2	112
349	Nanocrystalline TiO2Solar Cells Sensitized with InAs Quantum Dotsâ€. Journal of Physical Chemistry B, 2006, 110, 25451-25454.	1.2	443
350	Finite Mobility Effects on the Radiative Efficiency Limit of Pn-Junction Solar Cells. , 2006, , .		3
351	Detailed-balance power conversion limits of nanocrystal-quantum-dot solar cells in the presence of carrier multiplication. Applied Physics Letters, 2006, 89, 123118.	1.5	188
352	Near-field thermophotovoltaic energy conversion. Journal of Applied Physics, 2006, 100, 063704.	1.1	315
353	Mechanisms for Photogeneration and Recombination of Multiexcitons in Semiconductor Nanocrystals:  Implications for Lasing and Solar Energy Conversion. Journal of Physical Chemistry B, 2006, 110, 16827-16845.	1.2	468
354	Implications of the Negative Capacitance Observed at Forward Bias in Nanocomposite and Polycrystalline Solar Cells. Nano Letters, 2006, 6, 640-650.	4.5	217
355	Toward Exceeding the Shockleyâ^'Queisser Limit:  Photoinduced Interfacial Charge Transfer Processes that Store Energy in Excess of the Equilibrated Excited State. Journal of the American Chemical Society, 2006, 128, 8234-8245.	6.6	75
356	Energy, Entropy and Efficiency. , 2006, , 21-34.		2
357	Physical and Technological Aspects of a-Si:H/c-Si Hetero-Junction Solar Cells. , 2006, , .		9
358	Optoelectronic properties of Cr-substituted II–VI semiconductors. Computational Materials Science, 2006, 37, 483-490.	1.4	16
359	Solar conversion efficiency of photovoltaic and photoelectrolysis cells with carrier multiplication absorbers. Journal of Applied Physics, 2006, 100, 074510.	1.1	1,289

ARTICLE IF CITATIONS Survey of Thermophotovoltaic (TPV) Devices., 2006, , 673-738. 25 360 Seven Excitons at a Cost of One: Â Redefining the Limits for Conversion Efficiency of Photons into 4.5 464 Charge Carriers. Nano Letters, 2006, 6, 424-429. Bulk Sensitization of Inorganic Semiconductors with Organic Guest Molecules: Zink Phthalocyanines 363 2 Embedded in μc-Si and ZnSe Host Matrices. , 2006, , . Biomimetische Solarzellen. Nachrichten Aus Der Chemie, 2006, 54, 1072-1077. 364 Evaluation of Bi-W-oxides for visible light photocatalysis. Physica Status Solidi (A) Applications and 365 0.8 73 Materials Science, 2006, 203, 327-335. Surface potential of chalcopyrite films measured by KPFM. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 2571-2580. 0.8 Survey of intermediate band materials based on ZnS and ZnTe semiconductors. Solar Energy Materials 367 3.0 43 and Solar Cells, 2006, 90, 588-596. Studies of coupled charge transport in dye-sensitized solar cells using a numerical simulation tool. 368 14 Solar Energy Materials and Solar Cells, 2006, 90, 1915-1927. Monte Carlo simulation of energy loss and collection of hot charge carriers, first step towards a 369 more realistic hot-carrier solar energy converter. Solar Energy Materials and Solar Cells, 2006, 90, 3.0 24 2107-2128. Enhancing the performance of silicon solar cells via the application of passive luminescence 370 470 conversion layers. Solar Energy Materials and Solar Cells, 2006, 90, 2329-2337. The special features of heat conversion into work in solar cell energy reemission. Russian Journal of 371 4 0.1 Physical Chemistry A, 2006, 80, 1011-1015. Rapid and precise calculations of energy and particle flux for detailed-balance photovoltaic 0.8 26 applications. Solid-State Electronics, 2006, 50, 1400-1405. Quaternary InGaAsSb Thermophotovoltaic Diodes. IEEE Transactions on Electron Devices, 2006, 53, 373 1.6 127 2879-2891. Minimum Effect of Non-Infinitesmal Intermediate Band Width on the Detailed Balance Efficiency of an 374 Intermediate Band Solar Cell., 2006,,. Nanocrystalline Silicon in Amorphous Silicon Carbide Matrix for Si Quantum Dots Superlattice., 375 0 2006, , . Collection Properties of Photovoltaic Fluorescent Systems - Simulations and Experiments. , 2006, , . p-n junction heterostructure device physics model of a four junction solar cell., 2006, 6339, 63. 377 5 Exciton Multiplication and Relaxation Dynamics in Quantum Dots: Applications to Ultra-High 378 Efficiency Solar Photon Conversion., 2006, , .

#	Article	IF	CITATIONS
379	Nanostructured Photovoltaics Materials Fabrication and Characterization. , 2006, , 567-594.		2
381	Response to "Comment on â€~Efficiency limits of photovoltaic fluorescent collectors' [Appl. Phys. Lett. 87, 171101 (2005)]― Applied Physics Letters, 2006, 88, 176102.	1.5	7
382	Comment on "Efficiency limits of photovoltaic fluorescent collectors―[Appl. Phys. Lett. 87, 171101 (2005)]. Applied Physics Letters, 2006, 88, 176101.	1.5	2
383	Photovoltaics on the Threshold of its Global Deployment. , 0, , .		1
384	The photocurrent quantum efficiency dependence on the applied voltage in organic solar cells. Semiconductor Science and Technology, 2007, 22, 1329-1331.	1.0	9
385	Enhanced energy conversion efficiencies of solar cells by multiple carrier excitation. Electronics Letters, 2007, 43, 998.	0.5	7
386	Solar energy conversion. Physics Today, 2007, 60, 37-42.	0.3	484
387	Triple-Junction III–V Based Concentrator Solar Cells: Perspectives and Challenges. Journal of Solar Energy Engineering, Transactions of the ASME, 2007, 129, 258-265.	1.1	27
388	Recent Progress in Inorganic Solar Cells Using Quantum Structures. Recent Patents on Nanotechnology, 2007, 1, 67-73.	0.7	18
389	Growth of Polycrystalline Zn <sub>1-X</sub> Mg <sub>X</sub> O Thin Films Using EtCp <sub>2</sub> Mg and MeCp <sub>2</sub> Mg by Metal Organic Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2007, 46, 5040.	0.8	7
390	Improvement in the conversion efficiency of single-junction SiGe solar cells by intentional introduction of the compositional distribution. Journal of Applied Physics, 2007, 101, 054504.	1.1	7
391	Electroluminescence analysis of high efficiency Cu(In,Ga)Se2 solar cells. Journal of Applied Physics, 2007, 102, 104510.	1.1	93
392	Band-gap renormalization in carbon nanotubes: Origin of the ideal diode behavior in carbon nanotubepâ~'nstructures. Physical Review B, 2007, 75, .	1.1	33
393	Thermodynamics of losses in photovoltaic conversion. Applied Physics Letters, 2007, 91, .	1.5	77
394	Mechanisms of Operation and Degradation in Solution-Processable Organic Photovoltaics. , 2007, , .		5
395	Advances in the Research of the Intermediate Band (IB) Solar Cell. Materials Research Society Symposia Proceedings, 2007, 1031, 1.	0.1	0
396	Energy Band Engineering for Improved Vertical Transport in Quantum Structured III-V p-i-n Solar Cells. Materials Research Society Symposia Proceedings, 2007, 1031, 1.	0.1	0
397	High-Efficiency Multijunction Solar Cells. MRS Bulletin, 2007, 32, 230-235.	1.7	139

#	ARTICLE	IF	CITATIONS
398	Quantum Dots by QED. Advanced Materials Research, 2008, 31, 1-3.	0.3	3
399	Teaching the relation between solar cell efficiency and annual energy yield. European Journal of Physics, 2007, 28, 415-427.	0.3	10
400	Efficient Thin Polymer Solar Cells with Post-Annealing. Materials Research Society Symposia Proceedings, 2007, 1031, 1.	0.1	0
401	Advanced Inorganic Materials for Photovoltaics. MRS Bulletin, 2007, 32, 211-218.	1.7	69
403	The key factors on silicon-based tandem thin film solar cells. , 2007, , .		1
404	Tailored heterojunctions for efficient thin-film organic solar cells: a photoinduced absorption study. Proceedings of SPIE, 2007, , .	0.8	4
405	Thermally assisted electroluminescence: a viable means to generate electricity from solar or waste heat?. , 2007, , .		5
406	Analysis of Optical Absorption in Silicon Nanowire Arrays for Photovoltaic Applications. Nano Letters, 2007, 7, 3249-3252.	4.5	1,129
407	Improving thin-film crystalline silicon solar cell efficiencies with photonic crystals. Optics Express, 2007, 15, 16986.	1.7	623
408	40% efficient metamorphic GalnPâ^•GalnAsâ^•Ge multijunction solar cells. Applied Physics Letters, 2007, 90, 183516.	1.5	1,079
409	Spectral and Dynamical Properties of Multiexcitons in Semiconductor Nanocrystals. Annual Review of Physical Chemistry, 2007, 58, 635-673.	4.8	827
411	GaSbâ^•GaAs type II quantum dot solar cells for enhanced infrared spectral response. Applied Physics Letters, 2007, 90, 173125.	1.5	193
412	Numerical Modeling of the Copper-Indium-Selenium (CIS) based Solar Cell Performance by AMPS-1D. , 2007, , .		4
413	Solar Cells Based on Quantum Dots: Multiple Exciton Generation and Intermediate Bands. MRS Bulletin, 2007, 32, 236-241.	1.7	215
414	Intermediate-band solar cells based on quantum dot supracrystals. Applied Physics Letters, 2007, 91, .	1.5	167
415	Thermodynamic limits of quantum photovoltaic cell efficiency. Applied Physics Letters, 2007, 91, .	1.5	68
416	Hyperbranched PbS and PbSe Nanowires and the Effect of Hydrogen Gas on Their Synthesis. Nano Letters, 2007, 7, 2907-2912.	4.5	155
417	Photoluminescence from Silicon Quantum Dots in Si Quantum Dots/Amorphous SiC Superlattice. Japanese Journal of Applied Physics, 2007, 46, L833-L835.	0.8	74

#	Article	IF	CITATIONS
418	Evaluation of the Limiting Efficiencies of Photovoltaic Converters under Monochromatic Illumination. , 2007, , .		6
419	Reciprocity relation between photovoltaic quantum efficiency and electroluminescent emission of solar cells. Physical Review B, 2007, 76, .	1.1	956
420	Influence of some design parameters on the efficiency of solar cells with down-conversion and down shifting of high-energy photons. Journal of Applied Physics, 2007, 102, 073102.	1.1	47
421	Conduction Band Mediated Electron Transfer Across Nanocrystalline TiO2Surfacesâ€. Journal of Physical Chemistry B, 2007, 111, 6822-6828.	1.2	31
422	Improved model for solar cells with down-conversion and down-shifting of high-energy photons. Journal Physics D: Applied Physics, 2007, 40, 341-352.	1.3	60
423	Correlation effects for highly Cr doped ZnSe. Journal of Physics Condensed Matter, 2007, 19, 466209.	0.7	3
424	Carrier multiplication yields of <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline"&gt; <mml:mrow> <mml:mi>CdSe </mml:mi> </mml:mrow> </mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt; <mml:mrow> <mml:mi>CdTe </mml:mi> </mml:mrow> nanocrystals by trapsignt photolumingsconce spectroscony. Physical Paviou B, 2007, 76</mml:math 	1.1	211
425	PbSe nanocrystal/conducting polymer solar cells with an infrared response to 2 micron. Journal of Materials Research, 2007, 22, 2204-2210.	1.2	102
426	Principles and Applications of Semiconductor Photoelectrochemistry. Progress in Inorganic Chemistry, 2007, , 21-144.	3.0	130
427	Nonradiative Resonant Excitation Transfer from Nanocrystal Quantum Dots to Adjacent Quantum Channels. Nano Letters, 2007, 7, 3443-3451.	4.5	70
428	Alternative Ge Applications. , 2007, , 387-415.		1
430	Device Physics of Polymer:Fullerene Bulk Heterojunction Solar Cells. Advanced Materials, 2007, 19, 1551-1566.	11.1	2,000
431	Microscale radiation in thermophotovoltaic devices—A review. International Journal of Energy Research, 2007, 31, 689-716.	2.2	208
432	Effect of the compositional distribution on the photovoltaic power conversion of SiGe solar cells. Solar Energy Materials and Solar Cells, 2007, 91, 123-128.	3.0	15
433	Luminescent layers for enhanced silicon solar cell performance: Up-conversion. Solar Energy Materials and Solar Cells, 2007, 91, 829-842.	3.0	496
434	Comparative study of electroluminescence from Cu(In,Ga)Se2 and Si solar cells. Thin Solid Films, 2007, 515, 6238-6242.	0.8	96
435	Efficiency of thin film photocells. Optics Communications, 2007, 277, 109-113.	1.0	14
436	Polymer-based solar cells. Materials Today, 2007, 10, 28-33.	8.3	942

ARTICLE IF CITATIONS # Photovoltaics from soluble small molecules. Materials Today, 2007, 10, 34-41. 437 8.3 363 Third-generation photovoltaics. Materials Today, 2007, 10, 42-50. 8.3 439 Advanced solar cell concepts. Energy for Sustainable Development, 2007, 11, 17-23. 2.0 27 Electro-optical characterisation for the control of silicon nanocrystals embedded in SiNx:H films. 440 Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 1554-1559. Photovoltaic effects in InGaN structures with p–n junctions. Physica Status Solidi (A) Applications 441 0.8 36 and Materials Science, 2007, 204, 4288-4291. The potential of III-V semiconductors as terrestrial photovoltaic devices. Progress in Photovoltaics: Research and Applications, 2007, 15, 51-68. 4.4 170 Photosensitization of ZnO Nanowires with CdSe Quantum Dots for Photovoltaic Devices. Nano 443 4.5 935 Letters, 2007, 7, 1793-1798. Directions and materials challenges in high-performance photovoltaics. Jom, 2007, 59, 26-30. 444 445 Materials challenges for terrestrial thin-film photovoltaics. Jom, 2007, 59, 31-36. 0.9 9 Numerical simulation of the limiting efficiency of the graded bandgap solar cell. Renewable Energy, 446 4.3 2007, 32, 21-34. Physical aspects of a-Si:H/c-Si hetero-junction solar cells. Thin Solid Films, 2007, 515, 7475-7480. 447 0.8 145 The influence of cations on charge accumulation in dye-sensitized solar cells. Journal of 64 Electroanalytical Chemistry, 2007, 609, 55-60. Synthesis of highly mismatched alloys using ion implantation and pulsed laser melting. Nuclear 449 0.6 9 Instruments & Methods in Physics Research B, 2007, 261, 1150-1154. Appropriate strategies for determining the photoconversion efficiency of water photoelectrolysis cells: A review with examples using titania nanotube array photoanodes. Solar Energy Materials and Solar Cells, 2008, 92, 374-384. Light trapping, a new approach to spectrum splitting. Solar Energy Materials and Solar Cells, 2008, 92, 451 3.0 51 1570-1578. Optimization of random diffraction gratings in thin-film solar cells using genetic algorithms. Solar Energy Materials and Solar Cells, 2008, 92, 1689-1696. 98 Can up- and down-conversion and multi-exciton generation improve photovoltaics?. Solar Energy 453 3.080 Materials and Solar Cells, 2008, 92, 1541-1546. InGaAs/GaAsSb-interface studies in a tunnel junction of a low band gap tandem solar cell. Thin Solid 454 Films, 2008, 516, 6723-6728.

#	Article	IF	CITATIONS
455	Recent progress in thermodynamics of radiation—exergy of radiation, effective temperature of photon and entropy constant of photon. Science in China Series D: Earth Sciences, 2008, 51, 1096-1109.	0.9	33
456	Colloidal nanocrystal solar cells. Mikrochimica Acta, 2008, 160, 315-325.	2.5	73
457	Analysis of tandem solar cell efficiencies under AM1.5G spectrum using a rapid flux calculation method. Progress in Photovoltaics: Research and Applications, 2008, 16, 225-233.	4.4	248
458	A comparison of theoretical efficiencies of multiâ€junction concentrator solar cells. Progress in Photovoltaics: Research and Applications, 2008, 16, 537-546.	4.4	82
459	Directional selectivity and ultraâ€lightâ€trapping in solar cells. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2831-2843.	0.8	57
460	Detailed balance and reciprocity in solar cells. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2737-2751.	0.8	112
461	Solar cell as a heat engine: energy–entropy analysis of photovoltaic conversion. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2752-2756.	0.8	72
462	Multiple exciton generation in semiconductor nanocrystals: Toward efficient solar energy conversion. Laser and Photonics Reviews, 2008, 2, 377-399.	4.4	134
463	Oriented Nanostructures for Energy Conversion and Storage. ChemSusChem, 2008, 1, 676-697.	3.6	367
464	Design Rules for Donors in Bulkâ€Heterojunction Tandem Solar Cellsï;½Towards 15 % Energyâ€Conversion Efficiency. Advanced Materials, 2008, 20, 579-583.	11.1	502
466	Quantum-dot intermediate-band solar cells with inverted band alignment. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 41, 15-17.	1.3	7
467	Nanostructures for photovoltaics. Materials Science and Engineering Reports, 2008, 62, 175-189.	14.8	206
468	Multiple exciton generation in semiconductor quantum dots. Chemical Physics Letters, 2008, 457, 3-11.	1.2	632
469	Design criteria for optimal photosynthetic energy conversion. Chemical Physics Letters, 2008, 466, 209-213.	1.2	12
470	Photovoltaic technologies. Energy Policy, 2008, 36, 4390-4396.	4.2	172
471	Efficiency variation of the intermediate band solar cell due to the overlap between absorption coefficients. Solar Energy Materials and Solar Cells, 2008, 92, 273-282.	3.0	38
472	Low temperature characterization of the photocurrent produced by two-photon transitions in a quantum dot intermediate band solar cell. Thin Solid Films, 2008, 516, 6919-6923.	0.8	36
473	Elements of the design and analysis of quantum-dot intermediate band solar cells. Thin Solid Films, 2008, 516, 6716-6722.	0.8	106

#	Article	IF	CITATIONS
474	Charge separation in excitonic and bipolar solar cells — A detailed balance approach. Thin Solid Films, 2008, 516, 7144-7148.	0.8	11
475	Detailed balance theory of excitonic and bulk heterojunction solar cells. Physical Review B, 2008, 78, .	1.1	99
476	Quantum Dot Solar Cells. Semiconductor Nanocrystals as Light Harvesters. Journal of Physical Chemistry C, 2008, 112, 18737-18753.	1.5	2,322
477	Space-separated quantum cutting with silicon nanocrystals for photovoltaic applications. Nature Photonics, 2008, 2, 105-109.	15.6	302
478	Nanostructured Absorbers for Multiple Transition Solar Cells. IEEE Transactions on Electron Devices, 2008, 55, 706-711.	1.6	40
479	Highly Efficient CdSe-Sensitized TiO <sub>2</sub> Photoelectrode for Quantum-Dot-Sensitized Solar Cell Applications. Chemistry of Materials, 2008, 20, 6903-6905.	3.2	284
480	FUNDAMENTALS AND APPLICATIONS OF QUANTUM-CONFINED STRUCTURES. Series on Photoconversion of Solar Energy, 2008, , 147-207.	0.2	2
481	Limiting efficiency of an intermediate band solar cell under a terrestrial spectrum. Applied Physics Letters, 2008, 92, .	1.5	63
482	Structure and photoelectrical properties of SiO2/Si/SiO2 single quantum wells prepared under ultrahigh vacuum conditions. Journal of Non-Crystalline Solids, 2008, 354, 2100-2104.	1.5	15
483	Rugate filter for light-trapping in solar cells. Optics Express, 2008, 16, 9332.	1.7	62
484	Solar cell with an intermediate band of finite width. Physical Review B, 2008, 78, .	1.1	43
485	Carrier Multiplication in Semiconductor Nanocrystals: Theoretical Screening of Candidate Materials Based on Band-Structure Effects. Nano Letters, 2008, 8, 3174-3181.	4.5	80
486	Size effects and nanostructured materials for energy applications. Energy and Environmental Science, 2008, 1, 645.	15.6	169
487	A Physically Based Explicit \$J\$– \$V\$ Model of a Solar Cell for Simple Design Calculations. IEEE Electron Device Letters, 2008, 29, 449-451.	2.2	76
488	Observation of the photovoltaics effect from the solar cells using silicon quantum dots superlattice as a light absorption layer. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, ,	0.0	5
490	Small Bandgap Polymers for Organic Solar Cells <i>(Polymer Material Development in the Last 5) Tj ETQq1 1 0.78</i>	4314 rgB <sup>¬</sup>	Г /Qverlock 1 622
491	Evaluation of the efficiency potential of intermediate band solar cells based on thin-film chalcopyrite materials. Journal of Applied Physics, 2008, 103, .	1.1	96
492	Absorption characteristics of a quantum dot array induced intermediate band: Implications for solar cell design. Applied Physics Letters, 2008, 93, 263105.	1.5	135

#	Article	IF	CITATIONS
493	Ultrathin SiO2layers on Si(111): preparation, interface gap states and the influence of passivation. Nanotechnology, 2008, 19, 424020.	1.3	21
494	PV Technology trends and Industry's Role. , 2008, , .		5
495	Optimization of Rugate filters for ultra light-trapping in solar cells. , 2008, , .		0
496	Antimony sulphide thin film as an absorber in chemically deposited solar cells. Journal Physics D: Applied Physics, 2008, 41, 095112.	1.3	24
497	Enhanced Light-trapping in Solar Cells by Directional Selective Optical Filters. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	0
498	Up-and Down-Conversion,and Multi-Exciton Generation for Improving Solar Cells:A Reality Check. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	1
499	Material selection for three level transition using Quantum well structure. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	1
500	Photovoltaics. , 0, , 31-54.		1
501	Energy Conversion Efficiency in Exciton Process for Single and Bulk Heterojunction Organic Solar Cells. Japanese Journal of Applied Physics, 2008, 47, 8859-8867.	0.8	3
502	Ultra-high efficiency solar cells: the path for mass penetration of solar electricity. Electronics Letters, 2008, 44, 943.	0.5	15
503	Light management issues in intermediate band solar cells. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	6
504	Up Conversion for Photovoltaics. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	3
505	Solar Energy Conversion Toward 1 Terawatt. MRS Bulletin, 2008, 33, 355-364.	1.7	305
506	InGaN Thin Films Grown by ENABLE and MBE Techniques on Silicon Substrates. Materials Research Society Symposia Proceedings, 2008, 1068, 1.	0.1	10
507	Growth of InAs quantum dots on GaAsSb for the realization of a quantum dot solar cell. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	1
508	Photovoltaic effect in ultra-thin a-Si/SiO <inf>2</inf> multilayered structures. , 2008, , .		0
509	Carrier multiplication in carbon nanotubes studied by femtosecond pump-probe spectroscopy. Applied Physics Letters, 2008, 92, .	1.5	80
510	Engineering the randomness for enhanced absorption in solar cells. Applied Physics Letters, 2008, 92, 171114.	1.5	77

#	Article	IF	CITATIONS
511	Growth and characterization of GaAs[sub 1â^'x]Sb[sub x] barrier layers for advanced concept solar cells. Journal of Vacuum Science & Technology B, 2008, 26, 1149.	1.3	7
512	Charge generation in polythiophene organic solar cell blend films. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	0
513	Multiexciton Absorption and Multiple Exciton Generation in CdSe Quantum Dots. Physical Review Letters, 2008, 100, 136805.	2.9	49
514	Measurement of an InGaAsP/InGaAs tandem solar cell under GaAs. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	2
515	Finite mobility effects on the radiative efficiency limit of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow><mml:mi>p</mml:mi><mml:mi>n</mml:mi></mml:mrow>-junction solar cells. Physical Review B, 2008, 77, .</mml:math 	1.1	64
516	3D photonic crystals for ultra-light trapping in solar cells. , 2008, , .		3
517	Directional selectivity and light-trapping in solar cells. Proceedings of SPIE, 2008, , .	0.8	4
518	Subband gap photoresponse of nanocrystalline silicon in a metal-oxide-semiconductor device. Journal of Applied Physics, 2008, 104, .	1.1	24
519	Power generation by thermally assisted electroluminescence: like optical cooling, but different. , 2008, , .		1
521	Photovoltaics: Advanced Inorganic Materials. , 2008, , 1-11.		2
523	Restoration Techniques. , 2009, , .		0
524	Enhanced charge-transport in surfactant-free PbSe quantum dot films grown by a laser-assisted spray process. Applied Physics Letters, 2009, 95, 122107.	1.5	6
526	Directional emission in strain-balanced quantum well solar cells. , 2009, , .		2
527	Intermediate band solar cells. , 2009, , .		1
528	Absorption-related efficiency limits of quantum-confined p-i-n intermediate band solar cells. , 2009, , .		0
529	The chemical potential of light in fluorescent solar collectors. Journal of Applied Physics, 2009, 105, 063110.	1.1	17
530	IBPOWER: Intermediate band materials and solar cells for photovoltaics with high efficiency and reduced cost. , 2009, , .		5
531	Practical efficiency limits in organic photovoltaic cells: Functional dependence of fill factor and external quantum efficiency. Applied Physics Letters, 2009, 95, .	1.5	101

ARTICLE IF CITATIONS # Fabrication and performance of a monolithic dye-sensitized TiO2/Cu(In,Ga)Se2 thin film tandem solar 532 1.5 49 cell. Applied Physics Letters, 2009, 94, 173508. Combining solar cell and optical modeling in multijunction systems., 2009, , . Si nanopillar array optimization on Si thin films for solar energy harvesting. Applied Physics Letters, 534 1.5 245 2009, 95, . Photofilling of intermediate bands. Journal of Applied Physics, 2009, 105, . Theoretical investigation on optimum bandgap energies of Ge-Based Ill–V Triple-Junction solar cells 536 0 for long-term energy production on mars., 2009,,. 537 Development of multijunction thin film solar cells., 2009, , . Visible to near infrared conversion in  $Ce\< sup\&gt; 3\&amp; \#x002b; \&lt; / sup\&gt; -Yb\&lt; sup\&gt; 3\&amp; \#x002b; \&lt; / sup\&gt; Co-doped YAG \ ceramics., and the superior of the$ 538 1 2009,,. Two-dimensional GaAs/AlGaAs superlattice structures for solar cell applications: Ultimate efficiency 1.1 estimation. Journal of Applied Physics, 2009, 106, . 540 A GaAs nanowire/P3HT hybrid photovoltaic device. Nanotechnology, 2009, 20, 465205. 1.3 58 InAs/Sb∶GaAs quantum dot solar cells grown by metal organic chemical vapor deposition., 541 2009,,. Non-linear behaviors of dark current slope in P<sup&gt;+&lt;/sup&gt;N GaAs solar cells following 542 3 proton irradiations., 2009,,. Designs of solar voltaic cells based on carbon nano-tubes II., 2009, , . Electronic transport properties of Ti-impurity band in Si. Journal Physics D: Applied Physics, 2009, 42, 544 1.3 37 085110. Prospects of Nanostructure-Based Solar Cells for Manufacturing Future Generations of 545 1.4 Photovoltaic Modules. International Journal of Photoenergy, 2009, 2009, 1-13. Efficiency limits of Si/SiO2 quantum well solar cells from first-principles calculations. Journal of 546 40 1.1 Applied Physics, 2009, 105, 104511. A two junction, four terminal photovoltaic device for enhanced light to electric power conversion 547 33 using a low-cost dichroic mirror. Journal of Renewable and Sustainable Energy, 2009, 1, 013106. Nanostructured photovoltaics for space power. Journal of Nanophotonics, 2009, 3, 031880. 548 0.4 63 549 Can Impurities be Beneficial to Photovoltaics?. Solid State Phenomena, 0, 156-158, 107-114.

#	Article	IF	Citations
550	Small-angle X-ray scattering from nano-Si embedded a-SiC:H deposited by hot-wire chemical vapor deposition. Solid State Sciences, 2009, 11, 1408-1411.	1.5	6
551	Silicon Nanocrystals as an Enabling Material for Silicon Photonics. Proceedings of the IEEE, 2009, 97, 1250-1268.	16.4	74
552	Polymerâ€Fullerene Bulkâ€Heterojunction Solar Cells. Advanced Materials, 2009, 21, 1323-1338.	11.1	3,060
553	Nearâ€Infrared Quantum Cutting for Photovoltaics. Advanced Materials, 2009, 21, 3073-3077.	11.1	435
554	Interface Engineering of Inorganic Thinâ€Film Solar Cells – Materialsâ€5cience Challenges for Advanced Physical Concepts. Advanced Materials, 2009, 21, 4196-4206.	11.1	113
555	Third generation photovoltaics. Laser and Photonics Reviews, 2009, 3, 394-405.	4.4	168
556	Determination of the solar cell junction ideality factor using special trans function theory (STFT). Solar Energy Materials and Solar Cells, 2009, 93, 1423-1426.	3.0	49
557	The detailed analysis of auger effect on the efficiency of intermediate band solar cells. Solar Energy Materials and Solar Cells, 2009, 93, 1913-1922.	3.0	11
558	Comprehensive modeling of optoelectronic nanostructures. Journal of Computational Electronics, 2009, 8, 389-397.	1.3	6
559	What governs the reaction center excitation wavelength of photosystems I and II?. Photosynthesis Research, 2009, 101, 59-67.	1.6	23
560	Enhancing Solar Cell Efficiencies through 1-D Nanostructures. Nanoscale Research Letters, 2009, 4, .	3.1	259
561	Concentrating PV system based on spectral separation of solar radiation. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 375-378.	0.8	41
562	Thinâ€film intermediate band photovoltaics: advanced concepts for chalcopyrite solar cells. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1021-1025.	0.8	22
563	On the origin of the open-circuit voltage of polymer–fullerene solar cells. Nature Materials, 2009, 8, 904-909.	13.3	1,101
564	Directly assembled CdSe quantum dots on TiO2 in aqueous solution by adjusting pH value for quantum dot sensitized solar cells. Electrochemistry Communications, 2009, 11, 2265-2267.	2.3	90
565	Modeling charge carrier collection in multiple exciton generating PbSe quantum dots. Thin Solid Films, 2009, 517, 2438-2442.	0.8	6
566	Post deposition annealing temperature effect on silicon quantum dots embedded in silicon nitride dielectric multilayer prepared by hot-wire chemical vapor deposition. Thin Solid Films, 2009, 517, 3488-3491.	0.8	11
567	Impact ionization and Auger recombination at high carrier temperature. Solar Energy Materials and Solar Cells, 2009, 93, 797-802.	3.0	24

#	Article	IF	CITATIONS
568	Efficient conjugated polymer-ZnSe and -PbSe nanocrystals hybrid photovoltaic cells through full solar spectrum utilization. Solar Energy Materials and Solar Cells, 2009, 93, 1208-1213.	3.0	53
569	Enhancing the performance of solar cells via luminescent down-shifting of the incident spectrum: A review. Solar Energy Materials and Solar Cells, 2009, 93, 1182-1194.	3.0	480
570	Crystalline silicon cell performance at low light intensities. Solar Energy Materials and Solar Cells, 2009, 93, 1471-1481.	3.0	148
571	Intermediate band mobility in heavily titanium-doped silicon layers. Solar Energy Materials and Solar Cells, 2009, 93, 1668-1673.	3.0	49
572	Detailed balance limit for solar cell efficiency. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 159-160, 322-328.	1.7	63
573	Characterization of up-converter layers on bifacial silicon solar cells. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 159-160, 212-215.	1.7	16
574	Solar cells from colloidal nanocrystals: Fundamentals, materials, devices, and economics. Current Opinion in Colloid and Interface Science, 2009, 14, 245-259.	3.4	313
575	Photodriven heterogeneous charge transfer with transition-metal compounds anchored to TiO <sub>2</sub> semiconductor surfaces. Chemical Society Reviews, 2009, 38, 115-164.	18.7	1,064
576	Efficiency Limits of Organic Bulk Heterojunction Solar Cells. Journal of Physical Chemistry C, 2009, 113, 17958-17966.	1.5	215
577	Organic tandem solar cells: A review. Energy and Environmental Science, 2009, 2, 347.	15.6	698
578	Impurity photovoltaic effect in p-i-n structures of undoped GaAs. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2009, 64, 177-181.	0.1	3
579	Modern photoelectric and photochemical methods of solar power conversion. Russian Journal of General Chemistry, 2009, 79, 2543-2555.	0.3	1
580	Current flow and potential efficiency of solar cells based on GaAs and GaSb p-n junctions. Semiconductors, 2009, 43, 644-651.	0.2	22
581	Solar-thermal energy conversion and storage: Conductive heat transfer using bulk graphite. , 2009, , .		4
582	Asymmetric intermediate reflector for tandem micromorph thin film silicon solar cells. Applied Physics Letters, 2009, 94, .	1.5	75
583	Efficient Multiple Exciton Generation Observed in Colloidal PbSe Quantum Dots with Temporally and Spectrally Resolved Intraband Excitation. Nano Letters, 2009, 9, 1217-1222.	4.5	126
584	PbSe Nanocrystal Network Formation during Pyridine Ligand Displacement. ACS Applied Materials & Interfaces, 2009, 1, 244-250.	4.0	64
585	Evaluation of selective energy contact for hot carrier solar cells based on III–V semiconductors. , 2009, , .		10

ARTICLE IF CITATIONS # High Quality Ti-Implanted Si Layers Above Solid Solubility Limit. , 2009, , . 5 586 Current-matched triple-junction solar cell reaching 41.1% conversion efficiency under concentrated 587 1.5 sunlight. Applied Physics Letters, 2009, 94, . Strong 153 μm to NIR-VIS-UV upconversion in Er-doped fluoride glass for high-efficiency solar cells. 588 0.9 142 Journal of the Optical Society of America B: Optical Physics, 2009, 26, 1930. Global optimization of silicon photovoltaic cell front coatings. Optics Express, 2009, 17, 7505. 589 Dispersion, Wave Propagation and Efficiency Analysis of Nanowire Solar Cells. Optics Express, 2009, 590 1.7 86 17, 10399. Absorber and emitter for solar thermo-photovoltaic systems to achieve efficiency exceeding the Shockley-Queisser limit. Optics Express, 2009, 17, 15145. 1.7 404 Optical absorption enhancement in silicon nanowire arrays with a large lattice constant for 592 1.7 412 photovoltaic applications. Optics Express, 2009, 17, 19371. How much can guided modes enhance absorption in thin solar cells?. Optics Express, 2009, 17, 20975. 1.7 Superlinear photovoltaic effect in Si nanocrystals based metal-insulator-semiconductor devices. 594 29 1.5 Applied Physics Letters, 2009, 94, 062108. Distance-Dependent Electron Transfer in Tethered Assemblies of CdS Quantum Dots and 1.5 TiO<sub>2</sub> Nanoparticles. Journal of Physical Chemistry C, 2009, 113, 3139-3149. Intermediate-band photovoltaic solar cell based on ZnTe:O. Applied Physics Letters, 2009, 95, . 596 199 1.5 Model for intermediate band solar cells incorporating carrier transport and recombination. Journal 1.1 69 of Applied Physics, 2009, 105, 064512. Hybrid Polymer-Inorganic Photovoltaic Cells., 2009, , 321-385. 598 8 Materials Availability Expands the Opportunity for Large-Scale Photovoltaics Deployment. Environmental Science & Comp. Technology, 2009, 43, 2072-2077. 599 4.6 1,042 Lanthanide ions as spectral converters for solar cells. Physical Chemistry Chemical Physics, 2009, 11, 600 813 1.3 11081. Visible to near infrared conversion in Ce3+–Yb3+ Co-doped YAG ceramics. Journal of Applied Physics, 180 2009, 106, . 602 Reaching optimal efficiencies using nanosized photoelectric devices. Physical Review B, 2009, 80, . 1.1 105 The spectral variation effects on energy yield of optimized multi-junction solar cell., 2009, , .

		CITATION R	EPORT	
#	Article		IF	Citations
604	Downconversion for solar cells in NaYF4:Er,Yb. Journal of Applied Physics, 2009, 106, .		1.1	189
605	Design guidelines of periodic Si nanowire arrays for solar cell application. Applied Physics L 2009, 95, .	etters,	1.5	167
606	Nanoscale design to enable the revolution in renewable energy. Energy and Environmental 2009, 2, 559.	Science,	15.6	348
607	Extremely Efficient Multiple Electron-Hole Pair Generation in Carbon Nanotube Photodiode 2009, 325, 1367-1371.	s. Science,	6.0	483
608	Nonthermal plasma synthesis of semiconductor nanocrystals. Journal Physics D: Applied Pl 42, 113001.	ıysics, 2009,	1.3	234
609	Ionization energy levels in Mn-doped InxGa1â^'xN alloys. Journal of Applied Physics, 2009,	105, 033704.	1.1	6
610	Computational challenges for nanostructure solar cells. Energy and Environmental Science 944.	, 2009, 2,	15.6	18
611	Surface nanostructure optimization for solar energy harvesting in Si thin film based solar c 2009, , .	ells. ,		16
612	Ferromagnetic Compounds for High Efficiency Photovoltaic Conversion: The Case of AlP:C Review Letters, 2009, 102, 227204.	r. Physical	2.9	48
613	Hot carrier solar cells operating under practical conditions. Journal of Applied Physics, 200	9, 105, .	1.1	107
614	Charge separation and photocurrent polarity-switching at CdS quantum dots assembly in polyelectrolyte interfaced with hole scavengers. Physical Chemistry Chemical Physics, 200	9, 11, 5962.	1.3	32
615	Epitaxial growth of hierarchical PbS nanowires. Journal of Materials Chemistry, 2009, 19, 9	34.	6.7	59
616	Photo-response of Si-rich oxynitride film. , 2009, , .			0
617	Efficient up-conversion by triplet-triplet annihilation. Journal of Physics: Conference Series, 012002.	2009, 185,	0.3	39
618	Charged defects in soft semiconductors and their influence on organic photovoltaics. Soft 2009, 5, 2985.	Matter,	1.2	51
619	A Review of Ultrahigh Efficiency III-V Semiconductor Compound Solar Cells: Multijunction Lower Dimensional, Photonic Up/Down Conversion and Plasmonic Nanometallic Structure 2009, 2, 504-530.	Fandem, s. Energies,	1.6	144
620	Block copolymers for photovoltaics. Energy and Environmental Science, 2009, 2, 1266.		15.6	232
621	Ionization levels of doped sulfur and selenium chalcopyrites. Journal of Applied Physics, 20 073718.	09, 106,	1.1	18

	CITATION REPORT		
Article		IF	CITATIONS
General theoretical considerations on nanowire solar cell designs. Physica Status Solic Applications and Materials Science, 2009, 206, 173-178.	li (A)	0.8	52
A Study on Radiative Transfer in a TiO2 Photoelectrode for Improvement of Dye-Sensit Performance. Journal of Thermal Science and Technology, 2009, 4, 248-259.	ized Solar Cell	0.6	0
Minimizing shadow losses in III-nitride solar cells. Proceedings of SPIE, 2009, , .		0.8	0
Light harvesting in hybrid epitaxial/colloidal nanostructures. , 2009, , .			0
Inverted-opal photonic crystals for ultra light-trapping in solar cells. Proceedings of SP	IE, 2010, , .	0.8	1
New PV conversion phenomena on very high efficiency silicon devices for small footpr (automotive). Proceedings of SPIE, 2010, , .	int cells	0.8	0
The state-of-the-art and future development of the photovoltaic technologies $\hat{a} \in$ "the crystalline to nanostructured and new emerging materials. Journal of Physics: Confere 2010, 253, 012007.	route from nce Series,	0.3	10
Experimental verification of optically optimized CuGaSe <sub>2</sub> top cell for impr chalcopyrite tandems. EPJ Photovoltaics, 2010, 1, 10601.	roving	0.8	10
Comparing The Energy Yield of (III–V) Multi-Junction Cells With Different Numbers C Conference Proceedings, 2010, , .	)f Sub-Cells. AIP	0.3	12
Quantum Dot Solar Cells. , 2010, , 279-322.			1
High-Efficiency Photovoltaic Technology. , 2010, , .			0
Variable electronic load for testing PV performance. Applied Solar Energy (English Trar	nslation of) Tj ETQq1 1 0.7	8431,4 rgB	BT /Qverlock 1

635	Solar fuels: thermodynamics, candidates, tactics, and figures of merit. Dalton Transactions, 2010, 39, 10021.	1.6	156
636	Open-circuit voltage limit caused by recombination through tail states in bulk heterojunction polymer-fullerene solar cells. Applied Physics Letters, 2010, 96, 113301.	1.5	182
637	Dünnschicht-Photovoltaik in Deutschland. Vakuum in Forschung Und Praxis, 2010, 22, 28-34.	0.0	1
638	Semiconductor Quantum Dots and Quantum Dot Arrays and Applications of Multiple Exciton Generation to Third-Generation Photovoltaic Solar Cells. Chemical Reviews, 2010, 110, 6873-6890.	23.0	1,118
639	Polymer–fullerene bulk heterojunction solar cells. Reports on Progress in Physics, 2010, 73, 096401.	8.1	754
640	Organic Bulk-Heterojunction Solar Cells. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1517-1527.	1.9	71

#

622

625

627

629

631

633

634

		CITATION REPORT	
#	Article	IF	CITATIONS
641	Hot-Electron Transfer from Semiconductor Nanocrystals. Science, 2010, 328, 1543-1547.	6.0	775
642	Exciton Fission and Charge Generation via Triplet Excitons in Pentacene/C <sub>60</sub> Bilayers. Journal of the American Chemical Society, 2010, 132, 12698-12703.	6.6	295
643	Structures, Materials, and Scale. , 2010, , 67-120.		3
645	Prospects of Colloidal Nanocrystals for Electronic and Optoelectronic Applications. Chemical Reviews, 2010, 110, 389-458.	23.0	3,708
646	Multiple Exciton Collection in a Sensitized Photovoltaic System. Science, 2010, 330, 63-66.	6.0	763
647	Molecular Semiconductors in Organic Photovoltaic Cells. Chemical Reviews, 2010, 110, 6689-6735.	23.0	839
648	Quantum Dots and Their Multimodal Applications: A Review. Materials, 2010, 3, 2260-2345.	1.3	986
649	Requisites to realize high conversion efficiency of solar cells utilizing carrier multiplication. Solar Energy Materials and Solar Cells, 2010, 94, 1399-1405.	3.0	28
650	Integration of Catalysis with Storage for the Design of Multi-Electron Photochemistry Devices for Solar Fuel. Applied Magnetic Resonance, 2010, 37, 497-503.	0.6	12
651	Light-Harvesting in n-ZnO/p-Silicon Heterojunctions. Journal of Electronic Materials, 2010, 39, 2467-2470.	1.0	11
652	Investigation into Photoconductivity in Single CNF/TiO2-Dye Core–Shell Nanowire Devices. Nanos Research Letters, 2010, 5, 1480-1486.	cale 3.1	16
653	Silicon and Germanium Nanostructures for Photovoltaic Applications: Ab-Initio Results. Nanoscale Research Letters, 2010, 5, 1637-1649.	3.1	41
654	Charge-Transfer States and Upper Limit of the Open-Circuit Voltage in Polymer:Fullerene Organic Solar Cells. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1676-1684.	1.9	71
655	Multiscale Modeling of Dye Solar Cells and Comparison With Experimental Data. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1611-1618.	1.9	24
656	Quantumâ€Ðotâ€Sensitized Solar Cells. ChemPhysChem, 2010, 11, 2290-2304.	1.0	825
657	Functional Materials for Sustainable Energy Technologies: Four Case Studies. ChemSusChem, 2010, 44-58.	3, 3.6	34
658	Estimating the Maximum Attainable Efficiency in Dye ensitized Solar Cells. Advanced Functional Materials, 2010, 20, 13-19.	7.8	458
659	The Intermediate Band Solar Cell: Progress Toward the Realization of an Attractive Concept. Advanc Materials, 2010, 22, 160-174.	ed 11.1	297
#	Article	IF	CITATIONS
-----	--	------	-----------
660	Role of the Charge Transfer State in Organic Donor–Acceptor Solar Cells. Advanced Materials, 2010, 22, 4097-4111.	11.1	631
667	Near infrared downconversion in Pr3+–Yb3+ codoped oxyfluoride glass ceramics. Optical Materials, 2010, 33, 176-179.	1.7	31
668	The effects of recombination lifetime on efficiency and J–V characteristics of InxGa1â^'xN/GaN quantum dot intermediate band solar cell. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2353-2357.	1.3	37
669	Electronic and optical properties of the group IV doped copper gallium chalcopyrites. Thin Solid Films, 2010, 519, 1435-1440.	0.8	21
670	Electron–phonon energy transfer in hot-carrier solar cells. Solar Energy Materials and Solar Cells, 2010, 94, 287-296.	3.0	55
671	Modeling and optimization study of industrial n-type high-efficiency back-contact back-junction silicon solar cells. Solar Energy Materials and Solar Cells, 2010, 94, 568-577.	3.0	49
672	Energy harvesting efficiency of Ill–V triple-junction concentrator solar cells under realistic spectral conditions. Solar Energy Materials and Solar Cells, 2010, 94, 869-877.	3.0	119
673	Angular confinement and concentration in photovoltaic converters. Solar Energy Materials and Solar Cells, 2010, 94, 1393-1398.	3.0	29
674	Detailed balance analysis of solar thermophotovoltaic systems made up of single junction photovoltaic cells and broadband thermal emitters. Solar Energy Materials and Solar Cells, 2010, 94, 2137-2147.	3.0	59
675	Multiple carrier generation in solar cells. Solar Energy Materials and Solar Cells, 2010, 94, 1927-1930.	3.0	17
676	Optical properties of metal–oxide nano-particles embedded in the polyimide layer for photovoltaic applications. Current Applied Physics, 2010, 10, S478-S480.	1.1	9
677	Theory of multiexciton generation in semiconductor nanocrystals. Chemical Physics Letters, 2010, 496, 227-235.	1.2	82
	<pre><mml:math altimg="sil.gif" display="inline" overflow="scroll" xmins:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mstyle< pre=""></mml:mstyle<></mml:mrow></mml:msub></mml:math></pre>		

678

#	Article	IF	CITATIONS
684	Experimental verification of optically optimized CuGaSe2top cell for improving chalcopyrite tandems. EPJ Photovoltaics, 2010, 1, 10601.	0.8	6
685	Spectrally-Selective Photonic Structures for PV Applications. Energies, 2010, 3, 171-193.	1.6	71
686	Complex Nanostructures: Synthesis and Energetic Applications. Energies, 2010, 3, 285-300.	1.6	31
687	Energy harvesting and the future of energy. , 2010, , 822-858.		1
688	Nanoimprint lithography for solar cell texturisation. Proceedings of SPIE, 2010, , .	0.8	11
689	Plasmon-Enhanced Luminescence Useful for Wavelength Shifting in Solar Cells. Materials Science Forum, 0, 636-637, 860-864.	0.3	2
690	Intermediate Band Solar Cells. Advances in Science and Technology, 0, , .	0.2	3
691	Nanoparticles for solar spectrum conversion. Proceedings of SPIE, 2010, , .	0.8	6
692	Silicon solar cells with nano-crystalline silicon down shifter: experiment and modeling. Proceedings of SPIE, 2010, , .	0.8	7
693	Solar-Thermal Energy Conversion and Storage: Conductive Heat Transfer Using Self-Assembled Bulk Graphite. Advances in Science and Technology, 2010, 74, 253-258.	0.2	0
694	Si nanocone array optimization on crystalline Si thin films for solar energy harvesting. Journal Physics D: Applied Physics, 2010, 43, 255101.	1.3	43
695	Spectroscopy and 1μm Luminescence by Visible Quantum Cutting in Pr3+-Yb3+ Codoped Glass. Materials, 2010, 3, 2405-2411.	1.3	24
696	Organic Tandem Solar Cells. , 2010, , 1-5.		1
697	Limiting efficiency of intermediate band solar cells with spectrally selective reflectors. Applied Physics Letters, 2010, 97, 031910.	1.5	14
698	Evaluation of minority carrier lifetime in BaSi <inf>2</inf> as a novel material for earth-abundant high efficiency thin film solar cells. , 2010, , .		1
699	Surface texturing of Si thin film solar cells via low cost periodic nanopillars array to enhance efficiency. , 2010, , .		0
700	Efficiency of a laterally engineered architecture for photovoltaics. , 2010, , .		4
701	Photovoltaic effect for narrow-gap Mott insulators. Physical Review B, 2010, 82, .	1.1	38

#	Article	IF	CITATIONS
702	The efficiency limit of solar cells with molecular absorbers: A master equation approach. Journal of Applied Physics, 2010, 108, 124506.	1.1	22
703	Computational optoelectronics as analysis and design tool. , 2010, , .		0
704	High quality Ti-implanted Si layers above the Mott limit. Journal of Applied Physics, 2010, 107, .	1.1	51
705	Peak efficiency of multijunction photovoltaic systems. , 2010, , .		8
706	Performance analysis of thermophotovoltaic system with an equivalent cut-off blackbody emitter. Journal of Applied Physics, 2010, 108, .	1.1	19
707	Electronic and hole spectra of layered systems of cylindrical rod arrays: Solar cell application. Journal of Applied Physics, 2010, 107, 043706.	1.1	12
708	Diamagnetic shift of the A free exciton in CuGaSe2 single crystals. Applied Physics Letters, 2010, 97, 162101.	1.5	23
709	Promises of advanced multi-junction solar cells for the use in CPV systems. , 2010, , .		11
710	Quantum dot solar cell: Materials that produce two intermediate bands. Journal of Renewable and Sustainable Energy, 2010, 2, 013111.	0.8	20
711	Structural and electrical properties of Cu2O thin films deposited on ZnO by metal organic chemical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 1338-1343.	0.9	19
712	Silicon based solar cells: Research progress and future perspectives. , 2010, , .		3
713	Controlled current matching in small molecule organic tandem solar cells using doped spacer layers. Journal of Applied Physics, 2010, 107, .	1.1	92
714	Band gap dependent thermophotovoltaic device performance using the InGaAs and InGaAsP material system. Journal of Applied Physics, 2010, 108, 084516.	1.1	23
715	Assessing possibilities & limits for thin film solar cells. , 2010, , .		0
716	Embedded indium-tin-oxide nanoelectrodes for efficiency and lifetime enhancement of polymer-based solar cells. Applied Physics Letters, 2010, 96, 153307.	1.5	39
717	Photovoltaic properties of Si nanostructure based solar cells fabricated on quartz. , 2010, , .		1
718	Downconversion for solar cells in <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline"&gt;<mml:mrow><mml:msub><mml:mrow><mml:mtext>YF</mml:mtext></mml:mrow><mml:mn>3 xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow><mml:msup><mml:mrow><mml:mtext>Yb</mml:mtext></mml:mrow><mml:.< td=""><td>31.1</td><td>1&gt;191</td></mml:.<></mml:msup></mml:mrow></mml:mn></mml:msub></mml:mrow></mml:math>	31.1	1>191
719	Physical Review B, 2010, 81, . Lock-in thermography for investigating solar cells and materials. Quantitative InfraRed Thermography Journal, 2010, 7, 147-165.	2.1	5

#	Article	IF	CITATIONS
720	Investigation of theoretical efficiency limit of hot carriers solar cells with a bulk indium nitride absorber. Journal of Applied Physics, 2010, 108, .	1.1	67
721	Detailed balance calculations of multiple exciton generation and Tandem Hybrid solar cells. , 2010, , .		0
722	Area dependent simulation model for the double exponential effect in I(V)-characteristics of solar cells. , 2010, , .		0
723	Practical Factors Lowering Conversion Efficiency of Hot Carrier Solar Cells. Applied Physics Express, 2010, 3, 104301.	1.1	40
724	Reducing carrier escape in the InAs/GaAs quantum dot intermediate band solar cell. Journal of Applied Physics, 2010, 108, .	1.1	156
725	Si quantum dot-sensitized solar cells using Si nanoparticles produced by plasma CVD. , 2010, , .		1
726	PbSe Thin Films in All-Chemically Deposited Solar Cells. Journal of the Electrochemical Society, 2010, 157, D528.	1.3	27
727	Periodic arrays of ridge apertures as a high efficiency coupler for photovoltaic applications. , 2010, , .		0
728	Optical absorption enhancement in silicon nanowire and nanohole arrays for photovoltaic applications. , 2010, , .		9
729	Molecular approaches to third generation photovoltaics: photochemical up-conversion. , 2010, , .		5
730	Enhanced light trapping in thin amorphous silicon solar cells by directionally selective optical filters. , 2010, , .		1
731	The Influence of the 4n2 Light Trapping Factor on Ultimate Solar Cell Efficiency. , 2010, , .		3
732	Wide band gap Gallium Phosphide solar cells for multi-junction solar cell system. , 2010, , .		3
733	Computational Studies of the Interaction between Ruthenium Dyes and Xâ^' and X2â^', X = Br, I, At. Implications for Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2010, 114, 15165-15173.	1.5	25
734	Energetic factors governing injection, regeneration and recombination in dye solar cells with phthalocyanine sensitizers. Energy and Environmental Science, 2010, 3, 1985.	15.6	125
735	Design of 2- and 3-terminal GaInP/GaAs concentrator cells for maximum yearly energy output. , 2010, , .		2
736	Sulfurization studies of the potential thin film solar absorber Cu <inf>2</inf> ZnSnS <inf>4</inf> . , 2010, , .		1
737	Impact Ionization and Auger Recombination Rates in Semiconductor Quantum Dots. Journal of Physical Chemistry C, 2010, 114, 3743-3747.	1.5	29

	CITATION REPORT		
#	Article	IF	CITATIONS
738	Excited states of the free excitons in CuInSe2 single crystals. Applied Physics Letters, 2010, 97, .	1.5	41
739	Novel Si Nanodisk Fabricated by Biotemplate and Defect-Free Neutral Beam Etching for Solar Cell Application. Japanese Journal of Applied Physics, 2010, 49, 04DL16.	0.8	20
740	The detailed balance limit of photochemical energy conversion. Physical Chemistry Chemical Physics, 2010, 12, 422-432.	1.3	36
741	Third generation photovoltaics: Multiple Exciton Generation in colloidal quantum dots, quantum dot of a colloid a co		1
742	Light-to-Electricity Conversion. Graduate Texts in Physics, 2010, , 599-651.	0.1	0
743	Electronic structure of ZnTe:O and its usability for intermediate band solar cell. Applied Physics Letters, 2010, 96, 071903.	1.5	36
744	Toward Designed Singlet Fission: Electronic States and Photophysics of 1,3-Diphenylisobenzofuran. Journal of Physical Chemistry A, 2010, 114, 1457-1473.	1.1	98
745	Singlet Exciton Fission for Solar Cell Applications: Energy Aspects of Interchromophore Coupling. Journal of Physical Chemistry B, 2010, 114, 14223-14232.	1.2	126
746	Comparison of optical absorption in Si nanowire and nanoporous Si structures for photovoltaic applications. Applied Physics Letters, 2010, 96, .	1.5	49

	CHAHON		
#	Article	IF	CITATIONS
758	Multiple Exciton Generation in Single-Walled Carbon Nanotubes. Nano Letters, 2010, 10, 2381-2386.	4.5	142
759	CdSe Nanotube Arrays on ITO via Aligned ZnO Nanorods Templating. Chemistry of Materials, 2010, 22, 64-69.	3.2	45
760	Self-consistent simulation of intermediate band solar cells: Effect of occupation rates on device characteristics. Applied Physics Letters, 2010, 97, 133503.	1.5	60
761	Advances in quantum dot intermediate band solar cells. , 2010, , .		29
762	Enhanced Conversion of Light at TiO2 Photonic Crystals to the Blue of a Stop Band and at TiO2 Random Films Sensitized with Q-CdS: Order and Disorder. Journal of Physical Chemistry C, 2010, 114, 2806-2813.	1.5	35
763	A semi-analytical model for semiconductor solar cells: From detailed balance to practical devices. , 2010, , .		1
764	Hot carrier solar cells: Achievable efficiency accounting for heat losses in the absorber and through contacts. Applied Physics Letters, 2010, 97, .	1.5	117
765	Enhancing InGaN-based solar cell efficiency through localized surface plasmon interaction by embedding Ag nanoparticles in the absorbing layer. Optics Express, 2010, 18, 2682.	1.7	63
766	Light absorption and emission in nanowire array solar cells. Optics Express, 2010, 18, 27589.	1.7	143
767	Optical absorption enhancement in nanopore textured-silicon thin film for photovoltaic application. Optics Letters, 2010, 35, 40.	1.7	64
768	Ultraviolet-blue to near-infrared downconversion of Nd^3+-Yb^3+ couple. Optics Letters, 2010, 35, 220.	1.7	104
769	Multijunction solar cells for conversion of concentrated sunlight to electricity. Optics Express, 2010, 18, A73.	1.7	95
770	Enhanced light trapping in thin-film solar cells by a directionally selective filter. Optics Express, 2010, 18, A133.	1.7	30
771	Resource efficient plasmon-based 2D-photovoltaics with reflective support. Optics Express, 2010, 18, A343.	1.7	24
772	High-efficiency broadband solar cell architectures based on arrays of volumetrically distributed narrowband photovoltaic fibers. Optics Express, 2010, 18, A432.	1.7	16
773	Progress and challenges for next-generation high-efficiency multijunction solar cells. Current Opinion in Solid State and Materials Science, 2010, 14, 131-138.	5.6	146
774	The future of energy – Photovoltaics. Current Opinion in Solid State and Materials Science, 2010, 14, 117-122.	5.6	24
775	Hybrid conjugated polymer/semiconductor photovoltaic cells. Synthetic Metals, 2010, 160, 1-15.	2.1	149

#	Article	IF	CITATIONS
776	Optical Absorption Enhancement in Silicon Nanohole Arrays for Solar Photovoltaics. Nano Letters, 2010, 10, 1012-1015.	4.5	373
777	Ideal diode equation for organic heterojunctions. I. Derivation and application. Physical Review B, 2010, 82, .	1.1	183
778	Low-Cost Inorganic Solar Cells: From Ink To Printed Device. Chemical Reviews, 2010, 110, 6571-6594.	23.0	412
779	Recombination in polymer-fullerene bulk heterojunction solar cells. Physical Review B, 2010, 82, .	1.1	1,698
780	Quantum Photocell: Using Quantum Coherence to Reduce Radiative Recombination and Increase Efficiency. Physical Review Letters, 2010, 104, 207701.	2.9	190
781	Multi-stacked InAs/GaNAs quantum dots with direct Si doping for use in intermediate band solar cell. , 2010, , .		8
782	Fabrication of resonant tunneling structures for selective energy contact of hot carrier solar cell based on III–V semiconductors. , 2010, , .		20
783	Intermediate-band solar cells: Influence of band formation on dynamical processes in InAs/GaAs quantum dot arrays. Physical Review B, 2010, 82, .	1.1	104
784	Plasmonic metallic nanostructures for efficient absorption enhancement in ultrathin CdTe-based photovoltaic cells. Journal Physics D: Applied Physics, 2010, 43, 465101.	1.3	16
786	Defect physics of the kesterite thin-film solar cell absorber Cu2ZnSnS4. Applied Physics Letters, 2010, 96, .	1.5	454
787	Defect physics of <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline"&gt;<mml:mrow><mml:msub><mml:mrow><mml:mtext>CuGaS</mml:mtext></mml:mrow><mml:n Physical Review B, 2010, 81, .</mml:n </mml:msub></mml:mrow></mml:math>	1n <b>12</b> <td>າ<b>l:າ6າ2</b>າ &gt; </td>	າ <b>l:າ6າ2</b> າ >
788	Quantifying intrinsic loss mechanisms in solar cells: Why is power efficiency fundamentally limited?. , 2010, , .		4
789	Toward the Lambertian Limit of Light Trapping in Thin Nanostructured Silicon Solar Cells. Nano Letters, 2010, 10, 4692-4696.	4.5	255
790	High-efficiency crystalline si thin film solar cells with Si nanopillar array textured surfaces. , 2010, , .		4
791	Photoacoustic and photoelectrochemical current spectra of combined CdS/CdSe quantum dots adsorbed on nanostructured TiO2 electrodes, together with photovoltaic characteristics. Journal of Applied Physics, 2010, 108, .	1.1	39
792	Fabrication of InAs/GaAs quantum dot solar cells with enhanced photocurrent and without degradation of open circuit voltage. Applied Physics Letters, 2010, 96, .	1.5	281
793	Transparent silicon solar cells: Design, fabrication, and analysis. , 2010, , .		3
794	Computational studies on the interactions among redox couples, additives and TiO2: implications for dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2010, 12, 14609.	1.3	32

#	Article	IF	Citations
795	Relating the open-circuit voltage to interface molecular properties of donor:acceptor bulk heterojunction solar cells. Physical Review B, 2010, 81, .	1.1	750
796	A Power Control Algorithm Based on MAC Protocol with Directional Antenna. , 2010, , .		0
797	Transient absorption for characterization of intermediate band solar cells. , 2010, , .		0
798	An evaluation of energy-saving technologies for residential purposes. , 2010, , .		14
799	Review of papers on the architecture and operation of microthermophotovoltaic system for MEMS power generation. , 2010, , .		0
800	Hot carrier solar cell efficiency simulation with carrier extraction through non ideal selective contacts. , 2010, , .		0
801	Novel method and system for monitoring CPV cell and module temperature. , 2010, , .		3
802	High-density and well-ordered Si-nanodisk array with controllable band gap energy and high photon absorption coefficient for all-silicon tandem solar cell applications. , 2010, , .		1
803	Developing InP-based solar cells: Time-resolved terahertz measurements of photoconductivity and carrier multiplication efficiencies. , 2010, , .		0
804	Simulation of the Buxton-Clarke model for organic photovoltaic cells. , 2010, , .		2
805	An outline of the synthesis and properties of silicon nanowires. Semiconductor Science and Technology, 2010, 25, 024003.	1.0	98
806	Theory and simulation of organic solar cell model compounds: from atoms to excitons. Physical Chemistry Chemical Physics, 2011, 13, 16247.	1.3	4
807	3D Colloidal photonic crystal fabrication improved by AC fields for frequency conversion enhancement in photovoltaics. , 2011, , .		0
808	Multiple exciton generation in nanocrystal quantum dots – controversy, current status and future prospects. Physical Chemistry Chemical Physics, 2011, 13, 12693.	1.3	70
809	Reduced charge recombination in a co-sensitized quantum dot solar cell with two different sizes of CdSequantum dot. Nanoscale, 2011, 3, 674-677.	2.8	56
810	Charge transfer excitons in low band gap polymer based solar cells and the role of processing additives. Energy and Environmental Science, 2011, 4, 5077.	15.6	66
811	Analysis of semiconductor nanowire arrays for photovoltaics. , 2011, , .		0
812	Low-Temperature Approach to High-Yield and Reproducible Syntheses of High-Quality Small-Sized PbSe Colloidal Nanocrystals for Photovoltaic Applications. ACS Applied Materials & Interfaces, 2011, 3, 553-565.	4.0	54

#	Article	IF	CITATIONS
813	Multi-junction solar cell designs. , 2011, , .		2
814	A carbon-metal junction prepared by CVD technique as X-ray photovoltaic cell. , 2011, , .		Ο
815	Excitons in semiconducting carbon nanotubes: diameter-dependent photoluminescence spectra. Physical Chemistry Chemical Physics, 2011, 13, 14879.	1.3	25
816	Expectations on the very high concentration photovoltaics performance. , 2011, , .		0
817	Analysis of a Bismuth Sulfide/Silicon Junction for Building Thin Film Solar Cells. Journal of the Electrochemical Society, 2011, 158, H741.	1.3	28
818	Value of module efficiency in real operating conditions for low energy cost PV systems. , 2011, , .		1
819	ALD for clean energy conversion, utilization, and storage. MRS Bulletin, 2011, 36, 899-906.	1.7	109
820	Modeled performance of triple junction, double heterostructure p <sup>+</sup> in <sup>+</sup> solar cells. , 2011, , .		0
821	Photoluminescence properties and energy transfer between Eu3+ and Nd3+ in polyborate BaGdB9O16: Eu3+, Nd3+. Journal of Applied Physics, 2011, 109, 053109.	1.1	17
822	Photovoltaic manufacturing: Present status, future prospects, and research needs. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, .	0.9	226
823	Atomic Layer Deposition of Lead Sulfide Quantum Dots on Nanowire Surfaces. Nano Letters, 2011, 11, 934-940.	4.5	84
824	Light Emission from Silicon Nanoparticles and Related Materials. , 2011, , 196-212.		2
825	Effects of reduced dimensionality on the electronic structure and defect chemistry of semiconducting hybrid organic–inorganic PbS solids. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 1970-1985.	1.0	23
826	Quantum well double barrier resonant tunneling structures for selective contacts of hot carrier solar cells. , 2011, , .		6
827	Thickness optimization of organic solar cells by optical transfer matrix. , 2011, , .		8
828	Quantum cutting mechanism in Tb3+-Yb3+ co-doped oxyfluoride glass. Journal of Applied Physics, 2011, 110, .	1.1	44
829	Attachment of CdSe Nanoparticles to TiO <sub>2</sub> via Aqueous Linker-Assisted Assembly: Influence of Molecular Linkers on Electronic Properties and Interfacial Electron Transfer. ACS Applied Materials & Interfaces, 2011, 3, 4242-4253.	4.0	52
830	Compensation-doped silicon for photovoltaic applications. Physical Review B, 2011, 84, .	1.1	6

#	Article	IF	CITATIONS
831	Ultrafast Dynamics of Exciton Fission in Polycrystalline Pentacene. Journal of the American Chemical Society, 2011, 133, 11830-11833.	6.6	394
832	Intermediate-Band Solar Cells Based on InAs/GaAs Quantum Dots. Chinese Physics Letters, 2011, 28, 038401.	1.3	6
833	Near-infrared luminescent and antireflective in SiO2/YVO4:Yb3+ bilayer films for c-Si solar cells. Applied Physics Letters, 2011, 99, .	1.5	13
834	A new analysis for solar cell efficiency: Rigorous electromagnetic approach. , 2011, , .		0
835	Realistic upconverter-enhanced solar cells with non-ideal absorption and recombination efficiencies. Journal of Applied Physics, 2011, 110, .	1.1	70
836	Increase in photocurrent by optical transitions via intermediate quantum states in direct-doped InAs/GaNAs strain-compensated quantum dot solar cell. Journal of Applied Physics, 2011, 109, .	1.1	216
837	Dye-sensitized photovoltaic properties of hydrothermally prepared TiO2 nanotubes. Energy and Environmental Science, 2011, 4, 998.	15.6	49
838	Visible to infrared down conversion in rare-earth doped fluorides for luminescent solar converters. , 2011, , .		1
839	Spongy structure of CdS nanocrystals decorated with dye molecules for semiconductor sensitized solar cells. Journal of Materials Chemistry, 2011, 21, 2883.	6.7	24
840	Organic and Hybrid Solar Cells Based on Small Molecules. Green Energy and Technology, 2011, , 57-114.	0.4	0
842	Direct Fabrication of Uniform and High Density Sub-10-nm Etching Mask Using Ferritin Molecules on Si and GaAs Surface for Actual Quantum-Dot Superlattice. Applied Physics Express, 2011, 4, 015202.	1.1	23
844	Optical absorption characteristic of highly ordered and dense two-dimensional array of silicon nanodiscs. Nanotechnology, 2011, 22, 105301.	1.3	24
845	Transient photoconductivity in polymer bulk heterojunction solar cells: Competition between sweep-out and recombination. Physical Review B, 2011, 83, .	1.1	213
846	Dependences of the optical absorption and photovoltaic properties of CdS quantum dot-sensitized solar cells on the CdS quantum dot adsorption time. Journal of Applied Physics, 2011, 110, .	1.1	25
847	Electrospinning: designed architectures for energy conversion and storage devices. Energy and Environmental Science, 2011, 4, 4761.	15.6	654
848	Thickness Dependence of Plasmonic Charge Carrier Generation in Ultrathin a-Si:H Layers for Solar Cells. ACS Nano, 2011, 5, 6218-6225.	7.3	30
851	III-V compound semiconductor screening for implementing quantum dot intermediate band solar cells. Journal of Applied Physics, 2011, 109, 014313.	1.1	58
852	Upconverter solar cells: materials and applications. Energy and Environmental Science, 2011, 4, 4835.	15.6	344

#	Article	IF	CITATIONS
853	Nanostructured TCOs (ZnO, TiO2, and Beyond). , 2011, , 425-457.		1
854	Strong Enhancement of Solar Cell Efficiency Due to Quantum Dots with Built-In Charge. Nano Letters, 2011, 11, 2311-2317.	4.5	230
855	Mechanism for Singlet Fission in Pentacene and Tetracene: From Single Exciton to Two Triplets. Journal of the American Chemical Society, 2011, 133, 19944-19952.	6.6	397
856	Solar energy enhancement using down-converting particles: A rigorous approach. Journal of Applied Physics, 2011, 109, .	1.1	78
857	Current Challenges in Organic Photovoltaic Solar Energy Conversion. Topics in Current Chemistry, 2011, 312, 175-212.	4.0	27
858	Phase-selective synthesis of bornite nanoparticles. Journal of Materials Chemistry, 2011, 21, 19286.	6.7	27
859	Nonconventional (Non-Silicon-Based) Photovoltaic Materials. Annual Review of Materials Research, 2011, 41, 297-321.	4.3	82
860	Quantum dot based anode and cathode for high voltage tandem photo -electrochemical solar cell. Energy and Environmental Science, 2011, 4, 1874.	15.6	40
861	Engineering the Electronic Band Structure for Multiband Solar Cells. Physical Review Letters, 2011, 106, 028701.	2.9	282
862	Numerical model of current-voltage characteristics and efficiency of GaAs nanowire solar cells. Journal of Applied Physics, 2011, 109, .	1.1	98
864	Multiple Exciton Generation in Semiconductor Quantum Dots. Journal of Physical Chemistry Letters, 2011, 2, 1282-1288.	2.1	373
865	Design guideline of high efficiency crystalline Si thin film solar cell with nanohole array textured surface. Journal of Applied Physics, 2011, 109, .	1.1	47
866	Absorption enhancement analysis of crystalline Si thin film solar cells based on broadband antireflection nanocone grating. Journal of Applied Physics, 2011, 110, .	1.1	33
867	Energy Conversion in Photosynthesis: A Paradigm for Solar Fuel Production. Annual Review of Condensed Matter Physics, 2011, 2, 303-327.	5.2	129
868	Panchromatic engineering for dye-sensitized solar cells. Energy and Environmental Science, 2011, 4, 842-857.	15.6	319
869	A semi-analytical model for semiconductor solar cells. Journal of Applied Physics, 2011, 110, .	1.1	51
870	Pulsed-laser hyperdoping and surface texturing for photovoltaics. MRS Bulletin, 2011, 36, 439-445.	1.7	150
871	An investigation on In <sub>x</sub> Ga <sub>1â^'x</sub> N/GaN multiple quantum well solar cells. Journal Physics D: Applied Physics, 2011, 44, 265103.	1.3	24

	CITATION REPORT		
#	Article	IF	Citations
872	Limiting acceptance angle to maximize efficiency in solar cells. Proceedings of SPIE, 2011, , .	0.8	6
873	Analysis of Quantum Coherent Semiconductor Quantum Dot <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mi>p</mml:mi><mml:mo>â^'</mml:mo><mml:mi>i</mml:mi><mml:mo>â^'</mml:mo><n Photovoltaic Cells. Physical Review Letters. 2011, 106, 048703.</n </mml:math 	ım <b>î:</b> mi>n<	/mml:mi>
874	Feasibility of band gap engineering of pyrite FeS <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:msub><mml:mrow /&gt;<mml:mn>2</mml:mn></mml:mrow </mml:msub>. Physical Review B, 2011, 84, .</mml:math 	1.1	48
875	Broadband near ultra violet sensitization of 1 μm luminescence in Yb3+-doped CeO2 crystal. Journal of Applied Physics, 2011, 110, 073104.	1.1	19
876	Low-bandgap small molecules for near-infrared photovoltaic applications. Journal of Photonics for Energy, 2011, 1, 011102.	0.8	3
877	Near 1 V open circuit voltage InAs/GaAs quantum dot solar cells. Applied Physics Letters, 2011, 98, .	1.5	267
878	Efficiency limit and example of a photonic solar cell. Journal of Applied Physics, 2011, 110, 043104.	1.1	9
879	Detailed balance limit of the efficiency of multilevel intermediate band solar cells. Applied Physics Letters, 2011, 98, .	1.5	100
880	Impact of Cu/III ratio on the near-surface defects in polycrystalline CuGaSe2 thin films. Applied Physics Letters, 2011, 98, 112105.	1.5	18
881	Incorporation of hydrogen in CuInSe2: Improvements of the structure. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, 051201.	0.9	6
882	Diketopyrrolopyrrole-Based ï€-Bridged Donor–Acceptor Polymer for Photovoltaic Applications. ACS Applied Materials & Interfaces, 2011, 3, 3874-3883.	4.0	43
883	Effect of Excitons in AlGaAs/GaAs Superlattice Solar Cells. Japanese Journal of Applied Physics, 2011, 50, 052302.	0.8	4
885	Photovoltaic Cells. Green Energy and Technology, 2011, , 53-81.	0.4	3
886	First-principles study of the band structure and optical absorption of CuGaS <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:msub><mml:mrow /&gt;<mml:mn>2</mml:mn></mml:mrow </mml:msub>. Physical Review B, 2011, 84, .</mml:math 	1.1	74
887	High Photoelectric Conversion Efficiency of Metal Phthalocyanine/Fullerene Heterojunction Photovoltaic Device. International Journal of Molecular Sciences, 2011, 12, 476-505.	1.8	82
888	Thermodynamic efficiency limit of excitonic solar cells. Physical Review B, 2011, 83, .	1.1	150
889	Handbook of Transparent Conductors. , 2011, , .		271
890	A silicon-based metamaterial for light-to-electricity conversion. , 2011, , .		0

#	Article	IF	CITATIONS
891	Fundamental limits in the external quantum efficiency of single nanowire solar cells. Applied Physics Letters, 2011, 99, 263102.	1.5	45
892	The molecular nature of photovoltage losses in organic solar cells. Chemical Communications, 2011, 47, 3702.	2.2	122
893	First-Principles Investigation on Electronic Properties of Quantum Dot-Sensitized Solar Cells Based on Anatase TiO2 Nanotubes. Journal of Physical Chemistry C, 2011, 115, 20307-20315.	1.5	36
895	Photocurrent generation by direct electron transfer using photosynthetic reaction centres. Smart Materials and Structures, 2011, 20, 094019.	1.8	32
896	Recent developments in solar water-splitting photocatalysis. MRS Bulletin, 2011, 36, 17-22.	1.7	259
897	Performance of a split-spectrum photovoltaic device operating under time-varying spectral conditions. Journal of Applied Physics, 2011, 109, 074909.	1.1	18
898	Solar Energy Conversion and Environmental Remediation Using Inorganic Semiconductor–Liquid Interfaces: The Road Traveled and the Way Forward. Journal of Physical Chemistry Letters, 2011, 2, 1301-1309.	2.1	75
899	Thermodynamics of zinc insertion in CuGaS2:Ti, used as a modulator agent in an intermediate-band photovoltaic material. Computational and Theoretical Chemistry, 2011, 975, 134-137.	1.1	10
900	Assessment of the composition of Silicon-Rich Oxide films for photovoltaic applications by optical techniques. Energy Procedia, 2011, 10, 28-32.	1.8	1
901	Application of photoluminescence and electroluminescence techniques to the characterization of intermediate band solar cells. Energy Procedia, 2011, 10, 117-121.	1.8	6
902	Charge transfer from CdTe quantum dots into a CdS thin layer. Energy Procedia, 2011, 10, 225-231.	1.8	0
903	Highly efficient energy transfer in Pr^3+, Yb^3+ codoped CaF_2 for luminescent solar converters. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1760.	0.9	29
904	Optical properties of nanostructured materials: aÂreview. Journal of Nanophotonics, 2011, 5, 052502.	0.4	112
905	Increasing photocell power by quantum coherence induced by external source. Physical Review A, 2011, 84, .	1.0	15
906	Electron-rich heteroaromatic conjugated polypyridine ruthenium sensitizers for dye-sensitized solar cells. Dalton Transactions, 2011, 40, 12421.	1.6	70
907	Organic solar cells: A new look at traditional models. Energy and Environmental Science, 2011, 4, 4410.	15.6	399
908	First-principles electronic structure and relative stability of pyrite and marcasite: Implications for photovoltaic performance. Physical Review B, 2011, 83, .	1.1	122
909	Screened hybrid and self-consistent <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline"&gt;<mml:mrow><mml:mi mathvariant="italic"&gt;GW</mml:mi </mml:mrow></mml:math> calculations of cadmium/magnesium indium sulfide materials. Physical Review B, 2011, 83, .	1.1	16

#	Article	IF	CITATIONS
910	Interactions of the N3 dye with the iodide redox shuttle: quantum chemical mechanistic studies of the dye regeneration in the dye-sensitized solar cell. Physical Chemistry Chemical Physics, 2011, 13, 15148.	1.3	28
911	Theoretical studies of dye-sensitised solar cells: from electronic structure to elementary processes. Energy and Environmental Science, 2011, 4, 4473.	15.6	187
912	Experimental observation of extremely weak optical scattering from an interlocking carbon nanotube array. Applied Optics, 2011, 50, 1850.	2.1	47
913	Energy Conversion Efficiency of a Novel Hybrid Solar System for Photovoltaic, Thermoelectric, and Heat Utilization. IEEE Transactions on Energy Conversion, 2011, 26, 662-670.	3.7	184
914	Long-Wavelength Sensitization of TiO2by Ruthenium Diimine Compounds with Low-Lying π* Orbitals. Langmuir, 2011, 27, 14522-14531.	1.6	35
915	Modal analysis of enhanced absorption in silicon nanowire arrays. Optics Express, 2011, 19, A1067.	1.7	126
916	Optimal design of aperiodic, vertical silicon nanowire structures for photovoltaics. Optics Express, 2011, 19, A1148.	1.7	90
917	Quantum cutting in Li (770 nm) and Yb (1000 nm) co-dopant emission bands by energy transfer from the ZnO nano-crystalline host. Optics Express, 2011, 19, 15955.	1.7	26
918	Detailed balance model for intermediate band solar cells with photon conservation. Optics Express, 2011, 19, 16927.	1.7	11
919	Enhanced optical absorption in nanopatterned silicon thin films with a nano-cone-hole structure for photovoltaic applications. Optics Letters, 2011, 36, 1713.	1.7	68
920	Broadband absorption enhancement in randomly positioned silicon nanowire arrays for solar cell applications. Optics Letters, 2011, 36, 1884.	1.7	82
921	Incorporation of graphene in quantum dot sensitized solar cells based on ZnO nanorods. Chemical Communications, 2011, 47, 6084.	2.2	82
922	Coherent light trapping in thin-film photovoltaics. MRS Bulletin, 2011, 36, 453-460.	1.7	84
923	Hot carrier dynamics in InGaAs/GaAsP quantum well solar cells. , 2011, , .		16
924	Three-Dimensional Photonic Crystal Fluorinated Tin Oxide (FTO) Electrodes: Synthesis and Optical and Electrical Properties. ACS Applied Materials & Interfaces, 2011, 3, 1101-1108.	4.0	44
925	Optical Properties of Doped Silicon Quantum Dots with Crystalline and Amorphous Structures. Journal of Physical Chemistry C, 2011, 115, 19529-19537.	1.5	45
926	Charge Transfer States in Organic Donor–Acceptor Solar Cells. Semiconductors and Semimetals, 2011, 85, 261-295.	0.4	18
927	Photocurrent Generation in Organic Solar Cells. Semiconductors and Semimetals, 2011, 85, 297-330.	0.4	7

#		IF	CITATION
928	Enhancement of Si-Based Solar Cell Efficiency via Nanostructure Integration. Green Energy and Technology, 2011, , 3-55.	0.4	0
929	Will we exceed 50% efficiency in photovoltaics?. Journal of Applied Physics, 2011, 110, . Compositional dependence of structural and electronic properties of Cu <mml:math< td=""><td>1.1</td><td>184</td></mml:math<>	1.1	184
930	xmins:mml= http://www.w3.org/1998/Math/Math/ML display="inline">< mml:mrow>< mml:msub>< mml:mrow /> <mml:mrow>&lt; mml:mn&gt;2</mml:mrow> ZnSn(S,Se) <mml:r xmlns:mml="http://www.w3.org/1998/Math/Math/ML" display="inline"&gt;&lt; mml:mrow&gt;</mml:r 	nath	399
931	A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 1840-1856.	1.6	171
932	On Voltage, Photovoltage, and Photocurrent in Bulk Heterojunction Organic Solar Cells. Journal of Physical Chemistry Letters, 2011, 2, 1950-1964.	2.1	153
933	Quantum dot solar cells: Effective conversion of IR radiation due to inter-dot n-doping. , 2011, , .		1
934	Insulator-to-Metal Transition in Sulfur-Doped Silicon. Physical Review Letters, 2011, 106, 178701.	2.9	167
935	Silicon solar cell production. Computers and Chemical Engineering, 2011, 35, 1439-1453.	2.0	95
936	Energy cost of materials: materials for thin-film photovoltaics as an example. , 0, , 48-60.		0
937	Direct Solar Energy. , 2011, , 333-400.		25
938	Semiconductor Superlattice-Based Intermediate-Band Solar Cells. , 2011, , .		0
939	Future concepts for photovoltaic energy conversion. , 0, , 238-256.		4
940	Concentrating and multijunction photovoltaics. , 0, , 257-271.		0
941	Engineering natural photosynthesis. , 0, , 365-378.		2
942	Relation Between Nanomorphology and Performance of Polymer-Based Solar Cells. , 0, , .		1
943	Direct solar energy conversion with photovoltaic devices. , 0, , 216-237.		1
944	Porphyrin Based Dye Sensitized Solar Cells. , 0, , .		4
945	Effect of Ga/Cu Ratio on Polycrystalline Thin Film Solar Cell. Advances in OptoElectronics, 2011, 2011, 1-6.	0.6	5

		CITATION REPORT		
#	Article		IF	CITATIONS
946	Detailed balance limit of silicon nanowire and nanohole array solar cells. Proceedings of	f SPIE, 2011, , .	0.8	6
948	Modeling and calculation of light absorption in silicon/metal nanocomposites. Journal c Conference Series, 2011, 274, 012114.	of Physics:	0.3	0
950	Texturing of crystalline Si thin film solar cells via nanostructure to boost efficiency. Inte Journal of Nanoparticles, 2011, 4, 284.	rnational	0.1	1
951	Study of spectrum-splitting solar photovoltaic system. Proceedings of SPIE, 2011, , .		0.8	2
952	Upconversion of 1.54 <i>μ</i> m radiation in Er <sup>3+</sup> doped fluoride-based m solar cell with improved efficiency. EPJ Photovoltaics, 2011, 2, 20601.	naterials for c-Si	0.8	17
953	Estimation of the Influence of Fresnel Lens Temperature on Energy Generation of a Cor Photovoltaic System. AIP Conference Proceedings, 2011, , .	ncentrator	0.3	4
954	Sensitized <scp><scp>Yb<sup>3+</sup></scp></scp> Luminescence of <scp><scp>Eu<sup>3+</sup>/Yb<sup>3+</sup></scp></scp> odoped Fluorosilica Journal of the American Ceramic Society, 2012, 95, 1042-1047.	te Glass Ceramics.	1.9	9
955	Efficiency enhancement in organic solar cells with ferroelectric polymers. Nature Mater 296-302.	ials, 2011, 10,	13.3	482
956	Towards the intermediate band. Nature Photonics, 2011, 5, 137-138.		15.6	69
957	Neural optoelectronic interface. Nature Photonics, 2011, 5, 138-138.		15.6	2
958	Studies on Cu2ZnSnS4 (CZTS) absorber layer using different stacking orders in precurs Solar Energy Materials and Solar Cells, 2011, 95, 3202-3206.	or thin films.	3.0	253
959	Intermediate band position modulated by Zn addition in Ti doped CuGaS2. Thin Solid Fi 7517-7521.	ilms, 2011, 519,	0.8	20
960	SnS thin-films by RF sputtering at room temperature. Thin Solid Films, 2011, 519, 7421	7424.	0.8	224
961	Chemically deposited thin films of PbSe as an absorber component in solar cell structur Films, 2011, 519, 7432-7437.	res. Thin Solid	0.8	44
962	Formation of CuSbS2 and CuSbSe2 thin films via chalcogenisation of Sb–Cu metal p Solid Films, 2011, 519, 7438-7443.	recursors. Thin	0.8	119
963	Progress in light harvesting and charge injection of dye-sensitized solar cells. Materials Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1142-1160.	Science and	1.7	128
964	Considerations of resource availability in technology development strategies: The case photovoltaics. Resources, Conservation and Recycling, 2011, 56, 56-65.	study of	5.3	105
965	ZnO:Al-based recombination layers for polymer tandem solar cells: Influence of acidic o poly(3,4-ethylenedioxythiophene):poly(styrenesulfonate) formulations. Organic Electro 2071-2075.	r pH-neutral onics, 2011, 12,	1.4	6

#	Article	IF	CITATIONS
966	Simulation of IPV effect in In-doped c-Si with optimized indium concentration and layer thickness. Physica B: Condensed Matter, 2011, 406, 4221-4226.	1.3	12
967	Dark current characteristics of InAs/GaNAs strain-compensated quantum dot solar cells. Physica E: Low-Dimensional Systems and Nanostructures, 2011, 44, 390-393.	1.3	14
968	Coming attractions for semiconductor quantum dots. Materials Today, 2011, 14, 382-387.	8.3	86
969	Theoretical Investigation of a Dye Solar Cell Wrapped Around an Optical Fiber. IEEE Journal of Quantum Electronics, 2011, 47, 1214-1221.	1.0	23
970	Compound Semiconductor Nanowire Solar Cells. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1033-1049.	1.9	45
971	Optimal Filling of the Intermediate Band in Idealized Intermediate-Band Solar Cells. IEEE Transactions on Electron Devices, 2011, 58, 2559-2565.	1.6	67
972	Synthesis of near-infrared silver-indium-sulfide (AgInS2) quantum dots as heavy-metal free photosensitizer for solar cell applications. Chemical Physics Letters, 2011, 515, 254-257.	1.2	51
973	Conducting polymer-based counter electrode for a quantum-dot-sensitized solar cell (QDSSC) with a polysulfide electrolyte. Electrochimica Acta, 2011, 57, 277-284.	2.6	128
974	The GrÃæel Cell: Where Next?. Journal of Physical Chemistry Letters, 2011, 2, 1861-1867.	2.1	256
975	Peak External Photocurrent Quantum Efficiency Exceeding 100% via MEG in a Quantum Dot Solar Cell. Science, 2011, 334, 1530-1533.	6.0	1,511
976	Colloidal Quantum Dot Photovoltaics: A Path Forward. ACS Nano, 2011, 5, 8506-8514.	7.3	327
977	First principles scheme to evaluate band edge positions in potential transition metal oxide photocatalysts and photoelectrodes. Physical Chemistry Chemical Physics, 2011, 13, 16644.	1.3	380
978	Molecular Design and Ordering Effects in π-Functional Materials for Transistor and Solar Cell Applications. Journal of the American Chemical Society, 2011, 133, 20009-20029.	6.6	1,338
979	Cavity Design and Optical Control. Green Energy and Technology, 2011, , 101-127.	0.4	0
980	PH-Controlled Construction of Cu(I) Coordination Polymers: In Situ Transformation of Ligand, Network Topologies, and Luminescence and UV–vis-NIR Absorption Properties. Inorganic Chemistry, 2011, 50, 11403-11411.	1.9	56
981	Synthesis of Monoclinic and Tetragonal Chalcocite Nanoparticles by Iron-Induced Stabilization. Chemistry of Materials, 2011, 23, 5491-5495.	3.2	36
982	Semiconductor nanostructure-based photovoltaic solar cells. Nanoscale, 2011, 3, 2430.	2.8	78
983	Electronic and surface properties of PbS nanoparticles exhibiting efficient multiple exciton generation. Physical Chemistry Chemical Physics, 2011, 13, 20275.	1.3	76

#	Article	IF	CITATIONS
984	Synthesis of Cu <sub>2</sub> ZnSnS <sub>4</sub> Nanocrystallines by a Hydrothermal Route. Japanese Journal of Applied Physics, 2011, 50, 065003.	0.8	14
985	Broadband Light-Induced Absorbance Change in Multilayer Graphene. Nano Letters, 2011, 11, 1540-1545.	4.5	92
986	Semiconductor Nanocrystal Quantum Dots as Solar Cell Components and Photosensitizers: Material, Charge Transfer, and Separation Aspects of Some Device Topologies. Journal of Physical Chemistry Letters, 2011, 2, 1879-1887.	2.1	189
987	Estimation of the ultimate efficiency of a three-pin solar cell based on the GaAs/Si heterostructure. Optoelectronics, Instrumentation and Data Processing, 2011, 47, 482-484.	0.2	0
988	Comparing Photosynthetic and Photovoltaic Efficiencies and Recognizing the Potential for Improvement. Science, 2011, 332, 805-809.	6.0	1,369
989	Characterization of nanostructured hybrid and organic solar cells by impedance spectroscopy. Physical Chemistry Chemical Physics, 2011, 13, 9083.	1.3	1,084
990	Biomimetic strategies for solar energy conversion: a technical perspective. Energy and Environmental Science, 2011, 4, 3834.	15.6	69
991	Fluorine Substituted Conjugated Polymer of Medium Band Gap Yields 7% Efficiency in Polymerâ^'Fullerene Solar Cells. Journal of the American Chemical Society, 2011, 133, 4625-4631.	6.6	1,463
992	Sustainability and renewable energies – a critical look at photovoltaics. Physica Status Solidi - Rapid Research Letters, 2011, 5, 318-323.	1.2	15
993	Simulation of dye solar cells: through and beyond one dimension. Journal of Computational Electronics, 2011, 10, 424-436.	1.3	24
994	Facile-chelating amine-assisted synthesis of β-In2S3 nanostructures from a new single-source precursor derived from S-methyl dithiocarbazate. Journal of Nanoparticle Research, 2011, 13, 1889-1896.	0.8	9
995	Core–shell nanophosphor with enhanced NIR–visible upconversion as spectrum modifier for enhancement of solar cell efficiency. Journal of Nanoparticle Research, 2011, 13, 6837-6846.	0.8	43
996	Temperature dependence of open-circuit voltage and recombination processes in polymer–fullerene based solar cells. Solar Energy Materials and Solar Cells, 2011, 95, 2131-2135.	3.0	49
997	Intermediate-band solar cells based on dilute alloys and quantum dots. Frontiers of Optoelectronics in China, 2011, 4, 2-11.	0.2	6
998	Recent progress in the numerical modeling for organic thin film solar cells. Science China: Physics, Mechanics and Astronomy, 2011, 54, 375-387.	2.0	31
999	Rapid thermal annealing and crystallization mechanisms study of silicon nanocrystal in silicon carbide matrix. Nanoscale Research Letters, 2011, 6, 129.	3.1	42
1000	Effective harvesting, detection, and conversion of IR radiation due to quantum dots with built-in charge. Nanoscale Research Letters, 2011, 6, 584.	3.1	22
1001	Development of ultraâ€ŧhin tunneling oxides and Si/SiO <sub>2</sub> nanostructures for the application in silicon solar cells. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 612-615.	0.8	4

#	Article	IF	CITATIONS
1002	Sensitization mechanisms of 1 µm luminescence in Tb <sup>3+</sup> –Yb <sup>3+</sup> coâ€doped bor glasses. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1827-1832.	ate 0.8	3
1003	<i>Ab initio</i> study of GaN periodically substituted by transition metal for intermediate band materials. Physica Status Solidi (B): Basic Research, 2011, 248, 964-968.	0.7	5
1004	Fundamental losses in solar cells. Progress in Photovoltaics: Research and Applications, 2011, 19, 286-293.	4.4	443
1005	Band gapâ€voltage offset and energy production in nextâ€generation multijunction solar cells. Progress in Photovoltaics: Research and Applications, 2011, 19, 797-812.	4.4	247
1006	Recent results for singleâ€ <del>j</del> unction and tandem quantum well solar cells. Progress in Photovoltaics: Research and Applications, 2011, 19, 865-877.	4.4	66
1007	Fourâ€junction spectral beamâ€splitting photovoltaic receiver with high optical efficiency. Progress in Photovoltaics: Research and Applications, 2011, 19, 61-72.	4.4	98
1008	Structural and Electronic Properties of Semiconductorâ€Sensitized Solarâ€Cell Interfaces. Advanced Functional Materials, 2011, 21, 4663-4667.	7.8	131
1009	Rareâ€Earth Ion Doped Upâ€Conversion Materials for Photovoltaic Applications. Advanced Materials, 2011, 23, 2675-2680.	11.1	465
1010	Solutionâ€Processed Nanocrystal Quantum Dot Tandem Solar Cells. Advanced Materials, 2011, 23, 3144-3148.	11.1	128
1011	Assessing Possibilities and Limits for Solar Cells. Advanced Materials, 2011, 23, 2870-2876.	11.1	122
1012	Practical Roadmap and Limits to Nanostructured Photovoltaics. Advanced Materials, 2011, 23, 5712-5727.	11.1	160
1013	Chalcopyrite Semiconductors for Quantum Well Solar Cells. Advanced Energy Materials, 2011, 1, 1109-1115.	10.2	7
1017	CdS quantum-dot-sensitized Zn2SnO4 solar cell. Electrochimica Acta, 2011, 56, 4902-4906.	2.6	37
1018	Theoretical study on InxGa1â^'xN/GaN quantum dots solar cell. Physica B: Condensed Matter, 2011, 406, 73-76.	1.3	42
1019	Impurity photovoltaic effect in silicon solar cell doped with sulphur: A numerical simulation. Physica B: Condensed Matter, 2011, 406, 1773-1777.	1.3	20
1020	Modeling the ultimate efficiency of polymer solar cell using Marcus theory of electron transfer. Organic Electronics, 2011, 12, 190-194.	1.4	24
1021	Parameters extraction from commercial solar cells l–V characteristics and shunt analysis. Applied Energy, 2011, 88, 2239-2244.	5.1	101
1022	Efficient quantum dot-sensitized solar cell with polystyrene-modified TiO2 photoanode and with guanidine thiocyanate in its polysulfide electrolyte. Journal of Power Sources, 2011, 196, 6595-6602.	4.0	37

# 1023	ARTICLE Infrared, visible and ultraviolet absorptions of transition metal doped ZnS crystals with	IF 1.4	Citations
1024	Ytterbium sensitization in KY3F10: Pr3+, Yb3+ for silicon solar cells efficiency enhancement. Optical Materials, 2011, 33, 1028-1031.	1.7	50
1025	Downconversion for the Er3+, Yb3+ couple in KPb2Cl5—A low-phonon frequency host. Journal of Luminescence, 2011, 131, 608-613.	1.5	55
1026	Effect of excitons on the absorption in the solar-cell with AlGaAs/GaAs superlattice grown by molecular beam epitaxy. Journal of Crystal Growth, 2011, 323, 504-507.	0.7	10
1027	Charge yield potential of indoor-operated solar cells incorporated into Product Integrated Photovoltaic (PIPV). Renewable Energy, 2011, 36, 642-647.	4.3	84
1028	Abundant non-toxic materials for thin film solar cells: Alternative to conventional materials. Renewable Energy, 2011, 36, 2753-2758.	4.3	97
1029	Solar photovoltaic electricity: Current status and future prospects. Solar Energy, 2011, 85, 1580-1608.	2.9	810
1030	Colloidal quantum dot solar cells. Solar Energy, 2011, 85, 1264-1282.	2.9	246
1031	Comparative study of Cu2ZnSnS4 film growth. Solar Energy Materials and Solar Cells, 2011, 95, 239-244.	3.0	179
1032	What limits the efficiency of chalcopyrite solar cells?. Solar Energy Materials and Solar Cells, 2011, 95, 1471-1476.	3.0	188
1033	Concepts of inorganic solid-state nanostructured solar cells. Solar Energy Materials and Solar Cells, 2011, 95, 1527-1536.	3.0	91
1034	Efficient near-infrared downconversion in GdVO4:Dy3+ phosphors for enhancing the photo-response of solar cells. Solar Energy Materials and Solar Cells, 2011, 95, 1590-1593.	3.0	43
1035	Experimental analysis of upconversion with both coherent monochromatic irradiation and broad spectrum illumination. Solar Energy Materials and Solar Cells, 2011, 95, 1960-1963.	3.0	65
1036	New Hamiltonian for a better understanding of the quantum dot intermediate band solar cells. Solar Energy Materials and Solar Cells, 2011, 95, 2095-2101.	3.0	45
1037	Highly efficient solar cells using hot carriers generated by two-step excitation. Solar Energy Materials and Solar Cells, 2011, 95, 2638-2644.	3.0	24
1038	Semiconductor solar cells: Recent progress in terrestrial applications. Superlattices and Microstructures, 2011, 49, 337-364.	1.4	125
1039	Effect of Zn incorporation into CuInS2 solar cell absorbers on microstructural and electrical properties. Journal of Applied Physics, 2011, 110, .	1.1	13
1040	Enhanced Si thin film solar cells short-circuit current with rational-designed Si nano-pillar array surface texturing. , 2011, , .		0

		CITATION RE	IPORT	
#	Article		IF	Citations
1041	Effects of non-ideal energy selective contacts and experimental carrier cooling rate on performance of an indium nitride based hot carrier solar cell. Applied Physics Letters, 2	the 011, 99, .	1.5	23
1042	The scope to improve the efficiency of solar-powered reverse osmosis. Desalination and Treatment, 2011, 35, 14-32.	d Water	1.0	13
1043	Detailed balance model for intermediate band solar cells with photon conservation. , 2	011,,.		2
1044	Si/Si <inf>1−x</inf> Ge <inf>x</inf> nanopillar superlattice solar cell: A novel na solar cell for overcoming the Shockley-Queisser limit. , 2011, , .	nostructured		0
1045	High-efficiency Si-nanowire photovoltaic devices with optimal tip head design. , 2011, ,	, <b>.</b>		0
1046	Temperature-dependent measurements of an inverted metamorphic multijunction (IMI 2011, , .	M) solar cell. ,		26
1047	Preparation and Properties of Cu2ZnSnS4Absorber and Cu2ZnSnS4/Amorphous Silicon Cell. Applied Physics Express, 2011, 4, 074101.	ו Thin-Film Solar	1.1	39
1048	Hyrbid advanced concept solar cells. , 2011, , .			1
1049	Synthesis and Characterization of Ultrathin Si:SiO2 Thin Films for Photovoltaic Applica	tions. , 2011, , .		0
1050	Tunable Hot-Electron Transfer Within a Single Core-Shell Nanowire. Physical Review Let 156802.	tters, 2011, 107,	2.9	7
1051	Beyond the Yablonovitch limit: Trapping light by frequency shift. Applied Physics Letter 071107.	<sup>.</sup> s, 2011, 98,	1.5	19
1052	Optimal lateral splitting of the AM1.5 solar spectrum for a mono-Si and CdTe two cell I .	PV array. , 2011, ,		0
1053	Thermodynamic limits of hybrid photovoltaic systems using multiple junction solar cell transitions at intermediate band. , 2011, , .	s with carrier		0
1054	Ultrafast dynamics of carrier multiplication in quantum dots. Physical Review B, 2011,	84,.	1.1	7
1055	Fabrication of polymer solar cells by magnetic field disposal. , 2011, , .			0
1056	Single axis tracking and fix-tilt performance of C-SI systems in the Italian Alpine region.	,2011,,.		2
1057	A hot-carrier solar cell with optical energy selective contacts. Applied Physics Letters, 2	.011, 99, .	1.5	44
1058	A comparison of 3 <sup>rd</sup> generation solar cell efficiencies using the transfer functions: Which method is best?. , 2011, , .	rmodynamic		1

#	Article	IF	Citations
1059	Non-radiative recombination and photofilling in intermediate band solar cells. , 2011, , .		1
1060	Optical measurement techniques for in-line process control in CdS/CdTe solar cell manufacturing. , 2011, , .		1
1061	Effect of GaAs Step Layer on InGaAs/GaAsP Quantum Well Solar Cells. Applied Physics Express, 2011, 4, 122301.	1.1	14
1062	The Efficiency Limits of Solar Cells. Advanced Materials Research, 0, 347-353, 1233-1236.	0.3	1
1063	High efficacy thinned four-junction solar cell. Semiconductor Science and Technology, 2011, 26, 125013.	1.0	16
1064	Biomimetic membrane reactors for hydrogen (H 2 ) production. , 2011, , 610-643.		1
1065	Transient Absorption for Characterization of Quantum Dot Intermediate Band Solar Cells. Materials Research Society Symposia Proceedings, 2011, 1289, 402.	0.1	0
1066	Spectral separation of sunlight for enhanced operability of photovoltaic cells. Journal of Photonics for Energy, 2011, 1, 015501.	0.8	3
1067	Nanostructured materials for improved photoconversion. MRS Bulletin, 2011, 36, 192-197.	1.7	6
1068	Wide Spectrum Absorption of CuGaS <sub>2</sub> with Intermediate Bands. Applied Mechanics and Materials, 0, 148-149, 1558-1561.	0.2	5
1069	I-III-VI2 (Copper Chalcopyrite-based) Thin Films for Photoelectrochemical Water-Splitting Tandem-Hybrid Photocathode. Materials Research Society Symposia Proceedings, 2011, 1324, 83.	0.1	1
1070	Photovoltaics: Status and Perspectives until 2020. Green, 2011, 1, .	0.4	6
1072	Limiting efficiencies of intermediate band solar cell assisted with multiple exciton generation. , 2011, , .		1
1073	Design of a GaInP/GaAs tandem solar cell for maximum daily, monthly, and yearly energy output. Journal of Photonics for Energy, 2011, 1, 018001.	0.8	19
1074	Time-Resolved Microphotoluminescence Study of Cu(In,Ga)Se <sub>2</sub> . Japanese Journal of Applied Physics, 2011, 50, 05FC01.	0.8	18
1075	Quantum heat engine power can be increased by noise-induced coherence. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 15097-15100.	3.3	342
1076	Nanomaterials for third generation photovoltaics. International Journal of Nanoparticles, 2011, 4, 200.	0.1	3
1077	Quantum wells in multiple junction photovoltaics. Proceedings of SPIE, 2011, , .	0.8	8

#	Article	IF	CITATIONS
1078	Efficiency limits for space multi-junction concentrator solar cells. , 2011, , .		0
1079	Optical Property and Energy Transfer in the ZnO-LiYbO2Hybrid Phosphors under the Indirect Near-UV Excitation. Journal of the Electrochemical Society, 2011, 159, H11-H15.	1.3	5
1080	The effect of processing conditions on the structural morphology and physical properties of ZnO and CdS thin films produced via sol–gel synthesis and chemical bath deposition techniques. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2011, 2, 045001.	0.7	9
1081	Current enhancement in direct-doped InAs/GaNAs strain-compensated quantum dot solar cell. , 2011, , .		1
1082	Characteristics of the InGaP/InGaAs/Ge Triple-Junction Solar Cells with Concentration Photovoltaic System. Applied Mechanics and Materials, 2011, 148-149, 773-777.	0.2	1
1083	Effects of absorption spectra overlapping on structural design of intermediate band solar cells. , 2011, , .		1
1084	SYNTHESIS OF <font>PbS</font> NANOCRYSTAL/FUNCTIONALIZED CONDUCTING POLYMERS FOR PLASTIC SOLAR CELLS. International Journal of Nanoscience, 2011, 10, 521-532.	0.4	10
1085	Detailed balance limit efficiency of silicon intermediate band solar cells. Chinese Physics B, 2011, 20, 097103.	0.7	8
1086	Green Upconversion Luminescence of Li+â^•Er3+â^•Yb3+ Tridoped CaWO4 and Effects of Er3+ Concentration. Journal of the Electrochemical Society, 2011, 158, J345.	1.3	15
1087	Observing the Multiexciton State in Singlet Fission and Ensuing Ultrafast Multielectron Transfer. Science, 2011, 334, 1541-1545.	6.0	468
1088	Computational Investigation of In x Ga 1â^' x N/InN Quantum-Dot Intermediate-Band Solar Cell. Chinese Physics Letters, 2011, 28, 018401.	1.3	12
1089	Time-Resolved Photocurrent Measurements on PbS Nanocrystal Schottky-Contact Photovoltaic Cells. Solid State Phenomena, 0, 178-179, 56-60.	0.3	0
1090	A comparison between Si and GaAs nanowire-based photovoltaic devices. , 2011, , .		10
1091	Innovative paths for providing green energy for sustainable global economic growth. Proceedings of SPIE, 2012, , .	0.8	12
1092	Synthesis and Luminescent Properties of Micro – Nanometer Ca <sub>0.69</sub> Sr <sub>0.23</sub> (P <sub>x</sub> Mo <sub>y</sub> )O <sub>4</sub> :0.05Eu <sup>3+by Co Precipitation – Melted-Salt Method. Applied Mechanics and Materials, 2012, 217-219, 213-216.</sup>	>0.2	0
1093	Light Absorption in Semiconductor Nanowire Arrays with Multijunction Cell Structures. Japanese Journal of Applied Physics, 2012, 51, 11PE07.	0.8	0
1094	The Essence and Efficiency Limits of Bulk-Heterostructure Organic Solar Cells. Materials Research Society Symposia Proceedings, 2012, 1390, 136.	0.1	1
1095	Plasmon enhanced upconversion luminescence near gold nanoparticles–simulation and analysis of the interactions. Optics Express, 2012, 20, 271.	1.7	81

#	ARTICLE Characterization of intrinsic ZnO thin film deposited by sputtering and its effects on	IF	CITATIONS
1096	<inline-formula><math <br="" display="inline">overflow="scroll"&gt;<mrow><msub><mrow><mi>CuIn</mi></mrow><mrow& Journal of Photonics for Energy, 2012, 2, 028502.</mrow& </msub></mrow></math></inline-formula>	0.8 gt; <mn< td=""><td>&gt;1</td></mn<>	>1
1097	Analysis of surface recombination in nanowire array solar cells. Journal of Photonics for Energy, 2012, 2, 028002-1.	0.8	29
1098	Optimization of angularly selective photonic filters for concentrator photovoltaic. Proceedings of SPIE, 2012, , .	0.8	12
1099	Kësterite thin films for photovoltaics : a review. EPJ Photovoltaics, 2012, 3, 35004.	0.8	175
1100	InGaAs/GaAsP quantum wells for hot carrier solar cells. Proceedings of SPIE, 2012, , .	0.8	25
1101	Advanced Modelling of Silicon Wafer Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 10NA06.	0.8	1
1102	The Opto-Electronics which Broke the Efficiency Record in Solar Cells. , 2012, , .		1
1103	Power and energy research at the Army Research Laboratory. Proceedings of SPIE, 2012, , .	0.8	0
1104	Limiting efficiency of generalized realistic c-Si solar cells coupled to ideal up-converters. Journal of Applied Physics, 2012, 112, .	1.1	21
1105	Study on the effects of 5d energy locations of Ce^3+ ions on NIR quantum cutting process in Y_2SiO_5: Ce^3+, Yb^3+. Optics Express, 2012, 20, A510.	1.7	35
1106	Computational analysis of thin film InGaAs/GaAs quantum well solar cells with back side light trapping structures. Optics Express, 2012, 20, A864.	1.7	9
1107	Quantum cutting in CaYAlO_4: Pr^3+, Yb^3+. Optics Letters, 2012, 37, 2280.	1.7	22
1108	Lithography-free sub-100 nm nanocone array antireflection layer for low-cost silicon solar cell. Applied Optics, 2012, 51, 4430.	0.9	17
1109	Design of a plasmonic back reflector for silicon nanowire decorated solar cells. Optics Letters, 2012, 37, 4245.	1.7	21
1110	A history of slide rules for blackbody radiation computations. Proceedings of SPIE, 2012, , .	0.8	4
1111	A solar photovoltaic system with ideal efficiency close to the theoretical limit. Optics Express, 2012, 20, A28.	1.7	20
1112	Near-infrared quantum splitting in Ho^3+:LaF_3 nanocrystals embedded germanate glass ceramic. Optical Materials Express, 2012, 2, 636.	1.6	25
1113	Single element spectral splitting solar concentrator for multiple cells CPV system. Optics Express, 2012, 20, 9004.	1.7	62

#	Article	IF	CITATIONS
1114	Optical absorption enhancement in a hybrid system photonic crystal – thin substrate for photovoltaic applications. Optics Express, 2012, 20, A452.	1.7	25
1115	Optical absorption enhancement in a hybrid system photonic crystal — Thin film for photovoltaic applications. , 2012, , .		1
1116	Parametric energy conversion of thermoacoustic vibrations. Applied Physics Letters, 2012, 100, .	1.5	6
1117	Extremely long carrier lifetime at intermediate states in wall-inserted type II quantum dot absorbers. Journal of Applied Physics, 2012, 112, .	1.1	10
1118	Interstitial Ti for intermediate band formation in Ti-supersaturated silicon. Journal of Applied Physics, 2012, 112, .	1.1	17
1119	Realistic performance prediction in nanostructured solar cells as a function of nanostructure dimensionality and density. Journal of Applied Physics, 2012, 112, 124518.	1.1	11
1120	Approaching the Shockley-Queisser limit in GaAs solar cells. , 2012, , .		1
1121	Analysis of CuIn <inf>x</inf> Ga <inf>1−x</inf> Se <inf>2</inf> solar cells using admittance spectroscopy under light bias. , 2012, , .		0
1122	Broadband optical absorption enhancement in silicon nanofunnel arrays for photovoltaic applications. Applied Physics Letters, 2012, 100, .	1.5	29
1123	A statistical exploration of multiple exciton generation in silicon quantum dots and optoelectronic application. Applied Physics Letters, 2012, 100, .	1.5	21
1124	Excitation power and temperature dependence of excitons in CulnSe2. Journal of Applied Physics, 2012, 111, .	1.1	38
1125	InGaAs/GaAsSb type-II quantum dots for intermediate band solar cell. , 2012, , .		4
1126	Absorption performance of the micro concentrating photovoltaic with multimode waveguide and slanted micro-hole cell. , 2012, , .		0
1127	Theoretical limits for visibly transparent photovoltaics. Applied Physics Letters, 2012, 101, 043902.	1.5	154
1128	Solar energy trapping with modulated silicon nanowire photonic crystals. Journal of Applied Physics, 2012, 112, .	1.1	50
1129	Fabrication of two-terminal metal-interconnected multijunction III–V solar cells. , 2012, , .		3
1130	Mid-IR photovoltaic devices based on interband cascade structures. , 2012, , .		1
1131	Tuning structural, electrical, and optical properties of oxide alloys: ZnO1â^'xSex. Journal of Applied Physics, 2012, 111, .	1.1	14

		CITATION REPORT	
#	Article	IF	CITATIONS
1132	Photon ratchet intermediate band solar cells. Applied Physics Letters, 2012, 100, .	1.5	70
1133	Semiconductor heterostructures and optimization of light-trapping structures for efficient thin-f solar cells. Journal of Optics (United Kingdom), 2012, 14, 024007.	ilm 1.0	11
1134	What is the useful energy of a photon?. Applied Physics Letters, 2012, 101, 193901.	1.5	15
1135	Photovoltaic (PV) thin-films for solar cells. , 2012, , 22-41.		1
1136	Carrier multiplication in bulk indium nitride. Applied Physics Letters, 2012, 101, .	1.5	14
1137	Multi-junction solar cell with Dilute Nitride cascaded quantum wells design. , 2012, , .		2
1138	Efficiency simulations of top surface light management structures for concentrator solar cells using RCWA and detailed balance theory. , 2012, , .		0
1139	Approaching single-junction theoretical limit using ultra-thin GaAs solar cells with optimal optica designs. , 2012, , .	l	7
1140	Effects of metallic nanodiscs on solar absorption in Si nanopillar array solar cell. , 2012, , .		0
1141	The effect of tailoring electron/hole blocking layers on the photovoltaic performance of the sing junction solar cells. , 2012, , .	e	0
1142	Nanowire array photovoltaics: Radial disorder versus design for optimal efficiency. Applied Physic Letters, 2012, 101, .	cs 1.5	39
1143	Phase assembly and photo-induced current in CdTe-ZnO nanocomposite thin films. Applied Phys Letters, 2012, 101, .	ics 1.5	5
1144	First principles calculation of the electronic properties and lattice dynamics of Cu2ZnSn(S1â^'xS Journal of Applied Physics, 2012, 111, .	ex)4. 1.1	73
1145	The Shockley-Queisser limit and practical limits of nanostructured photovoltaics. , 2012, , .		4
1146	Towards intermediate-band formation in solar cells with AlGaInAs quantum dots. , 2012, , .		0
1147	Designing photonic materials for effective bandgap modification and optical concentration in photovoltaics. , 2012, , .		0
1148	High Electrocatalytic Activity of Vertically Aligned Single-Walled Carbon Nanotubes towards Sulf Redox Shuttles. Scientific Reports, 2012, 2, 368.	ìde 1.6	83
1149	GaAs nanopillar arrays with suppressed broadband reflectance and high optical quality for photovoltaic applications. Optical Materials Express, 2012, 2, 1671.	1.6	35

ARTICLE IF CITATIONS # Band engineering of type-II ZnO/ZnSe heterostructures for solar cell applications. Journal of 1150 1.2 9 Materials Research, 2012, 27, 730-733. Optical and Electrical Properties of Single-Crystal Si Supersaturated with Se by Ion Implantation. 1.3 Chinese Physics Letters, 2012, 29, 097101. Effect of capture and escape rates of carriers and well parameters on the performance of 1152 0 multi-quantum well solar cell., 2012, , . Effect of Quantum Well on the Efficiency of Carrier Collection in InGaAs/GaAsP Multiple Quantum Well Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 10ND04. Highly efficient CdS-quantum-dot-sensitized GaAs solar cells. Optics Express, 2012, 20, A319. 1154 1.7 37 Hot-Carrier Extraction from Intermediate-Band Absorbers through Quantum-Well Energy-Selective 0.8 Contacts. Japanese Journal of Applied Physics, 2012, 51, 10ND03. Modeling upconversion of erbium doped microcrystals based on experimentally determined Einstein 1156 1.1 71 coefficients. Journal of Applied Physics, 2012, 111, . Indium Antimonide (InSb) Nanowire-Based Photodetectors., 2012, , 209-224. Numerical Approach to the Investigation of Performance of Silicon Nanowire Solar Cells Embedded in 1158 0.8 12 a SiO<sub>2</sub> Matrix. Japanese Journal of Applied Physics, 2012, 51, 11PE12. CdTe Solar Cell from Sputtering Method. Materials Research Society Symposia Proceedings, 2012, 1447, 1159 0.1 71. Nanoscale engineering of photoelectron processes by charging quantum dots., 2012,,. 1160 0 Plasmon induced NIR response of thin-film a-Si:H solar cells. Proceedings of SPIE, 2012, , . 1161 0.8 Numerical Approach to the Performance of Silicon Quantum Dots Superlattice Solar Cells Taking into 1162 0.8 5 Account the Quantum Effect. Japanese Journal of Applied Physics, 2012, 51, 10NE09. Numerical Study of a Solar Thermophotovoltaic Energy Converter With High Performance 2D Photonic Crystals., 2012,,. Epsilon-Near-Zero Metamaterial Emitters for High Efficiency Thermophotovoltaics., 2012, , . 0 1164 Current Status of Inorganic Solar Cells Using Quantum Structures. Recent Patents on Nanotechnology, 2012, 6, 2-9. Solar cells. , 0, , 368-383. 1166 0 Charge-induced series resistance switching in GaAs solar cells. AIP Advances, 2012, 2, 042194.

#	Article	IF	CITATIONS
1168	Multiple exciton generation in PbSe nanorods. , 2012, , .		4
1169	Improving photo-generated carrier escape in quantum well solar cells. , 2012, , .		3
1170	Via-hole fabrication for III-V triple-junction solar cells. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	0.6	13
1171	Fluorescence enhancing under UV-NIR simultaneous-excitation in ZnS:Cu,Mn phosphors. AIP Advances, 2012, 2, 042172.	0.6	4
1172	Microstructured silicon with two impurity bands for solar cells. Journal of Applied Physics, 2012, 111, 043102.	1.1	1
1173	Photovoltaic devices based on quantum dot functionalized nanowire arrays embedded in an organic matrix. Proceedings of SPIE, 2012, , .	0.8	0
1174	Thermophotovoltaic (TPV) devices: introduction and modelling. , 2012, , 67-90.		3
1175	Effects of photonic structures on upconversion. , 2012, , .		1
1176	Realizing Terawatt-Scale Solar Electricity: Nanotechnology-Enabled Physical Mechanisms and Material Properties. IEEE Nanotechnology Magazine, 2012, 6, 6-14.	0.9	1
1177	Charge carriers and excitons transport in an organic solar cell-theory and simulation. Electronic Materials Letters, 2012, 8, 435-443.	1.0	7
1178	Semiconducting Monolayer Materials as a Tunable Platform for Excitonic Solar Cells. ACS Nano, 2012, 6, 10082-10089.	7.3	145
1179	Thin films of silica imbedded silicon and germanium quantum dots by solution processing. Materials Science in Semiconductor Processing, 2012, 15, 713-721.	1.9	6
1180	A highly efficient hybrid CdS-GaAs solar cell. , 2012, , .		0
1181	Measurement of the Open-Circuit Voltage of Individual Subcells in a Dual-Junction Solar Cell. IEEE Journal of Photovoltaics, 2012, 2, 164-168.	1.5	5
1182	Ga Composition Dictates Macroscopic Photovoltaic and Nanoscopic Electrical Characteristics of Cu(In \$_{1-X}\$Ga\$_X\$)Se \$_2\$ Thin Films via Grain-Boundary-Type Inversion. IEEE Journal of Photovoltaics, 2012, 2, 191-195.	1.5	23
1183	Enhanced Carrier Escape in MSQW Solar Cell and Its Impact on Photovoltaics Performance. IEEE Journal of Photovoltaics, 2012, 2, 221-226.	1.5	7
1184	Photocurrent Generation by Two-Step Photon Absorption With Quantum-Well Superlattice Cell. IEEE Journal of Photovoltaics, 2012, 2, 298-302.	1.5	20
1185	Strong Internal and External Luminescence as Solar Cells Approach the Shockley–Queisser Limit. IEEE Journal of Photovoltaics, 2012, 2, 303-311.	1.5	826

#	Article	IF	Citations
1186	Resonant thermotunneling design for high-performance single-junction quantum-well solar cells. IEEE Journal of Photovoltaics, 2012, 2, 256-260.	1.5	14
1187	Phase Stability of the Earth-Abundant Tin Sulfides SnS, SnS <sub>2</sub> , and Sn <sub>2</sub> S <sub>3</sub> . Journal of Physical Chemistry C, 2012, 116, 24262-24267.	1.5	201
1188	Review on up/down conversion materials for solar cell application. , 2012, , .		10
1189	Engineering Light: Advances in Wavelength Conversion Materials for Energy and Environmental Technologies. Environmental Science & Technology, 2012, 46, 12316-12328.	4.6	79
1190	Crystalline Silicon Feedstock Preparation and Analysis. Semiconductors and Semimetals, 2012, , 185-261.	0.4	9
1191	Nonradiative lifetimes in intermediate band photovoltaics—Absence of lifetime recovery. Journal of Applied Physics, 2012, 112, .	1.1	56
1192	Intermediate Band Solar Cells. , 2012, , 619-639.		0
1193	Getting to the (Square) Root of the Problem: How to Make Noncoherent Pumped Upconversion Linear. Journal of Physical Chemistry Letters, 2012, 3, 299-303.	2.1	279
1194	Introduction to Photovoltaic Technology. , 2012, , 5-11.		2
1196	Computational screening of perovskite metal oxides for optimal solar light capture. Energy and Environmental Science, 2012, 5, 5814-5819.	15.6	354
1197	Overcoming the bandgap limitation on solar cell materials. Applied Physics Letters, 2012, 100, .	1.5	31
1198	Photoexcited electron and hole dynamics in semiconductor quantum dots: phonon-induced relaxation, dephasing, multiple exciton generation and recombination. Journal of Physics Condensed Matter, 2012, 24, 363201.	0.7	29
1199	Up-conversion semiconducting MoO3:Yb/Er nanocomposites as buffer layer in organic solar cells. Solar Energy Materials and Solar Cells, 2012, 105, 196-201.	3.0	46
1200	Ultrafast Dynamics of Multiple Exciton Harvesting in the CdSe–ZnO System: Electron Injection versus Auger Recombination. Nano Letters, 2012, 12, 6393-6399.	4.5	77
1201	Strain-engineered artificial atom as a broad-spectrum solar energy funnel. Nature Photonics, 2012, 6, 866-872.	15.6	907
1202	Hot Carrier Solar Cells: Controlling Thermalization in Ultrathin Devices. IEEE Journal of Photovoltaics, 2012, 2, 506-511.	1.5	19
1203	Optimizing luminescent solar concentrator design. Energy and Environmental Science, 2012, 5, 5798-5802.	15.6	61
1204	Comparison of arsenide and phosphide based graded buffer layers used in inverted metamorphic solar cells. Journal of Applied Physics, 2012, 112, 024907.	1.1	8

#	Article	IF	Citations
1205	Statistical theory and applications of lock-in carrierographic image pixel brightness dependence on multi-crystalline Si solar cell efficiency and photovoltage. Journal of Applied Physics, 2012, 112, 054505.	1.1	22
1206	Thin Films in Photovoltaics. , 2012, , 313-359.		1
1207	All-Oxide Photovoltaics. Journal of Physical Chemistry Letters, 2012, 3, 3755-3764.	2.1	263
1210	Nanotechnologyâ€Enabled Energy Harvesting for Selfâ€Powered Microâ€/Nanosystems. Angewandte Chemie - International Edition, 2012, 51, 11700-11721.	7.2	910
1211	Lowâ€Threshold Photon Upconversion Capsules Obtained by Photoinduced Interfacial Polymerization. Angewandte Chemie - International Edition, 2012, 51, 11841-11844.	7.2	68
1212	Structural investigations of silicon nanostructures grown by self-organized island formation for photovoltaic applications. Applied Physics A: Materials Science and Processing, 2012, 108, 719-726.	1.1	5
1213	Simulation analysis of the effects of defect density on the performance of p-i-n InGaN solar cell. Applied Physics A: Materials Science and Processing, 2012, 109, 497-502.	1.1	25
1214	Broadband spectral conversion due to cooperative and phonon-assistant energy transfer from ZnO to Yb3+. Applied Physics B: Lasers and Optics, 2012, 108, 553-558.	1.1	7
1215	Theoretical study of two-photon absorption properties and up-conversion efficiency of new symmetric organic i€-conjugated molecules for photovoltaic devices. Journal of Molecular Modeling, 2012, 18, 3657-3667.	0.8	8
1216	Multi-objective-optimization-based approach to improve the electrical efficiency for organic solar cells. Journal of Computational Electronics, 2012, 11, 336-343.	1.3	2
1217	A novel double-stranded staircase Cu(I)-iodide coordination polymer based on bis(4-pyridyl-carboxylate) ligand with flexible propyl spacer. Inorganic Chemistry Communication, 2012, 24, 59-62.	1.8	8
1218	A facile and low cost synthesis of earth abundant element Cu2ZnSnS4 (CZTS) nanocrystals: Effect of Cu concentrations. Journal of Alloys and Compounds, 2012, 541, 192-197.	2.8	48
1219	Cu2ZnSnS4 thin films deposition by ultrasonic spray pyrolysis. Journal of Alloys and Compounds, 2012, 542, 22-27.	2.8	99
1220	Recent progress in the design of narrow bandgap conjugated polymers for high-efficiency organic solar cells. Progress in Polymer Science, 2012, 37, 1292-1331.	11.8	248
1221	Prospects for electron microscopy characterisation of solar cells: Opportunities and challenges. Ultramicroscopy, 2012, 119, 82-96.	0.8	3
1222	A study of nanoellipsoids for thin-film plasmonic solar cell applications. Journal Physics D: Applied Physics, 2012, 45, 275101.	1.3	19
1223	Fundamental limitations of hot-carrier solar cells. Physical Review B, 2012, 86, .	1.1	33
1224	Nanoscale photon management in silicon solar cells. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	36

# 1225	ARTICLE Effect of ZnS coatings on the enhancement of the photovoltaic properties of PbS quantum dot-sensitized solar cells. Journal of Applied Physics, 2012, 111, .	IF 1.1	Citations 66
1226	Energy transfer in CaYAlO4: Ce3+, Pr3+ for sensitization of quantum-cutting with the Pr3+-Yb3+ couple. Journal of Applied Physics, 2012, 111, 043104.	1.1	32
1227	Optical absorptions in AlxGa1â^'xAs/GaAs quantum well for solar energy application. Journal of Applied Physics, 2012, 112, 054314.	1.1	0
1228	Investigation of defects in N <sup>+</sup> -CDS/P-CdTe solar cells. , 2012, , .		0
1229	The influence of quantum dot size on the sub-bandgap intraband photocurrent in intermediate band solar cells. Applied Physics Letters, 2012, 101, 133909.	1.5	29
1230	Photovoltaic property of vertically array carbon nanotubes assembled with CdS QDs. , 2012, , .		0
1231	Analysis of solar cell quality using voltage metrics. , 2012, , .		9
1232	Device simulation of intermediate band solar cells: Dependence on number of intermediate band layers. , 2012, , .		0
1233	A feasibility study for deployment of wind energy based power production solution in Islamabad, Pakistan. , 2012, , .		2
1234	Flexible fluorine-based micro-lens arrays for photovoltaic modules. , 2012, , .		0
1235	Designing photonic materials for effective bandgap modification and optical concentration in photovoltaics. , 2012, , .		0
1236	Lattice-matched solar cells with 40% average efficiency in pilot production and a roadmap to 50%. , 2012, , .		0
1237	Chemical input and I–V output: stepwise chemical information processing in dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2012, 14, 16014.	1.3	11
1238	Role of theory in the design of semiconducting nanostructures. Journal of Materials Chemistry, 2012, 22, 1724-1732.	6.7	20
1239	Limiting efficiencies of tandem solar cells consisting of III-V nanowire arrays on silicon. Journal of Applied Physics, 2012, 112, .	1.1	58
1240	Reduction of crosshatch roughness and threading dislocation density in metamorphic GaInP buffers and GaInAs solar cells. Journal of Applied Physics, 2012, 111, .	1.1	58
1241	A new methodology for calculating the efficiency of multi-junction solar cells. , 2012, , .		0
1242	3D photonic crystals for photon management in solar cells. , 2012, , .		1

#	Article	IF	CITATIONS
1243	Influence of the Ga content on the optical and electrical properties of Culn <inf>1−x</inf> Ga <inf>x</inf> Se <inf>2</inf> thin-film solar cells. , 2012, , .		0
1244	Simple mathematical model for solar cell development forecasting. , 2012, , .		1
1245	High-aspect-ratio structures for efficient light absorption and carrier transport in InGaAs/GaAsP multiple quantum well solar cells. , 2012, , .		3
1246	Issues in the physical measurement of the intermediate band effect. , 2012, , .		0
1247	Effect of Sb on GaNAs intermediate band solar cells. , 2012, , .		1
1248	Enhanced V <inf>oc</inf> in InAs quantum-dot Based p-i-n solar cells using a non-alternating strain-balancing epitaxial growth method. , 2012, , .		3
1249	Photoelectrochemical cells for hydrogen generation. , 2012, , 91-146e.		4
1250	The Effect of Spectrum Variation on the Energy Production of Triple-Junction Solar Cells. IEEE Journal of Photovoltaics, 2012, 2, 417-423.	1.5	18
1251	Effect of GaAs step layer thickness in InGaAs/GaAsP stepped quantum-well solar cell. , 2012, , .		1
1252	Photosensitization of ZnO rod electrodes with AgInS <sub>2</sub> nanoparticles and ZnS-AgInS <sub>2</sub> solid solution nanoparticles for solar cell applications. RSC Advances, 2012, 2, 552-559.	1.7	46
1253	Plasmon enhanced light trapping for thin film silicon solar cells application. , 2012, , .		0
1254	Band gap tunable Sn-doped PbSe nanocrystals: solvothermal synthesis and first-principles calculations. CrystEngComm, 2012, 14, 7408.	1.3	16
1255	Metal pillar interconnection topology for bonded two-terminal multijunction III–V solar cells. , 2012, , .		0
1256	Surface off-stoichiometry of CuInS <inf>2</inf> thin-film solar cell absorbers. , 2012, , .		0
1257	A unified mathematical framework for intermediate band solar cells. , 2012, , .		2
1258	Evaluating photovoltaic performance indoors. , 2012, , .		14
1259	Fabrication of lattice mismatched multijunction photovoltaic cells using 3D integration concepts. , 2012, , .		1
1260	Pushing inverted metamorphic multijunction solar cells toward higher efficiency at realistic operating conditions. , 2012, , .		7

# 1261	ARTICLE Investigation of carrier escape mechanism in InAs/GaAs quantum dot solar cells. , 2012, , .	IF	CITATIONS
1262	Device simulation of intermediate band solar cells. , 2012, , .		2
1263	Film-thickness-dependent conduction in ordered Si quantum dot arrays. Nanotechnology, 2012, 23, 105401.	1.3	19
1264	Broadband absorption of semiconductor nanowire arrays for photovoltaic applications. Journal of Optics (United Kingdom), 2012, 14, 024004.	1.0	87
1265	Facile Synthesis of Colloidal CuO Nanocrystals for Light-Harvesting Applications. Journal of Nanomaterials, 2012, 2012, 1-6.	1.5	61
1266	Heat fluctuations and coherences in a quantum heat engine. Physical Review A, 2012, 86, .	1.0	63
1267	Limiting efficiencies over 50% using multijunction solar cells with multiple exciton generation. , 2012,		3
1268	Type-II Core/Shell Nanowire Heterostructures and Their Photovoltaic Applications. Nano-Micro Letters, 2012, 4, 135-141.	14.4	27
1269	Theoretical efficiency of intermediate band solar cells with overlapping absorption coefficients for various combinations of band gaps. , 2012, , .		3
1270	The Right Place for the Right Job in the Photovoltaic Life Cycle. Environmental Science & Technology, 2012, 46, 7415-7421.	4.6	14
1271	Oriented hierarchical single crystalline anatase TiO <sub>2</sub> nanowire arrays on Ti-foil substrate for efficient flexible dye-sensitized solar cells. Energy and Environmental Science, 2012, 5, 5750-5757.	15.6	353
1272	Photon frequency management for trapping & concentration of sunlight. RSC Advances, 2012, 2, 3173.	1.7	13
1273	Effect of Solar Concentration on the Thermodynamic Power Conversion Efficiency of Quantum-Dot Solar Cells Exhibiting Multiple Exciton Generation. Journal of Physical Chemistry Letters, 2012, 3, 2857-2862.	2.1	62
1274	Ultra-high photoluminescent quantum yield of β-NaYF_4: 10% Er^3+ via broadband excitation of upconversion for photovoltaic devices. Optics Express, 2012, 20, A879.	1.7	76
1275	Hole Transport in Nonstoichiometric and Doped Wüstite. Journal of Physical Chemistry C, 2012, 116, 17403-17413.	1.5	22
1276	Hybrid pentacene/a-silicon solar cells utilizing multiple carrier generation via singlet exciton fission. Applied Physics Letters, 2012, 101, .	1.5	54
1277	Quantum efficiency of intermediate-band solar cells based on non-compensated n-p codoped TiO2. Journal of Chemical Physics, 2012, 137, 104702.	1.2	11
1278	Time-Asymmetric Photovoltaics. Nano Letters, 2012, 12, 5985-5988.	4.5	90

#	Article	IF	CITATIONS
1279	Metamaterial-Plasmonic Absorber Structure for High Efficiency Amorphous Silicon Solar Cells. Nano Letters, 2012, 12, 440-445.	4.5	354
1280	Exploring Exciton Relaxation and Multiexciton Generation in PbSe Nanocrystals Using Hyperspectral Near-IR Probing. ACS Nano, 2012, 6, 3269-3277.	7.3	43
1281	Efficiency Enhancement of Organic and Thin-Film Silicon Solar Cells with Photochemical Upconversion. Journal of Physical Chemistry C, 2012, 116, 22794-22801.	1.5	167
1282	Selective emitters design and optimization for thermophotovoltaic applications. Journal of Applied Physics, 2012, 111, .	1.1	36
1283	Green energy conversion & storage for solving India's energy problem through innovation in ultra large scale manufacturing and advanced research of solid state devices and systems. , 2012, , .		8
1284	Toward Optimized Light Utilization in Nanowire Arrays Using Scalable Nanosphere Lithography and Selected Area Growth. Nano Letters, 2012, 12, 2839-2845.	4.5	80
1285	The opto-electronic physics that broke the efficiency limit in solar cells. , 2012, , .		35
1286	Light Absorption by Crystalline and Amorphous Silicon Quantum Dots with Silver Adsorbates and Dopants. Journal of Physical Chemistry C, 2012, 116, 23107-23112.	1.5	4
1287	Impact ionization effects on the efficiency of the intermediate band solar cells. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1608-1611.	1.3	16
1288	Enhancement of power conversion efficiency in GaAs solar cells with dual-layer quantum dots using flexible PDMS film. Solar Energy Materials and Solar Cells, 2012, 104, 92-96.	3.0	43
1289	Copper–indium–gallium–selenide (CIGS) solar cells with localized back contacts for achieving high performance. Solar Energy Materials and Solar Cells, 2012, 104, 152-158.	3.0	21
1290	Low temperature intermediate band metallic behavior in Ti implanted Si. Thin Solid Films, 2012, 520, 6614-6618.	0.8	18
1291	Recent developments in high-temperature photonic crystals for energy conversion. Energy and Environmental Science, 2012, 5, 8815.	15.6	132
1292	The energy barrier in singlet fission can be overcome through coherent coupling and entropic gain. Nature Chemistry, 2012, 4, 840-845.	6.6	294
1293	Open-circuit voltage in organic solar cells. Journal of Materials Chemistry, 2012, 22, 24315.	6.7	262
1294	A Microscopic Model of Singlet Fission. Journal of Physical Chemistry B, 2012, 116, 11473-11481.	1.2	87
1295	Colloidal PbS and PbSeS Quantum Dot Sensitized Solar Cells Prepared by Electrophoretic Deposition. Journal of Physical Chemistry C, 2012, 116, 16391-16397.	1.5	81
1296	Optimum doping for n <sup>+</sup> p silicon solar cell and the J-V characteristic. , 2012, , .		0

#	Article	IF	CITATIONS
1297	Systematic Investigation of Benzodithiophene- and Diketopyrrolopyrrole-Based Low-Bandgap Polymers Designed for Single Junction and Tandem Polymer Solar Cells. Journal of the American Chemical Society, 2012, 134, 10071-10079.	6.6	530
1298	A multi-objective optimization-based approach to improve the organic solar cell efficiency. , 2012, , .		2
1299	Electronic and optoelectronic nano-devices based on carbon nanotubes. Journal of Physics Condensed Matter, 2012, 24, 313202.	0.7	87
1300	Thermodynamic Limit of Exciton Fission Solar Cell Efficiency. Journal of Physical Chemistry Letters, 2012, 3, 2749-2754.	2.1	95
1301	Quantum-Dot-Sensitized Solar Cells: Effect of Nanostructured TiO <sub>2</sub> Morphologies on Photovoltaic Properties. Journal of Physical Chemistry Letters, 2012, 3, 1885-1893.	2.1	101
1302	Enhanced absorption in silicon nanocone arrays for photovoltaics. Nanotechnology, 2012, 23, 194003.	1.3	120
1303	Band-structure, optical properties, and defect physics of the photovoltaic semiconductor SnS. Applied Physics Letters, 2012, 100, .	1.5	382
1304	Upconversion goes broadband. Nature Materials, 2012, 11, 842-843.	13.3	165
1305	Thermalisation rate study of GaSb-based heterostructures by continuous wave photoluminescence and their potential as hot carrier solar cell absorbers. Energy and Environmental Science, 2012, 5, 6225.	15.6	94
1306	Near-Field Electromagnetic Theory for Thin Solar Cells. Physical Review Letters, 2012, 109, 138701.	2.9	42
1307	Pulsed electrically detected magnetic resonance for thin film silicon and organic solar cells. Physical Chemistry Chemical Physics, 2012, 14, 14418.	1.3	31
1308	Materials interface engineering for solution-processed photovoltaics. Nature, 2012, 488, 304-312.	13.7	1,000
1309	The effect of photonic bandgap materials on the Shockley-Queisser limit. Journal of Applied Physics, 2012, 112, .	1.1	50
1310	Concepts to enhance the efficiency of upconversion for solar applications. , 2012, , .		1
1311	High-Performance Solution-Processed Solar Cells and Ambipolar Behavior in Organic Field-Effect Transistors with Thienyl-BODIPY Scaffoldings. Journal of the American Chemical Society, 2012, 134, 17404-17407.	6.6	227
1312	Nanomaterials and nanostructures for efficient light absorption and photovoltaics. Nano Energy, 2012, 1, 57-72.	8.2	270
1313	Lanthanide nanomaterials with photon management characteristics for photovoltaic application. Nano Energy, 2012, 1, 73-90.	8.2	162
1314	Recent progress of one-dimensional ZnO nanostructured solar cells. Nano Energy, 2012, 1, 91-106.	8.2	189

#	Article	IF	CITATIONS	
1315	Photosensitization of TiO2 nanorods with CdS quantum dots for photovoltaic applications: A wet-chemical approach. Nano Energy, 2012, 1, 440-447.	8.2	85	
1316	Quaternary Cu2ZnSnS4 nanocrystals: Facile and low cost synthesis by microwave-assisted solution method. Journal of Alloys and Compounds, 2012, 516, 96-101.	2.8	68	
1317	Influence of sintering temperature on screen printed Cu2ZnSnS4 (CZTS) films. Journal of Alloys and Compounds, 2012, 539, 237-241.	2.8	35	
1318	Suppressed lattice relaxation during InGaAs/GaAsP MQW growth with InGaAs and GaAs ultra-thin interlayers. Journal of Crystal Growth, 2012, 352, 239-244.	0.7	37	
1319	Investigation on structural, optical, morphological and electrical properties of thermally deposited lead selenide (PbSe) nanocrystalline thin films. Journal of Crystal Growth, 2012, 353, 47-54.	0.7	43	
1320	Advanced Light Management Approaches for Thin-Film Silicon Solar Cells. Energy Procedia, 2012, 15, 189-199.	1.8	40	
1321	High Efficiency CIGS Solar Modules. Energy Procedia, 2012, 15, 275-282.	1.8	39	
1322	Tandem Solar Cell Concept Using Black Silicon for Enhanced Infrared Absorption. Energy Procedia, 2012, 27, 555-560.	1.8	11	
1323	A mirage study of CdSe colloidal quantum dot films, Urbach tail, and surface states. Journal of Chemical Physics, 2012, 137, 154704.	1.2	37	
1324	Epitaxial III–V Films and Surfaces for Photoelectrocatalysis. ChemPhysChem, 2012, 13, 2899-2909.	1.0	39	
1325	High efficiency photovoltaics: on the way to becoming a major electricity source. Wiley Interdisciplinary Reviews: Energy and Environment, 2012, 1, 132-151.	1.9	13	
1326	Optical and photocatalytic properties of two-dimensional MoS2. European Physical Journal B, 2012, 85, 1.	0.6	121	
1327	Structural variations of Si1â^'xCx and their light absorption controllability. Nanoscale Research Letters, 2012, 7, 503.	3.1	7	
1328	Low-energy silicon allotropes with strong absorption in the visible for photovoltaic applications. Physical Review B, 2012, 86, .	1.1	138	
1329	Application of Micro- and Nanotechnology in Photovoltaics. , 2012, , 515-531.		3	
1331	Improving the light-harvesting of amorphous silicon solar cells with photochemical upconversion. Energy and Environmental Science, 2012, 5, 6953.	15.6	339	
1332	Identification of Potential Photovoltaic Absorbers Based on First-Principles Spectroscopic Screening of Materials. Physical Review Letters, 2012, 108, 068701.	2.9	497	
1333	Structural, optical and electrical properties of spray-deposited CZTS thin films under a non-equilibrium growth condition. Journal Physics D: Applied Physics, 2012, 45, 445103.	1.3	144	
		CITATION R	EPORT	
------	--	---------------------------------	-------	-----------
#	Article		IF	CITATIONS
1334	Thermodynamics of Photovoltaics. , 2012, , 315-352.			0
1335	Theoretical consideration of III–V nanowire/Si triple-junction solar cells. Nanotechnolc 505202.	gy, 2012, 23,	1.3	41
1336	Polaron absorption for photovoltaic energy conversion in a manganite-titanate <mml:maxmlns:mml="http: 1998="" display="inline" math="" mathml"="" www.w3.org=""><mml:mrow><m mathvariant="bold-italic"&gt;pn</m </mml:mrow>heterojunction. Phys 2012, 85, .</mml:maxmlns:mml="http:>	ıth ml:mi sical Review B,	1.1	28
1337	High-Efficiency Ill–V Multijunction Solar Cells. , 2012, , 417-448.			16
1338	Ideal Efficiencies. , 2012, , 63-75.			1
1339	Control of optical bandgap energy and optical absorption coefficient by geometric para sub-10 nm silicon-nanodisc array structure. Nanotechnology, 2012, 23, 065302.	meters in	1.3	34
1340	Principles of Solar Energy Conversion. , 2012, , 293-313.			5
1341	Plastic Solar Cells. , 2012, , 439-480.			13
1342	Crystalline Silicon Solar Cells. , 2012, , 353-387.			80
1343	Upconversion. , 2012, , 533-548.			4
1344	Down-Shifting of the Incident Light for Photovoltaic Applications. , 2012, , 563-585.			11
1345	Plasmonics for Photovoltaics. , 2012, , 641-656.			0
1346	Statistics, synergetics, and mechanism of multiple photogeneration of excitons in quan Fundamental and applied aspects. Applied Solar Energy (English Translation of Geliotek 160-164.	tum dots: 1nika), 2012, 48,	0.2	3
1347	High-efficiency cascade CdS/CdSe quantum dot-sensitized solar cells based on hierarchi tetrapod-like ZnO nanoparticles. Physical Chemistry Chemical Physics, 2012, 14, 13539	cal ·	1.3	46
1348	Ultrafast exciton dynamics in InAs/ZnSe nanocrystal quantum dots. Physical Chemistry Physics, 2012, 14, 15166.	Chemical	1.3	15
1349	Electrical Transport in Colloidal Quantum Dot Films. Journal of Physical Chemistry Letter 1169-1175.	rs, 2012, 3,	2.1	288
1350	Modeling down-conversion and down-shifting for photovoltaic applications. , 2012, , .			6
1351	Deep Subwavelength Spatial Characterization of Angular Emission from Single-Crystal A Ridge Nanoantennas. ACS Nano, 2012, 6, 1742-1750.	u Plasmonic	7.3	45

#	Article	IF	Citations
1352	Electrical Characterization of Solar Cell Materials Using Scanning Probe Microscopy. Nanoscience and Technology, 2012, , 551-573.	1.5	3
1353	Organic Photodiode with High Infrared Light Sensitivity Based on Tin Phthalocyanine/C\$_{60}\$ Bulk Heterojunction and Optical Interference Effect. Japanese Journal of Applied Physics, 2012, 51, 034103.	0.8	15
1354	Chemical engineering in the electronics industry: progress towards the rational design of organic semiconductor heterojunctions. Current Opinion in Chemical Engineering, 2012, 1, 117-122.	3.8	7
1355	Nanocarbon-Based Photovoltaics. ACS Nano, 2012, 6, 8896-8903.	7.3	117
1356	Near-infrared quantum cutting through a three-step energy transfer process in Nd <sup>3+</sup> –Yb <sup>3+</sup> co-doped fluoroindogallate glasses. Journal of Physics Condensed Matter, 2012, 24, 385501.	0.7	23
1357	Flexible photovoltaic cells based on a graphene–CdSe quantum dot nanocomposite. Nanoscale, 2012, 4, 441-443.	2.8	63
1359	SnSe2 quantum dot sensitized solar cells prepared employing molecular metal chalcogenide as precursors. Chemical Communications, 2012, 48, 3324.	2.2	67
1360	[High efficiency Cu <inf>2</inf> ZnSnSe <inf>4</inf> solar cells with a TiN diffusion barrier on the molybdenum bottom contact. , 2012, , .		2
1361	Small-Sized PbSe/PbS Core/Shell Colloidal Quantum Dots. Chemistry of Materials, 2012, 24, 4417-4423.	3.2	42
1362	In situ measurement of exciton energy in hybrid singlet-fission solar cells. Nature Communications, 2012, 3, 1019.	5.8	165
1363	Quantum dots for next-generation photovoltaics. Materials Today, 2012, 15, 508-515.	8.3	257
1365	Polymer tandem photovoltaic cells with molecularly intimate interfaces achieved by a thin-film transfer technique. Solar Energy Materials and Solar Cells, 2012, 105, 1-5.	3.0	9
1366	Organic—inorganic hybrid solar cells: A comparative review. Solar Energy Materials and Solar Cells, 2012, 107, 87-111.	3.0	550
1367	High efficiency nanotextured silicon solar cells. Optics Communications, 2012, 285, 4211-4214.	1.0	16
1368	A review on the role of materials science in solar cells. Renewable and Sustainable Energy Reviews, 2012, 16, 5834-5847.	8.2	189
1369	Photonic and plasmonic crystal based enhancement of solar cells — Theory of overcoming the Lambertian limit. Journal of Non-Crystalline Solids, 2012, 358, 2289-2294.	1.5	9
1370	Tm3+-sensitized up- and down-conversions in nano-structured oxyfluoride glass ceramics. Materials Research Bulletin, 2012, 47, 4433-4437.	2.7	13
1371	Scalable synthesis of vertically aligned, catalyst-free gallium arsenide nanowire arrays: towards optimized optical absorption. , 2012, , .		2

#	Article	IF	CITATIONS
1372	Large-Scale Synthesis of PbS–TiO <sub>2</sub> Heterojunction Nanoparticles in a Single Step for Solar Cell Application. Journal of Physical Chemistry C, 2012, 116, 16264-16270.	1.5	49
1373	Effect of spacer layer thickness on multi-stacked InGaAs quantum dots grown on GaAs (311)B substrate for application to intermediate band solar cells. Journal of Applied Physics, 2012, 111, 074305.	1.1	23
1374	High efficiency InGaN solar cell with a graded p-InGaN top layer. Proceedings of SPIE, 2012, , .	0.8	0
1375	Device simulation of intermediate band solar cells. Proceedings of SPIE, 2012, , .	0.8	1
1376	Numerical simulation of QD-intermediate band solar cells: effect of dot size on performance. , 2012, , .		1
1377	Harvesting Singlet Fission for Solar Energy Conversion: One- versus Two-Electron Transfer from the Quantum Mechanical Superposition. Journal of the American Chemical Society, 2012, 134, 18295-18302.	6.6	79
1378	Upconversion-powered photoelectrochemistry. Chemical Communications, 2012, 48, 209-211.	2.2	261
1379	EFFICIENT ULTRAVIOLET LIGHT FREQUENCY DOWN-SHIFTING BY A THIN FILM OF ZnO NANOPARTICLES. International Journal of Nanoscience, 2012, 11, 1240022.	0.4	10
1380	The origin of photovoltaic responses in BiFeO <sub>3</sub> multiferroic ceramics. Journal of Physics Condensed Matter, 2012, 24, 495902.	0.7	22
1381	Light Energy Conversion at Carbon Nanotubes - Organic and Inorganic Interfaces: Photovoltaics, Photodetectors and Bolometers. , 2012, , 1-68.		3
1383	Enhancement of output performance of Cu2ZnSnS4 thin film solar cells—A numerical simulation approach and comparison to experiments. Physica B: Condensed Matter, 2012, 407, 4391-4397.	1.3	134
1384	A Charge-Orbital Balance Picture of Doping in Colloidal Quantum Dot Solids. ACS Nano, 2012, 6, 8448-8455.	7.3	206
1385	Alkoxy Side Chains in Low Band-Gap Co-Polymers: Impact on Conjugation and Frontier Energy Levels. Energy Procedia, 2012, 31, 38-45.	1.8	3
1386	Status and prospects of Al2O3-based surface passivation schemes for silicon solar cells. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	659
1387	Intergrain variations of the chemical and electronic surface structure of polycrystalline Cu(In,Ga)Se2 thin-film solar cell absorbers. Applied Physics Letters, 2012, 101, .	1.5	3
1388	Effect of defect bands in $\hat{l}^2$ -In2S3 thin films. Journal of Applied Physics, 2012, 111, 093714.	1.1	30
1389	Black silicon for solar cell applications. Proceedings of SPIE, 2012, , .	0.8	34
1390	Effect of the Quantum Size Effect on the Performance of Solar Cells with a Silicon Nanowire Array Embedded in SiO <sub>2</sub> . Materials Research Society Symposia Proceedings, 2012, 1439, 145-150.	0.1	1

#	Article	IF	CITATIONS
1391	Bioinspired High-Potential Porphyrin Photoanodes. Journal of Physical Chemistry C, 2012, 116, 4892-4902.	1.5	69
1392	Parameters optimization of a heterojunction thin film solar cell to improve the conversion efficiency. , 2012, , .		1
1393	Analysis on carrier energy relaxation in superlattices and its implications on the design of hot carrier solar cell absorbers. , 2012, , .		2
1394	Understanding the operation of quantum dot intermediate band solar cells. Journal of Applied Physics, 2012, 111, 044502.	1.1	41
1395	Theoretical performance of multi-junction solar cells combining III-V and Si materials. Optics Express, 2012, 20, A754.	1.7	33
1396	Control of an interfacial MoSe <sub>2</sub> layer in Cu <sub>2</sub> ZnSnSe <sub>4</sub> thin film solar cells: 8.9% power conversion efficiency with a TiN diffusion barrier. Applied Physics Letters, 2012, 101, 053903.	1.5	292
1397	Engineering of hybrid heterostructures from organic semiconductors and quantum dots for advanced photovoltaic applications. , 2012, , .		1
1398	Numerical study of GaAs-based dual junction intermediate band solar cells. , 2012, , .		0
1399	Plasmonic enhancement of up-conversion in ultrathin layers. Proceedings of SPIE, 2012, , .	0.8	3
1400	Photophysics of Carbon Nanotubes Interfaced with Organic and Inorganic Materials. , 2012, , .		12
1401	Metamaterial-based integrated plasmonic absorber/emitter for solar thermo-photovoltaic systems. Journal of Optics (United Kingdom), 2012, 14, 024005.	1.0	320
1402	Electronic properties of the Cu2ZnSn(Se,S)4 absorber layer in solar cells as revealed by admittance spectroscopy and related methods. Applied Physics Letters, 2012, 100, .	1.5	194
1403	New cubic perovskites for one- and two-photon water splitting using the computational materials repository. Energy and Environmental Science, 2012, 5, 9034.	15.6	211
1404	Increasing the Band Gap of Iron Pyrite by Alloying with Oxygen. Journal of the American Chemical Society, 2012, 134, 13216-13219.	6.6	96
1405	Device simulation of intermediate band solar cells: Effects of doping and concentration. Journal of Applied Physics, 2012, 112, .	1.1	36
1406	Two-photon excitation in an intermediate band solar cell structure. Applied Physics Letters, 2012, 100, .	1.5	110
1407	Efficient Singlet Fission Discovered in a Disordered Acene Film. Journal of the American Chemical Society, 2012, 134, 6388-6400.	6.6	275
1408	Up- and down-conversion materials for photovoltaic devices. , 2012, , .		5

#	Article	IF	CITATIONS
1409	Broadband excitation of upconversion in lanthanide doped fluorides for enhancement of Si solar cells. , 2012, , .		2
1410	Calculation of the lattice dynamics and Raman spectra of copper zinc tin chalcogenides and comparison to experiments. Journal of Applied Physics, 2012, 111, .	1.1	221
1411	Channel-Length-Dependent Transport and Photovoltaic Characteristics of Carbon-Nanotube-Based, Barrier-Free Bipolar Diode. ACS Applied Materials & Interfaces, 2012, 4, 1154-1157.	4.0	9
1412	Photochemical Upconversion Enhanced Solar Cells: Effect of a Back Reflector. Australian Journal of Chemistry, 2012, 65, 480.	0.5	85
1413	Development of plasmonic semiconductor nanomaterials with copper chalcogenides for a future with sustainable energy materials. Energy and Environmental Science, 2012, 5, 5564-5576.	15.6	334
1414	COMPUTATIONAL SIMULATIONS OF NANOSTRUCTURED SOLAR CELLS. Nano LIFE, 2012, 02, 1230007.	0.6	3
1415	Ultrafast Charge Transfer Dynamics in Polycrystalline CdSe/TiO <sub>2</sub> Nanorods Prepared by Oblique Angle Codeposition. Journal of Physical Chemistry C, 2012, 116, 5033-5041.	1.5	39
1416	Strain-Engineering of Band Gaps in Piezoelectric Boron Nitride Nanoribbons. Nano Letters, 2012, 12, 1224-1228.	4.5	181
1417	Fundamental Issues in Manufacturing Photovoltaic Modules Beyond the Current Generation of Materials. Advances in OptoElectronics, 2012, 2012, 1-10.	0.6	13
1418	Nanoscale Radiative Heat Transfer and Its Applications. , 0, , .		3
1419	Silicon Quantum Dots for Photovoltaics: A Review. , 0, , .		6
1420	Quantum Mechanics Design of Two Photon Processes Based Solar Cells. , 0, , .		0
1421	Solar Spectrum Conversion for Photovoltaics Using Nanoparticles. , 0, , .		16
1422	A simulation study towards a new concept for realization of thin film triple junction solar cells based on group IV elements. Progress in Photovoltaics: Research and Applications, 2012, 20, 74-81.	4.4	12
1423	Analytical treatment of Trivich–Flinn and Shockley–Queisser photovoltaic efficiency limits using polylogarithms. Progress in Photovoltaics: Research and Applications, 2012, 20, 127-134.	4.4	12
1424	Interplay between the hot phonon effect and intervalley scattering on the cooling rate of hot carriers in GaAs and InP. Progress in Photovoltaics: Research and Applications, 2012, 20, 82-92.	4.4	61
1425	Radiative efficiency of stateâ€ofâ€ŧheâ€art photovoltaic cells. Progress in Photovoltaics: Research and Applications, 2012, 20, 472-476.	4.4	323
1426	Initial theoretical study of solar cells with an intermediate band of nonâ€zero width and a thermalized electron population. Progress in Photovoltaics: Research and Applications, 2012, 20, 431-441.	4.4	6

C	<b>n</b>	
		ICDT.
CHAILO		UK I

#	Article	IF	CITATIONS
1427	Limiting photovoltaic efficiency under new ASTM International G173â€based reference spectra. Progress in Photovoltaics: Research and Applications, 2012, 20, 954-959.	4.4	37
1428	Global optimization of solar thermophotovoltaic systems. Progress in Photovoltaics: Research and Applications, 2013, 21, 1040-1055.	4.4	32
1429	Can computational approaches aid in untangling the inherent complexity of practical organic photovoltaic systems?. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 1071-1089.	2.4	29
1430	Nanostructured thin film silicon solar cells efficiency improvement using gold nanoparticles. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1475-1480.	0.8	49
1431	Binary copper oxide semiconductors: From materials towards devices. Physica Status Solidi (B): Basic Research, 2012, 249, 1487-1509.	0.7	547
1432	Computational simulation of the pâ€n doped silicon quantum dot. International Journal of Quantum Chemistry, 2012, 112, 3879-3888.	1.0	32
1433	Separating multiple excitons. Nature Photonics, 2012, 6, 272-273.	15.6	18
1434	The renaissance of dye-sensitized solar cells. Nature Photonics, 2012, 6, 162-169.	15.6	1,197
1435	Excitons and charges at organic semiconductor heterojunctions. Faraday Discussions, 2012, 155, 339-348.	1.6	38
1436	<i>Sun-Believable</i> Solar Paint. A Transformative One-Step Approach for Designing Nanocrystalline Solar Cells. ACS Nano, 2012, 6, 865-872.	7.3	92
1437	Fortification of CdSe Quantum Dots with Graphene Oxide. Excited State Interactions and Light Energy Conversion. Journal of the American Chemical Society, 2012, 134, 7109-7116.	6.6	309
1438	Understanding intermediate-band solar cells. Nature Photonics, 2012, 6, 146-152.	15.6	576
1439	Toward high-efficiency solar upconversion with plasmonic nanostructures. Journal of Optics (United) Tj ETQq0 0	0 rgBT /Ov FO	verlock 10 T 54
1440	Present Status in the Development of III–V Multi-Junction Solar Cells. Springer Series in Optical Sciences, 2012, , 1-21.	0.5	11
1441	Next Generation Photovoltaics Based on Multiple Exciton Generation in Quantum Dot Solar Cells. Springer Series in Optical Sciences, 2012, , 191-207.	0.5	6
1442	Modelling of Quantum Dots for Intermediate Band Solar Cells. Springer Series in Optical Sciences, 2012, , 229-250.	0.5	0
1443	Thin-Film Technology in Intermediate Band Solar Cells: Advanced Concepts for Chalcopyrite Solar Cells. Springer Series in Optical Sciences, 2012, , 277-307.	0.5	1
1444	Ion Implant Technology for Intermediate Band Solar Cells. Springer Series in Optical Sciences, 2012, , 321-346.	0.5	4

		CITATION RE	PORT	
#	ARTICLE Photonic design principles for ultrahigh-efficiency photovoltaics. Nature Materials, 201	2 11 174-177	IF	CITATIONS
1447	Resolving the Electron Transfer Kinetics in the Bacterial Reaction Center by Pulse Polaria Photon Echo Spectroscopy. Journal of Physical Chemistry Letters, 2012, 3, 1798-1805.	zed 2-D	2.1	12
1448	Controllable photoelectron transfer in CdSe nanocrystal–carbon nanotube hybrid str Nanoscale, 2012, 4, 742-746.	uctures.	2.8	15
1449	Energy-transfer luminescence of a zinc oxide/ytterbium oxide nanocomposite. RSC Adv. 8783.	ances, 2012, 2,	1.7	23
1450	Recent developments in molecule-based organic materials for dye-sensitized solar cells. Materials Chemistry, 2012, 22, 8734.	Journal of	6.7	362
1451	Broadband dye-sensitized upconversion of near-infrared light. Nature Photonics, 2012,	6, 560-564.	15.6	861
1452	Artificial photosynthesis for solar water-splitting. Nature Photonics, 2012, 6, 511-518.		15.6	1,790
1453	Optimum mobility, contact properties, and open-circuit voltage of organic solar cells: A drift-diffusion simulation study. Physical Review B, 2012, 85, .		1.1	174
1454	Multiple Exciton Generation by a Single Photon in Single-Walled Carbon Nanotubes. Ph Letters, 2012, 108, 227401.	ysical Review	2.9	21
1455	Hot-injection synthesis of monodispersed Cu2ZnSn(SxSe1â^'x)4 nanocrystals: tunable optical properties. Journal of Materials Chemistry, 2012, 22, 14667.	composition and	6.7	85
1456	Modeling geminate pair dissociation in organic solar cells: high power conversion efficie achieved with moderate optical bandgaps. Energy and Environmental Science, 2012, 5,	encies 8343.	15.6	46
1457	Detailed balance. , 2012, , .			0
1458	Ultrafast Supercontinuum Spectroscopy of Carrier Multiplication and Biexcitonic Effect States of PbS Quantum Dots. Nano Letters, 2012, 12, 2658-2664.	s in Excited	4.5	48
1459	Temperature dependence of phonon modes, dielectric functions, and interband electro in Cu2ZnSnS4 semiconductor films. Physical Chemistry Chemical Physics, 2012, 14, 99	nic transitions 36.	1.3	38
1460	Sorting Stable versus Unstable Hypothetical Compounds: The Case of Multiâ€Function Halfâ€Heusler Filled Tetrahedral Structures. Advanced Functional Materials, 2012, 22, 1	al ABX 1425-1435.	7.8	107
1461	High Efficiency Semiconductorâ€Liquid Junction Solar Cells based on Cu/Cu <sub>2Functional Materials, 2012, 22, 3907-3913.</sub>	b>O. Advanced	7.8	51
1462	Minimizing Energy Losses in Dye ensitized Solar Cells Using Coordination Compoun Redox Mediators Coupled with Appropriate Organic Dyes. Advanced Energy Materials, 2	ds as Alternative 2012, 2, 616-627.	10.2	87
1463	Thermodynamic Efficiency Limit of Molecular Donorâ€Acceptor Solar Cells and its Appli Diindenoperylene/C <sub>60</sub> â€Based Planar Heterojunction Devices. Advanced E 2012, 2, 1100-1108.	cation to Inergy Materials,	10.2	84

#	Article	IF	CITATIONS
1464	Pathways to a New Efficiency Regime for Organic Solar Cells. Advanced Energy Materials, 2012, 2, 1246-1253.	10.2	343
1465	Carbon Nanotubeâ€ <b>S</b> ilicon Solar Cells. Advanced Energy Materials, 2012, 2, 1043-1055.	10.2	144
1466	Efficient Light Trapping in Inverted Nanopyramid Thin Crystalline Silicon Membranes for Solar Cell Applications. Nano Letters, 2012, 12, 2792-2796.	4.5	322
1467	Density functional theory analysis of dopants in cupric oxide. Journal of Applied Physics, 2012, 111, .	1.1	57
1468	Layer-by-Layer Assembly of Sintered CdSe <sub><i>x</i></sub> Te <sub>1–<i>x</i></sub> Nanocrystal Solar Cells. ACS Nano, 2012, 6, 5995-6004.	7.3	130
1469	Low band gap liquid-processed CZTSe solar cell with 10.1% efficiency. Energy and Environmental Science, 2012, 5, 7060.	15.6	303
1470	Singlet Exciton Fission-Sensitized Infrared Quantum Dot Solar Cells. Nano Letters, 2012, 12, 1053-1057.	4.5	200
1471	Correlated electron dynamics in quantum-dot sensitized solar cell: Kadanoff-Baym versus Markovian approach. Physical Review B, 2012, 85, .	1.1	9
1472	Photovoltaic efficiency limits and material disorder. Energy and Environmental Science, 2012, 5, 6022.	15.6	166
1473	Multiple Exciton Generation and Recombination Dynamics in Small Si and CdSe Quantum Dots: An Ab Initio Time-Domain Study. ACS Nano, 2012, 6, 1239-1250.	7.3	91
1474	Computational electromagnetics for nanowire solar cells. Journal of Computational Electronics, 2012, 11, 153-165.	1.3	20
1475	Optical and Electrical Properties of Cu2ZnSnS4 Film Prepared by Sulfurization Method. Journal of Electronic Materials, 2012, 41, 2204-2209.	1.0	26
1476	Simulation and experimental validation of heat transfer in a novel hybrid solar panel. International Journal of Heat and Mass Transfer, 2012, 55, 1076-1082.	2.5	85
1477	Hybrid polymer/nanoparticle solar cells: Preparation, principles and challenges. Journal of Colloid and Interface Science, 2012, 369, 1-15.	5.0	85
1478	Study and enhance the photovoltaic properties of narrow-bandgap Cu2SnS3 solar cell by p–n junction interface modification. Journal of Colloid and Interface Science, 2012, 376, 327-330.	5.0	71
1479	Investigation on the performance enhancement of silicon solar cells with an assembly grating structure. Energy Conversion and Management, 2012, 54, 30-37.	4.4	35
1480	Thermally deposited lead oxides for thin film photovoltaics. Materials Letters, 2012, 71, 51-53.	1.3	38
1481	Power conversion efficiency enhancement in silicon solar cell from solution processed transparent upconversion film. Materials Letters, 2012, 77, 17-20.	1.3	20

#	Article	IF	CITATIONS
1482	Optimization of CdS layer on ZnO nanorod arrays for efficient CdS/CdSe co-sensitized solar cell. Materials Letters, 2012, 82, 240-243.	1.3	47
1483	Evaluation of vanadium substituted In2S3 as a material for intermediate band solar cells. Solar Energy Materials and Solar Cells, 2012, 98, 88-93.	3.0	10
1484	Theoretical enhancement of solar cell efficiency by the application of an ideal â€~down-shifting' thin film. Solar Energy Materials and Solar Cells, 2012, 98, 455-464.	3.0	32
1485	Theoretical efficiency of 3rd generation solar cells: Comparison between carrier multiplication and down-conversion. Solar Energy Materials and Solar Cells, 2012, 99, 308-315.	3.0	25
1486	Estimation of the influence of Fresnel lens temperature on energy generation of a concentrator photovoltaic system. Solar Energy Materials and Solar Cells, 2012, 99, 333-338.	3.0	68
1487	Optimizing Er/Yb ratio and content in Er–Yb co-doped glass-ceramics for enhancement of the up- and down-conversion luminescence. Solar Energy Materials and Solar Cells, 2012, 100, 209-215.	3.0	86
1488	Improving solar cell efficiency with optically optimised TCO layers. Solar Energy Materials and Solar Cells, 2012, 101, 262-269.	3.0	52
1489	Evaluation of carrier transport and recombinations in cadmium selenide quantum-dot-sensitized solar cells. Solar Energy Materials and Solar Cells, 2012, 101, 5-10.	3.0	25
1490	Temperature dependence of solar cell performance—an analysis. Solar Energy Materials and Solar Cells, 2012, 101, 36-45.	3.0	672
1491	Efficient near-infrared quantum splitting in YVO4:Ho3+ for photovoltaics. Solar Energy Materials and Solar Cells, 2012, 101, 303-307.	3.0	26
1492	Nd:SrTiO3 thin films as photon downshifting layers for photovoltaics. Solar Energy Materials and Solar Cells, 2012, 102, 71-74.	3.0	33
1493	Symmetry considerations in the empirical k.p Hamiltonian for the study of intermediate band solar cells. Solar Energy Materials and Solar Cells, 2012, 103, 171-183.	3.0	26
1494	Formation of a heterojunction by electrophoretic deposition of CdTe/CdSe nanoparticles from an exhaustible source. Thin Solid Films, 2012, 520, 5500-5503.	0.8	13
1495	A discussion on spectral modification from visible to near-infrared based on energy transfer for silicon solar cells. Optical Materials, 2012, 34, 901-905.	1.7	29
1496	UV to NIR photon conversion in Nd-doped rutile and anatase titanium dioxide films for silicon solar cell application. Optical Materials, 2012, 34, 1419-1425.	1.7	20
1497	Optimization of the side-chain density to improve the charge transport and photovoltaic performances of a low band gap copolymer. Organic Electronics, 2012, 13, 114-120.	1.4	32
1498	An analysis of quantum coherent solar photovoltaic cells. Physica B: Condensed Matter, 2012, 407, 544-546.	1.3	6
1499	Evaluation of the conversion efficiency of thin-film single-junction (a-Si:H) and tandem (μc-Si:H + a-Si:H) solar cells by analysis of the experimental dark and load current-voltage (l–V) characteristics. Semiconductors, 2012, 46, 929-936.	0.2	4

		CITATION RE	PORT	
#	Article		IF	CITATIONS
1500	Doping-free carbon nanotube optoelectronic devices. Science Bulletin, 2012, 57, 149-1	56.	1.7	23
1501	Doping-free fabrication of carbon nanotube thin-film diodes and their photovoltaic chan Nano Research, 2012, 5, 33-42.	acteristics.	5.8	12
1502	Enhancing the photovoltaic effect in the infrared region by germanium quantum dots ir intrinsic region of a silicon p-i-n diode with nanostructure. Journal of Materials Science, 93-99.	iserted in the 2012, 47,	1.7	5
1503	An organic solar cell theoretical model with two concepts of excitonic and bipolar trans Asia-Pacific Journal of Chemical Engineering, 2013, 8, 59-68.	port.	0.8	1
1504	On the reported experimental evidence for the quasiâ€Fermi level split in quantumâ€do solar cells. Progress in Photovoltaics: Research and Applications, 2013, 21, 209-216.	)t intermediateâ€band	4.4	11
1505	CdS/Cu(In,Ga)S <sub>2</sub> based solar cells with efficiencies reaching 12.9% prepar thermal process. Progress in Photovoltaics: Research and Applications, 2013, 21, 88-93	ed by a rapid	4.4	50
1506	Enhanced light harvesting of Si solar cells via luminescent downâ€shifting using YVO <sub>4</sub> :Bi <sup>3+</sup> , Eu <sup>3+</sup> nanophosphors. Progress in P Research and Applications, 2013, 21, 1507-1513.	hotovoltaics:	4.4	56
1507	Zinc alloyed iron pyrite ternary nanocrystals for band gap broadening. Journal of Materi Chemistry A, 2013, 1, 12060.	als	5.2	22
1508	Perspectives on the pathways for cadmium telluride photovoltaic module manufacture expected increases in the price for tellurium. Solar Energy Materials and Solar Cells, 202	rs to address 13, 115, 199-212.	3.0	74
1509	An analysis of the optimal band gaps of light absorbers in integrated tandem photoelec water-splitting systems. Energy and Environmental Science, 2013, 6, 2984.	trochemical	15.6	497
1510	Design of GaAs Solar Cells Operating Close to the Shockley–Queisser Limit. IEEE Jour Photovoltaics, 2013, 3, 737-744.	nal of	1.5	106
1511	Highly efficient organic tandem solar cells: a follow up review. Energy and Environment. 2013, 6, 2390.	al Science,	15.6	440
1512	Nanochemistry and nanomaterials for photovoltaics. Chemical Society Reviews, 2013,	42, 8304.	18.7	269
1513	The exciton dynamics in tetracene thin films. Physical Chemistry Chemical Physics, 201	3, 15, 14797.	1.3	106
1514	Solar energy harvesting with the application of nanotechnology. Renewable and Sustai Reviews, 2013, 26, 837-852.	nable Energy	8.2	185
1515	The potential sunlight harvesting efficiency of carbon nanotube solar cells. Energy and Environmental Science, 2013, 6, 2572.		15.6	53
1516	Ideal Efficiencies. , 2013, , 55-66.			1
1517	High Efficiency Ill–V Multijunction Solar Cells. , 2013, , 353-381.			2

#	Article	IF	CITATIONS
1518	Exceeding the Limit in Solar Energy Conversion with Multiple Excitons. Accounts of Chemical Research, 2013, 46, 1239-1241.	7.6	19
1519	Enhanced external radiative efficiency for 20.8% efficient single-junction GaInP solar cells. Applied Physics Letters, 2013, 103, .	1.5	254
1520	Electrical decoupling effect on intermediate band Ti-implanted silicon layers. Journal Physics D: Applied Physics, 2013, 46, 135108.	1.3	10
1521	Large-scale synthesis and in situ functionalization of Zn3P2 and Zn4Sb3 nanowire powders. Physical Chemistry Chemical Physics, 2013, 15, 6260.	1.3	23
1522	Synthesis and Crystallographic Analysis of Shape-Controlled SnS Nanocrystal Photocatalysts: Evidence for a Pseudotetragonal Structural Modification. Journal of the American Chemical Society, 2013, 135, 11634-11644.	6.6	129
1523	Modeling of quantum dot junction for third generation solar cell. Thin Solid Films, 2013, 543, 16-18.	0.8	3
1524	Carbon nanotube-based heterostructures for solar energy applications. Chemical Society Reviews, 2013, 42, 8134.	18.7	85
1525	The case for organic photovoltaics. RSC Advances, 2013, 3, 17633.	1.7	471
1526	Luminescence upconversion in colloidal double quantum dots. Nature Nanotechnology, 2013, 8, 649-653.	15.6	126
1527	Optimizing infrared to near infrared upconversion quantum yield of β-NaYF4:Er3+ in fluoropolymer matrix for photovoltaic devices. Journal of Applied Physics, 2013, 114, .	1.1	85
1528	Photon upconversion facilitated molecular solar energy storage. Journal of Materials Chemistry A, 2013, 1, 8521.	5.2	124
1529	Detailed Balance Calculation of a Novel Triple-Junction Solar Cell Structure. IEEE Journal of Photovoltaics, 2013, 3, 1403-1408.	1.5	8
1530	Semiconducting Tin and Lead Iodide Perovskites with Organic Cations: Phase Transitions, High Mobilities, and Near-Infrared Photoluminescent Properties. Inorganic Chemistry, 2013, 52, 9019-9038.	1.9	4,516
1531	III–V nanowire photovoltaics: Review of design for high efficiency. Physica Status Solidi - Rapid Research Letters, 2013, 7, 815-830.	1.2	204
1532	A Seleniumâ€ <b>S</b> ubstituted Lowâ€Bandgap Polymer with Versatile Photovoltaic Applications. Advanced Materials, 2013, 25, 825-831.	11.1	396
1533	Impurity Photovoltaic Effect in Multijunction Solar Cells. Procedia Technology, 2013, 7, 166-172.	1.1	1
1534	PbS Quantum Dots Embedded in a ZnS Dielectric Matrix for Bulk Heterojunction Solar Cell Applications. Advanced Materials, 2013, 25, 4598-4604.	11.1	50
1535	Layer-by-Layer Assemblies of Semiconductor Quantum Dots for Nanostructured Photovoltaic Devices. Journal of Physical Chemistry Letters, 2013, 4, 2461-2470.	2.1	26

#	Article	IF	CITATIONS
1536	High efficient quantum cutting in Ce3+/Yb3+co-doped oxyfluoride glasses. Journal of Alloys and Compounds, 2013, 572, 110-112.	2.8	27
1537	The role of spin in the kinetic control of recombination in organic photovoltaics. Nature, 2013, 500, 435-439.	13.7	460
1538	On the missing links in quantum dot solar cells: a DFT study on fluorophore oxidation and reduction processes in sensitized solar cells. Physical Chemistry Chemical Physics, 2013, 15, 16275.	1.3	22
1539	Three-dimensional imaging for precise structural control of Si quantum dot networks for all-Si solar cells. Nanoscale, 2013, 5, 7499.	2.8	20
1540	Electronic and optical properties of kesterite Cu2ZnSnS4 under in-plane biaxial strains: First-principles calculations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 2398-2402.	0.9	25
1541	DBL model for GaAs-based solar cells in different outdoor conditions. Indian Journal of Physics, 2013, 87, 971-976.	0.9	2
1542	Effect of sulfur and copper amounts in sol–gel precursor solution on the growth, crystal properties, and optical properties of Cu2ZnSnS4 films. Journal of Materials Science: Materials in Electronics, 2013, 24, 3756-3763.	1.1	19
1543	Preparation, optical properties and solar cell applications of CdS quantum dots synthesized by chemical bath deposition. Journal of Materials Science: Materials in Electronics, 2013, 24, 3009-3013.	1.1	9
1544	Investigation of electrical and optical measurements of silicon nanocrystals embedded in SiO2 matrix. Journal of Materials Science: Materials in Electronics, 2013, 24, 1837-1841.	1.1	3
1545	Effect of Temperature on Structural and Optical Properties of Chemically Deposited Tin Sulfide Thin Films Suitable for Photovoltaic Structures. Advanced Materials Research, 0, 665, 93-100.	0.3	3
1546	CZTS nanocrystals: a promising approach for next generation thin film photovoltaics. Energy and Environmental Science, 2013, 6, 2822.	15.6	309
1547	Photocatalytic Production of Renewable Hydrogen. , 2013, , 495-527.		0
1548	Photocatalysts for Solar Hydrogen Conversion. , 2013, , 191-217.		2
1549	Nonequilibrium dynamics of photoexcited electrons in graphene: Collinear scattering, Auger processes, and the impact of screening. Physical Review B, 2013, 88, .	1.1	164
1550	Efficiency limits of rectenna solar cells: Theory of broadband photon-assisted tunneling. Applied Physics Letters, 2013, 102, .	1.5	45
1551	First-principles study on the doping effects of nitrogen on the electronic structure and optical properties of Cu <sub>2</sub> O. RSC Advances, 2013, 3, 84-90.	1.7	35
1552	Modeling the front side plasmonics effect in nanotextured silicon surface for thin film solar cells application. Microsystem Technologies, 2013, 19, 871-877.	1.2	10
1553	Influence of the Ga Content on the Optical and Electrical Properties of CuIn \$_{{m 1}hbox{}{m x}}\$Ga \$_{m x}\$Se\$_{m 2}\$ Thin-Film Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 823-827.	1.5	5

	CHAHON	REPORT	
#	Article	IF	CITATIONS
1554	Charge carrier recombination in organic solar cells. Progress in Polymer Science, 2013, 38, 1941-1960.	11.8	534
1555	Exciton spectra in two-dimensional graphene derivatives. Physical Review B, 2013, 88, .	1.1	31
1556	Solar Cells solar cell : Very High Efficiencies Approaches solar cell very high efficiencies approaches. , 2013, , 358-377.		0
1557	Enhancement of Perovskite-Based Solar Cells Employing Core–Shell Metal Nanoparticles. Nano Letters, 2013, 13, 4505-4510.	4.5	505
1558	Black tungsten for solar power generation. Applied Physics Letters, 2013, 103, .	1.5	31
1559	Colloidal quantum dots in solar cells. Russian Chemical Reviews, 2013, 82, 429-448.	2.5	34
1560	A Co atalyst‣oaded Ta <sub>3</sub> N <sub>5</sub> Photoanode with a High Solar Photocurrent for Water Splitting upon Facile Removal of the Surface Layer. Angewandte Chemie - International Edition, 2013, 52, 11016-11020.	7.2	208
1561	Anchoring Energy Acceptors to Nanostructured ZrO <sub>2</sub> Enhances Photon Upconversion by Sensitized Triplet–Triplet Annihilation Under Simulated Solar Flux. Journal of Physical Chemistry C, 2013, 117, 14493-14501.	1.5	43
1562	Critical size for the generation of misfit dislocations and their effects on electronic properties in GaAs nanosheets on Si substrate. Journal of Applied Physics, 2013, 114, 074316.	1.1	3
1563	Three-Dimensional Cu(InGa)Se\$_{f 2}\$ Photovoltaic Cells Simulations: Optimization for Limited-Range Wavelength Applications. IEEE Journal of Photovoltaics, 2013, 3, 1106-1112.	1.5	8
1564	Modeling of antimony based subcell layers for higher photon absorption in novel multijunction solar cell. , 2013, , .		1
1565	Single intermediate-band solar cells of InGaN/InN quantum dot supracrystals. Applied Physics A: Materials Science and Processing, 2013, 113, 75-82.	1.1	16
1566	Metal chalcogenide complex-mediated fabrication of Cu2S film as counter electrode in quantum dot sensitized solar cells. Science China Chemistry, 2013, 56, 977-981.	4.2	8
1567	Rare earth ions doped phosphors for improving efficiencies of solar cells. Energy, 2013, 57, 270-283.	4.5	180
1568	Reformulation of solar cell physics to facilitate experimental separation of recombination pathways. Applied Physics Letters, 2013, 103, .	1.5	78
1569	Broadband near-infrared downconversion luminescence in Eu2+–Yb3+ codoped Ca9Y(PO4)7. Optics Communications, 2013, 296, 84-86.	1.0	23
1570	A comprehensive multi-criteria model to rank electric energy production technologies. Renewable and Sustainable Energy Reviews, 2013, 22, 640-654.	8.2	204
1571	Intermediateâ€bandâ€assisted hotâ€carrier solar cells using indirectâ€bandgap absorbers. Progress in Photovoltaics: Research and Applications, 2013, 21, 1308-1318.	4.4	21

#	Article	IF	CITATIONS
1572	Fundamentals of PV efficiency interpreted by a two-level model. American Journal of Physics, 2013, 81, 655-662.	0.3	10
1573	Photoelectrochemical Water Splitting. SpringerBriefs in Energy, 2013, , .	0.2	329
1574	Quantum effects in silicon for photovoltaic applications. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1071-1075.	0.8	7
1575	Performance Enhancement of Crystalline Silicon Solar Cells by Coating with Luminescent Silicon Nanostructures. Journal of Electronic Materials, 2013, 42, 403-409.	1.0	5
1576	Upconversion in solar cells. Nanoscale Research Letters, 2013, 8, 81.	3.1	184
1578	Clarifying Kirk's confusion about quantum coherent solar cell physics via simple examples and analysis. Physica B: Condensed Matter, 2013, 423, 54-57.	1.3	1
1579	Highly efficient ZnO porous nanostructure for CdS/CdSe quantum dot sensitized solar cell. Thin Solid Films, 2013, 548, 636-640.	0.8	14
1580	Luminescent Coupling in GaAs/GaInNAsSb Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 520-527.	1.5	52
1581	Lattice-Matched Solar Cells With 40% Average Efficiency in Pilot Production and a Roadmap to 50%. IEEE Journal of Photovoltaics, 2013, 3, 542-547.	1.5	23
1582	Effect of Sb on GaNAs Intermediate Band Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 730-736.	1.5	29
1583	Interband Cascade Photovoltaic Devices for Conversion of Mid-IR Radiation. IEEE Journal of Photovoltaics, 2013, 3, 745-752.	1.5	15
1584	Low-Temperature Concentrated Light Characterization Applied to Intermediate Band Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 753-761.	1.5	10
1585	High-Aspect Ratio Structures for Efficient Light Absorption and Carrier Transport in InGaAs/GaAsP Multiple Quantum-Well Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 859-867.	1.5	22
1586	Metal Pillar Interconnection Topology for Bonded Two-Terminal Multijunction III–V Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 868-872.	1.5	16
1587	Reassessment of the Limiting Efficiency for Crystalline Silicon Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 1184-1191.	1.5	774
1588	Performance improvements in microsystems enabled photovoltaics with wider acceptance angles. , 2013, , .		1
1589	Near-infrared quantum cutting in OHâ^' free Nd3+-Yb3+ co-doped low-silica calcium aluminosilicate glasses. Journal of Applied Physics, 2013, 114, .	1.1	21
1590	Evaluation of photovoltaic materials within the Cu-Sn-S family. Applied Physics Letters, 2013, 103, .	1.5	117

#	Article	IF	CITATIONS
1591	Impact of Se flux on the defect formation in polycrystalline Cu(In,Ca)Se2 thin films grown by three stage evaporation process. Journal of Applied Physics, 2013, 113, 064907.	1.1	15
1592	Maximum efficiencies of indoor photovoltaic devices. IEEE Journal of Photovoltaics, 2013, 3, 59-64.	1.5	197
1593	Photon management with nanostructures on concentrator solar cells. Applied Physics Letters, 2013, 103, .	1.5	7
1594	Ultrafast biexciton spectroscopy in semiconductor quantum dots: evidence for early emergence of multiple-exciton generation. Scientific Reports, 2013, 3, 3206.	1.6	14
1595	Energy level alignment at interfaces in organic photovoltaic devices. Journal of Electron Spectroscopy and Related Phenomena, 2013, 190, 12-24.	0.8	27
1596	Effect of light soaking on the electro- and photoluminescence of Cu(In,Ga)Se2 solar cells. Applied Physics Letters, 2013, 103, .	1.5	14
1597	Broadband downconversion in YVO4:Tm3+,Yb3+ phosphors. Journal of Rare Earths, 2013, 31, 27-31.	2.5	24
1598	Design parameters for nanowireâ€planar tandem solar cells. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 425-429.	0.8	8
1599	Near-infrared downconversion in Eu <sup>2+</sup> and Pr <sup>3+</sup> co-doped KSrPO <sub>4</sub> phosphor. Chinese Physics B, 2013, 22, 057803.	0.7	5
1600	Hybrid polymer/inorganic nanoparticle blended ternary solar cells. Physica Status Solidi - Rapid Research Letters, 2013, 7, 534-537.	1.2	7
1601	Characterization of Cu(In,Ga)Se2 grown by MBE by two-wavelength excited photoluminescence spectroscopy. Journal of Crystal Growth, 2013, 378, 162-164.	0.7	11
1602	Computational screening of functionalized zinc porphyrins for dye sensitized solar cells. Physical Chemistry Chemical Physics, 2013, 15, 19478.	1.3	36
1603	Fe-substituted indium thiospinels: New intermediate band semiconductors with better absorption of solar energy. Journal of Applied Physics, 2013, 113, 213509.	1.1	27
1604	Multiexciton Absorption Cross Sections of CdSe Quantum Dots Determined by Ultrafast Spectroscopy. Journal of Physical Chemistry Letters, 2013, 4, 3330-3336.	2.1	19
1605	Design Enhancements for High Performance Dye-Sensitized Solar Cells. Journal of Solar Energy Engineering, Transactions of the ASME, 2013, 135, .	1.1	1
1606	Investigation of the open-circuit voltage in solar cells doped with quantum dots. Scientific Reports, 2013, 3, 2703.	1.6	65
1607	Study of optical absorbance in porous silicon nanowires for photovoltaic applications. Applied Surface Science, 2013, 283, 828-832.	3.1	21
1608	Perovskites: The Emergence of a New Era for Low-Cost, High-Efficiency Solar Cells. Journal of Physical Chemistry Letters, 2013, 4, 3623-3630.	2.1	2,483

ARTICLE IF CITATIONS Three-dimensional self-assembled photonic crystals with high temperature stability for thermal 1609 5.8 204 emission modification. Nature Communications, 2013, 4, 2630. GaSb/InGaAs quantum dot–well hybrid structure active regions in solar cells. Solar Energy Materials and Solar Cells, 2013, 114, 165-171. Feasibility of submonolayer ZnTe/ZnCdSe quantum dots as intermediate band solar cell material 1611 3.0 24 system. Solar Energy Materials and Solar Cells, 2013, 117, 604-609. Impact of the light intensity variation on the performance of solar cell constructed from 0.2 (Muscovite/TiO<sub&gt;2&lt;/sub&gt;/Dye/Al). Natural Science, 2013, 05, 1069-1077. Harvesting singlet fission for solar energy conversion via triplet energy transfer. Nature 1613 70 5.8 Communications, 2013, 4, 2679. Stabilizing Cu<sub>2</sub>S for Photovoltaics One Atomic Layer at a Time. ACS Applied Materials 4.0 & Interfaces, 2013, 5, 10302-10309. Composition-Dependent Photoelectrochemical Properties of Nonstoichiometric 1615 Cu<sub>2</sub>ZnSnS<sub>4</sub> Nanoparticles. Journal of Physical Chemistry C, 2013, 117, 1.516 21055-21063. Silicon quantum dots embedded in a SiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow 1616 1.1 16 /><mml:mn>2</mml:mn></mml:msub></mml:math>matrix: From structural study to carrier transport properties. Physical Review B. 2013. 88. . Thermodynamics of primary photosynthesis. Photosynthesis Research, 2013, 116, 363-366. 7 1617 1.6 Synthesis of Eco-Friendly CuInS<sub>2</sub> Quantum Dot-Sensitized Solar Cells by a Combined Ex Situ/in Situ Growth Approach. ACS Applied Materials & amp; Interfaces, 2013, 5, 11296-11306. Advanced electro-optical simulation of nanowire-based solar cells. Journal of Computational 1619 1.3 18 Electronics, 2013, 12, 572-584. Controlling Light Absorption in Charge-Separating Core/Shell Semiconductor Nanocrystals. ACS Nano, 2013, 7, 11055-11063. 1621 Rectenna Solar Cells., 2013, , . 83 Efficient Biologically Inspired Photocell Enhanced by Delocalized Quantum States. Physical Review Letters, 2013, 111, 253601. 134 Raman spectroscopy of silicon-nanocrystals fabricated by inductively coupled plasma chemical vapor 1623 1.3 17 deposition. Physica É: Low-Dimensional Systems and Nanostructures, 2013, 52, 59-64. 1624 Nanoenergy., 2013, , . Photoluminescence characterization of a high-efficiency Cu2ZnSnS4 device. Journal of Applied 1625 1.1 84 Physics, 2013, 114, . Singlet exciton fission in solution. Nature Chemistry, 2013, 5, 1019-1024. 6.6

#	Article	IF	CITATIONS
1627	Elongated nanostructures for radial junction solar cells. Reports on Progress in Physics, 2013, 76, 106502.	8.1	43
1628	On the synthesis and properties of ternary copper oxide sulfides (Cu <sub>2</sub> O <sub>1–<i>x</i></sub> S <i><sub>x</sub></i> ). Physica Status Solidi - Rapid Research Letters, 2013, 7, 360-363.	1.2	7
1629	Effect of Sn-layer addition to precursors on characteristics of Cu2ZnSn(S,Se)4 thin-film solar cell absorber. Thin Solid Films, 2013, 549, 59-64.	0.8	10
1630	Vertical correlation and miniband formation in submonolayer Zn(Cd)Te/ZnCdSe type-II quantum dots for intermediate band solar cell application. Applied Physics Letters, 2013, 103, 181905.	1.5	12
1631	Effects of substrates on structural and optical properties of Cu-poor CuGaSe2 thin films prepared by in-situ co-evaporation. Current Applied Physics, 2013, 13, 907-912.	1.1	10
1632	Design of multi-junction solar cells using PC1D. , 2013, , .		3
1633	The structural, electronic and optical properties of CuGa (SexS1-x)2 compounds from first-principle calculations. European Physical Journal B, 2013, 86, 1.	0.6	7
1634	An integrated approach to realizing high-performance liquid-junction quantum dot sensitized solar cells. Nature Communications, 2013, 4, 2887.	5.8	255
1635	Carrier Separation at Dislocation Pairs in CdTe. Physical Review Letters, 2013, 111, 096403.	2.9	51
1636	A comprehensive picture of Cu doping in CdTe solar cells. Journal of Applied Physics, 2013, 114, .	1.1	92
1637	Synthesis, Characterization, and Electronic Structure of Single-Crystal SnS, Sn <sub>2</sub> S <sub>3</sub> , and SnS <sub>2</sub> . Chemistry of Materials, 2013, 25, 4908-4916.	3.2	388
1638	Micro-optical design of photochemical upconverters for thin-film solar cells. Journal of Photonics for Energy, 2013, 3, 034598.	0.8	21
1639	Efficient upconverted photocurrent through an Auger process in disklike InAs quantum structures for intermediate-band solar cells. Physical Review B, 2013, 87, .	1.1	32
1640	High performance CdS quantum-dot-sensitized solar cells with Ti-based ceramic materials as catalysts on the counter electrode. Journal of Power Sources, 2013, 237, 141-148.	4.0	34
1641	Numerical modeling of silicon nanocrystal down-shifting layers for enhanced CIGS solar cell performance. , 2013, , .		3
1642	A silicon-wafer based p-n junction solar cell by aluminum-induced recrystallization and doping. Applied Physics Letters, 2013, 103, .	1.5	15
1643	<mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline"&gt;<mml:mrow><mml:mi>G</mml:mi><mml:mi>W</mml:mi></mml:mrow></mml:math> quasipartic band structures of stibnite, antimonselite, bismuthinite, and guanajuatite. Physical Review B, 2013, 87, .	cl <b>e.1</b>	178
1644	Fabrication of GaInP/GaAs//Si Solar Cells by Surface Activated Direct Wafer Bonding. IEEE Journal of Photovoltaics, 2013, 3, 1423-1428.	1.5	124

#	Article	IF	CITATIONS
1645	Making the Invisible, Visible: Upconversion via Capped Er-doped NaGdF4 Nanoparticles for Harvesting Sub Bandgap Photons. , 2013, , .		0
1646	Simulation of photogenerated current of PN silicon photodetector enhanced by impurity photovoltaic effect. Renewable and Sustainable Energy Reviews, 2013, 26, 408-413.	8.2	5
1647	Investigation of deep-level defects in Cu(In,Ga)Se2 thin films by two-wavelength excitation photo-capacitance spectroscopy. Applied Physics Letters, 2013, 103, 163905.	1.5	12
1648	Down-conversion effect on GaAs single junction solar cell using CdSe quantum dots. , 2013, , .		1
1649	Morphological impact of ZnO nanoparticle on MEHPPV:ZnO based hybrid solar cell. Journal of Materials Science: Materials in Electronics, 2013, 24, 4621-4629.	1.1	22
1650	Photoluminescence study of Si doped and undoped Chalcopyrite CuGaSe2 thin films. Applied Physics A: Materials Science and Processing, 2013, 113, 257-261.	1.1	8
1651	Improvement of carrier diffusion length in silicon nanowire arrays using atomic layer deposition. Nanoscale Research Letters, 2013, 8, 361.	3.1	39
1652	The influence of the precursor compositional ratio on Cu2ZnSnS4 films prepared by using sulfurization of the metallic precursor. Journal of the Korean Physical Society, 2013, 63, 2194-2198.	0.3	2
1653	An anomalous increase in the fill factor of the current-voltage characteristic in the short-wave region of the solar spectrum for a silicon photocell containing a porous-silicon structure. Technical Physics Letters, 2013, 39, 945-948.	0.2	1
1654	Morphology Engineering of Porous Media for Enhanced Solar Fuel and Power Production. Jom, 2013, 65, 1702-1709.	0.9	9
1655	Growth of CZTS thin films by sulfurization of sputtered single-layered Cu–Zn–Sn metallic precursors from an alloy target. Journal of Materials Science: Materials in Electronics, 2013, 24, 4958-4963.	1.1	24
1656	Spectral beam splitting for efficient conversion of solar energy—A review. Renewable and Sustainable Energy Reviews, 2013, 28, 654-663.	8.2	304
1657	Optical and electronic simulation of gallium arsenide/silicon tandem four terminal solar cells. Solar Energy, 2013, 97, 85-92.	2.9	9
1658	From atomic structure to photovoltaic properties in CdTe solar cells. Ultramicroscopy, 2013, 134, 113-125.	0.8	80
1659	Highly Efficient Infrared Quantum Cutting in Tb <sup>3+</sup> â^`Yb <sup>3+</sup> Codoped Silicon Oxynitride for Solar Cell Applications. Advanced Optical Materials, 2013, 1, 855-862.	3.6	43
1660	Amorphous silicon nanomaterials: Quantum dots versus nanowires. Journal of Renewable and Sustainable Energy, 2013, 5, .	0.8	12
1661	Biomimetic Dye Aggregate Solar Cells. Springer Theses, 2013, , .	0.0	9
1662	Band gap tunable and improved microstructure characteristics of Cu2ZnSn(S1â^'x,Sex)4 thin films by annealing under atmosphere containing S and Se. Current Applied Physics, 2013, 13, 1837-1843.	1.1	28

#	Article	IF	CITATIONS
1663	Exceeding the Shockley–Queisser limit in solar energy conversion. Energy and Environmental Science, 2013, 6, 3508.	15.6	106
1664	A numerical study into the influence of quantum dot size on the sub-bandgap interband photocurrent in intermediate band solar cells. AIP Advances, 2013, 3, 022116.	0.6	10
1665	Improvement of Cu2ZnSnS4 thin film morphology using Cu–Zn–Sn–O precursor fabricated by sputtering. Current Applied Physics, 2013, 13, 1861-1864.	1.1	15
1666	Electrochemical Potentials (Quasi-Fermi Levels) and the Operation of Hot-Carrier, Impact-Ionization, and Intermediate-Band Solar Cells. IEEE Journal of Photovoltaics, 2013, 3, 1298-1304.	1.5	11
1667	Theoretical analysis of multilevel intermediate-band solar cells using a drift diffusion model. Journal of Applied Physics, 2013, 113, 243102.	1.1	6
1668	Tunable Electronic Coupling and Driving Force in Structurally Well-Defined Tetracene Dimers for Molecular Singlet Fission: A Computational Exploration Using Density Functional Theory. Journal of Physical Chemistry A, 2013, 117, 10824-10838.	1.1	66
1669	25th Anniversary Article: A Decade of Organic/Polymeric Photovoltaic Research. Advanced Materials, 2013, 25, 6642-6671.	11.1	1,055
1670	Ferritin as a model for developing 3rd generation nano architecture organic/inorganic hybrid photo catalysts for energy conversion. Catalysis Science and Technology, 2013, 3, 3103.	2.1	15
1671	Analysis on the effect of polysulfide electrolyte composition for higher performance of Si quantum dot-sensitized solar cells. Electrochimica Acta, 2013, 95, 43-47.	2.6	31
1672	Light Trapping in Ultrathin Monocrystalline Silicon Solar Cells. Advanced Energy Materials, 2013, 3, 1401-1406.	10.2	61
1673	Strong optical absorption in CuTaN2 nitride delafossite. Energy and Environmental Science, 2013, 6, 2994.	15.6	42
1674	First-principles study of valence band offsets at ZnSnP2/CdS, ZnSnP2/ZnS, and related chalcopyrite/zincblende heterointerfaces. Journal of Applied Physics, 2013, 114, .	1.1	24
1675	Calcium-doping effects on photovoltaic response and structure in multiferroic BiFeO3 ceramics. Journal of Applied Physics, 2013, 114, .	1.1	39
1676	Magnetic field effects and the role of spin states in singlet fission. Chemical Physics Letters, 2013, 585, 1-10.	1.2	81
1677	Research Progress of Quantum Dot Solar Cell. Applied Mechanics and Materials, 2013, 320, 693-697.	0.2	0
1678	Design guidelines for periodic nanowire arrays in thin-film silicon/organic hybrid solar cell. , 2013, , .		0
1679	InGaAs quantum dot solar cells with high energygap matrix layers. , 2013, , .		2
1680	Loss analysis of silicon solar cells by means of numerical device simulation. , 2013, , .		13

#	Article	IF	CITATIONS
1681	Thin Film c-Si Solar Cell Enhanced with Impact Ionization. , 2013, , .		1
1682	Analysis of short- and long-term performance goals for III/V on active Si concentrator solar cells. , 2013, , .		0
1683	Study of structural and optical properties of kesterite Cu2ZnGeX4 (X = S, Se) thin films synthesized by chemical spray pyrolysis. CrystEngComm, 2013, 15, 10500.	1.3	78
1684	Hot carrier solar cells from group III-V quantum well structures. , 2013, , .		1
1685	Simulations of the irradiation and temperature dependence of the efficiency of tandem photoelectrochemical water-splitting systems. Energy and Environmental Science, 2013, 6, 3605.	15.6	148
1686	Broadband photon harvesting capability enhancement with plasmonic inspired nanostructure based solar cell. , 2013, , .		0
1687	Design and mechanism of cost-effective and highly efficient ultrathin (< 0.5 μm) GaAs solar cells employing nano/micro-hemisphere surface texturing. AIP Advances, 2013, 3, .	0.6	7
1688	CHAPTER 11.5. Nanoparticles and Quantum Dots. , 2013, , 232-269.		0
1689	In-situ stage development for high-temperature X-ray nanocharacterization of defects in solar cells. , 2013, , .		0
1690	Nanoinfusion of ZnO and ZnS nanoparticles into ethylene vinyl acetate in situ for improved optical properties. Polymer Composites, 2013, 34, 354-358.	2.3	2
1691	Positional disorder in nanowire array photovoltaics. , 2013, , .		0
1692	Modulated electroluminescence technique for determination of the minority carrier lifetime of solar cells. , 2013, , .		4
1693	GaSb/InGaAs quantum dot-well solar cells. , 2013, , .		1
1694	Sputtering of metal oxide tunnel junctions for tandem solar cells. , 2013, , .		5
1695	Impact of threshold energy of multiple exciton generation solar cells. , 2013, , .		0
1696	The impact of quantum yield through limiting efficiency for multiple exciton generation with intermediate band solar cells. , 2013, , .		0
1697	Investigation of carrier-carrier scattering effect on the performance of hot carrier solar cells with relaxation time approximation. Applied Physics Letters, 2013, 102, .	1.5	21
1698	Innovative approaches in thin film photovoltaic cells. , 2013, , 596-630.		5

#	Article	IF	CITATIONS
1699	A semiconductor/mixed ion and electron conductor heterojunction for elevated-temperature water splitting. Physical Chemistry Chemical Physics, 2013, 15, 15459.	1.3	18
1700	Novel quantum effect devices realized by fusion of bio-template and defect-free neutral beam etching. , 2013, , .		0
1701	Ideality factor behavior between the maximum power point and open circuit. , 2013, , .		5
1702	Conformal growth of nanocrystalline CdX (X = S, Se) on mesoscopic NiO and their photoelectrochemical properties. Physical Chemistry Chemical Physics, 2013, 15, 4767.	1.3	31
1703	Light trapping and near-unity solar absorption in a three-dimensional photonic-crystal. Optics Letters, 2013, 38, 4200.	1.7	22
1704	Selective Hydrothermal Method To Create Patterned and Photoelectrochemically Effective Pt/WO <sub>3</sub> Interfaces. ACS Applied Materials & Interfaces, 2013, 5, 13050-13054.	4.0	9
1705	Routes to high efficiency photovoltaic power conversion. , 2013, , .		4
1706	Enhanced ultraviolet responses in thin-film InGaP solar cells by down-shifting. Physical Chemistry Chemical Physics, 2013, 15, 20434.	1.3	26
1707	Photovoltaic cell modeling for maximum power point tracking using MATLAB/Simulink to improve the conversion efficiency. , 2013, , .		9
1708	Numerical analysis of the optical concentration effects on split-spectrum solar cell system. , 2013, , .		0
1709	Improvement of excess-carrier lifetime in BaSi <inf>2</inf> epitaxial films by post-growth annealing. , 2013, , .		0
1710	Making Solar Cells a Reality in Every Home: Opportunities and Challenges for Photovoltaic Device Design. IEEE Journal of the Electron Devices Society, 2013, 1, 129-144.	1.2	59
1711	Recombination dynamics and carrier lifetimes in highly mismatched ZnTeO alloys. Applied Physics Letters, 2013, 103, .	1.5	12
1712	A hot carrier solar cell device model using a coupled electron phonon energy balance model. , 2013, , .		1
1713	Advancing solar cells to the limit with energy cascading. , 2013, , .		2
1714	Factors Limiting Device Efficiency in Organic Photovoltaics. Advanced Materials, 2013, 25, 1847-1858.	11.1	550
1715	Engineered nanomaterials for solar energy conversion. Nanotechnology, 2013, 24, 042001.	1.3	68
1716	Experimental verification of intermediate band formation on titanium-implanted silicon. Journal of Applied Physics, 2013, 113, 024104.	1.1	33

#	Article	IF	CITATIONS
1717	Transition metal oxide alloys as potential solar energy conversion materials. Journal of Materials Chemistry A, 2013, 1, 2474.	5.2	63
1718	Photovoltaic cells technology: principles and recent developments. Optical and Quantum Electronics, 2013, 45, 161-197.	1.5	49
1719	Oxide Heterostructures for Efficient Solar Cells. Physical Review Letters, 2013, 110, 078701.	2.9	113
1720	Pushing Inverted Metamorphic Multijunction Solar Cells Toward Higher Efficiency at Realistic Operating Conditions. IEEE Journal of Photovoltaics, 2013, 3, 893-898.	1.5	31
1721	Optimization of energy levels by molecular design: evaluation of bis-diketopyrrolopyrrole molecular donor materials for bulk heterojunction solar cells. Energy and Environmental Science, 2013, 6, 952.	15.6	113
1722	Photosynthetic reaction center as a quantum heat engine. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2746-2751.	3.3	234
1723	Characteristics of CuGaSe2 layers grown on GaAs substrates. Journal of Crystal Growth, 2013, 378, 154-157.	0.7	7
1724	Optical absorption enhancement in silicon square nanohole and hybrid square nanowire-hole arrays for photovoltaic applications. Optics Communications, 2013, 294, 377-383.	1.0	12
1725	The improvement on the performance of quantum dot-sensitized solar cells with functionalized Si. Thin Solid Films, 2013, 546, 284-288.	0.8	6
1726	Structural study on phosphorus doping of BaSi2 epitaxial films by ion implantation. Thin Solid Films, 2013, 534, 470-473.	0.8	15
1727	Evolutions of composition, microstructure and optical properties of Mn-doped pyrite (FeS2) films prepared by chemical bath deposition. Materials Research Bulletin, 2013, 48, 3601-3606.	2.7	22
1728	Near-infrared quantum cutting in Pr3+/Yb3+ co-doped transparent tellurate glass via two step energy transfer. Optical Materials, 2013, 35, 600-603.	1.7	27
1730	CZTS based thin film solar cells: a status review. Materials Technology, 2013, 28, 98-109.	1.5	276
1731	Quantification of energy losses in organic solar cells from temperature-dependent device characteristics. Physical Review B, 2013, 88, .	1.1	62
1732	Broadband optical absorption enhancement of hexagonal nanoconical frustum arrays texturing for c-Si film solarcells. Optics Communications, 2013, 294, 395-400.	1.0	9
1733	Broadband conversion of ultraviolet to visible and near-infrared emission in Gd3+/Yb3+ codoped germanate glass. Journal of Non-Crystalline Solids, 2013, 376, 26-29.	1.5	9
1734	First quadrant phototransistor behavior in CuInSe2 photovoltaics. Solar Energy Materials and Solar Cells, 2013, 118, 141-148.	3.0	12
1735	Auger generation effect on the thermodynamic efficiency of Cu(In,Ga)Se2 thin film solar cells. Thin Solid Films, 2013, 537, 285-290.	0.8	11

#	Article	IF	CITATIONS
1736	Steady state analysis of a storage integrated solar thermophotovoltaic (SISTPV) system. Solar Energy, 2013, 96, 33-45.	2.9	56
1737	Reversed organic–inorganic hybrid tandem solar cells for improved interfacial series resistances and balanced photocurrents. Synthetic Metals, 2013, 175, 103-107.	2.1	8
1738	Application of detailed balance to quantum coherent solar cells. Physica B: Condensed Matter, 2013, 417, 94-95.	1.3	3
1739	Towards Perfect Anti-Reflection and Absorption for Nanodome-Array Thin Film Silicon Solar Cell. Energy Procedia, 2013, 33, 150-156.	1.8	6
1740	Classification of Lattice Defects in the Kesterite Cu <sub>2</sub> ZnSnS <sub>4</sub> and Cu <sub>2</sub> ZnSnSe <sub>4</sub> Earthâ€Abundant Solar Cell Absorbers. Advanced Materials, 2013, 25, 1522-1539.	11.1	1,210
1741	Effect of static carrier screening on the energy relaxation of electrons in polar-semiconductor multiple-quantum-well superlattices. Journal of Applied Physics, 2013, 113, 024317.	1.1	6
1742	Effect of Thermal Annealing in Ammonia on the Properties of InGaN Nanowires with Different Indium Concentrations. Journal of Physical Chemistry C, 2013, 117, 3627-3634.	1.5	5
1743	Electrochemical Assessment of the Band-Edge Positioning in Shape-Tailored TiO <sub>2</sub> -Nanorod-Based Photoelectrodes for Dye Solar Cells. Journal of Physical Chemistry C, 2013, 117, 2574-2583.	1.5	27
1744	Highly efficient GaAs solar cells by limiting light emission angle. Light: Science and Applications, 2013, 2, e45-e45.	7.7	260
1745	Quantum theory of operation for rectenna solar cells. Journal Physics D: Applied Physics, 2013, 46, 135106.	1.3	34
1746	Numerical Study of Quantum-Dot-Embedded Solar Cells. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 1-10.	1.9	6
1747	Surface Off-Stoichiometry of CuInS\$_{2}\$ Thin-Film Solar Cell Absorbers. IEEE Journal of Photovoltaics, 2013, 3, 828-832.	1.5	2
1748	Engineered CuInSe <sub><i>x</i></sub> S <sub>2–<i>x</i></sub> Quantum Dots for Sensitized Solar Cells. Journal of Physical Chemistry Letters, 2013, 4, 355-361.	2.1	157
1749	Improved Optimization Strategy for Irradiance Equalization in Dynamic Photovoltaic Arrays. IEEE Transactions on Power Electronics, 2013, 28, 2946-2956.	5.4	131
1750	Epitaxial lift-off process for gallium arsenide substrate reuse and flexible electronics. Nature Communications, 2013, 4, 1577.	5.8	209
1751	Low-Temperature Solution-Processed Solar Cells Based on PbS Colloidal Quantum Dot/CdS Heterojunctions. Nano Letters, 2013, 13, 994-999.	4.5	129
1752	Quantum dot nanoscale heterostructures for solar energy conversion. Chemical Society Reviews, 2013, 42, 2963-2985.	18.7	204
1753	Density functional theory of structural, electronic and optical properties of CuXY2 (X=In, Ga and Y=S,) Tj ETQq1	0.78431 1.3	4 rgBT /Over

#	Article	IF	CITATIONS
1754	Multiple Exciton Generation and Recombination in Carbon Nanotubes and Nanocrystals. Accounts of Chemical Research, 2013, 46, 1358-1366.	7.6	59
1755	Enhanced quantum efficiency of light-harvesting in a biomolecular quantum "steam engine― Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2693-2694.	3.3	16
1756	Hot Electron Injection from Graphene Quantum Dots to TiO <sub>2</sub> . ACS Nano, 2013, 7, 1388-1394.	7.3	172
1757	Surface-passivated GaAsP single-nanowire solar cells exceeding 10% efficiency grown on silicon. Nature Communications, 2013, 4, 1498.	5.8	192
1758	Improving the optical absorption of BiFeO3 for photovoltaic applications via uniaxial compression or biaxial tension. Applied Physics Letters, 2013, 102, .	1.5	54
1760	The essence and efficiency limits of bulk-heterostructure organic solar cells: A polymer-to-panel perspective. Journal of Materials Research, 2013, 28, 541-557.	1.2	25
1761	Improvement of dye-sensitized solar cells toward the broader light harvesting of the solar spectrum. Chemical Communications, 2013, 49, 1471-1487.	2.2	149
1762	Nanomaterials for energy conversion and storage. Chemical Society Reviews, 2013, 42, 3127.	18.7	1,356
1763	Graphene and its derivatives for the development of solar cells, photoelectrochemical, and photocatalytic applications. Energy and Environmental Science, 2013, 6, 1362.	15.6	355
1764	Modeling integrated photovoltaic–electrochemical devices using steady-state equivalent circuits. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, .	3.3	93
1765	Optimization of the Cu2ZnSnS4 nanocrystal recipe by means of photoelectrochemical measurements. RSC Advances, 2013, 3, 3512.	1.7	21
1766	Single-nanowire solar cells beyond the Shockley–Queisser limit. Nature Photonics, 2013, 7, 306-310.	15.6	708
1767	Enhanced photocurrent in single-walled carbon nanotubes by exciton interactions. Applied Physics Letters, 2013, 102, .	1.5	9
1768	Photon-enhanced thermionic emission from heterostructures with low interface recombination. Nature Communications, 2013, 4, 1576.	5.8	146
1769	Density of Surface States at CdSe Quantum Dots by Fitting of Temperature-Dependent Surface Photovoltage Transients with Random Walk Simulations. Journal of Physical Chemistry C, 2013, 117, 6462-6468.	1.5	16
1770	Near-infrared luminescence and quantum cutting mechanism in CaWO4:Nd3+, Yb3+. Applied Physics B: Lasers and Optics, 2013, 111, 367-371. Cushmi:math xmins:mml="http://www.w3.org/1998/Math/MathML"	1.1	27
1771	<pre>aisplay= inline &gt;<mml:msub><mml:mrow></mml:mrow><mml:mn>2</mml:mn></mml:msub>Zn(Sn,Ge)Se<mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:math xml:mn="">4</mml:math>and Cu<mml:math <="" pre=""></mml:math></mml:math></mml:math></mml:math></mml:math></mml:math></mml:math></mml:math></mml:math></pre>	1.1	90
1772	xmins:mml="http://www.w3.org/1998/Math/MathML" display="inline"> <mml:msub><mml:mrow /&gt;<mml: Why are kesterite solar cells not 20% efficient?. Thin Solid Films, 2013, 535, 1-4.</mml: </mml:mrow </mml:msub>	0.8	321

#	Article	IF	CITATIONS
1773	Study of the junction and carrier lifetime properties of a spray-deposited CZTS thin-film solar cell. Semiconductor Science and Technology, 2013, 28, 055001.	1.0	31
1774	Mapping the Relation between Stacking Geometries and Singlet Fission Yield in a Class of Organic Crystals. Journal of Physical Chemistry Letters, 2013, 4, 1065-1069.	2.1	133
1775	Graphene in Light: Design, Synthesis and Applications of Photoâ€active Graphene and Graphene‣ike Materials. Small, 2013, 9, 1266-1283.	5.2	129
1776	Carbon Nanotube Photoelectronic and Photovoltaic Devices and their Applications in Infrared Detection. Small, 2013, 9, 1225-1236.	5.2	92
1777	Impact Excitation and Electron–Hole Multiplication in Graphene and Carbon Nanotubes. Accounts of Chemical Research, 2013, 46, 1348-1357.	7.6	36
1778	Recent Advances in Singlet Fission. Annual Review of Physical Chemistry, 2013, 64, 361-386.	4.8	862
1779	The Role of Hole Transport in Hybrid Inorganic/Organic Silicon/Poly(3,4-ethylenedioxy-thiophene):Poly(styrenesulfonate) Heterojunction Solar Cells. Journal of Physical Chemistry C, 2013, 117, 9049-9055.	1.5	76
1780	ZnO nanoparticle based highly efficient CdS/CdSe quantum dot-sensitized solar cells. Physical Chemistry Chemical Physics, 2013, 15, 8710.	1.3	54
1781	External Quantum Efficiency Above 100% in a Singlet-Exciton-Fission–Based Organic Photovoltaic Cell. Science, 2013, 340, 334-337.	6.0	783
1782	Increasing impact ionization rates in Si nanoparticles through surface engineering: A density functional study. Physical Review B, 2013, 87, .	1.1	24
1783	Photovoltaic performance enhancement by external recycling of photon emission. Energy and Environmental Science, 2013, 6, 1499.	15.6	53
1784	Sol–gel processed Cu2ZnSnS4 thin films for a photovoltaic absorber layer without sulfurization. Journal of Sol-Gel Science and Technology, 2013, 65, 23-27.	1.1	67
1785	Semiconductor nanowires: a platform for exploring limits and concepts for nano-enabled solar cells. Energy and Environmental Science, 2013, 6, 719.	15.6	189
1786	High performance isothermal photo-thermionic solar converters. Solar Energy Materials and Solar Cells, 2013, 113, 114-123.	3.0	42
1787	Clean Energy. Interface Science and Technology, 2013, 19, 279-383.	1.6	12
1788	Efficiency Limit of Molecular Solar Thermal Energy Collecting Devices. ACS Sustainable Chemistry and Engineering, 2013, 1, 585-590.	3.2	90
1789	GaNAsP: An intermediate band semiconductor grown by gas-source molecular beam epitaxy. Applied Physics Letters, 2013, 102, .	1.5	37
1790	Singlet Exciton Fission Photovoltaics. Accounts of Chemical Research, 2013, 46, 1300-1311.	7.6	271

#	Article	IF	CITATIONS
1791	Simulation of Nanostructure-Based High-Efficiency Solar Cells: Challenges, Existing Approaches, and Future Directions. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 1-11.	1.9	17
1792	Third Generation Photovoltaics based on Multiple Exciton Generation in Quantum Confined Semiconductors. Accounts of Chemical Research, 2013, 46, 1252-1260.	7.6	340
1793	Highly efficient charge transfer in nanocrystalline Si:H solar cells. Applied Physics Letters, 2013, 102, .	1.5	29
1794	Crystallization behaviour of co-sputtered Cu <sub>2</sub> ZnSnS <sub>4</sub> precursor prepared by sequential sulfurization processes. Nanotechnology, 2013, 24, 095706.	1.3	38
1795	Incorporation of Inorganic Nanoparticles into Bulk Heterojunction Organic Solar Cells. , 2013, , 1-47.		2
1796	Novel Excitonic Properties of Carbon Nanotube Studied by Advanced Optical Spectroscopy. Nano-optics and Nanophotonics, 2013, , 33-70.	0.2	1
1797	Carrier Multiplication in Semiconductor Nanocrystals: Influence of Size, Shape, and Composition. Accounts of Chemical Research, 2013, 46, 1261-1269.	7.6	161
1798	Quantum dot-sensitized solar cells—perspective and recent developments: A review of Cd chalcogenide quantum dots as sensitizers. Renewable and Sustainable Energy Reviews, 2013, 22, 148-167.	8.2	328
1799	Theoretical Insights into Photoinduced Charge Transfer and Catalysis at Oxide Interfaces. Chemical Reviews, 2013, 113, 4496-4565.	23.0	455
1800	Energy Level Alignment and Subâ€Bandgap Charge Generation in Polymer:Fullerene Bulk Heterojunction Solar Cells. Advanced Materials, 2013, 25, 2434-2439.	11.1	35
1801	Microscopic theory of singlet exciton fission. I. General formulation. Journal of Chemical Physics, 2013, 138, 114102.	1.2	210
1802	Efficiency of bulk-heterojunction organic solar cells. Progress in Polymer Science, 2013, 38, 1929-1940.	11.8	881
1803	Toward Designed Singlet Fission: Solution Photophysics of Two Indirectly Coupled Covalent Dimers of 1,3-Diphenylisobenzofuran. Journal of Physical Chemistry B, 2013, 117, 4680-4695.	1.2	117
1804	Nanophotonic design principles for ultrahigh efficiency photovoltaics. AIP Conference Proceedings, 2013, , .	0.3	11
1805	Recent trends in polymer tandem solar cells research. Progress in Polymer Science, 2013, 38, 1909-1928.	11.8	246
1806	Fabrication and photovoltaic properties of Cu2ZnSnS4/i-a-Si/n-a-Si thin film solar cells. Applied Surface Science, 2013, 280, 138-143.	3.1	17
1807	Technical and economic feasibility of centralized facilities for solar hydrogen production via photocatalysis and photoelectrochemistry. Energy and Environmental Science, 2013, 6, 1983.	15.6	1,119
1808	Cu2ZnSnS4 thin films: Facile and cost-effective preparation by RF-magnetron sputtering and texture control. Journal of Alloys and Compounds, 2013, 552, 418-422.	2.8	69

#	Article	IF	CITATIONS
1809	Effects of quantum dot charging on photoelectron processes and solar cell characteristics. Solar Energy Materials and Solar Cells, 2013, 117, 638-644.	3.0	22
1810	A discussion of fundamental solar photovoltaic cell physics. Physica B: Condensed Matter, 2013, 423, 58-59.	1.3	4
1811	Efficiency of Noncoherent Photon Upconversion by Triplet–Triplet Annihilation: The C60 Plus Anthanthrene System and the Importance of Tuning the Triplet Energies. Journal of Physical Chemistry A, 2013, 117, 5419-5427.	1.1	28
1812	Does Singlet Fission Enhance the Performance of Organic Solar Cells?. Journal of Physical Chemistry C, 2013, 117, 4971-4979.	1.5	17
1813	Band gap engineering of tandem structured CIGS compound absorption layer fabricated by sputtering and selenization. Journal of Alloys and Compounds, 2013, 563, 207-215.	2.8	26
1814	Effect of GaAs Step Layer Thickness in InGaAs/GaAsP Stepped Quantum-Well Solar Cell. IEEE Journal of Photovoltaics, 2013, 3, 289-294.	1.5	11
1815	Thermodynamic analysis of high frequency rectifying devices: Determination of the efficiency and other performance parameters. Nano Energy, 2013, 2, 368-376.	8.2	6
1816	Binder-Free Cu–In Alloy Nanoparticles Precursor and Their Phase Transformation to Chalcogenides for Solar Cell Applications. Journal of Physical Chemistry C, 2013, 117, 11930-11940.	1.5	30
1817	Energy Conversion and Transmission Modules for Space Solar Power. Proceedings of the IEEE, 2013, 101, 1424-1437.	16.4	70
1818	Organic Ternary Solar Cells: A Review. Advanced Materials, 2013, 25, 4245-4266.	11.1	688
1818 1819	Organic Ternary Solar Cells: A Review. Advanced Materials, 2013, 25, 4245-4266. Increased open-circuit voltage in a Schottky device using PbS quantum dots with extreme confinement. Applied Physics Letters, 2013, 102, .	11.1 1.5	688 23
1818 1819 1820	Organic Ternary Solar Cells: A Review. Advanced Materials, 2013, 25, 4245-4266.         Increased open-circuit voltage in a Schottky device using PbS quantum dots with extreme confinement. Applied Physics Letters, 2013, 102, .         10.2% Power Conversion Efficiency Polymer Tandem Solar Cells Consisting of Two Identical Subâ€Cells. Advanced Materials, 2013, 25, 3973-3978.	11.1 1.5 11.1	688 23 419
1818 1819 1820 1821	Organic Ternary Solar Cells: A Review. Advanced Materials, 2013, 25, 4245-4266.         Increased open-circuit voltage in a Schottky device using PbS quantum dots with extreme confinement. Applied Physics Letters, 2013, 102, .         10.2% Power Conversion Efficiency Polymer Tandem Solar Cells Consisting of Two Identical Subâ€Cells. Advanced Materials, 2013, 25, 3973-3978.         Narrow-bandgap photovoltaic devices operating at room temperature and above with high open-circuit voltage. Applied Physics Letters, 2013, 102, .	11.1 1.5 11.1 1.5	688 23 419 22
1818 1819 1820 1821 1822	Organic Ternary Solar Cells: A Review. Advanced Materials, 2013, 25, 4245-4266.         Increased open-circuit voltage in a Schottky device using PbS quantum dots with extreme confinement. Applied Physics Letters, 2013, 102, .         10.2% Power Conversion Efficiency Polymer Tandem Solar Cells Consisting of Two Identical Subâ€Cells. Advanced Materials, 2013, 25, 3973-3978.         Narrow-bandgap photovoltaic devices operating at room temperature and above with high open-circuit voltage. Applied Physics Letters, 2013, 102, .         Survey of energy harvesting and energy scavenging approaches for <i>on-site </i> powering of wireless sensor- and microinstrument-networks. Proceedings of SPIE, 2013,	11.1 1.5 11.1 1.5 0.8	688 23 419 22 8
1818 1819 1820 1821 1822 1823	Organic Ternary Solar Cells: A Review. Advanced Materials, 2013, 25, 4245-4266.         Increased open-circuit voltage in a Schottky device using PbS quantum dots with extreme confinement. Applied Physics Letters, 2013, 102, .         10.2% Power Conversion Efficiency Polymer Tandem Solar Cells Consisting of Two Identical Subâ€Cells. Advanced Materials, 2013, 25, 3973-3978.         Narrow-bandgap photovoltaic devices operating at room temperature and above with high open-circuit voltage. Applied Physics Letters, 2013, 102, .         Survey of energy harvesting and energy scavenging approaches for <i>on-site          Survey of energy harvesting and energy scavenging approaches for <i>on-site          Materials processing strategies for colloidal quantum dot solar cells: advances, present-day limitations, and pathways to improvement. MRS Communications, 2013, 3, 83-90.</i></i>	<ul> <li>11.1</li> <li>1.5</li> <li>1.5</li> <li>0.8</li> <li>0.8</li> </ul>	<ul> <li>688</li> <li>23</li> <li>419</li> <li>22</li> <li>8</li> <li>32</li> </ul>
1818 1819 1820 1821 1822 1823	Organic Ternary Solar Cells: A Review. Advanced Materials, 2013, 25, 4245-4266.         Increased open-circuit voltage in a Schottky device using PbS quantum dots with extreme confinement. Applied Physics Letters, 2013, 102, .         10.2% Power Conversion Efficiency Polymer Tandem Solar Cells Consisting of Two Identical Subà€Cells. Advanced Materials, 2013, 25, 3973-3978.         Narrow-bandgap photovoltaic devices operating at room temperature and above with high open-circuit voltage. Applied Physics Letters, 2013, 102, .         Survey of energy harvesting and energy scavenging approaches for <i>on-site </i> powering of wireless sensor- and microinstrument-networks. Proceedings of SPIE, 2013, .         Materials processing strategies for colloidal quantum dot solar cells: advances, present-day limitations, and pathways to improvement. MRS Communications, 2013, 3, 83-90.         Excitonic processes in molecular crystalline materials. MRS Bulletin, 2013, 38, 65-71.	<ol> <li>11.1</li> <li>1.5</li> <li>1.5</li> <li>0.8</li> <li>0.8</li> <li>1.7</li> </ol>	<ul> <li>688</li> <li>23</li> <li>419</li> <li>22</li> <li>8</li> <li>32</li> <li>29</li> </ul>
1818 1819 1820 1821 1822 1823 1823	Organic Ternary Solar Cells: A Review. Advanced Materials, 2013, 25, 4245-4266.         Increased open-circuit voltage in a Schottky device using PbS quantum dots with extreme confinement. Applied Physics Letters, 2013, 102, .         10.2% Power Conversion Efficiency Polymer Tandem Solar Cells Consisting of Two Identical SubâCCells. Advanced Materials, 2013, 25, 3973-3978.         Narrow-bandgap photovoltaic devices operating at room temperature and above with high open-circuit voltage. Applied Physics Letters, 2013, 102, .         Survey of energy harvesting and energy scavenging approaches for (i) on-site (i) powering of wireless sensor- and microinstrument-networks. Proceedings of SPIE, 2013,         Materials processing strategies for colloidal quantum dot solar cells: advances, present-day limitations, and pathways to improvement. MRS Communications, 2013, 3, 83-90.         Excitonic processes in molecular crystalline materials. MRS Bulletin, 2013, 38, 65-71.         Horizontal Silicon Nanowires with Radial pâ€ <sup>ee</sup> n Junctions: A Platform for Unconventional Solar Cells. Journal of Physical Chemistry Letters, 2013, 4, 2002-2009.	<ol> <li>11.1</li> <li>1.5</li> <li>11.1</li> <li>0.8</li> <li>0.8</li> <li>1.7</li> <li>2.1</li> </ol>	<ul> <li>688</li> <li>23</li> <li>419</li> <li>22</li> <li>8</li> <li>32</li> <li>29</li> <li>41</li> </ul>

	Сітатіс	CITATION REPORT	
#	ARTICLE Deposition and characterization of nanostructured Cu <sub>2</sub> O thin-film for potential	IF	CITATIONS
1027	photovoltaic applications. Journal of Materials Research, 2013, 28, 1740-1746.	1.2	51
1828	InAs/GaAs quantum dot solar cell with an AlAs cap layer. Applied Physics Letters, 2013, 102, .	1.5	50
1829	Syntheses of Cu2SnS3 and Cu2ZnSnS4 nanoparticles with tunable Zn/Sn ratios under multibubble sonoluminescence conditions. Dalton Transactions, 2013, 42, 10545.	1.6	34
1830	Photovoltaic Converters. , 2013, , 591-681.		0
1831	Visible to infrared energy conversion in Pr3+–Yb3+ co-doped fluoroindate glasses. Optical Materials, 2013, 35, 2085-2089.	1.7	31
1832	Observation of an Intermediate Band in Sn-doped Chalcopyrites with Wide-spectrum Solar Response. Scientific Reports, 2013, 3, 1286.	1.6	100
1833	Broadband antireflection and light-trapping enhancement of plasmonic solar cells. Physical Review B, 2013, 87, .	1.1	44
1834	Optical absorption enhancement in submicrometre crystalline silicon films with nanotexturing arrays for solar photovoltaic applications. Journal Physics D: Applied Physics, 2013, 46, 195106.	1.3	8
1835	Optimized luminescence properties of Mn doped ZnS nanoparticles for photovoltaic applications. Journal of Applied Physics, 2013, 113, .	1.1	44
1836	Organic Solar Cells beyond One Pair of Donor–Acceptor: Ternary Blends and More. Journal of Physical Chemistry Letters, 2013, 4, 1802-1810.	2.1	186
1837	Steric-Hindrance-Driven Shape Transition in PbS Quantum Dots: Understanding Size-Dependent Stability. Journal of the American Chemical Society, 2013, 135, 5278-5281.	6.6	301
1838	Efficiency of Multiexciton Generation in Colloidal Nanostructures. Accounts of Chemical Research, 2013, 46, 1242-1251.	7.6	63
1839	Exciton Dissociation within Quantum Dot–Organic Complexes: Mechanisms, Use as a Probe of Interfacial Structure, and Applications. Journal of Physical Chemistry C, 2013, 117, 10229-10243.	1.5	69
1840	Application of photoreflectance to advanced multilayer structures for photovoltaics. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2013, 178, 599-608.	1.7	16
1841	Chapter 3. Photoelectrical Responses of Carbon Nanotube–Polymer Composites. RSC Nanoscience and Nanotechnology, 2013, , 51-71.	0.2	0
1842	Direct Measurement of Auger Electrons Emitted from a Semiconductor Light-Emitting Diode under Electrical Injection: Identification of the Dominant Mechanism for Efficiency Droop. Physical Review Letters, 2013, 110, 177406.	2.9	564
1843	ZnO nanoparticles as a luminescent down-shifting layer for photosensitive devices. Journal of Semiconductors, 2013, 34, 053005.	2.0	9
1844	Non-vacuum processed next generation thin film photovoltaics: Towards marketable efficiency and production of CZTS based solar cells. Solar Energy, 2013, 94, 37-70.	2.9	125

	CITATION R	EPORT	
#	Article	IF	CITATIONS
1845	Structure-Function Interplay in Dye-Sensitised Solar Cells. Springer Theses, 2013, , 33-50.	0.0	0
1846	Organic Solar Cells—At the Interface. Journal of Physical Chemistry Letters, 2013, 4, 1949-1952.	2.1	16
1847	Rod–coil and all-conjugated block copolymers for photovoltaic applications. Progress in Polymer Science, 2013, 38, 791-844.	11.8	125
1848	Dye-Sensitized Solar Cell with Integrated Triplet–Triplet Annihilation Upconversion System. Journal of Physical Chemistry Letters, 2013, 4, 2073-2078.	2.1	158
1849	Gas-dependent bandgap and electrical conductivity of Cu2O thin films. Solar Energy Materials and Solar Cells, 2013, 108, 230-234.	3.0	40
1850	An approach to downconversion solar cells. Solar Energy Materials and Solar Cells, 2013, 108, 241-245.	3.0	14
1851	Spectral splitting module geometry that utilizes light trapping. Solar Energy Materials and Solar Cells, 2013, 108, 57-64.	3.0	27
1852	Cu <sub>2</sub> Sn <sub>1-<i>x</i></sub> Ge <sub><i>x</i></sub> S <sub>3</sub> ( <i>x</i> = 0.17) Thin-Film Solar Cells with High Conversion Efficiency of 6.0%. Applied Physics Express, 2013, 6, 045501.	1.1	132
1853	Spectroscopic investigations of dark Si nanocrystals in SiO2 and their role in external quantum efficiency quenching. Journal of Applied Physics, 2013, 114, 074304.	1.1	29
1854	Infrared Reflection–Absorption Spectroscopy of an Isotropic Adsorbate Layer on Pyrite. Journal of Physical Chemistry C, 2013, 117, 25982-25990.	1.5	5
1855	Spectrum splitting photovoltaics: Light trapping filtered concentrator for ultrahigh photovoltaic efficiency. , 2013, , .		4
1856	Characterization of thinâ€film aâ€5i:H/µcâ€5i:H tandem solar cells on glass substrates. Crystal Research and Technology, 2013, 48, 279-286.	0.6	1
1857	Near-infrared quantum cutting in Eu2+, Yb3+ co-doped Sr3Gd(PO4)3 phosphor. Optical Materials, 2013, 35, 1276-1278.	1.7	33
1858	Polymer solar cells. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20110414.	1.6	10
1859	Numerical power balance and free energy loss analysis for solar cells including optical, thermodynamic, and electrical aspects. Journal of Applied Physics, 2013, 114, .	1.1	21
1860	Photon Upconversion by Triplet–Triplet Annihilation in Ru(bpy) <sub>3</sub> - and DPA-Functionalized Polymers. Journal of Physical Chemistry Letters, 2013, 4, 4113-4118.	2.1	79
1861	Evaluation of a Selection of Intermediate Band Materials Based on Their Absorption Coefficients. IEEE Journal of Photovoltaics, 2013, 3, 997-1003.	1.5	5
1862	Efficiency enhancement calculations of state-of-the-art solar cells by luminescent layers with spectral shifting, quantum cutting, and quantum tripling function. Journal of Applied Physics, 2013, 114, .	1.1	47

#	Article	IF	CITATIONS
1863	Self-organized InGaAs/GaAs quantum dot arrays for use in high-efficiency intermediate-band solar cells. Journal Physics D: Applied Physics, 2013, 46, 024002.	1.3	42
1864	Optical thin films containing quantum dots. , 2013, , 493-516e.		2
1865	High temperature epsilon-near-zero and epsilon-near-pole metamaterial emitters for thermophotovoltaics. Optics Express, 2013, 21, A96.	1.7	234
1866	Plasmon-enhanced photocurrent generation and water oxidation from visible to near-infrared wavelengths. NPG Asia Materials, 2013, 5, e61-e61.	3.8	71
1867	Enhancing solar cell efficiency: the search for luminescent materials as spectral converters. Chemical Society Reviews, 2013, 42, 173-201.	18.7	1,446
1868	Design and development of photoanodes for water-splitting dye-sensitized photoelectrochemical cells. Chemical Society Reviews, 2013, 42, 2357-2387.	18.7	495
1869	Inverse Design of High Absorption Thinâ€Film Photovoltaic Materials. Advanced Energy Materials, 2013, 3, 43-48.	10.2	316
1870	A Transmetalation Route for Colloidal GaAs Nanocrystals and Additional III–V Semiconductor Materials. Chemistry of Materials, 2013, 25, 1377-1383.	3.2	37
1871	Energy Upconversion via Triplet Fusion in Super Yellow PPV Films Doped with Palladium Tetraphenyltetrabenzoporphyrin: a Comprehensive Investigation of Exciton Dynamics. Advanced Functional Materials, 2013, 23, 384-393.	7.8	104
1872	Integrated Energy-Harvesting Photodiodes With Diffractive Storage Capacitance. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2013, 21, 486-497.	2.1	25
1873	Optimization of Idealized Quantum Dot Intermediate Band Solar Cells Considering Spatial Variation of Generation Rates. IEEE Access, 2013, 1, 363-370.	2.6	5
1874	Nonradiative trapping and localization in intermediate band solar cells. , 2013, , .		0
1875	Photon extraction: the key physics for approaching solar cell efficiency limits. Proceedings of SPIE, 2013, , .	0.8	11
1876	Optical Absorption Enhancement in Solar Cell Employing Plasmonic Nanowire as the Core of C-Si Nanowire. , 2013, , .		1
1877	Design of a Surface Passivation Scheme for Gallium Arsenide Nanowire Solar Cells. , 2013, , .		0
1878	Detailed balance analysis of nanophotonic solar cells. Optics Express, 2013, 21, 1209.	1.7	46
1879	A high efficiency dual-junction solar cell implemented as a nanowire array. Optics Express, 2013, 21, A167.	1.7	11
1880	Broadband absorption and efficiency enhancement of an ultra-thin silicon solar cell with a plasmonic fractal. Optics Express, 2013, 21, A313.	1.7	68

#	Article	IF	CITATIONS
1881	Large-size, high-uniformity, random silver nanowire networks as transparent electrodes for crystalline silicon wafer solar cells. Optics Express, 2013, 21, A355.	1.7	44
1882	Current matching using CdSe quantum dots to enhance the power conversion efficiency of InGaP/GaAs/Ge tandem solar cells. Optics Express, 2013, 21, A953.	1.7	13
1883	Absorption enhancing proximity effects in aperiodic nanowire arrays. Optics Express, 2013, 21, A964.	1.7	17
1884	Optical absorption characteristics of nanometer and submicron a-Si:H solar cells with two kinds of nano textures. Optics Express, 2013, 21, 18043.	1.7	13
1885	Research of Nanostructured Hybrid Organic/ Semiconductor Quantum Dots in Thin Films. , 2013, , .		0
1886	Optimal design of nano-scale surface light trapping structures for enhancing light absorption in thin film photovoltaics. Journal of Applied Physics, 2013, 114, 024305.	1.1	9
1887	Super-intense white upconversion emission of Yb_2O_3 polycrystals and its application on luminescence converter of dye-sensitized solar cells. Optics Letters, 2013, 38, 3340.	1.7	45
1888	Design guideline of Si nanohole/PEDOT:PSS hybrid structure for solar cell application. Nanotechnology, 2013, 24, 355301.	1.3	15
1889	Measuring the localized surface plasmon resonance effect on large arrays (5 mm × 5 mm) of gold and aluminum nanoparticles on borosilicate glass substrates, fabricated by electron beam lithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06F410.	0.6	4
1890	Single bandgap solar converters unbounded by the Shockley Queisser limit. , 2013, , .		1
1891	Power generation of series and series/parallel triple junction tandem solar cells derived from measured spectra in Japan. , 2013, , .		0
1892	Design guidelines for slanting silicon nanowire arrays for solar cell application. Journal of Applied Physics, 2013, 114, .	1.1	29
1893	Carbon nanotube-based photovoltaic and light-emitting diodes. , 2013, , 298-318.		4
1894	Quantitative analysis of the contribution of nanocone gratings to the efficiency of crystalline Si thin-film solar cells. Journal Physics D: Applied Physics, 2013, 46, 145104.	1.3	3
1895	Research Progress of Quantum Dot Intermediate Band Solar Cell. Advanced Materials Research, 0, 774-776, 2013-2016.	0.3	0
1896	A direct thin-film path towards low-cost large-area III-V photovoltaics. Scientific Reports, 2013, 3, 2275.	1.6	65
1897	Numerical Analysis of Novel Back Surface Field for High Efficiency Ultrathin CdTe Solar Cells. International Journal of Photoenergy, 2013, 2013, 1-8.	1.4	27
1898	Fractal-like ray trajectories traced in three-dimensional array of photoelectrochemical cells. Journal Physics D: Applied Physics, 2013, 46, 182001.	1.3	0

#	Article	IF	CITATIONS
1899	Quantum Cutting Downconversion in Tb <sup>3+</sup> ,Yb <sup>3+</sup> Codoped Sr <sub>3</sub> AlO <sub>4</sub> F Phosphor. Advanced Materials Research, 0, 683, 172-175.	0.3	1
1900	Performance Comparison for Different Material Quantum Dot Single Intermediate Band Solar Cells. Applied Mechanics and Materials, 0, 477-478, 404-411.	0.2	0
1901	Using Dilute Nitrides to Achieve Record Solar Cell Efficiencies. Materials Research Society Symposia Proceedings, 2013, 1538, 161-166.	0.1	13
1902	Detailed photoluminescence studies of thin film Cu2S for determination of quasi-Fermi level splitting and defect levels. Journal of Applied Physics, 2013, 114, 233506.	1.1	8
1903	CdTe Solar Cells: Processing Limits and Defect Chemistry Effects on Open Circuit Voltage. Materials Research Society Symposia Proceedings, 2013, 1538, 249-260.	0.1	10
1904	Potential of hafnium nitride for the hot carrier solar cell. Proceedings of SPIE, 2013, , .	0.8	2
1905	Effects of Substrate Miscut on the Quality of In <sub>0.3</sub> Ga <sub>0.7</sub> As Layers Grown on Metamorphic (Al)GaInP Buffers by Metal–Organic Chemical Vapor Deposition. Applied Physics Express, 2013, 6, 065502.	1.1	2
1906	Photoluminescent Effects on the Temperature Coefficient of Multi-Junction Solar Cells. Materials Research Society Symposia Proceedings, 2013, 1493, 77-84.	0.1	0
1907	Simulations of the Irradiation and Temperature Dependence of the Efficiency of Tandem Photoelectrochemical Water-splitting Systems. ECS Transactions, 2013, 58, 293-303.	0.3	3
1908	Commentary: Photovoltaics firmly moving to the terawatt scale. Journal of Nanophotonics, 2013, 7, 078599.	0.4	16
1909	Overview of optical rectennas for solar energy harvesting. Proceedings of SPIE, 2013, , .	0.8	9
1910	Study of the Parameters Dispersion Effect in Photovoltaic Systems, in Terms of the Coveragetype. Advanced Materials Research, 2013, 716, 497-501.	0.3	0
1911	Third generation photovoltaic (PV) cells for eco-efficient buildings and other applications. , 2013, , 270-296.		3
1912	The Influence of Sulfurization Time and H2S Concentration on the Properties of Cu2ZnSnS4 Thin Films. Advanced Materials Research, 0, 818, 3-8.	0.3	1
1913	The Effect of Solution Temperature on Electrodeposit-ZnO Thin Film. Key Engineering Materials, 2013, 594-595, 1131-1135.	0.4	1
1914	Quantum-engineered interband cascade photovoltaic devices. Proceedings of SPIE, 2013, , .	0.8	4
1915	Fabrication of Diverse-Scale Patterned Layer on Organic Photovoltaics. Japanese Journal of Applied Physics, 2013, 52, 10MB12.	0.8	0
1916	Sub-Bandgap External Quantum Efficiency in Ti Implanted Si Heterojunction with Intrinsic Thin Layer Cells. Japanese Journal of Applied Physics, 2013, 52, 122302.	0.8	16

		15	0
#	ARTICLE	IF	CITATIONS
1917	Professional Issues in Engineering Education and Practice, 2013, 139, 12-18.	0.9	5
1918	High-Efficiency Photoelectric Conversion in Graphene–Diamond Hybrid Structures: Model and First-Principles Calculations. Applied Physics Express, 2013, 6, 045104.	1.1	8
1919	Improvement of Si Adhesion and Reduction of Electron Recombination for Si Quantum Dot-Sensitized Solar Cells. Japanese Journal of Applied Physics, 2013, 52, 01AD05.	0.8	12
1920	Grain Growth in Cu <sub>2</sub> ZnSnS <sub>4</sub> Thin Films Using Sn Vapor Transport for Photovoltaic Applications. Applied Physics Express, 2013, 6, 075503.	1.1	19
1921	Colloidal growth, characterization and optoelectronic study of strong light absorbent inexpensive iron pyrite nanomaterials by using amine ligands for photovoltaic application. Materials Research Society Symposia Proceedings, 2013, 1545, 1.	0.1	0
1922	Study of optical losses in mechanically stacked dye-sensitized/CdTe tandem solar cells. Materials Research Society Symposia Proceedings, 2013, 1538, 221-226.	0.1	0
1923	Improvement of Electrical Properties of Silicon Quantum Dot Superlattice Solar Cells with Diffusion Barrier Layers. Japanese Journal of Applied Physics, 2013, 52, 04CR02.	0.8	16
1924	A single diffractive optical element implementing spectrum-splitting and beam-concentration functions simultaneously with high diffraction efficiency. Chinese Physics B, 2013, 22, 034201.	0.7	8
1925	Synthesized and Characterization of Cu <sub>2</sub> ZnSnS <sub>4</sub> (CZTS) Thin Films Deposited by Electrodeposition Method. Applied Mechanics and Materials, 0, 343, 85-89.	0.2	4
1926	Controlling Thermal Radiation with Surface Waves. Challenges and Advances in Computational Chemistry and Physics, 2013, , 283-327.	0.6	1
1927	Study of the electrical behavior in Intermediate Band-Si junctions. Materials Research Society Symposia Proceedings, 2013, 1493, 85-90.	0.1	0
1928	Correlation between lifetime curve and performance of amorphous silicon/ crystalline silicon heterostructure solar cell. , 2013, , .		0
1929	The potential of GaAsBiN for multi-junction solar cells. , 2013, , .		6
1930	Forecasting the Development of Different Solar Cell Technologies. International Journal of Photoenergy, 2013, 2013, 1-5.	1.4	5
1931	Characteristics of Crystalline Silicon/Si Quantum Dot/Poly(3,4-ethylenedioxythiophene) Hybrid Solar Cells. Japanese Journal of Applied Physics, 2013, 52, 11NA05.	0.8	1
1932	Preparation and Characterization of Cu2ZnSnS4 Thin Films and Solar Cells Fabricated from Quaternary Cu-Zn-Sn-S Target. International Journal of Photoenergy, 2013, 2013, 1-9.	1.4	19
1933	Highly-efficient thermoelectronic conversion of solar energy and heat into electric power. Journal of Renewable and Sustainable Energy, 2013, 5, .	0.8	90
1934	CdTe Solar Cells. , 2013, , 1-28.		2

#	Article	IF	CITATIONS
1936	Challenges to the concept of an intermediate band in InAs/GaAs quantum dot solar cells. Applied Physics Letters, 2013, 103, 141113.	1.5	25
1937	Explanation of red spectral shifts at CdTe grain boundaries. Applied Physics Letters, 2013, 103, .	1.5	13
1938	Optimization of growth conditions of type-II Zn(Cd)Te/ZnCdSe submonolayer quantum dot superlattices for intermediate band solar cells. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, .	0.6	7
1939	Optical enhancement of the open-circuit voltage in high quality GaAs solar cells. Journal of Applied Physics, 2013, 113, .	1.1	258
1940	Recent advances in alternative material photovoltaics. Materials Technology, 2013, 28, 88-97.	1.5	46
1941	Spectrally dependent performance of hybrid colloidal quantum dots GaAs solar cells. , 2013, , .		0
1942	Ultrahigh-resolution direct observation of mini-bands formed in InGaAs/AlGaAs superlattice. , 2013, , .		1
1943	BaY2F8 doped with Er3+: An upconverter material for photovoltaic application. Journal of Applied Physics, 2013, 114, 064904.	1.1	25
1944	First principle analyses of direct bandgap solar cells with absorbing substrates versus mirrors. Journal of Applied Physics, 2013, 114, 174507.	1.1	6
1945	Detailed balance limit of power conversion efficiency for organic photovoltaics. Applied Physics Letters, 2013, 103, .	1.5	14
1946	Contactless measurement of electrical parameters and estimation of current-voltage characteristics of Si solar cells using the illumination intensity dependence of lock-in carrierography (photoluminescence) images. Journal of Applied Physics, 2013, 114, .	1.1	18
1947	Structural, chemical and luminescent investigation of MBE- and CSS-deposited CdTe thin-films for solar cells. , 2013, , .		1
1948	Methodology for vetting heavily doped semiconductors for intermediate band photovoltaics: A case study in sulfur-hyperdoped silicon. Journal of Applied Physics, 2013, 114, .	1.1	46
1949	Efficiency of a solar cell with intermediate energy levels: An example study on hydrogen implanted Si solar cells. Journal of Applied Physics, 2013, 114, .	1.1	9
1950	Hot spot engineering for light absorption enhancement of solar cells with a super-structured transparent conducting electrode. Applied Physics Letters, 2013, 103, 113905.	1.5	1
1951	Spatially non-uniform field response in arrays of silicon quantum dots: DFT computation. , 2013, , .		0
1952	Role of charged defects on organic solar cell performance: Prospect of heterojunction-free device design. , 2013, , .		1
1953	Solar thermophotovoltaic energy conversion systems with tantalum photonic crystal absorbers and emitters. , 2013, , .		2

#	Article	IF	CITATIONS
1954	Triplet diffusion in singlet exciton fission sensitized pentacene solar cells. Applied Physics Letters, 2013, 103, .	1.5	67
1955	xmlns:mml="http://www.w3.org/1998/Math/Math/ML"display="inline"> <mml:msup>/&gt;<mml:mrow><mml:mn>3</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msup> -Yb <mml: xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow>-Yb<mml: xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow>-Yb<mml: xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow>-Yb<mml: xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow>/&gt;<mml:mrow><mml:mn>3</mml:mn><mml:mo>+</mml:mo></mml:mrow>codoped</mml:mrow></mml: </mml:mrow></mml: </mml:mrow></mml: </mml:mrow></mml: 	math 1.1	21
1956	Embedded InN dot-like structure within InGaN layers using gradient-Indium content in nitride-based solar cell. , 2013, , .		0
1957	Design guidelines for (111) Si inclined nanohole arrays in thin film solar cells. , 2013, , .		0
1958	Thermodynamic limits of solar cells with non-ideal optical response. , 2013, , .		1
1959	The design of multijunction photovoltaic systems for realistic operating conditions. , 2013, , .		5
1960	NaLaF4:Pr3+,Yb3+, an efficient blue to near infra-red quantum cutter. APL Materials, 2013, 1, .	2.2	10
1961	Cu <sub>2</sub> ZnSnS <sub>4</sub> (CZTS) Application in TiO <sub>2</sub> Solar Cell as Dye. ECS Journal of Solid State Science and Technology, 2013, 2, Q95-Q98.	0.9	30
1962	Theoretical Photovoltaic Conversion Efficiencies of ZnSnP <sub>2</sub> , CdSnP <sub>2</sub> , and Zn <sub>1-<i>x</i></sub> Cd <sub><i>x</i></sub> SnP <sub>2</sub> Alloys. Applied Physics Express, 2013, 6, 061201.	1.1	39
1963	4 Junction dilute nitride solar cell optimization: Comparing current matching approaches in detailed balance algorithms. , 2013, , .		7
1964	Numerical study of graded bandgap solar cells. , 2013, , .		1
1965	Approaching high efficiency wide range silicon solar cells. , 2013, , .		7
1966	Increasing the limiting efficiency of space solar cells at end-of-life. , 2013, , .		0
1967	Enhanced efficiency for voltage matched stacked multi-junction cells: Optimization with yearly temperature and spectra variations. , 2013, , .		5
1968	Microcavity effects on the generation, fluorescence, and diffusion of excitons in organic solar cells. Optics Express, 2013, 21, A336.	1.7	7
1969	Epitaxial Growth of ZnInON Films with Tunable Band Gap from 1.7 to 3.3 eV on ZnO Templates. Japanese Journal of Applied Physics, 2013, 52, 11NM06.	0.8	16
1970	Fluorescent Radiation Thermometry at Cryogenic Temperatures Based on Detailed Balance Relation. Applied Physics Express, 2013, 6, 056602.	1.1	1
1971	Antimony Chalcogenide/Lead Selenide Thin Film Solar Cell with 2.5% Conversion Efficiency Prepared by Chemical Deposition. ECS Journal of Solid State Science and Technology, 2013, 2, Q69-Q73.	0.9	28

#	Article	IF	CITATIONS
1972	Study on the Fabrication of Paint-Type Si Quantum Dot-Sensitized Solar Cells. Japanese Journal of Applied Physics, 2013, 52, 10MB07.	0.8	7
1973	High-Absorption-Efficiency Superlattice Solar Cells by Excitons. Japanese Journal of Applied Physics, 2013, 52, 112302.	0.8	4
1974	Annealing effects on the microstructural properties of complex sulfosalt (SnS)x–(Bi2S3)1â^'x gradient thin films. Journal Physics D: Applied Physics, 2013, 46, 485302.	1.3	9
1975	Dramatic Enhancement of Photoluminescence Quantum Yields for Surfaceâ€Engineered Si Nanocrystals within the Solar Spectrum. Advanced Functional Materials, 2013, 23, 6051-6058.	7.8	26
1977	Narrow-bandwidth solar upconversion: Case studies of existing systems and generalized fundamental limits. Journal of Applied Physics, 2013, 113, .	1.1	73
1978	Compensation doping in InGaAs / GaAsP multiple quantum well solar cells for efficient carrier transport and improved cell performance. Journal of Applied Physics, 2013, 114, .	1.1	25
1979	Spectroscopic properties and quantum cutting in Tb3+–Yb3+ co-doped ZrO2 nanocrystals. Journal of Applied Physics, 2013, 113, .	1.1	38
1980	Efficient light management in vertical nanowire arrays for photovoltaics. Optics Express, 2013, 21, A558.	1.7	136
1981	Efficiency enhancement in the thin film GaAs solar cell using photonic crystal as a back reflector. , 2013, , .		2
1982	Spectrum splitting photovoltaics: Materials and device parameters to achieve ultrahigh system efficiency. , 2013, , .		7
1983	Efficiency scaling of non-coherent upconversion in a one-dimensional model system. Journal of Chemical Physics, 2013, 138, 134505.	1.2	2
1984	Hybrid chromophore/template nanostructures: A customizable platform material for solar energy storage and conversion. Journal of Chemical Physics, 2013, 138, 034303.	1.2	71
1985	Performance analysis of experimentally viable photonic crystal enhanced thermophotovoltaic systems. Optics Express, 2013, 21, A1035.	1.7	59
1986	Carrier multiplication applicability for photovoltaics; a critical analysis. Journal Physics D: Applied Physics, 2013, 46, 125102.	1.3	8
1987	Design and fabrication of a diffractive optical element as a spectrum-splitting solar concentrator for lateral multijunction solar cells. Applied Optics, 2013, 52, 2312.	0.9	32
1988	Recent progress on quantum dot intermediate band solar cells. IEICE Electronics Express, 2013, 10, 20132007-20132007.	0.3	11
1989	Silicon-Based Photovoltaics. Series in Optics and Optoelectronics, 2013, , 749-812.	0.0	0
1990	Present and Future of Research on Plasma Processing of Nanomaterials. Hyomen Kagaku, 2013, 34, 520-527.	0.0	0
#	Article	IF	CITATIONS
------	--	-----	-----------
1991	Structural properties of Si/SiO <sub>2</sub> nanostructures grown by decomposition of substoichiometric SiO <sub><i>x</i>/sub&gt;N<sub><i>y</i>/sub&gt; layers for photovoltaic applications. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 676-681.</sub></sub>	0.8	0
1992	Concentrating and spectrum splitting optical device in high efficiency CPV module with five bandgaps. , 2013, , .		6
1993	A new methodology for calculating the efficiency of multi-junction solar cells. , 2013, , .		0
1994	Metal pillar interconnection topology for bonded two-terminal multijunction III–V solar cells. , 2013, , .		0
1995	Tuning up the performance of GaAs-based solar cells by inelastic scattering on quantum dots and doping of AlyGa1-ySb type-II dots and AlxGa1-xAs spacers between dots. , 2013, , .		1
1996	Multiple exciton generation in PbSe and PbS nanocrystals incorporated into amorphous silicon p–n junction. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 523-527.	0.8	0
1998	Influence of the Ga content on the optical and electrical properties of Culn <inf>1−x</inf> Ga <inf>x</inf> Se <inf>2</inf> thin-film solar cells. , 2013, , .		0
1999	Improved bandgap-voltage offset in InGaAs/InAlGaAs quantum well solar cells. , 2013, , .		2
2000	Large area selective emitters/absorbers based on 2D tantalum photonic crystals for high-temperature energy applications. Proceedings of SPIE, 2013, , .	0.8	4
2001	Angular restriction of photon emission for ultra-efficient photovoltaics. , 2013, , .		0
2002	Photovoltaic energy harvesting for smart sensor systems. Proceedings of SPIE, 2013, , .	0.8	6
2003	Intermediate Band Solar Cells. Advances in Chemical and Materials Engineering Book Series, 0, , 188-213.	0.2	1
2004	Harnessing Sun's Energy with Quantum Dots Based Next Generation Solar Cell. Nanomaterials, 2013, 3, 22-47.	1.9	46
2005	Multiple exciton generation in semiconductor quantum dots and electronically coupled quantum dot arrays for application to thirdgeneration photovoltaic solar cells. , 2013, , 112-147.		2
2006	Optical absorption of CdSe quantum dots on electrodes with different morphology. AIP Advances, 2013, 3, 102115.	0.6	12
2007	Light absorption and conversion in solar cell based on Si:O alloy. Journal of Applied Physics, 2013, 114, 053507.	1.1	7
2008	Control of the Ge nanocrystal synthesis by co-implantation of Si+. Journal of Applied Physics, 2013, 114, .	1.1	10
2009	Characterization and optimization of poly (3-hexylthiophene-2, 5- diyl) (P3HT) and [6, 6] phenyl-C61-butyric acid methyl ester (PCBM) blends for optical absorption. Journal of Chemical Engineering and Materials Science, 2013, 4, 93-102.	1.9	24

		CITATION RE	PORT	
#	Article		IF	CITATIONS
2010	State of the Art and Perspectives of Inorganic Photovoltaics. , 2013, 2013, 1-8.			6
2011	EFFICIENCY IMPROVEMENT OF P-I-N SOLAR CELL BY EMBEDDING QUANTUM DOTS. Pr Electromagnetics Research, 2014, 146, 167-180.	ogress in	1.6	5
2012	Formation of FeS <sub>2</sub> Quantum Dot Semiconductor Using Electro Spray Met Powder Technology Foundation ANNUAL REPORT, 2014, 22, 16-23.	hod. Hosokawa	0.0	0
2016	Optical concentration effects on conversion efficiency of a split-spectrum solar cell sys Physics D: Applied Physics, 2014, 47, 075101.	tem. Journal	1.3	13
2017	Electronic and Optical Properties at Organic/Organic Interfaces in Organic Solar Cells. <sup>-</sup> Current Chemistry, 2014, 352, 103-150.	Γopics in	4.0	6
2018	THIN-FILM SOLAR CELLS BASED ON AMORPHOUS AND MICROCRYSTALLINE SILICON. Photoconversion of Solar Energy, 2014, , 139-207.	Series on	0.2	1
2019	CONCENTRATOR SYSTEMS. Series on Photoconversion of Solar Energy, 2014, , 491-57	0.	0.2	0
2020	Comparative study of absorption in tilted silicon nanowire arrays for photovoltaics. Nan Research Letters, 2014, 9, 620.	noscale	3.1	14
2021	Strong broadband absorption in GaAs nanocone and nanowire arrays for solar cells. Op 2014, 22, A386.	rtics Express,	1.7	55
2023	Simulated optical absorption enhancement in random silicon nanohole structure for sc application. Journal of Applied Physics, 2014, 116, .	lar cell	1.1	9
2024	Voltage Matching and Optimal Cell Compositions for Microsystem-Enabled Photovolta IEEE Journal of Photovoltaics, 2014, 4, 1593-1602.	ic Modules.	1.5	23
2025	Role of spectral non-idealities in the design of solar thermophotovoltaics. Optics Expres A1604.	ss, 2014, 22,	1.7	26
2026	Telecommunications: Paving the way for PV and ORC wide spread use of electricity pro .	duction. , 2014, ,		0
2027	Optimal tunneling enhances the quantum photovoltaic effect in double quantum dots. of Physics, 2014, 16, 045019.	New Journal	1.2	13
2028	Funkauslesbare Sensoren. VDI-Buch, 2014, , 1323-1402.		0.1	0
2029	The investigation of transition metal doped CuGaS <sub>2</sub> for promising interme materials. RSC Advances, 2014, 4, 62380-62386.	ediate band	1.7	49
2030	Fabrication of Cu2ZnSnS4 thin films on flexible polyimide substrates by sputtering and post-sulfurization. Journal of Renewable and Sustainable Energy, 2014, 6, 053110.		0.8	15
2031	Simulation study of Ge/Si heterostructure solar cells yielding improved open-circuit volt quantum efficiency. Japanese Journal of Applied Physics, 2014, 53, 110312.	rage and	0.8	0

#	Article	IF	CITATIONS
2032	Hot carrier extraction using energy selective contacts and its impact on the limiting efficiency of a hot carrier solar cell. , 2014, , .		0
2033	Spectrum splitting double-cell scheme for solar photovoltaics. , 2014, , .		1
2034	Structural and optical characterization of self-assembled Ge nanocrystal layers grown by plasma-enhanced chemical vapor deposition. Nanotechnology, 2014, 25, 405705.	1.3	9
2035	Dynamical evolutions and coherences in a quantum heat engine. European Physical Journal D, 2014, 68, 1.	0.6	0
2036	Hybrid tandem solar cell enhanced by a metallic hole-array as the intermediate electrode. Optics Express, 2014, 22, A1400.	1.7	11
2037	Surface passivation and antireflectance performances for atomic-layer-deposited Al2O3 films. Materials Research Express, 2014, 1, 046406.	0.8	0
2038	A Quantitative Study of ZnO Materials as Possible Down-shifters for Solar Cell Applications. Energy Procedia, 2014, 60, 23-31.	1.8	5
2039	Extremely high short-circuit current density in vertical single nanowire solar cells. , 2014, , .		1
2040	The rectenna device: From theory to practice (a review). MRS Energy & Sustainability, 2014, 1, 1.	1.3	83
2041	Impact of solar upconversion on photovoltaic cell efficiency: optical models of state-of-the-art solar cells with upconverters. Materials Research Society Symposia Proceedings, 2014, 1638, 1.	0.1	3
2042	Growth of Highly (112) Oriented Cu2ZnSnS4 Thin Film on Sapphire Substrate by Radio Frequency Magnetron Sputtering. Materials Research Society Symposia Proceedings, 2014, 1640, 1.	0.1	0
2043	Characterization and analysis of InAs/p–Si heterojunction nanowire-based solar cell. Journal Physics D: Applied Physics, 2014, 47, 394017.	1.3	25
2044	Singlet fission in linear chains of molecules. Journal of Chemical Physics, 2014, 141, 204703.	1.2	16
2046	Analysis of SnS <sub>2</sub> hyperdoped with V proposed as efficient absorber material. Journal of Physics Condensed Matter, 2014, 26, 395501.	0.7	5
2047	Thermal Energy Harvesting for Application at MEMS Scale. Springer Briefs in Electrical and Computer Engineering, 2014, , .	0.3	17
2048	Creating intermediate bands in ZnTe via co-alloying approach. Applied Physics Express, 2014, 7, 121201.	1.1	7
2049	CdTe solar cells with a PCBM back contact. , 2014, , .		2
2050	Polarization-dependent exciton dynamics in tetracene single crystals. Journal of Chemical Physics, 2014, 141, 244303.	1.2	26

#	Article	IF	CITATIONS
2051	Comparison of dispersive and non-dispersive spectrum splitting techniques for photovoltaic systems. , 2014, , .		0
2052	LIMITS TO PHOTOVOLTAIC ENERGY CONVERSION EFFICIENCY. Series on Photoconversion of Solar Energy, 2014, , 41-86.	0.2	Ο
2053	Analysis of GaAs/AlGaAs quantum nanodisk solar cell with intermediate band carrier transportation. , 2014, , .		0
2054	Ultra Thin SiN <sub>X</sub> on a-Si <i>In Situ</i> Hot-Wire CVD by Decomposing NH <sub>3</sub> Gas. Advanced Materials Research, 0, 894, 421-426.	0.3	Ο
2055	Analysis of dispersive spectrum splitting systems. , 2014, , .		1
2056	Requisites for Highly Efficient Hot-Carrier Solar Cells. Lecture Notes in Nanoscale Science and Technology, 2014, , 187-232.	0.4	10
2057	Dynamics in next-generation solar cells: time-resolved surface photovoltage measurements of quantum dots chemically linked to ZnO (101̄0). Faraday Discussions, 2014, 171, 275-298.	1.6	20
2058	(Invited) Photon Management Using Si Nanocrystals and Er3+ Ions: Generation of Hot Carries upon Absorption of Low-Energy Photons. ECS Transactions, 2014, 61, 127-132.	0.3	Ο
2059	Facile synthesis of colloidal InAs nanocrystals using triphenylarsine as an arsenic source. Journal of Crystal Growth, 2014, 405, 39-43.	0.7	2
2060	Theoretical Study of One-Intermediate Band Quantum Dot Solar Cell. International Journal of Photoenergy, 2014, 2014, 1-10.	1.4	17
2061	Progress into power conversion efficiency for solar cells based on nanostructured and realistic spectra. Journal of Renewable and Sustainable Energy, 2014, 6, .	0.8	7
2062	Nanoscience and Nanotechnology in Solar Cells. Journal of Energy Resources Technology, Transactions of the ASME, 2014, 136, .	1.4	21
2063	Design of folded holographic spectrum-splitting photovoltaic system for direct and diffuse illumination conditions. , 2014, , .		1
2064	10% efficiency solar thermophotovoltaic systems using spectrally controlled monolithic planar absorber/emitters. Proceedings of SPIE, 2014, , .	0.8	2
2065	The photonic solar cell: system design and efficiency estimations. , 2014, , .		4
2066	Effect of Annealing Temperature and Ambient on Formation, Composition and Bandgap of Cu_2ZnSnS_4 Thin Films. Acta Physica Polonica A, 2014, 126, 751-756.	0.2	3
2067	Synthesis of CdSe quantum dots for quantum dot sensitized solar cell. , 2014, , .		1
2068	Photon-enhanced thermionic emission from <i>p</i> -GaAs with nonequilibrium Cs overlayers. Applied Physics Letters, 2014, 105, .	1.5	27

ARTICLE IF CITATIONS High-concentration Photochemical Upconverters., 2014,,. 2069 0 Effect of hexagonal nanoconical hole arrays based solar cells on the light absorption enhancement., 2070 2014,,. Design and Simulation of Light Trapping in Thin Film GaAs Solar Cell using Photonic Crystals as back 2071 1 reflector., 2014, , . Advanced Anti-Reflection Coatings Based on Nano- and Micro-Structures., 2014,,. Optimal design of organic–inorganic hybrid tandem solar cell based on a‧i:H and organic 2073 0.6 11 photovoltaics for high efficiency. Micro and Nano Letters, 2014, 9, 881-883. Self-absorption in upconverter luminescent layers: impact on quantum yield measurements and on 2074 1.7 designing optimized photovoltaic devices. Optics Letters, 2014, 39, 2904. Impact of light management on photovoltaic characteristics of GaAs solar cells with photonic 2075 0.8 2 crystals and quasi-photonic crystals. Proceedings of SPIE, 2014, , . Investigation of nanostructured hybrid organic/semiconductor quantum dots in thin film and spatial distribution of the emission. Applied Optics, 2014, 53, A169. Time domain simulation of tandem silicon solar cells with optimal textured light trapping enabled by 2077 23 1.7 the quadratic complex rational function. Optics Express, 2014, 22, A818. Spectrum splitting metrics and effect of filter characteristics on photovoltaic system performance. 1.7 Optics Express, 2014, 22, A528. Enhanced light trapping in solar cells with a meta-mirror following generalized Snell's law. Optics 2079 1.7 28 Express, 2014, 22, A973. Design of antireflective nanostructures and optical coatings for next-generation multijunction 2080 1.7 photovoltaic devices. Optics Express, 2014, 22, A1243. Mode-based analysis of silicon nanohole arrays for photovoltaic applications. Optics Express, 2014, 22, 2081 1.7 30 A1343. Performance-limiting factors for GaAs-based single nanowire photovoltaics. Optics Express, 2014, 22, 2082 1.7 A344 2083 Maximal power output by solar cells with angular confinement. Optics Express, 2014, 22, A715. 19 1.7 Sb<sub>2</sub>Se<sub>3</sub>â€Sensitized Inorganicâ€"Organic Heterojunction Solar Cells Fabricated 2084 145 Using a Singleâ€Source Precursor. Angewandte Chemie - International Edition, 2014, 53, 1329-1333. CHAPTER 17. Real World Efficiency Limits: the Shockley–Queisser Model as a Starting Point. RSC Energy 2085 0.2 2 and Environment Series, 0, , 547-566. 2086 CHAPTER 16. Quantum Rectennas for Photovoltaics. RSC Energy and Environment Series, 0, , 506-546. 0.2

#	Article	IF	CITATIONS
2087	CHAPTER 15. Triplet–triplet Annihilation Up-conversion. RSC Energy and Environment Series, 0, , 489-505.	0.2	0
2088	CHAPTER 14. Spectral Conversion for Thin Film Solar Cells and Luminescent Solar Concentrators. RSC Energy and Environment Series, 0, , 455-488.	0.2	0
2089	Intermediate Band Solar Cells. RSC Energy and Environment Series, 2014, , 425-454.	0.2	3
2090	Singlet Fission and 1,3-Diphenylisobenzofuran as a Model Chromophore. RSC Energy and Environment Series, 2014, , 324-344.	0.2	7
2091	Thin-film Photovoltaics Based on Earth-abundant Materials. RSC Energy and Environment Series, 2014, , 118-185.	0.2	4
2092	Ill–V Multi-junction Solar Cells. RSC Energy and Environment Series, 2014, , 87-117.	0.2	8
2093	CHAPTER 3. Thin-film CdTe Photovoltaic Solar Cell Devices. RSC Energy and Environment Series, 0, , 61-86.	0.2	1
2094	Atomic-resolution characterization of the effects of CdCl <sub>2</sub> treatment on poly-crystalline CdTe thin films. Applied Physics Letters, 2014, 105, 071910.	1.5	23
2095	Dynamics and two photon intersubband absorption of photovoltaic quantum structures. , 2014, , .		0
2096	Steric engineering of metal-halide perovskites with tunable optical band gaps. Nature Communications, 2014, 5, 5757.	5.8	787
2097	Efficiency and dissipation in a two-terminal thermoelectric junction, emphasizing small dissipation. Physical Review E, 2014, 89, 012123.	0.8	32
2098	Thermodynamic Efficiency Limits for Optically Boosted Planar Solar Cells. Physical Review Applied, 2014, 2, .	1.5	0
2099	Conversion of above- and below-bandgap photons via InAs quantum dot media embedded into GaAs solar cell. Applied Physics Letters, 2014, 104, .	1.5	23
2100	Ab-initio study of donor-acceptor codoping for n-type CuO. Journal of Applied Physics, 2014, 116, 163704.	1.1	5
2101	Simulation of electron escape from GaNAs/GaAs quantum well solar cells. , 2014, , .		2
2102	Radiative transitions in highly doped and compensated chalcopyrites and kesterites: The case of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi mathvariant="normal">Cu</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mrow mathvariant="normal">ZnSnS</mml:mrow><mml:mn>4</mml:mn></mml:msub></mml:math> .	∕> <b>⊾i</b> nml:m	i 48
2103	Physical Review 6, 2014, 90, . Conversion efficiency limits and optimized designs for tandem solar cells with realistic sub-cell material quality. , 2014, , .		2
2104	Solar energy conversion via hot electron internal photoemission in metallic nanostructures: Efficiency estimates. Journal of Applied Physics, 2014, 115, .	1.1	126

#	Article	IF	CITATIONS
2105	Minimized open-circuit voltage reduction in GaAs/InGaAs quantum well solar cells with bandgap-engineered graded quantum well depths. Applied Physics Letters, 2014, 105, 123906.	1.5	4
2106	Study of recombination process in Cu <inf>2</inf> ZnSnS <inf>4</inf> thin film using two-wavelength excited photoluminescence. , 2014, , .		2
2107	Electronic confinement in modulation doped quantum dots. Applied Physics Letters, 2014, 104, 153102.	1.5	1
2108	Shockley-Read-Hall lifetimes in CdTe. Journal of Applied Physics, 2014, 116, .	1.1	11
2109	Materials for light-induced water splitting: In situ controlled surface preparation of GaPN epilayers grown lattice-matched on Si(100). Journal of Applied Physics, 2014, 115, 113509.	1.1	23
2110	Effect of internal electric field on InAs/GaAs quantum dot solar cells. Journal of Applied Physics, 2014, 115, 083510.	1.1	31
2111	Embedded InN dot-like structures with modulating growth temperature in nitride-based solar cell. , 2014, , .		0
2112	Evidence for a large phononic band gap leading to slow hot carrier thermalisation. IOP Conference Series: Materials Science and Engineering, 2014, 68, 012002.	0.3	12
2113	Characteristics of Cu <sub>2</sub> ZnSnS <sub>4</sub> Thin Films Fabricated by Sulfurization of Two Stacked Metallic Layers. Molecular Crystals and Liquid Crystals, 2014, 602, 134-143.	0.4	4
2114	Investigation of the transition phases from amorphous siliconâ€based multilayers to silicon nanostructures by <i>in situ</i> Xâ€ray diffraction. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1512-1518.	0.8	2
2115	Influence of different sulfur to selenium ratios on the structural and electronic properties of Cu(In,Ga)(S,Se)2 thin films and solar cells formed by the stacked elemental layer process. Journal of Applied Physics, 2014, 116, .	1.1	12
2116	Frequency up-conversion in nonpolar a-plane GaN/AlGaN based multiple quantum wells optimized for applications with silicon solar cells. Journal of Applied Physics, 2014, 116, 033703.	1.1	1
2117	Network Analysis of Photovoltaic Energy Conversion. Journal of Physical Chemistry C, 2014, 118, 27226-27234.	1.5	20
2118	Monitoring of indoor light conditions for photovoltaic energy harvesting. , 2014, , .		5
2119	Role of impact ionization in the thermalization of photoexcited Mott insulators. Physical Review B, 2014, 90, .	1.1	50
2120	P3HT-Based Solar Cells: Structural Properties and Photovoltaic Performance. Advances in Polymer Science, 2014, , 181-232.	0.4	11
2121	Nanoscale Imaging of Photocurrent and Efficiency in CdTe Solar Cells. ACS Nano, 2014, 8, 11883-11890.	7.3	60
2123	Microscopic photoluminescence and photocurrent imaging spectroscopy of InAs nanostructures: Identification of photocarrier generation sites for intermediate-band solar cells. Physical Review B, 2014, 89, .	1.1	17

#	Article	IF	CITATIONS
2124	Nanoplasmonic chemical sensors. , 2014, , .		0
2125	The promise and challenge of nanostructured solar cells. Nature Nanotechnology, 2014, 9, 951-954.	15.6	181
2126	Hot-carrier solar cells using low-dimensional quantum structures. Applied Physics Letters, 2014, 105, 171904.	1.5	17
2127	Fully crystalline perovskite-perylene hybrid photovoltaic cell capable of 1.2 V output with a minimized voltage loss. APL Materials, 2014, 2, .	2.2	37
2128	Exceptional Optoelectronic Properties of Hydrogenated Bilayer Silicene. Physical Review X, 2014, 4, .	2.8	35
2129	CHAPTER 8. All-oxide Photovoltaics. RSC Energy and Environment Series, 0, , 258-286.	0.2	1
2130	Quadruple-junction thin-film silicon-based solar cells with high open-circuit voltage. Applied Physics Letters, 2014, 105, 063902.	1.5	44
2131	Balanced Carrier Mobilities: Not a Necessary Condition for Highâ€Efficiency Thin Organic Solar Cells as Determined by MISâ€CELIV. Advanced Energy Materials, 2014, 4, 1300954.	10.2	129
2132	Microscopic theory of singlet exciton fission. III. Crystalline pentacene. Journal of Chemical Physics, 2014, 141, 074705.	1.2	160
2133	Kesterite CZTS nanocrystals: pHâ€dependent synthesis. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1531-1534.	0.8	23
2134	Metal/insulator/semiconductor carrier selective contacts for photovoltaic cells. , 2014, , .		25
2135	Thermal excitation of plasmons for near-field thermophotovoltaics. Applied Physics Letters, 2014, 105,	1.5	40
2136	Nanowires for Photovoltaics and Artificial Photosynthesis. RSC Smart Materials, 2014, , 277-311.	0.1	2
2137	Modeling of dual-metal Schottky contacts based silicon micro and nano wire solar cells. Solar Energy Materials and Solar Cells, 2014, 130, 456-465.	3.0	5
2138	Significant Reduction in NiO Band Gap Upon Formation of Li <sub><i>x</i></sub> Ni <sub>1â^'<i>x</i></sub> O alloys: Applications To Solar Energy Conversion. ChemSusChem, 2014, 7, 195-201.	3.6	56
2139	Design of Passivation Layers on Axial Junction GaAs Nanowire Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1511-1517.	1.5	15
2140	Nanostructured silicon oxide film for enhanced crystalline solar cell. , 2014, , .		0
2141	Quantum dot sensitized aluminium doped and copper doped ZnO nanostructure based solar cells.	1.1	10

#	Article	IF	CITATIONS
2142	Optoelectronic simulation of GaAs solar cells with angularly selective filters. Journal of Applied Physics, 2014, 115, .	1.1	15
2143	Development of Nonstoichiometric CuInS <sub>2</sub> as a Light-Harvesting Photoanode and Catalytic Photocathode in a Sensitized Solar Cell. ACS Applied Materials & Interfaces, 2014, 6, 22272-22281.	4.0	27
2144	Enhanced open voltage of BiFeO3 polycrystalline film by surface modification of organolead halide perovskite. Applied Physics Letters, 2014, 105, 013901.	1.5	29
2145	Light Trapping and Downâ€Shifting Effect of Periodically Nanopatterned Siâ€Quantumâ€Dotâ€Based Structures for Enhanced Photovoltaic Properties. Particle and Particle Systems Characterization, 2014, 31, 459-464.	1.2	32
2146	Evaluation of the two-photon absorption characteristics of GaSb/GaAs quantum rings. Journal of Applied Physics, 2014, 116, 044304.	1.1	15
2147	Light trapping for emission from a photovoltaic cell under normally incident monochromatic illumination. Journal of Applied Physics, 2014, 116, 124506.	1.1	11
2148	Thin Film Cadmium Telluride Solar Cells. RSC Energy and Environment Series, 2014, , 135-159.	0.2	0
2149	New Chalcogenide Materials forÂThin Film Solar Cells. RSC Energy and Environment Series, 2014, , 160-208.	0.2	1
2150	Fundamentals of Thin Film PV Cells. RSC Energy and Environment Series, 2014, , 27-52.	0.2	0
2151	P3HT Revisited – From Molecular Scale to Solar Cell Devices. Advances in Polymer Science, 2014, , .	0.4	86
2152	Demonstration of a hot-carrier photovoltaic cell. Progress in Photovoltaics: Research and Applications, 2014, 22, 151-160.	4.4	71
2153	(Sr,Ba)(Si,Ge)2 for thin-film solar-cell applications: First-principles study. Journal of Applied Physics, 2014, 115, .	1.1	61
2154	Enhancement of minority carrier lifetime of GalnP with lateral composition modulation structure grown by molecular beam epitaxy. Journal of Applied Physics, 2014, 116, .	1.1	10
2155	100-period, 1.23-eV bandgap InGaAs/GaAsP quantum wells for high-efficiency GaAs solar cells: toward current-matched Ge-based tandem cells. Progress in Photovoltaics: Research and Applications, 2014, 22, 784-795.	4.4	77
2156	Carrier Escape Time and Temperature-Dependent Carrier Collection Efficiency of Tunneling-Enhanced Multiple Quantum Well Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 607-613.	1.5	19
2157	Numerical Current Density Loss Analysis of Industrially Relevant Crystalline Silicon Solar Cell Concepts. IEEE Journal of Photovoltaics, 2014, 4, 533-539.	1.5	10
2158	Ideal solar cell equation in the presence of photon recycling. Journal of Applied Physics, 2014, 116, .	1.1	13
2159	Organicâ€inorganic nanocomposites composed of conjugated polymers and semiconductor nanocrystals for photovoltaics. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 1641-1660.	2.4	28

#	Article	IF	CITATIONS
2160	Geminate and Nongeminate Recombination of Triplet Excitons Formed by Singlet Fission. Physical Review Letters, 2014, 112, 238701.	2.9	67
2161	Theoretical study of optical properties of anti phase domains in GaP. Journal of Applied Physics, 2014, 115, .	1.1	17
2162	CHAPTER 1. Crystalline Silicon Solar Cells with High Efficiency. RSC Energy and Environment Series, 0, , 1-29.	0.2	0
2163	Novel high-efficiency c-Si compound heterojunction solar cells: HCT (Heterojunction with Compound) Tj ETQq1 1	0.784314	rgBT /Overl
2164	Structural and orientation effects on electronic energy transfer between silicon quantum dots with dopants and with silver adsorbates. Journal of Chemical Physics, 2014, 140, 244709.	1.2	1
2165	Stochastic analysis of advanced photovoltaic devices. , 2014, , .		0
2166	Phase Stability and Defect Physics of a Ternary ZnSnN <sub>2</sub> Semiconductor: First Principles Insights. Advanced Materials, 2014, 26, 311-315.	11.1	81
2167	Correlation between the electronic structures and diffusion paths of interstitial defects in semiconductors: The case of CdTe. Physical Review B, 2014, 90, .	1.1	24
2168	Landau levels of the C-exciton in CuInSe2 studied by magneto-transmission. Applied Physics Letters, 2014, 105, .	1.5	4
2169	Excess carrier generation in femtosecond-laser processed sulfur doped silicon by means of sub-bandgap illumination. Applied Physics Letters, 2014, 104, 042107.	1.5	24
2170	Band filling effects on temperature performance of intermediate band quantum wire solar cells. Journal of Applied Physics, 2014, 116, 083102.	1.1	5
2171	Exotic phase Si nanoparticles and Si-ZnS nanocomposites: New paradigms to improve the efficiency of MEG solar cells. , 2014, , .		Ο
2172	A hot carrier photovoltaic cell by offset resonant tunneling. , 2014, , .		0
2173	Computational prediction and characterization of single-layer CrS <sub>2</sub> . Applied Physics Letters, 2014, 104, 022116.	1.5	108
2174	Plasmoelectric potentials in metal nanostructures. Science, 2014, 346, 828-831.	6.0	209
2175	Yb <sup>3+</sup> site occupation and host sensitization luminescence of a novel nearâ€infrared emitting Sr <sub>2</sub> CaMoO <sub>6</sub> :Yb <sup>3+</sup> phosphor. Physica Status Solidi - Rapid Research Letters, 2014, 8, 202-205.	1.2	7
2176	Ultrafast dynamics of excitons in tetracene single crystals. Journal of Chemical Physics, 2014, 140, 114501.	1.2	42
2177	Ray trace optimization of a light trapping filtered concentrator for spectrum splitting photovoltaics. , 2014, , .		2

#	Article	IF	Citations
2178	Optimized structure of AlGaAs/GaAs double junction solar cells. Journal of Modern Optics, 2014, 61, 568-575.	0.6	3
2179	Light propagation in phosphor-filled matrices for photovoltaic PL down-shifting. , 2014, , .		0
2180	Recent developments in luminescent solar concentrators. Proceedings of SPIE, 2014, , .	0.8	2
2181	Effect of tapered shape on performance of silicon nanowire solar cells. , 2014, , .		1
2182	Holographic spectral beamsplitting for increased organic photovoltaic conversion efficiency. Proceedings of SPIE, 2014, , .	0.8	1
2183	Formation of surface morphology of silicon solar cells by means of two-step photo-electrochemical etching and their characterization. Proceedings of SPIE, 2014, , .	0.8	0
2184	Efficiency limit analysis of organic solar cells: model simulation based on vanadyl phthalocyanine/C60planar junction cell. Japanese Journal of Applied Physics, 2014, 53, 01AB12.	0.8	6
2185	Luminescent down-shifting layers with Eu <sup>2+</sup> and Eu <sup>3+</sup> doped strontium compound particles for photovoltaics. Proceedings of SPIE, 2014, , .	0.8	2
2186	Optical performance of dichroic spectrum-splitting filters. Journal of Photonics for Energy, 2014, 4, 043095.	0.8	11
2188	Multi junction solar cells using band-gap induced cascaded light absorption. Japanese Journal of Applied Physics, 2014, 53, 05FV07.	0.8	2
2189	Oxides for sustainable photovoltaics with earth-abundant materials. Proceedings of SPIE, 2014, , .	0.8	5
2190	Development and characterisation of laser power converters for optical power transfer applications. IET Optoelectronics, 2014, 8, 64-70.	1.8	32
2191	Radiative cooling of solar cells. Optica, 2014, 1, 32.	4.8	398
2192	A numerical simulation study of ZnTe-based solar cells. , 2014, , .		5
2193	Enhanced photovoltaic property by forming p-i-n structures containing Si quantum dots/SiC multilayers. Nanoscale Research Letters, 2014, 9, 634.	3.1	23
2194	Efficiency improvement of p-i-n solar cell by embedding quantum-dots. , 2014, , .		0
2195	Reduced optical loss in mechanically stacked multi-junction organic solar cells exhibiting complementary absorptions. Optics Express, 2014, 22, A481.	1.7	5
2196	Characterisation of InAs/GaAs quantum dots intermediate band photovoltaic devices. IET Optoelectronics, 2014, 8, 71-75.	1.8	4

#	Article	IF	CITATIONS
2197	Understanding the relationship between Cu2ZnSn(S,Se)4 material properties and device performance. MRS Communications, 2014, 4, 159-170.	0.8	59
2198	Characterizations of Electron Beam Evaporated Silicon Thin Films on Plastic Substrates for Solar Cells Applications. Advanced Materials Research, 0, 925, 543-547.	0.3	1
2199	Determination of the optimal conditions for the deposition of Cu <inf>2</inf> ZnSnS <inf>4</inf> (CZTS) thin films by spray pyrolysis using Taguchi method. , 2014, , .		1
2200	Electron Microscopy of Thin Film Inorganic and Organic Photovoltaic Materials. , 2014, , 43-88.		0
2201	Upconverter materials and upconversion solar-cell devices: simulation and characterization with broad solar spectrum illumination. , 2014, , .		1
2202	Design of single layer subwavelength diffractive optical element (G-Fresnel) for spectrum splitting and beam concentration. Proceedings of SPIE, 2014, , .	0.8	2
2203	Experimental Implementation of a Silicon Wafer Tandem Solar Cell. Energy Procedia, 2014, 55, 186-189.	1.8	2
2204	Nanoscale optimization of quantum dot media for effective photovoltaic conversion. Proceedings of SPIE, 2014, , .	0.8	1
2205	Solid-phase crystallization of amorphous silicon nanowire array and optical properties. Japanese Journal of Applied Physics, 2014, 53, 02BE09.	0.8	8
2206	III-V Multi-junction solar cells and concentrating photovoltaic (CPV) systems. Advanced Optical Technologies, 2014, 3, 469-478.	0.9	36
2207	Performance Analysis of a Multijunction Photovoltaic Cell Based on Cadmium Selenide and Cadmium Telluride. Advanced Materials Research, 0, 875-877, 1058-1062.	0.3	0
2208	Thermal to Electrical Energy Converters. Springer Briefs in Electrical and Computer Engineering, 2014, , 51-67.	0.3	1
2210	Lanthanides in Solar Energy Conversion. Fundamental Theories of Physics, 2014, 44, 169-281.	0.1	78
2211	GaAs-δ layered within nitrogen for high efficiency photovoltaic devices: First principle prediction. , 2014, , .		0
2212	Amorphous and micromorph Si solar cells: current status and outlook. Turkish Journal of Physics, 2014, 38, 526-542.	0.5	8
2213	Synthesis and Characterization of CZTS Thin Films by Sol-Gel Method without Sulfurization. International Journal of Photoenergy, 2014, 2014, 1-6.	1.4	14
2214	Probing periodic oscillations in a silane dusty plasma in a very high-frequency plasma enhanced chemical vapor deposition process. Canadian Journal of Physics, 2014, 92, 744-748.	0.4	2
2215	Titania Nanotubes by Electrochemical Anodization for Solar Energy Conversion. Journal of the Electrochemical Society, 2014, 161, D3066-D3077.	1.3	31

ARTICLE IF CITATIONS Probing the core-shell-shell structure of CdSe/CdTe/CdS type II quantum dots for solar cell 2216 0.3 3 applications. Journal of Physics: Conference Series, 2014, 522, 012069. Modeling intermediate band solar cells: a roadmap to high efficiency. Proceedings of SPIE, 2014, , . 0.8 Minority carrier lifetime of thin polycrystalline silicon nanowire films on polycrystalline silicon 2218 2 layer prepared by aluminum-induced crystallization., 2014, , . Sensitized Solar Cells via Nanomaterials: A Recent Development in Quantum Dots-Based Solar Cells. 0.9 IEEE Nanotechnology Magazine, 2014, 8, 16-21. Electrodeposited Cu<sub>2</sub>ZnSnSe<sub>4</sub> thin film solar cell with 7% power conversion 2220 4.4 142 efficiency. Progress in Photovoltaics: Research and Applications, 2014, 22, 58-68. Virtually Bare Nanocrystal Surfaces: Significantly Enhanced Electrical Transport in CulnSé<sub>2</sub>`and Culn<sub>`Iå^`<i>x</i></sub>Ga<sub><i>x</i></sub>Se<sub>2</sub> Thin Films upon Ligand Exchange with Thermally Degradable 1â€Ethylâ€5â€Thiotetrazole. Advanced Functional 7.8 26 Materials, 2014, 24, 1081-1088. The Architecture of Colloidal Quantum Dot Solar Cells: Materials to Devices. Chemical Reviews, 2014, 2222 23.0 444 114, 863-882. Industrial Bifacial Silicon Solar Cells with Up-converter and PbS Quantum Dots. Energy Procedia, 2223 1.8 2014, 44, 160-166. Imbedding germanium quantum dots in silica by a modified Stöber method. Materials Science in 2224 1.9 6 Semiconductor Processing, 2014, 17, 7-12. Structural, optical and electrical properties of Ti doped amorphous silicon prepared by co-sputtering. 1.6 Vacuum, 2014, 104, 65-69. Accurate opto-electrical modeling of multi-crystalline silicon wafer-based solar cells. Solar Energy 2226 3.024 Materials and Solar Cells, 2014, 123, 17-29. Infrared quantum cutting in Er3+:NaYF4 nanostructured glass ceramics for solar cells. Optik, 2014, 1.4 125, 565-568. Broadband triple-layer SiOx/SiOxNy/SiNx antireflective coatings in textured crystalline silicon solar 2228 1.9 15 cells. Materials Science in Semiconductor Processing, 2014, 25, 211-218. Photon management modeling and beyond for photovoltaics. Optics Communications, 2014, 314, 66-70. 2229 1.0 Luminescence properties and energy transfer investigations of tri-doped Sr3AlO4F:Ce3+,Tb3+,Yb3+ 2230 1.7 15 phosphors. Optical Materials, 2014, 36, 1097-1100. Fabrication of highly crystallized Cu2SnS3 thin films through sulfurization of Sn-rich metallic 2.8 precursors. Journal of Alloys and Compounds, 2014, 602, 199-203. Near-infrared down-conversion in Pr3+â€"Yb3+ co-doped transparent glass ceramic containing 2232 1.310 Ca5(PO4)3F nanocrystals. Physica B: Condensed Matter, 2014, 446, 12-16. Optical absorption enhancement of nanoconical frustum arrays texturing for c-Si film solar cells. Optics Communications, 2014, 310, 19-24.

#	Article	IF	CITATIONS
2234	Nanostructuring methods for enhancing light absorption rate of Si-based photovoltaic devices: A review. International Journal of Precision Engineering and Manufacturing - Green Technology, 2014, 1, 67-74.	2.7	29
2235	Numerical investigation of a hybrid-connection four-junction solar cell structure based on detailed balance calculation. Research on Chemical Intermediates, 2014, 40, 77-85.	1.3	1
2236	Near-infrared luminescence and energy transfer in CaMoO4: Ho3+, Yb3+ phosphor. Journal of Materials Science, 2014, 49, 527-531.	1.7	7
2237	Device Characteristics of CZTSSe Thinâ€Film Solar Cells with 12.6% Efficiency. Advanced Energy Materials, 2014, 4, 1301465.	10.2	2,651
2238	Fabrication of Cu2ZnSnS4 solar cell on a flexible glass substrate. Thin Solid Films, 2014, 562, 574-577.	0.8	59
2239	Realistic Detailed Balance Study of the Quantum Efficiency of Quantum Dot Solar Cells. Advanced Functional Materials, 2014, 24, 339-345.	7.8	21
2240	All-silicon spherical-Mie-resonator photodiode with spectral response in the infrared region. Nature Communications, 2014, 5, 3440.	5.8	75
2241	Comparison of Direct Growth and Wafer Bonding for the Fabrication of GalnP/GaAs Dual-Junction Solar Cells on Silicon. IEEE Journal of Photovoltaics, 2014, 4, 620-625.	1.5	98
2242	Terawatt Solar Photovoltaics. SpringerBriefs in Applied Sciences and Technology, 2014, , .	0.2	20
2243	Building blocks for tumour delivery. Nature Nanotechnology, 2014, 9, 93-94.	15.6	27
2243 2244	Building blocks for tumour delivery. Nature Nanotechnology, 2014, 9, 93-94. Toward Tandem Photovoltaic Devices Employing Nanoarray Graphene-Based Sheets. Journal of Physical Chemistry C, 2014, 118, 2385-2390.	15.6 1.5	27 6
2243 2244 2245	Building blocks for tumour delivery. Nature Nanotechnology, 2014, 9, 93-94.   Toward Tandem Photovoltaic Devices Employing Nanoarray Graphene-Based Sheets. Journal of Physical Chemistry C, 2014, 118, 2385-2390.   Optical properties of bio-inspired silver sulfide structures. Journal of Alloys and Compounds, 2014, 586, 5526-5530.	15.6 1.5 2.8	27 6 7
2243 2244 2245 2246	Building blocks for tumour delivery. Nature Nanotechnology, 2014, 9, 93-94.   Toward Tandem Photovoltaic Devices Employing Nanoarray Graphene-Based Sheets. Journal of Physical Chemistry C, 2014, 118, 2385-2390.   Optical properties of bio-inspired silver sulfide structures. Journal of Alloys and Compounds, 2014, 586, S526-S530.   Bimolecular Recombination in Organic Photovoltaics. Annual Review of Physical Chemistry, 2014, 65, 557-581.	15.6 1.5 2.8 4.8	27 6 7 218
22243 22244 22245 22246 22247	Building blocks for tumour delivery. Nature Nanotechnology, 2014, 9, 93-94.Toward Tandem Photovoltaic Devices Employing Nanoarray Graphene-Based Sheets. Journal of Physical Chemistry C, 2014, 118, 2385-2390.Optical properties of bio-inspired silver sulfide structures. Journal of Alloys and Compounds, 2014, S86, S526-S530.Bimolecular Recombination in Organic Photovoltaics. Annual Review of Physical Chemistry, 2014, 65, S57-S81.Progress Toward Realizing an Intermediate Band Solar Cellâ€"Sequential Absorption of Photons in a Quantum Well Solar Cell. IEEE Journal of Photovoltaics, 2014, 4, 634-638.	15.6 1.5 2.8 4.8	27 6 7 218 12
22243 22244 22245 22246 22247	Building blocks for tumour delivery. Nature Nanotechnology, 2014, 9, 93-94.   Toward Tandem Photovoltaic Devices Employing Nanoarray Graphene-Based Sheets. Journal of Physical Chemistry C, 2014, 118, 2385-2390.   Optical properties of bio-inspired silver sulfide structures. Journal of Alloys and Compounds, 2014, 586, 5526-5530.   Bimolecular Recombination in Organic Photovoltaics. Annual Review of Physical Chemistry, 2014, 65, 557-581.   Progress Toward Realizing an Intermediate Band Solar Cellâ€"Sequential Absorption of Photons in a Quantum Well Solar Cell. IEEE Journal of Photovoltaics, 2014, 4, 634-638.   Modeling Practical Performance Limits of Photoelectrochemical Water Splitting Based on the Current State of Materials Research. ChemSusChem, 2014, 7, 1372-1385.	15.6 1.5 2.8 4.8 1.5 3.6	27 6 7 218 12 195
22243 22244 22245 22246 22247 22248	Building blocks for tumour delivery. Nature Nanotechnology, 2014, 9, 93-94.   Toward Tandem Photovoltaic Devices Employing Nanoarray Graphene-Based Sheets. Journal of Physical Chemistry C, 2014, 118, 2385-2390.   Optical properties of bio-inspired silver sulfide structures. Journal of Alloys and Compounds, 2014, 586, 5526-5530.   Bimolecular Recombination in Organic Photovoltaics. Annual Review of Physical Chemistry, 2014, 65, 557-581.   Progress Toward Realizing an Intermediate Band Solar Cellá€"Sequential Absorption of Photons in a Quantum Well Solar Cell. IEEE Journal of Photovoltaics, 2014, 4, 634-638.   Modeling Practical Performance Limits of Photoelectrochemical Water Splitting Based on the Current State of Materials Research. ChemSusChem, 2014, 7, 1372-1385.   Analysis on the photovoltaic property of Si quantum dot-sensitized solar cells. International Journal of Precision Engineering and Manufacturing, 2014, 15, 339-343.	15.6 1.5 2.8 4.8 1.5 3.6 1.1	27 6 7 218 12 195
22243 22244 22245 22247 22248 22249 22250	Building blocks for tumour delivery. Nature Nanotechnology, 2014, 9, 93-94.   Toward Tandem Photovoltaic Devices Employing Nanoarray Graphene-Based Sheets. Journal of Physical Chemistry C, 2014, 118, 2385-2390.   Optical properties of bio-inspired silver sulfide structures. Journal of Alloys and Compounds, 2014, 586, 5526-5530.   Bimolecular Recombination in Organic Photovoltaics. Annual Review of Physical Chemistry, 2014, 65, 557-581.   Progress Toward Realizing an Intermediate Band Solar Cellã Caquential Absorption of Photons in a Quantum Well Solar Cell. IEEE Journal of Photovoltaics, 2014, 4, 634-638.   Modeling Practical Performance Limits of Photoelectrochemical Water Splitting Based on the Current State of Materials Research. ChemSusChem, 2014, 7, 1372-1385.   Analysis on the photovoltaic property of Si quantum dot-sensitized solar cells. International Journal of Precision Engineering and Manufacturing, 2014, 15, 339-343.   Metal-organic chemical vapor deposition of CaSb/CaAs quantum dots: the dependence of the morphology on growth temperature and vapour V/III ratio. Chemical Research in Chinese Universities, 2014, 30, 13-17.	15.6 1.5 2.8 4.8 1.5 3.6 1.1 1.3	27 6 7 218 12 195 5

#	Article	IF	CITATIONS
2253	Review of Experimental Results Related to the Operation of Intermediate Band Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 736-748.	1.5	85
2256	Updated Assessment of Possibilities and Limits for Solar Cells. Advanced Materials, 2014, 26, 1622-1628.	11.1	101
2258	Growth of void free Cu2ZnSnS4 (CZTS) thin films by sulfurization of stacked metallic precursor films. Vacuum, 2014, 104, 57-60.	1.6	24
2259	Photonic crystal structures for light trapping in thin-film Si solar cells: Modeling, process and optimizations. Optics Communications, 2014, 314, 41-47.	1.0	60
2260	Exceeding the solar cell Shockley–Queisser limit via thermal up-conversion of low-energy photons. Optics Communications, 2014, 314, 71-78.	1.0	26
2261	Enhancement of GaAs solar cell performance by using a ZnO sol–gel anti-reflection coating. Solar Energy Materials and Solar Cells, 2014, 123, 178-182.	3.0	45
2262	Enhanced up-conversion for photovoltaics via concentrating integrated optics. Optics Express, 2014, 22, A452.	1.7	19
2263	Recent Advances in Polymer Solar Cells: Realization of High Device Performance by Incorporating Water/Alcoholâ€Soluble Conjugated Polymers as Electrode Buffer Layer. Advanced Materials, 2014, 26, 1006-1024.	11.1	231
2264	Homomolecular non-coherent photon upconversion by triplet–triplet annihilation using a zinc porphyrin on wide bandgap semiconductors. Chemical Physics Letters, 2014, 598, 17-22.	1.2	14
2265	A detailed balance analysis of conversion efficiencies limits for nanocrystal solar cells—Relating the shape of the excitonic peak to conversion efficiencies. Journal of Applied Physics, 2014, 115, 054313.	1.1	10
2266	Unusual defect physics in CH3NH3PbI3 perovskite solar cell absorber. Applied Physics Letters, 2014, 104,	1.5	2,142
2268	Wurtzite CuGaO <sub>2</sub> : A New Direct and Narrow Band Gap Oxide Semiconductor Applicable as a Solar Cell Absorber. Journal of the American Chemical Society, 2014, 136, 3378-3381.	6.6	85
2270	Structural tuning of wide-gap chalcopyrite CuGaSe <sub>2</sub> thin films and highly efficient solar cells: differences from narrow-gap Cu(In,Ga)Se <sub>2</sub> . Progress in Photovoltaics: Research and Applications, 2014, 22, 821-829.	4.4	61
2271	Thin-film silicon-based quadruple junction solar cells approaching 20% conversion efficiency. Solar Energy Materials and Solar Cells, 2014, 129, 82-89.	3.0	53
2272	Light management for photovoltaics using high-index nanostructures. Nature Materials, 2014, 13, 451-460.	13.3	796
2273	Effects of Processing Conditions on the Recombination Reduction in Small Molecule Bulk Heterojunction Solar Cells. Advanced Energy Materials, 2014, 4, 1400438.	10.2	46
2274	Limiting Efficiencies of Multijunction Solar Cells With Multiple Exciton Generation. IEEE Journal of Photovoltaics, 2014, 4, 874-880.	1.5	3
2275	Photoelectrochemical Investigations of Semiconductor Nanoparticles and Their Application to Solar Cells. Journal of Physical Chemistry C, 2014, 118, 17123-17141.	1.5	26

# 2276	ARTICLE Lanthanide-Doped Nanoparticles. , 2014. , 121-160.	IF	CITATIONS
2277	Lead-free organic–inorganic tin halide perovskites for photovoltaic applications. Energy and Environmental Science, 2014, 7, 3061-3068.	15.6	2,086
2278	Nanostructured semiconductor composites for solar cells. , 2014, , 267-320.		3
2279	Organohalide lead perovskites for photovoltaic applications. Energy and Environmental Science, 2014, 7, 2448-2463.	15.6	1,220
2280	Investigation of hydrogen plasma treatment for reducing defects in silicon quantum dot superlattice structure with amorphous silicon carbide matrix. Nanoscale Research Letters, 2014, 9, 72.	3.1	11
2281	Fullâ€wave optoelectrical modeling of optimized flattened lightâ€scattering substrate for high efficiency thinâ€film silicon solar cells. Progress in Photovoltaics: Research and Applications, 2014, 22, 671-689.	4.4	35
2282	On the low carrier lifetime edge zone in multicrystalline silicon ingots. Journal of Applied Physics, 2014, 115, .	1.1	7
2283	High-performance broadband optical coatings on InGaN/GaN solar cells for multijunction device integration. Applied Physics Letters, 2014, 104, .	1.5	55
2284	CuSbS <sub>2</sub> as a Promising Earth-Abundant Photovoltaic Absorber Material: A Combined Theoretical and Experimental Study. Chemistry of Materials, 2014, 26, 3135-3143.	3.2	278
2285	Anomalous Band Gap Behavior in Mixed Sn and Pb Perovskites Enables Broadening of Absorption Spectrum in Solar Cells. Journal of the American Chemical Society, 2014, 136, 8094-8099.	6.6	1,234
2286	High-Yield Sorting of Small-Diameter Carbon Nanotubes for Solar Cells and Transistors. ACS Nano, 2014, 8, 2609-2617.	7.3	91
2287	Defectâ€Minimized PEDOT:PSS/Planarâ€Si Solar Cell with Very High Efficiency. Advanced Functional Materials, 2014, 24, 4978-4985.	7.8	147
2288	Carrier multiplication in graphene under Landau quantization. Nature Communications, 2014, 5, 3703.	5.8	54
2289	Optimization of absorption bands of dye-sensitized and perovskite tandem solar cells based on loss-in-potential values. Physical Chemistry Chemical Physics, 2014, 16, 14116-14126.	1.3	14
2290	Heteroepitaxial growth of Cu2ZnSnS4 thin film on sapphire substrate by radio frequency magnetron sputtering. Applied Physics Letters, 2014, 104, 092103.	1.5	17
2291	Luminescent solar concentrators: challenges for lanthanide-based organic–inorganic hybrid materials. Journal of Materials Chemistry A, 2014, 2, 5580-5596.	5.2	150
2292	Evidence of significant down-conversion in a Si-based solar cell using CuInS2/ZnS core shell quantum dots. Applied Physics Letters, 2014, 104, 183902.	1.5	28
2293	Printing-based assembly of quadruple-junction four-terminal microscale solar cells and their use in high-efficiency modules. Nature Materials, 2014, 13, 593-598.	13.3	143

#	Article	IF	CITATIONS
2294	Surface Engineering of ZnO Nanostructures for Semiconductor‧ensitized Solar Cells. Advanced Materials, 2014, 26, 5337-5367.	11.1	149
2295	Solution processed approaches for bulk-heterojunction solar cells based on Pb and Cd chalcogenide nanocrystals. Nano Energy, 2014, 5, 36-51.	8.2	16
2296	Radial junction Si micro/nano-wire array photovoltaics: Recent progress from theoretical investigation to experimental realization. Nano Energy, 2014, 7, 10-24.	8.2	46
2297	Tailoring Exciton Dynamics by Elastic Strainâ€Gradient in Semiconductors. Advanced Materials, 2014, 26, 2572-2579.	11.1	76
2298	Effects of substituents on tetracene derivatives on their stabilities and singlet fission. Journal of Molecular Graphics and Modelling, 2014, 51, 86-96.	1.3	17
2299	Transmittance enhancement and optical band gap widening of Cu2O thin films after air annealing. Journal of Applied Physics, 2014, 115, .	1.1	85
2300	Buried <i>p-n</i> junction formation in CuGaSe <sub>2</sub> thin-film solar cells. Applied Physics Letters, 2014, 104, 031606.	1.5	27
2301	Unique Properties of Halide Perovskites as Possible Origins of the Superior Solar Cell Performance. Advanced Materials, 2014, 26, 4653-4658.	11.1	1,735
2302	Analysis of Multivalley and Multibandgap Absorption and Enhancement of Free Carriers Related to Exciton Screening in Hybrid Perovskites. Journal of Physical Chemistry C, 2014, 118, 11566-11572.	1.5	463
2303	Near-IR Photoresponse of Ruthenium Dipyrrinate Terpyridine Sensitizers in the Dye-Sensitized Solar Cells. Inorganic Chemistry, 2014, 53, 5417-5419.	1.9	37
2304	Inverted Colloidal Quantum Dot Solar Cells. Advanced Materials, 2014, 26, 3321-3327.	11.1	59
2305	Fabrication of Cu2ZnSnS4 thin films using a ceramic quaternary target. Vacuum, 2014, 101, 146-150.	1.6	43
2306	Mechanistic aspects of preheating effects of electrodeposited metallic precursors on structural and photovoltaic properties of Cu2ZnSnS4 thin films. Solar Energy Materials and Solar Cells, 2014, 120, 218-225.	3.0	63
2307	Optical designs that improve the efficiency of Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> solar cells. Energy and Environmental Science, 2014, 7, 1029-1036.	15.6	200
2308	Exciton dynamics in an energy up-converting solid state system based on diphenylanthracene doped with platinum octaethylporphyrin. Chemical Physics, 2014, 429, 57-62.	0.9	28
2309	Multiple exciton dissociation and hot electron extraction by ultrafast interfacial electron transfer from PbS QDs. Coordination Chemistry Reviews, 2014, 263-264, 229-238.	9.5	40
2310	Optimized multi-junction photovoltaic solar cells for terrestrial applications. Solar Energy, 2014, 106, 72-81.	2.9	12
2311	Efficient near-infrared emission in Eu3+-Yb3+-Y3+ tri-doped cubic ZrO2 via down-conversion for silicon solar cells. Physica B: Condensed Matter, 2014, 436, 59-63.	1.3	15

#	Article	IF	CITATIONS
2312	Modeling of nanoscale solar cells: The Green's function formalism. Journal of Renewable and Sustainable Energy, 2014, 6, 011203.	0.8	44
2313	The origin of high efficiency in low-temperature solution-processable bilayer organometal halide hybrid solar cells. Energy and Environmental Science, 2014, 7, 399-407.	15.6	965
2314	Optical and Electronic Simulation of Silicon/Germanium Tandem Four Terminal Solar Cells. Journal of Solar Energy Engineering, Transactions of the ASME, 2014, 136, .	1.1	5
2315	Multiple exciton generation in silicon quantum dot arrays: density functional perturbation theory computation. Molecular Physics, 2014, 112, 430-440.	0.8	21
2316	Spectroscopic studies and downconversion luminescence in OHâ^'-free Pr3+–Yb3+ co-doped low-silica calcium aluminosilicate glasses. Journal of Luminescence, 2014, 145, 615-619.	1.5	10
2317	AlGalnAs Quantum Dots for Intermediate Band Formation in Solar Cell Devices. Lecture Notes in Nanoscale Science and Technology, 2014, , 167-186.	0.4	1
2318	A nanophotonic solar thermophotovoltaic device. Nature Nanotechnology, 2014, 9, 126-130.	15.6	704
2319	Fluence-Dependent Singlet Exciton Dynamics in Length-Sorted Chirality-Enriched Single-Walled Carbon Nanotubes. Nano Letters, 2014, 14, 504-511.	4.5	27
2320	Reply to 'On the thermodynamics of light trapping in solar cells'. Nature Materials, 2014, 13, 104-105.	13.3	5
2321	On the thermodynamics of light trapping in solar cells. Nature Materials, 2014, 13, 103-104.	13.3	23
2322	Solar thermophotovoltaic energy conversion systems with two-dimensional tantalum photonic crystal absorbers and emitters. Solar Energy Materials and Solar Cells, 2014, 122, 287-296.	3.0	158
2323	On global energy scenario, dye-sensitized solar cells and the promise of nanotechnology. Physical Chemistry Chemical Physics, 2014, 16, 6838.	1.3	83
2324	Efficiency improvement of Si solar cells using metal-enhanced nanophosphor fluorescence. Solar Energy Materials and Solar Cells, 2014, 120, 168-174.	3.0	50
2325	Material Selection for the Quantum Dot Intermediate Band Solar Cell. Lecture Notes in Nanoscale Science and Technology, 2014, , 135-166.	0.4	3
2326	Hybrid Optoelectronic Devices with Colloidal Quantum Dots. Lecture Notes in Nanoscale Science and Technology, 2014, , 67-90.	0.4	1
2328	Generation of Multiple Excitons in Ag <sub>2</sub> S Quantum Dots: Single High-Energy versus Multiple-Photon Excitation. Journal of Physical Chemistry Letters, 2014, 5, 659-665.	2.1	81
2329	High voltage and efficient bilayer heterojunction solar cells based on an organic–inorganic hybrid perovskite absorber with a low-cost flexible substrate. Physical Chemistry Chemical Physics, 2014, 16, 6033-6040.	1.3	86
2330	An alternative 'Sun' for solar cells. Nature Nanotechnology, 2014, 9, 92-93.	15.6	55

#	Article	IF	CITATIONS
2331	Photophysical and photoconductivity properties of thiol-functionalized graphene–CdSe QD composites. RSC Advances, 2014, 4, 13788.	1.7	34
2332	Metamaterial thermal emitters based on nanowire cavities for high-efficiency thermophotovoltaics. Journal of Optics (United Kingdom), 2014, 16, 035102.	1.0	32
2333	Ill–V nanowire arrays: growth and light interaction. Nanotechnology, 2014, 25, 014015.	1.3	87
2334	Efficiency above the Shockley–Queisser Limit by Using Nanophotonic Effects To Create Multiple Effective Bandgaps With a Single Semiconductor. Nano Letters, 2014, 14, 66-70.	4.5	36
2335	Tunneling in ZnO/ZnCdO quantum wells towards next generation photovoltaic cells. Solar Energy, 2014, 106, 82-87.	2.9	10
2336	Electronic Structure Study of Singlet Fission in Tetracene Derivatives. Journal of Chemical Theory and Computation, 2014, 10, 324-334.	2.3	113
2337	Infrared to near-infrared and visible upconversion mechanisms in LiYF4: Yb3+, Ho3+. Journal of Luminescence, 2014, 147, 147-154.	1.5	31
2338	Chloroboron subphthalocyanine/C60 planar heterojunction organic solar cell with N,N-dicarbazolyl-3,5-benzene blocking layer. Solar Energy Materials and Solar Cells, 2014, 122, 264-270.	3.0	33
2339	Silicon nanostructures for photonics and photovoltaics. Nature Nanotechnology, 2014, 9, 19-32.	15.6	802
2340	ZnS-Passivated CdSe/CdS Co-sensitized Mesoporous Zn2SnO4 Based Solar Cells. Electrochimica Acta, 2014, 121, 223-232.	2.6	15
2341	Colloidal Solution-Processed CuInSe <sub>2</sub> Solar Cells with Significantly Improved Efficiency up to 9% by Morphological Improvement. ACS Applied Materials & Interfaces, 2014, 6, 259-267.	4.0	22
2342	Characterization of a CZTS thin film solar cell grown by sputtering method. Solar Energy, 2014, 100, 23-30.	2.9	224
2343	Nonadiabatic Dynamics of Charge Transfer and Singlet Fission at the Pentacene/C <sub>60</sub> Interface. Journal of the American Chemical Society, 2014, 136, 1599-1608.	6.6	142
2344	The Structure and Dynamics of Molecular Excitons. Annual Review of Physical Chemistry, 2014, 65, 127-148.	4.8	213
2345	Numerical Simulation of Solar Cell Plasmonics for Small and Large Metal Nano Clusters Using Discrete Dipole Approximation. Plasmonics, 2014, 9, 291-297.	1.8	13
2346	First-principles study on the electronic and optical properties of cubic ABX3 halide perovskites. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 290-293.	0.9	233
2347	Graphene sheets anchored with high density TiO <sub>2</sub> nanocrystals and their application in quantum dot-sensitized solar cells. RSC Advances, 2014, 4, 2068-2072.	1.7	23
2349	Micro-Raman, photoluminescence and photocurrent studies on the photostability of quantum dot sensitized photoanodes. Journal of Photochemistry and Photobiology A: Chemistry, 2014, 275, 127-133.	2.0	12

ARTICLE IF CITATIONS Plasmon-Enhanced Energy Transfer for Improved Upconversion of Infrared Radiation in 2350 4.5 194 Doped-Lanthanide Nanocrystals. Nano Letters, 2014, 14, 101-106. Physical performance limitations of luminescent down-conversion layers for photovoltaic applications. Solar Energy Materials and Solar Cells, 2014, 122, 8-14. Lead candidates for high-performance organic photovoltaics from high-throughput quantum 2353 15.6 189 chemistry – the Harvard Clean Energy Project. Energy and Environmental Science, 2014, 7, 698-704. Tuning the near-gap electronic structure of tin-halide and lead-halide perovskites via changes in 2354 1.1 atomic layering. Physical Review B, 2014, 90, . Spatial Mapping of Sub-Bandgap States Induced by Local Nonstoichiometry in Individual Lead Sulfide 2355 2.1 12 Nanocrystals. Journal of Physical Chemistry Letters, 2014, 5, 3701-3707. Fabrication of high-contrast gratings for a parallel spectrum splitting dispersive element in a concentrated photovoltaic system. Journal of Vacuum Science and Technology B:Nanotechnology and 0.6 Microelectronics, 2014, 32, Optical absorption enhancement in a Si nanohole structure with hexagonal unit cell for solar cell 2357 1.34 application. Nanotechnology, 2014, 25, 415303. Tuning the band gap of ferritin nanoparticles by co-depositing iron with halides or oxo-anions. 2358 5.2 Journal of Materials Chemistry A, 2014, 2, 20782-20788. 2359 Heterojunction rear passivated contact for high efficiency n-Cz Si solar cells., 2014, , . 0 Photovoltaic properties of Si-based quantum-dot-sensitized solar cells prepared using laser plasma in 0.8 liquid. Japanese Journal of Applied Physics, 2014, 53, 010208. N-doped graphene quantum dots-functionalized titanium dioxide nanofibers and their highly efficient 2361 21 1.2 photocurrent response. Journal of Materials Research, 2014, 29, 1408-1416. Atomic scale study of polar Lomer–Cottrell and Hirth lock dislocation cores in CdTe. Acta 2362 0.0 Crystallographica Section A: Foundations and Advances, 2014, 70, 524-531. Electronic structures of halogen-doped Cu <sub>2</sub> O based on DFT calculations. Chinese 2363 0.7 8 Physics B, 2014, 23, 017401. Heterojunction of single-walled capped carbon nanotube and zinc phthalocyanine with high energy conversion efficiency. Journal of Applied Physics, 2014, 116, 054305. 2364 1.1 Net CO<sub>2</sub> emissions from global photovoltaic development. RSC Advances, 2014, 4, 2365 1.7 3 58652-58659. Identification of trap states for two-step two-photon-absorption processes in InAs quantum 2366 structures for intermediate-band solar cells. , 2014, , . A Unique Architecture Based on 1 D Semiconductor, Reduced Graphene Oxide, and Chalcogenide with 2367 1.7 14 Multifunctional Properties. Chemistry - A European Journal, 2014, 20, 10456-10465. Light trapping in hybrid nanopyramid and nanohole structure silicon solar cell beyond the Lambertian 2368 1.1 limit. Journal of Applied Physics, 2014, 116, 074310.

#	Article	IF	CITATIONS
2369	Application of a Silicon Nanocrystal Down-shifter to a c-Si Solar Cell. Energy Procedia, 2014, 55, 190-196.	1.8	1
2370	Detection of miniband formation in strain-balanced InGaAs/GaAsP quantum well solar cells by using a piezoelectric photothermal spectroscopy. Journal of Applied Physics, 2014, 116, 044509.	1.1	11
2371	Semiconductor–Polymer Hybrid Materials. Advances in Polymer Science, 2014, , 283-311.	0.4	11
2372	Quasi-Fermi level splitting and sub-bandgap absorptivity from semiconductor photoluminescence. Journal of Applied Physics, 2014, 116, .	1.1	135
2373	Spectrally resolved intraband transitions on two-step photon absorption in InGaAs/GaAs quantum dot solar cell. Applied Physics Letters, 2014, 105, .	1.5	39
2374	Broadband Up-Conversion at Subsolar Irradiance: Triplet–Triplet Annihilation Boosted by Fluorescent Semiconductor Nanocrystals. Nano Letters, 2014, 14, 6644-6650.	4.5	62
2375	Optimization tool for multijunction photovoltaic systems. , 2014, , .		1
2376	xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mml:msup><mml:mi mathvariant="normal"&gt;Zn<mml:mrow><mml:mn>2</mml:mn><mml:mo>+</mml:mo></mml:mrow>&lt; into<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal"&gt;KNbO<mml:mn>3</mml:mn></mml:mi </mml:msub></mml:math>and</mml:mi </mml:msup>	/mml:msu	p>៹/mml:ma
2377	polarization rotation. Physical Review B. 2014, 89. Enhanced upconversion emission in colloidal (NaYF_4:Er^3+)/NaYF_4  core/shell nanoparticles excited at 1523Ânm. Optics Letters, 2014, 39, 1386.	1.7	51
2378	A deep-purple-grey thiophene–benzothiadiazole–thiophene BODIPY dye for solution-processed solar cells. New Journal of Chemistry, 2014, 38, 3644-3653.	1.4	30
2379	The effect of photoanode structure on the performances of quantum-dot-sensitized solar cells: a case study of the anatase TiO <sub>2</sub> nanocrystals and polydisperse mesoporous spheres hybrid photoanodes. Journal of Materials Chemistry A, 2014, 2, 16276-16284.	5.2	38
2380	Synthesis, Spectroscopic Properties, and Photoconductivity of Black Absorbers Consisting of Pt(Bipyridine)(Dithiolate) Charge Transfer Complexes in the Presence and Absence of Nitrofluorenone Acceptors. Journal of the American Chemical Society, 2014, 136, 16185-16200.	6.6	37
2381	Inverted Schottky quantum dot solar cells with enhanced carrier extraction and air-stability. Journal of Materials Chemistry A, 2014, 2, 20799-20805.	5.2	22
2382	Multijunction solar cell efficiencies: effect of spectral window, optical environment and radiative coupling. Energy and Environmental Science, 2014, 7, 3600-3605.	15.6	18
2383	Light concentration effects on the performance of the p-i-n quantum dot solar cells: A simulation study. Optik, 2014, 125, 6691-6695.	1.4	4
2384	Calculation of defect concentrations in Cu <inf>2</inf> ZnSnS <inf>4</inf> from stoichiometry. , 2014, , .		0
2385	Effect of annealing temperature on the fabrication of self-assembled gold droplets on various type-B GaAs surfaces. CrystEngComm, 2014, 16, 4390.	1.3	9
2386	Investigation of InGaAs thermophotovoltaic cells under blackbody radiation. Applied Physics Express, 2014, 7, 096601.	1.1	24

#	Article	IF	CITATIONS
2387	Intermediate band in the gap of photosensitive hybrid gel based on titanium oxide: role of coordinated ligands during photoreduction. Journal of Materials Chemistry A, 2014, 2, 11499-11508.	5.2	23
2388	Simultaneous Multiple Wavelength Upconversion in a Core–Shell Nanoparticle for Enhanced Near Infrared Light Harvesting in a Dye-Sensitized Solar Cell. ACS Applied Materials & Interfaces, 2014, 6, 18018-18025.	4.0	77
2389	Cation Disorder Regulation by Microstate Configurational Entropy in Photovoltaic Absorber Materials Cu2ZnSn(S,Se)4. Journal of Physical Chemistry C, 2014, 118, 24884-24889.	1.5	18
2390	Third-generation solar cells: a review and comparison of polymer:fullerene, hybrid polymer and perovskite solar cells. RSC Advances, 2014, 4, 43286-43314.	1.7	238
2391	Toward the Practical Limits of Silicon Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1465-1469.	1.5	188
2392	Design Guidelines for Si(1 1 1) Inclined Nanohole Arrays in Thin-Film Solar Cells. IEEE Nanotechnology Magazine, 2014, 13, 431-436.	1.1	13
2393	Germanium nanoparticles with non-diamond core structures for solar energy conversion. Journal of Materials Chemistry A, 2014, 2, 9820.	5.2	29
2394	Solar thermal harvesting for enhanced photocatalytic reactions. Physical Chemistry Chemical Physics, 2014, 16, 5137.	1.3	15
2395	A double-acceptor as a superior organic dye design for p-type DSSCs: high photocurrents and the observed light soaking effect. Physical Chemistry Chemical Physics, 2014, 16, 26103-26111.	1.3	55
2396	Epitaxial growth of successive CdSe ultrathin films and quantum dot layers on TiO2 nanorod arrays for photo-electrochemical cells. RSC Advances, 2014, 4, 12154.	1.7	13
2397	Semiconductor quantum dot-doped glass as spectral converter for photovoltaic application. Science Bulletin, 2014, 59, 16-22.	1.7	1
2398	Effect of external bias on multi-stacked InAs/AlGaAs quantum dots solar cell. , 2014, , .		4
2399	Quantum tripling in Tm 3+ doped La 2 BaZnO 5 phosphors for efficiency enhancement of small band gap solar cells. Journal of Luminescence, 2014, 156, 262-265.	1.5	5
2400	Insights into the energy transfer mechanism in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:msup><mml:mrow><mml:mi>Ce</mml:mi>YAG phosphors. Physical Review B, 2014, 90, .</mml:mrow></mml:msup></mml:math 	ר <b>ַסגע</b> > < mr	n <b>ໄສ</b> ອາເວພ > < ເ
2401	Organic photovoltaics: key photophysical, device and design aspects. Journal of Modern Optics, 2014, 61, 1703-1713.	0.6	3
2402	Multiple exciton generation solar cells: Effects of nanocrystal shape on quantum efficiency. , 2014, , .		0
2403	Electrostatic force and Kelvin probe force microscopies on Cu(In,Ga)Se <inf>2</inf> solar cells. , 2014, , .		1
2404	High efficiency quadruple junction, four-terminal solar cells and modules by transfer printing. , 2014,		0

#	Article	IF	CITATIONS
2405	Limiting efficiencies of integrating single junction with intermediate band solar cells for multiphysics effects. , 2014, , .		1
2406	Tandem Solar Cells Based on High-Efficiency c-Si Bottom Cells: Top Cell Requirements for >30% Efficiency. IEEE Journal of Photovoltaics, 2014, 4, 208-214.	1.5	164
2407	Theoretical Study of Structural, Elastic Properties and Phase Transitions of Cu <sub>2</sub> ZnSnS <sub>4</sub> . Advanced Materials Research, 0, 1058, 113-117.	0.3	2
2408	Determining the maximum open circuit voltage from absorber photoluminescence in the presence of tail states. , 2014, , .		0
2409	Material selection and fabrication parameters for antireflective nanostructures integrated with multijunction photovoltaics. , 2014, , .		0
2410	Impact of surface ligands on the photocurrent enhancement due to multiple exciton generation in close-packed nanocrystal thin films. Chemical Science, 2014, 5, 2696.	3.7	19
2411	Si nanocorals/PbS quantum dots composited high efficiency c-Si solar cell. RSC Advances, 2014, 4, 14862-14867.	1.7	2
2412	Matrix elements of intraband transitions in quantum dot intermediate band solar cells: the influence of quantum dot presence on the extended-state electron wave-functions. Semiconductor Science and Technology, 2014, 29, 045014.	1.0	6
2413	Performance optimization for Perovskite based solar cells. , 2014, , .		3
2414	Ligand-stabilized CdSe nanoplatelet hybrid structures with tailored geometric and electronic properties. New insights from theory. RSC Advances, 2014, 4, 55980-55989.	1.7	17
2415	Spray pyrolysis of CZTS nanoplatelets. Chemical Communications, 2014, 50, 11366-11369.	2.2	8
2416	Sunlight absorption in water – efficiency and design implications for photoelectrochemical devices. Energy and Environmental Science, 2014, 7, 2951-2956.	15.6	174
2417	Experimental demonstration of enhanced photon recycling in angle-restricted GaAs solar cells. Energy and Environmental Science, 2014, 7, 1907-1912.	15.6	69
2418	Cu <sub>2</sub> ZnSnS <sub>4</sub> thin film solar cell utilizing rapid thermal process of precursors sputtered from a quaternary target: a promising application in industrial processes. RSC Advances, 2014, 4, 43080-43086.	1.7	46
2419	Creating electrochemical gradients by light: from bio-inspired concepts to photoelectric conversion. Physical Chemistry Chemical Physics, 2014, 16, 19781-19789.	1.3	25
2420	Graphene oxide as an effective interfacial layer for enhanced graphene/silicon solar cell performance. Journal of Materials Chemistry C, 2014, 2, 7715-7721.	2.7	62
2421	Efficient spectral conversion from visible to near-infrared in transparent glass ceramics containing Ce <sup>3+</sup> –Yb <sup>3+</sup> codoped Y <sub>3</sub> Al <sub>5</sub> O <sub>12</sub> nanocrystals. Journal of Materials Chemistry C, 2014, 2, 2204-2211.	2.7	59
2422	Illustrating Anticipatory Life Cycle Assessment for Emerging Photovoltaic Technologies. Environmental Science & Technology, 2014, 48, 10531-10538.	4.6	100

#	Article	IF	CITATIONS
2423	Detailed Balance Analysis and Enhancement of Open-Circuit Voltage in Single-Nanowire Solar Cells. Nano Letters, 2014, 14, 1011-1015.	4.5	53
2424	CZTS-based materials and interfaces and their effects on the performance of thin film solar cells. Physica Status Solidi - Rapid Research Letters, 2014, 08, 735-762.	1.2	131
2425	Effect of TiO2 Crystal Orientation on the Adsorption of CdSe Quantum Dots for Photosensitization Studied by the Photoacoustic and Photoelectron Yield Methods. Journal of Physical Chemistry C, 2014, 118, 16680-16687.	1.5	10
2426	Dye-sensitized solar cells: Atomic scale investigation of interface structure and dynamics. Chinese Physics B, 2014, 23, 086801.	0.7	4
2427	Semi-Empirical Limiting Efficiency of Singlet-Fission-Capable Polyacene/Inorganic Hybrid Solar Cells. Journal of Physical Chemistry C, 2014, 118, 2298-2305.	1.5	18
2428	CdTe Quantum Dots in Ionic Liquid: Stability and Hole Scavenging in the Presence of a Sulfide Salt. Journal of Physical Chemistry C, 2014, 118, 18481-18487.	1.5	26
2429	HATCN-based Charge Recombination Layers as Effective Interconnectors for Tandem Organic Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 15604-15609.	4.0	12
2430	The Shockleyâ€Queisser paper – A notable example of a scientific sleeping beauty. Annalen Der Physik, 2014, 526, A41.	0.9	18
2431	Synthesis, characterization and processing of cubic iron pyrite nanocrystals in a photovoltaic cell. Materials Chemistry and Physics, 2014, 148, 1022-1028.	2.0	19
2432	Integration of upconverting β-NaYF <sub>4</sub> :Yb <sup>3+</sup> ,Er <sup>3+</sup> @TiO <sub>2</sub> composites as light harvesting layers in dye-sensitized solar cells. RSC Advances, 2014, 4, 52694-52701.	1.7	18
2433	Investigation of the bulk and surface properties of CdSe: insights from theory. Physical Chemistry Chemical Physics, 2014, 16, 23251-23259.	1.3	17
2434	Computational search for direct band gap silicon crystals. Physical Review B, 2014, 90, .	1.1	63
2435	Plasmon-Enhanced Triplet–Triplet Annihilation Using Silver Nanoplates. Journal of Physical Chemistry C, 2014, 118, 6398-6404.	1.5	40
2436	Energetics and efficiency analysis of a cobaloxime-modified semiconductor under simulated air mass 1.5 illumination. Physical Chemistry Chemical Physics, 2014, 16, 15818-15824.	1.3	50
2437	Electronic Excitations in Push–Pull Oligomers and Their Complexes with Fullerene from Many-Body Green's Functions Theory with Polarizable Embedding. Journal of Chemical Theory and Computation, 2014, 10, 3104-3110.	2.3	55
2438	Thin-Film InGaAs/GaAsP MQWs Solar Cell With Backside Nanoimprinted Pattern for Light Trapping. IEEE Journal of Photovoltaics, 2014, 4, 1086-1090.	1.5	14
2439	Multiple phases of Cu2ZnSnSe4 detected by room temperature photoluminescence. Journal of Applied Physics, 2014, 116, .	1.1	12
2440	A Layered Hybrid Perovskite Solar ell Absorber with Enhanced Moisture Stability. Angewandte Chemie - International Edition, 2014, 53, 11232-11235.	7.2	1,547

#	ARTICLE Semiconducting ferroelectric perovskites with intermediate bands via <mml:math< th=""><th>IF</th><th>CITATIONS</th></mml:math<>	IF	CITATIONS
2441	xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mml:mi>B</mml:mi> -site <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:msup><mml:mi mathvariant="normal"&gt;Bi<mml:mrow><mml:mn>5</mml:mn><mml:mo>+</mml:mo><td>1.1 nml:msup</td><td>23 &gt; </td></mml:mrow></mml:mi </mml:msup></mml:math 	1.1 nml:msup	23 >
2442	Solution Processing of GaAs Thin Films for Photovoltaic Applications. Chemistry of Materials, 2014, 26, 4419-4424.	3.2	29
2443	Electronic states of elongated PbSe/PbS Core/shell quantum dots. Journal of Physics: Conference Series, 2014, 526, 012010.	0.3	0
2444	Porous NiOx nanostructures templated by polystyrene-block-poly(2-vinylpyridine) diblock copolymer micelles. Journal of Materials Chemistry A, 2014, 2, 6158.	5.2	13
2445	Influence of grain boundary modification on limited performance of wide bandgap Cu(In,Ga)Se2 solar cells. Applied Physics Letters, 2014, 105, 013902.	1.5	36
2446	Type II GaSb quantum ring solar cells under concentrated sunlight. Optics Express, 2014, 22, A359.	1.7	17
2447	A simple model for voltage-dependent carrier collection efficiency in solar cells. Journal of Applied Physics, 2014, 115, 143703.	1.1	3
2448	Broadband Cr^3+-sensitized upconversion luminescence in La_3Ga_5GeO_14: Cr^3+,Yb^3+,Er^3+. Optical Materials Express, 2014, 4, 638.	1.6	41
2449	Shedding light on nanoscale ferroelectrics. Current Applied Physics, 2014, 14, 1083-1091.	1.1	25
2450	Micrometric investigation of external quantum efficiency in microcrystalline CuInGa(S,Se)2 solar cells. Thin Solid Films, 2014, 565, 32-36.	0.8	4
2451	Thermodynamics of light management in photovoltaic devices. Physical Review B, 2014, 90, .	1.1	163
2452	Bright light-emitting diodes based on organometal halide perovskite. Nature Nanotechnology, 2014, 9, 687-692.	15.6	3,627
2453	Properties of electronic potential barriers at grain boundaries in Cu(In,Ga)Se 2 thin films. Solar Energy Materials and Solar Cells, 2014, 130, 124-131.	3.0	45
2454	The feasibility of high-efficiency InAs/GaAs quantum dot intermediate band solar cells. Solar Energy Materials and Solar Cells, 2014, 130, 225-233.	3.0	42
2455	Upconversion nanophosphors for solar cell applications. RSC Advances, 2014, 4, 34873-34895.	1.7	103
2456	Modelling of quantum dot intermediate band solar cells: effect of intermediate band linewidth broadening. IET Optoelectronics, 2014, 8, 81-87.	1.8	10
2457	InAs/GaAs and InAlGaAs/AlGaAs quantum dot based solar cells for intermediate band operation. , 2014, ,		3
2458	Effects of Heteroatoms of Tetracene and Pentacene Derivatives on Their Stability and Singlet Fission. Journal of Physical Chemistry A, 2014, 118, 5700-5708.	1.1	64

#	Article	IF	CITATIONS
2460	Detecting the historical roots of research fields by reference publication year spectroscopy ( <scp>RPYS</scp> ). Journal of the Association for Information Science and Technology, 2014, 65, 751-764.	1.5	142
2461	Theoretical study of the efficiency of CdS/PbS thin film solar cells. Solar Energy, 2014, 108, 360-369.	2.9	29
2462	Tunable Exciton Funnel Using Moiré Superlattice in Twisted van der Waals Bilayer. Nano Letters, 2014, 14, 5350-5357.	4.5	55
2463	Night time performance of a storage integrated solar thermophotovoltaic (SISTPV) system. Solar Energy, 2014, 108, 377-389.	2.9	38
2464	Mesoscopic Features of Charge Generation in Organic Semiconductors. Accounts of Chemical Research, 2014, 47, 3385-3394.	7.6	76
2465	The evolution of the dye sensitized solar cells from GrĀæel prototype to up-scaled solar applications: A life cycle assessment approach. Renewable and Sustainable Energy Reviews, 2014, 39, 124-138.	8.2	138
2466	Analysis of InAs/CaAs quantum dot solar cells using Suns- V oc measurements. Solar Energy Materials and Solar Cells, 2014, 130, 241-245.	3.0	43
2467	Band-gap engineering of Cu 2 ZnSn 1â^ x Ge x S 4 single crystals and influence of the surface properties. Acta Materialia, 2014, 79, 181-187.	3.8	37
2468	High temperature layered absorber for thermo-solar systems. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 149, 8-15.	1.1	12
2469	Towards high efficiency thin-film crystalline silicon solar cells: The roles of light trapping and non-radiative recombinations. Journal of Applied Physics, 2014, 115, .	1.1	51
2470	Modeling of the quantum dot filling and the dark current of quantum dot infrared photodetectors. Journal of Applied Physics, 2014, 115, .	1.1	17
2471	Efficient optical extraction of hot-carrier energy. Nature Communications, 2014, 5, 4665.	5.8	42
2472	Preparation of Si nanoparticles by laser ablation in liquid and their application as photovoltaic material in quantum dot sensitized solar cell. Journal of Physics: Conference Series, 2014, 518, 012023.	0.3	8
2473	Antireflection and downconversion response of Nd3+ doped Y2O3/Si thin film deposited by AACVD process. Chemical Physics Letters, 2014, 612, 1-7.	1.2	4
2474	Temperature and light-intensity dependence of upconverted photocurrent generation in shallow InAs quantum structures. Japanese Journal of Applied Physics, 2014, 53, 05FV01.	0.8	3
2475	Cu2ZnSnS <i>x</i> O4â^' <i>x</i> and Cu2ZnSnS <i>x</i> Se4â^' <i>x</i> : First principles simulations of optimal alloy configurations and their energies. Journal of Applied Physics, 2014, 115, .	1.1	22
2476	Tailoring Absorber Thickness and the Absorber-Scaffold Interface in CdSe-Coated ZnO Nanowire Extremely Thin Absorber Solar Cells. Electrochimica Acta, 2014, 145, 291-299.	2.6	12
2477	Theoretical performance of solar cell based on mini-bands quantum dots. Journal of Applied Physics, 2014, 115, 114311.	1.1	20

#	Article	IF	CITATIONS
2478	Nonlinear Density Dependence of Singlet Fission Rate in Tetracene Films. Journal of Physical Chemistry Letters, 2014, 5, 3462-3467.	2.1	19
2479	Micro and Nanophotonics for Semiconductor Infrared Detectors. , 2014, , .		9
2480	High efficiency organic/a-Si hybrid tandem solar cells with complementary light absorption. Journal of Materials Chemistry A, 2014, 2, 15303.	5.2	18
2481	Experimental Synthesis and Properties of Metastable CuNbN <sub>2</sub> and Theoretical Extension to Other Ternary Copper Nitrides. Chemistry of Materials, 2014, 26, 4970-4977.	3.2	55
2482	Novel high-efficiency crystalline-silicon-based compound heterojunction solar cells: HCT (heterojunction with compound thin-layer). Physical Chemistry Chemical Physics, 2014, 16, 15400-15410.	1.3	32
2483	Bringing solar cell efficiencies into the light. Nature Nanotechnology, 2014, 9, 657-657.	15.6	13
2484	Graphene as a transparent conducting and surface field layer in planar Si solar cells. Nanoscale Research Letters, 2014, 9, 349.	3.1	55
2485	Recent Research Developments of Perovskite Solar Cells. Chinese Journal of Chemistry, 2014, 32, 957-963.	2.6	37
2486	Modeling the Performance of an Integrated Photoelectrolysis System with 10 × Solar Concentrators. Journal of the Electrochemical Society, 2014, 161, F1101-F1110.	1.3	36
2487	Radiative Recombination and Photoconversion of Methylammonium Lead Iodide Perovskite by First Principles: Properties of an Inorganic Semiconductor within a Hybrid Body. Journal of Physical Chemistry C, 2014, 118, 24843-24853.	1.5	74
2488	Photo-Ionic Cells: Two Solutions to Store Solar Energy and Generate Electricity on Demand. Journal of Physical Chemistry C, 2014, 118, 16872-16883.	1.5	13
2489	Limiting Efficiency of Erbium-Based Up-Conversion for Generalized Realistic c-Si Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 799-806.	1.5	14
2490	Perovskite photovoltaics: a high-efficiency newcomer to the solar cell family. Nanoscale, 2014, 6, 12287-12297.	2.8	120
2491	Maximum Theoretical Efficiency Limit of Photovoltaic Devices: Effect of Band Structure on Excited State Entropy. Journal of Physical Chemistry Letters, 2014, 5, 3354-3359.	2.1	20
2492	Size and shape controlled hydrothermal synthesis of kesterite Cu2ZnSnS4 nanocrystals. RSC Advances, 2014, 4, 32530-32533.	1.7	5
2493	Resonant energy transfer of triplet excitons from pentacene to PbSe nanocrystals. Nature Materials, 2014, 13, 1033-1038.	13.3	246
2494	First-principles study of point defects in chalcopyrite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:msub><mml:mi>ZnSnP</mml:mi><mml:mn>2Physical Review B, 2014, 90, .</mml:mn></mml:msub></mml:math 	ח <b>: מ</b> מ <i>ו</i> : א א ממו	m <b>∦:9</b> nsub≻
2495	Magnetic and Photovoltaic Properties of Calcium-Doped \${hbox{BiFeO}}_{3}\$ Ceramic. IEEE Transactions on Magnetics, 2014, 50, 1-4.	1.2	3

#	Article	IF	CITATIONS
2496	<i>AbÂlnitio</i> Study of Hot Carriers in the First Picosecond after Sunlight Absorption in Silicon. Physical Review Letters, 2014, 112, 257402.	2.9	203
2497	Structure and Mobility of Acetic Acid at the Anatase (101)/Acetonitrile Interface. Journal of Physical Chemistry C, 2014, 118, 6251-6260.	1.5	19
2498	Grain Boundary Engineering for Improved Thin Silicon Photovoltaics. Nano Letters, 2014, 14, 4943-4950.	4.5	25
2499	Enhanced light absorption in thin-film tandem solar cells using a bottom metallic nanograting. Applied Physics A: Materials Science and Processing, 2014, 115, 509-515.	1.1	6
2500	Spectrum splitting using multi-layer dielectric meta-surfaces for efficient solar energy harvesting. Applied Physics A: Materials Science and Processing, 2014, 115, 713-719.	1.1	24
2501	Synergistic plasmonic and photonic crystal light-trapping: Architectures for optical up-conversion in thin-film solar cells. Optics Express, 2014, 22, A1.	1.7	30
2502	High-Efficiency Silicon Solar Cells—Materials and Devices Physics. Critical Reviews in Solid State and Materials Sciences, 2014, 39, 277-317.	6.8	52
2503	Quantum Efficiency of Organic Solar Cells: Electro-Optical Cavity Considerations. ACS Photonics, 2014, 1, 173-181.	3.2	137
2504	Synthesis, characterization and optoelectronic properties of iron pyrite nanohusks. Materials Letters, 2014, 126, 181-184.	1.3	14
2505	Hot Carriers in Quantum Wells for Photovoltaic Efficiency Enhancement. IEEE Journal of Photovoltaics, 2014, 4, 244-252.	1.5	81
2506	Enhanced carrier multiplication in engineered quasi-type-II quantum dots. Nature Communications, 2014, 5, 4148.	5.8	143
2507	Structural evolution and photoluminescence of annealed Si-rich nitride with Si quantum dots prepared by plasma enhanced chemical vapor deposition. Journal of Applied Physics, 2014, 115, .	1.1	16
2508	Lessons Learned: From Dye‧ensitized Solar Cells to All‧olid‧tate Hybrid Devices. Advanced Materials, 2014, 26, 4013-4030.	11.1	144
2509	Fabrication of SnS quantum dots for solar-cell applications: Issues of capping and doping. Physica Status Solidi (B): Basic Research, 2014, 251, 1309-1321.	0.7	11
2510	Optimizing porphyrins for dye sensitized solar cells using large-scale <i>ab initio</i> calculations. Physical Chemistry Chemical Physics, 2014, 16, 16246-16254.	1.3	29
2511	Synthesis and characterization of Cu <sub>2</sub> ZnSnS <sub>4</sub> thin films by the sulfurization of co-electrodeposited Cu–Zn–Sn–S precursor layers for solar cell applications. RSC Advances, 2014, 4, 23977-23984.	1.7	63
2512	The effect of CdS QDs structure on the InGaP/GaAs/Ge triple junction solar cell efficiency. Electronic Materials Letters, 2014, 10, 457-460.	1.0	5
2513	Study on characteristics of CdS quantum dot-sensitized solar cells prepared by successive ionic layer adsorption and reaction with different adsorption times. Electronic Materials Letters, 2014, 10, 621-626.	1.0	20

#	Article	IF	CITATIONS
2514	Silicon quantum dot superlattice solar cell structure including silicon nanocrystals in a photogeneration layer. Nanoscale Research Letters, 2014, 9, 246.	3.1	23
2515	Cu(In,Ga)Se2-based solar cells prepared from Se-containing precursors. Vacuum, 2014, 102, 26-30.	1.6	32
2516	Molecular Packing Determines Singlet Exciton Fission in Organic Semiconductors. ACS Nano, 2014, 8, 7377-7383.	7.3	102
2517	In situ syntheses of semiconducting nanoparticles in conjugated polymer matrices and their application in photovoltaics Hybrid Materials, 2014, 1, .	0.7	4
2518	Electron Extraction Dynamics in CdSe and CdSe/CdS/ZnS Quantum Dots Adsorbed with Methyl Viologen. Journal of Physical Chemistry C, 2014, 118, 17240-17246.	1.5	42
2519	Direct Band Gap Silicon Allotropes. Journal of the American Chemical Society, 2014, 136, 9826-9829.	6.6	151
2520	Performance enhancement in silicon solar cell by inverted nanopyramid texturing and silicon quantum dots coating. Journal of Renewable and Sustainable Energy, 2014, 6, 011204.	0.8	14
2521	Band gap engineering of FeS <sub>2</sub> under biaxial strain: a first principles study. Physical Chemistry Chemical Physics, 2014, 16, 24466-24472.	1.3	38
2522	Amorphous FeOOH Oxygen Evolution Reaction Catalyst for Photoelectrochemical Water Splitting. Journal of the American Chemical Society, 2014, 136, 2843-2850.	6.6	524
2523	Suppression of thermal carrier escape and efficient photo-carrier generation by two-step photon absorption in InAs quantum dot intermediate-band solar cells using a dot-in-well structure. Journal of Applied Physics, 2014, 116, .	1.1	31
2525	Designing Photonic Materials for Effective Bandgap Modification and Optical Concentration in Photovoltaics. IEEE Journal of Photovoltaics, 2014, 4, 233-236.	1.5	7
2526	Thermal Evaporation and Characterization of Sb <sub>2</sub> Se <sub>3</sub> Thin Film for Substrate Sb <sub>2</sub> Se <sub>3</sub> /CdS Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 10687-10695.	4.0	326
2527	Hot Injection Processes in Optically Excited States: Molecular Design for Optimized Photocapture. Journal of Physical Chemistry C, 2014, 118, 21798-21805.	1.5	4
2528	Effect of variable mechanical resistance on electrodynamic alternator efficiency. Energy Conversion and Management, 2014, 88, 894-906.	4.4	10
2530	Seeking Small Molecules for Singlet Fission: A Heteroatom Substitution Strategy. Journal of the American Chemical Society, 2014, 136, 12638-12647.	6.6	121
2531	Investigation of local compositional uniformity in Cu2ZnSn(S,Se)4thin film solar cells prepared from nanoparticle inks. Journal of Materials Chemistry A, 2014, 2, 13464.	5.2	27
2532	Significant enhancement of optical absorption through nano-structuring of copper based oxide semiconductors: possible future materials for solar energy applications. Physical Chemistry Chemical Physics, 2014, 16, 11054-11066.	1.3	64
2533	Interfacial Alkali Diffusion Control in Chalcopyrite Thin-Film Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 14123-14130.	4.0	23

ARTICLE IF CITATIONS Defect levels in Cu2ZnSn(SxSe1a<sup>^</sup>x)4 solar cells probed by current-mode deep level transient 2534 1.5 39 spectroscopy. Applied Physics Letters, 2014, 104, . Efficiency enhancement of mono-Si solar cell with CdO nanotip antireflection and down-conversion 1.7 layer. RSC Advances, 2014, 4, 51683-51687. Yb<sub>2</sub>O<sub>3</sub>/Au Upconversion Nanocomposites with Broad-Band Excitation for 2536 1.5 46 Solar Cells. Journal of Physical Chemistry C, 2014, 118, 3258-3265. Femtosecond Pump–Push–Probe and Pump–Dump–Probe Spectroscopy of Conjugated Polymers: New 2.1 Insight and Opportunities. Journal of Physical Chemistry Letters, 2014, 5, 3231-3240. Multi-intermediate-band character of Ti-substitutedCuGaS2: Implications for photovoltaic 2538 1.1 24 applications. Physical Review B, 2014, 90, . 2-Photon tandem device for water splitting: comparing photocathode first <i>versus</i> photoanode first designs. Energy and Environmental Science, 2014, 7, 2397-2413. 15.6 130 Radiative behaviors of crystalline silicon nanowire and nanohole arrays for photovoltaic 2540 1.1 55 applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 133, 579-588. Semiconductor nanowire solar cells: synthetic advances and tunable properties. Pure and Applied 2541 Chemistry, 2014, 86, 13-26. Investigation of the relative density of deep defects in Cu(In,Ga)Se2 thin films dependent on Ga 2542 0.8 12 content by transient photocapacitance method. Japanese Journal of Applied Physics, 2014, 53, 068008. Comparison of solar cells sensitised by CdTe/CdSe and CdSe/CdTe core/shell colloidal quantum dots 2543 0.8 with and without a CdS outer layer. Thin Solid Films, 2014, 560, 65-70. Growth and characterization of Cu2ZnSnS4 photovoltaic thin films by electrodeposition and 2544 2.8 32 sulfurization. Journal of Alloys and Compounds, 2014, 610, 331-336. Controlled growth of SiNPs by plasma synthesis. Solar Energy Materials and Solar Cells, 2014, 124, 1-9. 2545 3.0 Cu-doped ZnO nanoporous film for improved performance of CdS/CdSe quantum dot-sensitized solar 2546 0.8 10 cells. Thin Solid Films, 2014, 570, 310-314. Improvement of the solar cell efficiency by the ZnO nanoparticle layer via the down-shifting effect. Microelectronic Engineering, 2014, 127, 51-56. 2547 1.1 Influence of functional derivatives of an amino-coumarin/MWCNT composite organic hetero-junction 2548 1.9 3 on the photovoltaic characteristics. Materials Science in Semiconductor Processing, 2014, 25, 279-285. Hybrid inorganic–organic tandem solar cells for broad absorption of the solar spectrum. Physical 2549 Chemistry Chemical Physics, 2014, 16, 7672-7676. Triplet Dynamics in Pentacene Crystals: Applications to Fissionâ€Sensitized Photovoltaics. Advanced 2550 11.1 62 Materials, 2014, 26, 919-924. Quantum Efficiency and Bandgap Analysis for Combinatorial Photovoltaics: Sorting Activity of Cu–O 3.8 Compounds in All-Óxide Device Libraries. ACS Combinatorial Science, 2014, 16, 53-65.

#	Article		CITATIONS
2552	Mixedâ€Organicâ€Cation Perovskite Photovoltaics for Enhanced Solarâ€Light Harvesting. Angewandte Chemie - International Edition, 2014, 53, 3151-3157.	7.2	1,117
2553	Derivation of the open-circuit voltage of organic solar cells. Physical Review B, 2014, 89, .	1.1	14
2554	Combinatorial Design of Copolymer Donor Materials for Bulk Heterojunction Solar Cells. ACS Nano, 2014, 8, 6089-6096.	7.3	21
2555	TD-DFT calculations of the excited states of metalloporphyrins relevant to organic solar photovoltaic cells. Journal of Porphyrins and Phthalocyanines, 2014, 18, 475-492.	0.4	6
2556	Controllable electronic energy structure of size-controlled Cu <sub>2</sub> ZnSnS <sub>4</sub> nanoparticles prepared by a solution-based approach. Physical Chemistry Chemical Physics, 2014, 16, 672-675.	1.3	28
2557	Mesoporous TiO2 beads for high efficiency CdS/CdSe quantum dot co-sensitized solar cells. Journal of Materials Chemistry A, 2014, 2, 2517.	5.2	102
2558	Real-Time Observation of Ultrafast Intraband Relaxation and Exciton Multiplication in PbS Quantum Dots. ACS Photonics, 2014, 1, 285-292.	3.2	54
2559	A review of semiconductor materials as sensitizers for quantum dot-sensitized solar cells. Renewable and Sustainable Energy Reviews, 2014, 37, 397-407.	8.2	163
2560	Solar photovoltaic system modeling and performance prediction. Renewable and Sustainable Energy Reviews, 2014, 36, 304-315.	8.2	196
2561	In situ fabrication of Cu <sub>2</sub> ZnSnS <sub>4</sub> nanoflake thin films on both rigid and flexible substrates. CrystEngComm, 2014, 16, 6244-6249.	1.3	30
2562	2D Photonic-crystals for high spectral conversion efficiency in solar thermophotovoltaics. , 2014, , .		2
2564	Functional Mode Electron-Transfer Theory. Journal of Physical Chemistry B, 2014, 118, 7586-7593.	1.2	15
2565	Extraction of electrical parameters in multi-junction solar cells from voltage dependent spectral response without light bias. Japanese Journal of Applied Physics, 2014, 53, 066601.	0.8	3
2566	Design considerations for enhancing absorption in semiconductors on metals through surface plasmon polaritons. Physical Chemistry Chemical Physics, 2014, 16, 6084-6091.	1.3	9
2567	TiO <sub>2</sub> Sensitization with Bi <sub>2</sub> S <sub>3</sub> Quantum Dots: The Inconvenience of Sodium Ions in the Deposition Procedure. Journal of Physical Chemistry C, 2014, 118, 11495-11504.	1.5	72
2568	Improved Open―Circuit Voltage in ZnO–PbSe Quantum Dot Solar Cells by Understanding and Reducing Losses Arising from the ZnO Conduction Band Tail. Advanced Energy Materials, 2014, 4, 1301544.	10.2	94
2569	The Low-Lying Electronic States of Pentacene and Their Roles in Singlet Fission. Journal of the American Chemical Society, 2014, 136, 5755-5764.	6.6	197
2571	Electrodeposition of Antimony Selenide Thin Films and Application in Semiconductor Sensitized Solar Cells. ACS Applied Materials & amp; Interfaces, 2014, 6, 2836-2841.	4.0	113

#	Article	IF	CITATIONS
2572	Structural Transition and Band Gap Tuning of Cu <sub>2</sub> (Zn,Fe)SnS <sub>4</sub> Chalcogenide for Photovoltaic Application. Journal of Physical Chemistry C, 2014, 118, 14227-14237.	1.5	85
2573	Analyzing carrier escape mechanisms in InAs/GaAs quantum dot p- <i>i</i> -n junction photovoltaic cells. Applied Physics Letters, 2014, 104, .	1.5	34
2574	Singlet Fission: From Coherences to Kinetics. Journal of Physical Chemistry Letters, 2014, 5, 2312-2319.	2.1	123
2575	Multicarrier Interactions in Semiconductor Nanocrystals in Relation to the Phenomena of Auger Recombination and Carrier Multiplication. Annual Review of Condensed Matter Physics, 2014, 5, 285-316.	5.2	201
2576	A promising sputtering route for dense Cu2ZnSnS4 absorber films and their photovoltaic performance. Solar Energy Materials and Solar Cells, 2014, 128, 275-282.	3.0	28
2577	Controlling the preferred orientation in sputter-deposited Cu2O thin films: Influence of the initial growth stage and homoepitaxial growth mechanism. Acta Materialia, 2014, 76, 207-212.	3.8	30
2578	Differentiation of multiple maximum power points of partially shaded photovoltaic power generators. Renewable Energy, 2014, 71, 89-99.	4.3	26
2579	Polycrystalline Si nanocorals/CdS quantum dots composited solar cell with efficient light harvesting and surface passivation. Chemical Physics Letters, 2014, 608, 314-318.	1.2	2
2580	Photophysical properties of new bis-perylene dyads for potential upconversion use. Chemical Physics Letters, 2014, 605-606, 126-130.	1.2	7
2581	Carrier extraction dynamics from Ge/Si quantum wells in Si solar cells. Thin Solid Films, 2014, 557, 368-371.	0.8	10
2582	Prospects of layer-split tandem cells for high-efficiency OPV. Solar Energy Materials and Solar Cells, 2014, 120, 716-723.	3.0	6
2583	Multiple Exciton Generation in Colloidal Nanocrystals. Nanomaterials, 2014, 4, 19-45.	1.9	82
2584	Impact of sub-cell internal luminescence yields on energy conversion efficiencies of tandem solar cells: A design principle. Applied Physics Letters, 2014, 104, 031118.	1.5	28
2585	Modeling of Near-Field Concentrated Solar Thermophotovoltaic Microsystem. , 2014, , .		2
2586	Effect of thermal annealing in vacuum on the photovoltaic properties of electrodeposited Cu <sub>2</sub> O-absorber solar cell. EPJ Photovoltaics, 2014, 5, 50301.	0.8	13
2588	Performance enhancement of dye and Si quantum dot hybrid nanostructured solar cell with TiO <sub>2</sub> barrier. Transactions of the Materials Research Society of Japan, 2014, 39, 321-324.	0.2	0
2589	AP-MOVPE Technology and Characterization of InGaAsN p-i-n Subcell for InGaAsN/GaAs Tandem Solar Cell. International Journal of Electronics and Telecommunications, 2014, 60, 151-156.	0.6	7
2590	Theoretical Limits of Power Conversion Efficiency for Organic Photovoltaic Cells. Hyomen Kagaku, 2014, 35, 595-602.	0.0	2

#	Article	IF	CITATIONS
2591	Direct Imaging of Cl―and Cuâ€Induced Shortâ€Circuit Efficiency Changes in CdTe Solar Cells. Advanced Energy Materials, 2014, 4, 1400454.	10.2	79
2592	Deposition of crystalline Ge nanoparticle films by high-pressure RF magnetron sputtering method. Journal of Physics: Conference Series, 2014, 518, 012002.	0.3	5
2593	Size ontrolled Synthesis of Ag <sub>8</sub> SnS <sub>6</sub> Nanocrystals for Efficient Photoenergy Conversion Systems Driven by Visible and Near″R Lights. Particle and Particle Systems Characterization, 2014, 31, 1122-1126.	1.2	10
2594	Printed high-efficiency quadruple-junction, four-terminal solar cells and modules for full spectrum utilization. , 2014, , .		0
2595	Theoretical energy yield of GaAs-on-Si tandem solar cells. Materials Research Society Symposia Proceedings, 2014, 1638, 1.	0.1	2
2596	Down-conversion in ytterbium-doped NaGd(MoO4)2 crystals. Optics and Spectroscopy (English) Tj ETQq1 1 0.78	4314 rgBT 0.2	- /Overlock 1
2597	Optimizing Plasmonically Enhanced Upconversion. Energy Procedia, 2015, 77, 478-486.	1.8	7
2598	Conditions for beneficial coupling of thermoelectric and photovoltaic devices. Journal of Materials Research, 2015, 30, 2663-2669.	1.2	20
2599	Identifying defect-tolerant semiconductors with high minority-carrier lifetimes: beyond hybrid lead halide perovskites. MRS Communications, 2015, 5, 265-275.	0.8	662
2600	Glasses on the basis of heavy metal fluorides. Inorganic Materials, 2015, 51, 1348-1361.	0.2	12
2601	Steps toward efficient inorganic–organic hybrid perovskite solar cells. MRS Bulletin, 2015, 40, 648-653.	1.7	33
2602	Dependence of perovskite solar cells performance on temperature and solar irradiation. , 2015, , .		3
2603	Compositional dependence photoluminescence study of polycrystalline CuGaSe2 thin films. , 2015, , .		1
2604	Photovoltaic characteristics of GaAs solar cells with selective filters. , 2015, , .		0
2605	Structure and Dynamics of the <sup>1</sup> (TT) State in a Quinoidal Bithiophene: Characterizing a Promising Intramolecular Singlet Fission Candidate. Journal of Physical Chemistry C, 2015, 119, 28258-28268.	1.5	56
2606	Toward First-Principles Description of Carrier Relaxation in Nanoparticles. ACS Symposium Series, 2015, , 201-213.	0.5	0
2607	A kinetic rate model of novel upconversion nanostructures for high-efficiency photovoltaics. , 2015, ,		2
2608	Colloidal nanoparticles for Intermediate Band solar cells. , 2015, , .		0

#	Article	IF	CITATIONS
2609	Direct nm-scale spatial mapping of traps in CIGS. , 2015, , .		0
2610	Determining subcell carrier-collection efficiencies of triple-junction solar cells using time-resolved photoluminescence. , 2015, , .		3
2611	Freeform surface relief diffractive optic for photovoltaic spectrum splitting. , 2015, , .		1
2612	Tuneable Singlet Exciton Fission and Triplet–Triplet Annihilation in an Orthogonal Pentacene Dimer. Advanced Functional Materials, 2015, 25, 5452-5461.	7.8	184
2613	Modeling wide bandgap GaInP photovoltaic cells for conversion efficiencies up to 16.5%. , 2015, , .		2
2615	Titanium-nitride-based integrated plasmonic absorber/emitter for solar thermophotovoltaic application. Photonics Research, 2015, 3, 329.	3.4	77
2616	Progress in Photovoltaic Textiles: A Comprehensive Review. , 2015, , 101-135.		0
2617	Colloidal semiconductor quantum dots; syntheses, properties and applications. Journal of the Ceramic Society of Japan, 2015, 123, 1-8.	0.5	5
2619	Introduction to Photovoltaics and Potential Applications of Group IV Nanostructures. , 2015, , 1-25.		2
2620	Quantifying Losses in Open-Circuit Voltage in Solution-Processable Solar Cells. Physical Review Applied, 2015, 4, .	1.5	500
2621	Electronic Structure and Optical Properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow><mml:msub><mml:mrow><mml:mi>Cu</mml:mi></mml:mrow><mml:mrow><mm First-Principles Calculations and Vacuum-Ultraviolet Spectroscopic Ellipsometric Studies. Physical</mm </mml:mrow></mml:msub></mml:mrow></mml:math 	l:m1n5>2 <td>ח<b>תופ</b>mn&gt;</td>	ח <b>תופ</b> mn>
2622	Review Applied, 2015, 4, . Fundamental Limits to Nonlinear Energy Harvesting. Physical Review Applied, 2015, 4, .	1.5	28
2623	Two-step photon absorption in InAs/GaAs quantum-dot superlattice solar cells. Physical Review B, 2015, 91, .	1.1	35
2624	Ideal near-field thermophotovoltaic cells. Physical Review B, 2015, 91, .	1.1	56
2625	Wurtzite silicon as a potential absorber in photovoltaics: Tailoring the optical absorption by applying strain. Physical Review B, 2015, 92, .	1.1	54
2626	Hexagonal rare-earth manganites as promising photovoltaics and light polarizers. Physical Review B, 2015, 92, .	1.1	100
2627	New class of planar ferroelectric Mott insulators via first-principles design. Physical Review B, 2015, 92, .	1.1	4
2629	Low-density silicon allotropes for photovoltaic applications. Physical Review B, 2015, 92, .	1.1	70

#	Article	IF	Citations
2630	The generalized Shockley-Queisser limit for nanostructured solar cells. Scientific Reports, 2015, 5, 13536.	1.6	107
2632	A New Silicon Phase with Direct Band Gap and Novel Optoelectronic Properties. Scientific Reports, 2015, 5, 14342.	1.6	74
2634	A path to practical Solar Pumped Lasers via Radiative Energy Transfer. Scientific Reports, 2015, 5, 14758.	1.6	35
2635	Thermoelectric Generators. , 2015, , 233-272.		1
2637	Enhancing light-harvesting power with coherent vibrational interactions: A quantum heat engine picture. Journal of Chemical Physics, 2015, 143, 155102.	1.2	75
2638	Diffuse electroreflectance of thin-film solar cells: Suppression of interference-related lineshape distortions. Applied Physics Letters, 2015, 107, .	1.5	19
2639	Predicting a quaternary tungsten oxide for sustainable photovoltaic application by density functional theory. Applied Physics Letters, 2015, 107, 233902.	1.5	2
2640	Higher triplet state of fullerene C70 revealed by electron spin relaxation. Journal of Chemical Physics, 2015, 143, 244314.	1.2	4
2641	Resonant photoemission spectroscopy for intermediate band materials. Applied Physics Letters, 2015, 107, 192104.	1.5	5
2642	Suppressing sub-bandgap phonon-polariton heat transfer in near-field thermophotovoltaic devices for waste heat recovery. Applied Physics Letters, 2015, 107, .	1.5	54
2643	Spectrum sensitivity, energy yield, and revenue prediction of PV and CPV modules. AIP Conference Proceedings, 2015, , .	0.3	3
2644	Application of heterojunction to Si-based solar cells using photonic nanostructures coupled with vertically aligned Ge quantum dots. Japanese Journal of Applied Physics, 2015, 54, 08KA06.	0.8	1
2645	Study on limiting efficiencies of a-Si:H/μc-Si:H-based single-nanowire solar cells under single and tandem junction configurations. Applied Physics Letters, 2015, 107, 181106.	1.5	0
2646	Photo-Seebeck effect in polycrystalline ZnO. Journal of Applied Physics, 2015, 118, .	1.1	12
2647	Resonant tunneling diodes as energy-selective contacts used in hot-carrier solar cells. Journal of Applied Physics, 2015, 118, .	1.1	32
2648	Epitaxial Cu2ZnSnS4 thin film on Si (111) 4° substrate. Applied Physics Letters, 2015, 106, .	1.5	41
2649	Adding 0.2 V to the open circuit voltage of organic solar cells by enhancing the built-in potential. Journal of Applied Physics, 2015, 118, .	1.1	26
2650	Optimal design of bandpass filters to reduce emission from photovoltaic cells under monochromatic illumination. Japanese Journal of Applied Physics, 2015, 54, 08KA05.	0.8	0

		CITATION RE	PORT	
#	Article		lF	Citations
2651	Dipole-allowed direct band gap silicon superlattices. Scientific Reports, 2015, 5, 18086	>.	1.6	37
2652	Control of valence band offset at CdS/Cu(In,Ga)Se <sub>2</sub> interface by inserting materials for suppression of interfacial recombination in Cu(In,Ga)Se <sub>2</sub> sola Japanese Journal of Applied Physics, 2015, 54, 08KC08.	wide-bandgap ar cells.	0.8	27
2653	Crystalline silicon germanium films grown on crystalline silicon substrates by solid pha crystallization. Japanese Journal of Applied Physics, 2015, 54, 08KB01.	se	0.8	1
2654	Thermodynamic limit of bifacial double-junction tandem solar cells. Applied Physics Let	ters, 2015, 107, .	1.5	21
2655	Synthesis of nanocrystalline Cu2ZnSnS4 thin films grown by the spray-pyrolysis techni Conference Proceedings, 2015, , .	que. AIP	0.3	3
2656	Graphene/CdTe heterostructure solar cell and its enhancement with photo-induced do Physics Letters, 2015, 107, .	ping. Applied	1.5	17
2657	Controlling electronic structure through epitaxial strain in ZnSe/ZnTe nano-heterostruc Journal of Applied Physics, 2015, 118, 015701.	ctures.	1.1	7
2658	Three-dimensional transparent parabolic concentrator for photovoltaics. AIP Advances, 097175.	. 2015, 5,	0.6	0
2659	Can quantum coherent solar cells break detailed balance?. Journal of Applied Physics, 2	2015, 118, 034506.	1.1	4
2660	A checkerboard selective absorber with excellent spectral selectivity. Journal of Applied 118, .	Physics, 2015,	1.1	6
2661	Enhanced open-circuit voltage of InAs/GaAs quantum dot solar cells by hydrogen plasn Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2	1a treatment. 015, 33, 041401.	0.6	7
2662	Has the Sun Set on Quantum Dot-Sensitized Solar Cells?. Nanomaterials and Nanotech 16.	ınology, 2015, 5,	1.2	0
2663	Effect of quantum efficiency on the performance of multijunction tandem cells. , 2015	,,.		0
2664	Investigation on the Use of Photovoltaic Cells Based Devices for Pace of Growth Forec Estimates of Crop Production. Agriculture and Agricultural Science Procedia, 2015, 6, 6	asts and 57-72.	0.6	1
2665	Study of Light Extinction and Surface Plasmon Resonances of Metal Nanocluster: a Co Between Coated and Non-coated Nanogeometry. Plasmonics, 2015, 10, 1597-1606.	mparison	1.8	16
2666	Carrier collection in quantum dots solar cells with barrier modification. , 2015, , .			1
2667	A fundamental study of the effects of grain boundaries on performance of poly-crystall CdTe solar cells. , 2015, , .	ine thin film		0
2668	Boron subphthalocyanine-based organic photovoltaic device with record high open cire 2015, , .	cuit voltage. ,		0
		CITATION REPORT		
------	---	----------------------------	------	-----------
#	Article		IF	Citations
2669	Challenges with balancing excitations in intermediate-band solar cells. , 2015, , .			0
2670	Targeting Ideal Dualâ€Absorber Tandem Water Splitting Using Perovskite Photovoltaic Culn <i><sub>x</sub></i> Ga <sub>1â€<i>x</i></sub> Se <sub>2</sub> Photocathodes Materials, 2015, 5, 1501520.	s and . Advanced Energy	10.2	109
2671	Solutionâ€Phase Conversion of Bulk Metal Oxides to Metal Chalcogenides Using a Sim Solvent Mixture. Angewandte Chemie - International Edition, 2015, 54, 8378-8381.	ıple Thiol–Amine	7.2	78
2672	Synthesis of kesterite nanopowders with bandgap tuning ligands. Crystal Research and 2015, 50, 743-746.	l Technology,	0.6	3
2673	D–A–Aâ€Type Organic Dyes for NiOâ€Based Dyeâ€6ensitized Solar Cells. Europea Chemistry, 2015, 2015, 6850-6857.	n Journal of Organic	1.2	16
2674	Self-assembled silicon nanocrystal arrays for photovoltaics. Physica Status Solidi (A) Ap and Materials Science, 2015, 212, 1649-1661.	plications	0.8	23
2675	Placement and efficiency effects on radiative forcing of solar installations. AIP Conferent Proceedings, 2015, , .	nce	0.3	9
2676	Heterogeneously Integrated Optoelectronic Devices Enabled by Microâ€Transfer Printi Optical Materials, 2015, 3, 1313-1335.	ng. Advanced	3.6	127
2677	Photovoltaic cells energy performance enhancement with down-converting photolumin phosphors. International Journal of Energy Research, 2015, 39, n/a-n/a.	nescence	2.2	3
2678	Adhesive bonding for mechanically stacked solar cells. Progress in Photovoltaics: Resea Applications, 2015, 23, 1080-1090.	arch and	4.4	28
2679	Fundamental limits on the losses of phase and amplitude optical actuators. Laser and F Reviews, 2015, 9, 666-673.	Photonics	4.4	15
2680	Characterisation of intrinsic silicon oxide absorber layers for use in silicon thin film sola Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2068-2073.	r cells.	0.8	2
2681	Tellurium vacancy in cadmium telluride revisited: Size effects in the electronic propertie Status Solidi (B): Basic Research, 2015, 252, 2649-2656.	es. Physica	0.7	11
2682	Analysis of the attainable efficiency of a direct-bandgap betavoltaic element. Journal Ph Physics, 2015, 48, 455101.	iysics D: Applied	1.3	4
2683	Efficiency Records in Mesoscopic Dye ensitized Solar Cells. Chemical Record, 2015,	15, 803-828.	2.9	41
2684	Threeâ€step process improves crystal quality of Cu <sub>2</sub> ZnSnS <sub>4</sub> efficiency of solar cell. Crystal Research and Technology, 2015, 50, 613-620.	absorber layer and	0.6	8
2685	Fabrication and characterization of multiband solar cells based on highly mismatched a of Physics: Conference Series, 2015, 647, 012067.	alloys. Journal	0.3	0
2686	CuSbSe <sub>2</sub> as a Potential Photovoltaic Absorber Material: Studies from The Experiment. Advanced Energy Materials, 2015, 5, 1501203.	ory to	10.2	99

#	Article	IF	CITATIONS
2688	Sunlight Absorption Engineering for Thermophotovoltaics: Contributions from the Optical Design. ChemSusChem, 2015, 8, 786-788.	3.6	1
2689	Trapâ€assisted photonâ€enhanced thermionic emission from polycrystalline diamond films. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2583-2588.	0.8	9
2690	Annealing temperature dependence of photovoltaic properties of solar cells containing Cu <sub>2</sub> SnS <sub>3</sub> thin films produced by coâ€evaporation. Physica Status Solidi (B): Basic Research, 2015, 252, 1239-1243.	0.7	64
2692	Thinâ€Film Solar Cells with InP Absorber Layers Directly Grown on Nonepitaxial Metal Substrates. Advanced Energy Materials, 2015, 5, 1501337.	10.2	13
2693	Light: A Very Peculiar Reactant and Product. Angewandte Chemie - International Edition, 2015, 54, 11320-11337.	7.2	106
2696	Current–voltage characteristics of manganite–titanite perovskite junctions. Beilstein Journal of Nanotechnology, 2015, 6, 1467-1484.	1.5	16
2697	Carrier multiplication in silicon nanocrystals: ab initio results. Beilstein Journal of Nanotechnology, 2015, 6, 343-352.	1.5	15
2698	Fabrication of High Contrast Gratings for the Spectrum Splitting Dispersive Element in a Concentrated Photovoltaic System. Journal of Visualized Experiments, 2015, , e52913.	0.2	0
2699	The distance temperature map as method to analyze the optical properties of Fresnel lenses and their interaction with multi-junction solar cells. AIP Conference Proceedings, 2015, , .	0.3	4
2700	The Physics of High-Efficiency Thin-Film III-V Solar Cells. , 0, , .		5
2701	Assessment of Density-Functional Tight-Binding Ionization Potentials and Electron Affinities of Molecules of Interest for Organic Solar Cells Against First-Principles GW Calculations. Computation, 2015, 3, 616-656.	1.0	19
2702	Enhancing Solar Cell Efficiency Using Photon Upconversion Materials. Nanomaterials, 2015, 5, 1782-1809.	1.9	142
2703	Theoretical Calculation of the Efficiency Limit for Solar Cells. , 0, , .		10
2704	Towards 50% Efficiency in Solar Cells. , 0, , .		0
2705	Quantum Dots Solar Cells. , 0, , .		20
2706	Charge separation in subcells of triple-junction solar cells revealed by time-resolved photoluminescence spectroscopy. Optics Express, 2015, 23, A1687.	1.7	16
2707	MPPT Technique Based on Current and Temperature Measurements. International Journal of Photoenergy, 2015, 2015, 1-9.	1.4	18
2708	Effects of non-ideal losses on the optimal bandgap arrangement of multi-junction solar cells comprising up to 5 subcells. AIP Conference Proceedings, 2015, , .	0.3	0

#	Article	IF	CITATIONS
2709	Perovskite Solar Cells: Potentials, Challenges, and Opportunities. International Journal of Photoenergy, 2015, 2015, 1-13.	1.4	65
2710	MATLAB User Interface for Simulation of Silicon Germanium Solar Cell. Journal of Materials, 2015, 2015, 2015, 1-6.	0.1	3
2711	Photoactive Graphene $\hat{a} \in \mathbb{R}$ From Functionalization to Applications. , 2015, , .		1
2716	Tetracene Aggregation on Polar and Nonpolar Surfaces: Implications for Singlet Fission. Journal of Physical Chemistry Letters, 2015, 6, 1209-1215.	2.1	11
2717	Luminescent CuInS <sub>2</sub> Quantum Dots by Partial Cation Exchange in Cu <sub>2–<i>x</i></sub> S Nanocrystals. Chemistry of Materials, 2015, 27, 621-628.	3.2	127
2718	Platinum-Doped α-Fe <sub>2</sub> O <sub>3</sub> for Enhanced Water Splitting Efficiency: A DFT+ <i>U</i> Study. Journal of Physical Chemistry C, 2015, 119, 5836-5847.	1.5	73
2719	Elucidating the Optical Properties of Novel Heterolayered Materials Based on MoTe <sub>2</sub> –InN for Photovoltaic Applications. Journal of Physical Chemistry C, 2015, 119, 11886-11895.	1.5	56
2720	Ternary and quaternary wurtzite-type oxide semiconductors: new materials and their properties. , 2015, , .		0
2721	Fe/Co doped molybdenum diselenide: a promising two-dimensional intermediate-band photovoltaic material. Nanotechnology, 2015, 26, 195401.	1.3	11
2722	Extreme broadband photocurrent spectroscopy on InAs quantum dot solar cells. , 2015, , .		2
2723	Fabrication of 3.01% power conversion efficient high-quality CZTS thin film solar cells by a green and simple sol–gel technique. Materials Letters, 2015, 158, 58-61.	1.3	60
2724	Electronic structure and optical properties of Cu3PX4(X=S and Se): Solar cell made of abundant materials. Materials Science in Semiconductor Processing, 2015, 39, 217-222.	1.9	4
2725	Sun-to-Wheels Exergy Efficiencies for Bio-Ethanol and Photovoltaics. Environmental Science & Technology, 2015, 49, 6394-6401.	4.6	5
2726	Multiple exciton generation in quantum dots versus singlet fission in molecular chromophores for solar photon conversion. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140412.	1.6	37
2727	Fast Triplet Formation via Singlet Exciton Fission in a Covalent Perylenediimide-β-apocarotene Dyad Aggregate. Journal of Physical Chemistry A, 2015, 119, 5587-5596.	1.1	22
2728	Beyond Shockley–Queisser: Molecular Approaches to High-Efficiency Photovoltaics. Journal of Physical Chemistry Letters, 2015, 6, 2367-2378.	2.1	142
2729	Narrow-bandgap Cu2Sn1â^'xGexSe3 thin film solar cells. Materials Letters, 2015, 158, 205-207.	1.3	21
2730	The efficiency limit of CH3NH3PbI3 perovskite solar cells. Applied Physics Letters, 2015, 106, .	1.5	480

#	Article	IF	CITATIONS
2731	Transition-Metal Complexes for Triplet–Triplet Annihilation-Based Energy Upconversion. Green Chemistry and Sustainable Technology, 2015, , 137-169.	0.4	1
2732	Limit of efficiency for photon-enhanced thermionic emission vs. photovoltaic and thermal conversion. Solar Energy Materials and Solar Cells, 2015, 140, 464-476.	3.0	58
2733	Exciton Delocalization Drives Rapid Singlet Fission in Nanoparticles of Acene Derivatives. Journal of the American Chemical Society, 2015, 137, 6790-6803.	6.6	195
2734	Emergent Models for Artificial Light-Harvesting. Frontiers in Materials, 2015, 2, .	1.2	4
2740	Photon Absorption Models in Nanostructured Semiconductor Solar Cells and Devices. SpringerBriefs in Applied Sciences and Technology, 2015, , .	0.2	14
2741	Structural, optical and electrical properties of Cu2FeSnSe4 and Cu(In,Al)Se2 thin films. Materials Science in Semiconductor Processing, 2015, 39, 243-250.	1.9	10
2742	Efficient inverted hybrid solar cells using both CuO and P3HT as an electron donor materials. Journal of Materials Science: Materials in Electronics, 2015, 26, 6478-6483.	1.1	19
2743	Wetting of Ga on SiO <sub><i>x</i></sub> and Its Impact on GaAs Nanowire Growth. Crystal Growth and Design, 2015, 15, 3105-3109.	1.4	65
2744	Synthesis of Cu2ZnSnS4 thin film through chemical successive ionic layer adsorption and reactions. Applied Surface Science, 2015, 349, 430-436.	3.1	11
2745	Effects of surface barrier layer in AlGaAs/GaAs solar cells. Journal of Crystal Growth, 2015, 425, 330-332.	0.7	4
2746	Concentrated photovoltaic thermal (CPVT) solar collector systems: Part I – Fundamentals, design considerations and current technologies. Renewable and Sustainable Energy Reviews, 2015, 50, 1500-1565.	8.2	172
2747	A Comparative Study between Silicon Cermanium and Germanium Solar Cells by Numerical Simulation. Applied Mechanics and Materials, 0, 761, 341-346.	0.2	2
2748	Highly crystalline Fe <sub>2</sub> GeS <sub>4</sub> nanocrystals: green synthesis and their structural and optical characterization. Journal of Materials Chemistry A, 2015, 3, 2265-2270.	5.2	26
2749	What Is High-Throughput Virtual Screening? A Perspective from Organic Materials Discovery. Annual Review of Materials Research, 2015, 45, 195-216.	4.3	203
2750	Calculation of Defect Concentrations and Phase Stability in Cu\$_2\$ ZnSnS\$_4\$ and Cu\$_2\$ ZnSnSe\$_4\$ From Stoichiometry. IEEE Journal of Photovoltaics, 2015, 5, 1188-1196.	1.5	17
2751	Fabrication of ZnInON/ZnO multi-quantum well solar cells. Thin Solid Films, 2015, 587, 106-111.	0.8	15
2752	The Frozen Potential Approach to Separate the Photocurrent and Diode Injection Current in Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 865-873.	1.5	11
2753	Atomistic simulations of grain boundaries in CdTe. , 2015, , .		3

#	Article	IF	CITATIONS
2754	Molecular beam epitaxial growth of intermediate-band materials based on GaAs:N δ-doped superlattices. Japanese Journal of Applied Physics, 2015, 54, 08KA07.	0.8	7
2755	Cd and impurity redistribution at the p-n junction of CICS based solar cells resolved by atom-probe tomography. , 2015, , .		1
2756	Identification of EL2 as the lifetime-limiting defect using temperature-dependent photoluminescence decay with linearization method to decouple effects of diffusion and surface recombination. , 2015, , .		1
2757	Spectral dependence of photovoltaic cell conversion efficiency for monochromatic radiation. , 2015, ,		1
2758	HIT intermediate-band solar cells with self-assembled colloidal quantum dots and metal nanoparticles. , 2015, , .		0
2759	Low-cost and high-throughput realization of metasurface-based absorber/emitter for thermal-photovoltaic cells. , 2015, , .		1
2760	Effects of internal electric field on efficiency of carrier multiplication solar cells. , 2015, , .		0
2761	Addressing reflectivity losses in multi-junction solar cells to achieve 50% power conversion efficiency. Materials Research Innovations, 2015, 19, 503-507.	1.0	3
2762	General design considerations for making optimal use of new photovoltaic materials. , 2015, , .		1
2763	Development of a 2.0 eV AlGaInP solar cell grown by OMVPE. , 2015, , .		11
2764	Improved voltage response in IIIâ $\in$ "V solar cells based on engineered spontaneous emission. , 2015, , .		0
2765	Optical effects of Si-delta doping of GaAs spacer layer on the vertical coupled multi-stacked InAs/InGaAs/GaAs intermediate-band solar cells. International Journal of Nanotechnology, 2015, 12, 642.	0.1	2
2766	Design, synthesis and photophysical properties of InP/CdS/CdSe and CdTe/CdS/CdSe (core/shell/shell) quantum dots for photon upconversion. , 2015, , .		7
2767	Shifting the Sun: Solar Spectral Conversion and Extrinsic Sensitization in Natural and Artificial Photosynthesis. Advanced Science, 2015, 2, 1500218.	5.6	77
2768	Estimating the theoretical limit of the power conversion efficiency of a luminescent solar concentrator device from the perspective of Shockley-Queisser limit. , 2015, , .		1
2769	Correlation of Electroluminescence With Open-Circuit Voltage From Thin-Film CdTe Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1175-1178.	1.5	10
2770	A hot-electron thermophotonic solar cell demonstrated by thermal up-conversion of sub-bandgap photons. Nature Communications, 2015, 6, 8685.	5.8	23
2771	High-efficiency polymer solar cells with small photon energy loss. Nature Communications, 2015, 6, 10085.	5.8	358

		CITATION RE	PORT	
#	Article		IF	CITATIONS
2772	Efficiency analysis of betavoltaic elements. Solid-State Electronics, 2015, 111, 147-152	<b>'.</b>	0.8	21
2773	Photoelectrochemical properties of orthorhombic and metastable phase SnS nanocryst synthesized by a facile colloidal method. Thin Solid Films, 2015, 596, 135-139.	als	0.8	14
2774	Efficiency improvement of quantum well solar cell with the AuGeNi metallization and S design. Philosophical Magazine, 2015, 95, 3809-3822.	i3N4ARC	0.7	2
2775	Analysis of ultra-thin crystalline silicon solar cells coupled to a luminescent solar concer Solar Energy, 2015, 122, 667-677.	ntrator.	2.9	7
2776	Temperature effect on upconversion efficiency for erbium-doped microcrystal material.	,2015,,.		1
2777	Creation and analysis of atomic structures for CdTe bi-crystal interfaces by the grain bo , 2015, , .	undary genie.		2
2778	Theoretical efficiency limits of a 2 terminal dual junction step cell. , 2015, , .			4
2779	Design of a holographic micro-scale spectrum-splitting photovoltaic system. , 2015, , .			0
2780	Simulated performance of monocrystalline CdTe/MgCdTe double heterostructure solar	cells. , 2015, , .		0
2781	Differences between CuGa/In and Cu/Ga/In films for selenization. , 2015, , .			4
2782	Spectrum sensitivity, energy yield, and revenue prediction of PV and CPV modules. , 20	15,,.		3
2783	Solar cells and nanotechnology: Bibliometric analysis of publications that are reflected VINITI RAN and the Web of Science database. Scientific and Technical Information Proc 294-298.	in RZh Fizika essing, 2015, 42,	0.3	2
2784	Structural evolution and optoelectronic applications of multilayer silicene. Physical Rev 92, .	iew B, 2015,	1.1	24
2785	Quantum photovoltaic effect: Two photon process in solar cell. , 2015, , .			5
2786	Beyond silicon: Alternative photovoltaic technologies. , 2015, , .			1
2787	Does below-bandgap absorption improve solar cell efficiency?. , 2015, , .			0
2788	Anomalous Size-Dependent Excited-State Relaxation Dynamics of NanoGUMBOS. Journ Chemistry C, 2015, 119, 28206-28213.	nal of Physical	1.5	10
2789	Study of time-resolved photoluminescence in Cu <sub>2</sub> ZnSn(S,Se) <sub>4different Cu/Sn ratio. Japanese Journal of Applied Physics, 2015, 54, 08KC15.</sub>	>>thin films with	0.8	4

#	Article	IF	CITATIONS
2790	Review on the degradation and device physics of quantum dot solar cells. Modern Physics Letters B, 2015, 29, 1530008.	1.0	9
2791	Low bandgap mid-infrared thermophotovoltaic arrays based on InAs. Infrared Physics and Technology, 2015, 73, 126-129.	1.3	15
2792	Efficiency Enhancement of GaAs Solar Cell Using Luminescent Down-Shifting Layer Consisting of (CdSe)ZnS Quantum Dots With Calculation and Experiment. Journal of Solar Energy Engineering, Transactions of the ASME, 2015, 137, .	1.1	8
2793	Photovoltaics towards terawatts $\hat{a} \in $ progress in photovoltaic cells and modules. IET Power Electronics, 2015, 8, 2343-2351.	1.5	14
2794	Design guidelines for concentrated photo-electrochemical water splitting devices based on energy and greenhouse gas yield ratios. Energy and Environmental Science, 2015, 8, 3069-3082.	15.6	41
2795	Back contact band offset study of Mo-CZTS based solar cell structure by using XPS/UPS techniques. , 2015, , .		6
2796	Resonant dielectric high-contrast gratings as spectrum splitting optical elements for ultrahigh efficiency (>50%) photovoltaics. , 2015, , .		2
2797	Improved properties of phosphor-filled luminescent down-shifting layers: reduced scattering, optical model, and optimization for PV application. Proceedings of SPIE, 2015, , .	0.8	1
2798	Generalized Optoelectronic Model of Series-Connected Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1827-1839.	1.5	97
2799	Thermoelectric conversion in tandem thermoelectric-photovoltaic applications. , 2015, , .		2
2800	Evaluation of spectrum-splitting dichroic mirrors for PV mirror tandem solar cells. , 2015, , .		10
2801	Effect of different solar radiation on the efficiency of GaInP2/GaAs/Ge based multijunction solar cell. , 2015, , .		3
2802	Realization of single-phase BaSi <sub>2</sub> films by vacuum evaporation with suitable optical properties and carrier lifetime for solar cell applications. Japanese Journal of Applied Physics, 2015, 54, 07JE02.	0.8	41
2803	A review and analysis on growth and optical absorption properties of silicon nanowire array for photovoltaic applications. Modern Physics Letters B, 2015, 29, 1530007.	1.0	2
2804	The structural and electronic properties of Cu(In1â^'xBx)Se2as a new photovoltaic material. RSC Advances, 2015, 5, 85431-85435.	1.7	6
2805	Semiconductor Nanocrystal Quantum Dot Synthesis Approaches Towards Large-Scale Industrial Production for Energy Applications. Nanoscale Research Letters, 2015, 10, 469.	3.1	73
2806	Reversible electron–hole separation in a hot carrier solar cell. New Journal of Physics, 2015, 17, 095004.	1.2	33
2807	Efficiency Estimations for Multijunction and Intermediate Band Solar Cells Using Actual Measured Solar Spectra in Japan. Journal of Solar Energy Engineering, Transactions of the ASME, 2015, 137, .	1.1	3

# 2808	ARTICLE Polymorph engineering of Cu <i>M</i> O <sub>2</sub> ( <i>M</i> = Al, Ga, Sc, Y) semiconductors for solar energy applications: from delafossite to wurtzite. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2015, 71, 702-706	IF 0.5	Citations
2809	Control of radiative processes for energy conversion and harvesting. Optics Express, 2015, 23, A1533.	1.7	28
2810	Efficient planar heterojunction solar cell employing CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>2+</sub> <i><sub>x</sub></i> Cl <sub>1â<sup>^</sup></sub> <i><sub>x</sub><!--<br-->halide perovskite utilizing modified sequential deposition. Japanese Journal of Applied Physics, 2015, 54, 092301</i>	i>mixed 0.8	3
2811	Positioning effect of type-II GaSb/GaAs quantum ring layer on solar cell performances. , 2015, , .		2
2812	Amplification of hot electron flow by the surface plasmon effect on metal–insulator–metal nanodiodes. Nanotechnology, 2015, 26, 445201.	1.3	16
2813	Implications of Redesigned, High-Radiative-Efficiency GaInP Junctions on III-V Multijunction Concentrator Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 418-424.	1.5	17
2814	Chalcogenide Perovskites for Photovoltaics. Nano Letters, 2015, 15, 581-585.	4.5	249
2815	Cu(In,Ga)Se\$_{f 2}\$ Thin-Film Solar Cells and Modules—A Boost in Efficiency Due to Potassium. IEEE Journal of Photovoltaics, 2015, 5, 656-663.	1.5	77
2816	Modeling, Simulation, and Fabrication of a Fully Integrated, Acidâ€stable, Scalable Solarâ€Driven Waterâ€6plitting System. ChemSusChem, 2015, 8, 544-551.	3.6	89
2817	Investigations on Al\$_{m x}\$Ga\$_{m {1-x}}\$As Solar Cells Grown by MOVPE. IEEE Journal of Photovoltaics, 2015, 5, 446-453.	1.5	39
2818	Spectrally Resolved Interband and Intraband Transitions by Two-Step Photon Absorption in InGaAs/GaAs Quantum Dot Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 229-233.	1.5	28
2819	PbS/Cd3P2quantum heterojunction colloidal quantum dot solar cells. Nanotechnology, 2015, 26, 035401.	1.3	7
2820	Non-native Co-, Mn-, and Ti-oxyhydroxide nanocrystals in ferritin for high efficiency solar energy conversion. Nanotechnology, 2015, 26, 015703.	1.3	7
2821	Monolithically-integrated laterally-arrayed multiple bandgap solar cells for spectrum-splitting photovoltaic systems. Progress in Quantum Electronics, 2015, 39, 24-70.	3.5	9
2822	All Solution-Processed Lead Halide Perovskite-BiVO <sub>4</sub> Tandem Assembly for Photolytic Solar Fuels Production. Journal of the American Chemical Society, 2015, 137, 974-981.	6.6	244
2823	Synthesis and photophysical properties of a "face-to-face―stacked tetracene dimer. Physical Chemistry Chemical Physics, 2015, 17, 6523-6531.	1.3	52
2824	Superior Photovoltaic Properties of Lead Halide Perovskites: Insights from First-Principles Theory. Journal of Physical Chemistry C, 2015, 119, 5253-5264.	1.5	246
2825	Beneficial effect of alloy disorder on the conversion efficiency of ZnO/Zn <sub>x</sub> Cd <sub>1â°x</sub> Se coaxial nanowire solar cells. Journal of Materials Chemistry A. 2015. 3. 6360-6365.	5.2	6

ARTICLE IF CITATIONS What Limits Photon Upconversion on Mesoporous Thin Films Sensitized by Solution-Phase Absorbers?. 2826 1.5 28 Journal of Physical Chemistry C, 2015, 119, 4550-4564. Intra- to Intermolecular Singlet Fission. Journal of Physical Chemistry C, 2015, 119, 1312-1319. 1.5 Structural and Thermal Properties of Ternary Narrow-Gap Oxide Semiconductor; Wurtzite-Derived 2828 1.9 33 l<sup>2</sup>-CuGaO<sub>2</sub>. Inorganic Chemistry, 2015, 54, 1698-1704. Detailed balance analysis of area de-coupled double tandem photovoltaic modules. Applied Physics Letters, 2015, 106, . Charge Carrier Separation in Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 461-469. 2831 327 1.5Growth and properties of AllIBV QD structures for intermediate band solar cells. Journal of Crystal Growth, 2015, 414, 172-176. Increasing the band gap of FeS2 by alloying with Zn and applying biaxial strain: A first-principles study. 2833 2.8 25 Journal of Alloys and Compounds, 2015, 629, 43-48. Perovskite Solar Cells: Beyond Methylammonium Lead Iodide. Journal of Physical Chemistry Letters, 2834 2.1 266 2015, 6, 898-907. 2835 Pathways for solar photovoltaics. Energy and Environmental Science, 2015, 8, 1200-1219. 15.6 385 Exploring Non-Condon Effects in a Covalent Tetracene Dimer: How Important Are Vibrations in Determining the Electronic Coupling for Singlet Fission?. Journal of Physical Chemistry A, 2015, 119, 1.1 299-311. Shockley–Queisser Detailed Balance Efficiency Limit for Nanowire Solar Cells. ACS Photonics, 2015, 2, 2837 3.2 69 446-453. Low-Lying Electronic Excited States of Pentacene Oligomers: A Comparative Electronic Structure 2.3 Study in the Context of Singlet Fission. Journal of Chemical Theory and Computation, 2015, 11, 147-156. Intermolecular Vibrational Modes Speed Up Singlet Fission in Perylenediimide Crystals. Journal of 2839 2.1 107 Physical Chemistry Letters, 2015, 6, 360-365. High-efficiency spectrum splitting for solar photovoltaics. Solar Energy Materials and Solar Cells, 2015, 136, 120-126. 2840 Photoinduced Carrier Dynamics of Nearly Stoichiometric Oleylamine-Protected Copper Indium Sulfide 2841 1.5 18 Nanoparticles and Nanodisks. Journal of Physical Chemistry C, 2015, 119, 11100-11105. Solution-processable polymeric solar cells: A review on materials, strategies and cell architectures 2842 216 to overcome 10%. Organic Electronics, 2015, 19, 34-60. Influence of piezoelectric fields on InGaN based intermediate band solar cells. Journal Physics D: 2843 1.35 Applied Physics, 2015, 48, 025101. Annealing-induced optical-bandgap widening of Cu<sub>2</sub>ZnSnS<sub>4</sub>thin films with 2844 observation of simultaneous increase in local-structure ordering. Japanese Journal of Applied Physics, 2015, 54, 015503.

#	Article	IF	CITATIONS
2845	Composition dependence of the structure and optical properties of Cu2MnxZn1â^'xSnS4 thin films. Journal of Alloys and Compounds, 2015, 627, 388-392.	2.8	53
2846	Au-Cu2O core-shell nanowire photovoltaics. Applied Physics Letters, 2015, 106, .	1.5	18
2847	Spatially Resolved Characterization in Thin-Film Photovoltaics. Springer Briefs in Electrical and Computer Engineering, 2015, , .	0.3	10
2848	Limiting Light Escape Angle in Silicon Photovoltaics: Ideal and Realistic Cells. IEEE Journal of Photovoltaics, 2015, 5, 61-69.	1.5	23
2850	Role of electron transfer in Ce3+ sensitized Yb3+ luminescence in borate glass. Journal of Applied Physics, 2015, 117, .	1.1	37
2851	Synthesis and characterization of 15% efficient CIGSSe solar cells from nanoparticle inks. Progress in Photovoltaics: Research and Applications, 2015, 23, 1550-1556.	4.4	105
2852	Targeted Search for Effective Intermediate Band Solar Cell Materials. IEEE Journal of Photovoltaics, 2015, 5, 212-218.	1.5	44
2853	Investigation of the properties of deep-level defect in Cu(In,Ga)Se <sub>2</sub> thin films by steady-state photocapacitance and time-resolved photoluminescence measurements. Japanese Journal of Applied Physics, 2015, 54, 04DR02.	0.8	5
2854	Ultrafast Carrier Transfer and Hot Carrier Dynamics in PbS–Au Hybrid Nanostructures. Journal of Physical Chemistry C, 2015, 119, 2113-2120.	1.5	19
2855	Strain sensitivity of band gaps of Sn-containing semiconductors. Physical Review B, 2015, 91, .	1.1	24
2856	Antireflective downconversion ZnO:Er3+,Yb3+ thin film for Si solar cell applications. Journal of Applied Physics, 2015, 117, .	1.1	22
2857	Enhanced performance of joint cooling and energy production. Physical Review B, 2015, 91, .	1.1	53
2858	Downconversion in Pr3+–Yb3+ co-doped ZBLA fluoride glasses. Journal of Luminescence, 2015, 161, 198-201.	1.5	21
2859	One-step sonochemical synthesis route towards kesterite Cu2ZnSnS4 nanoparticles. Journal of Alloys and Compounds, 2015, 630, 23-28.	2.8	21
2860	Fabrication of CdSe/CdTe Quantum Dots Co-Sensitized TiO <sub>2</sub> Nanorods by Electrochemical Atomic Layer Deposition Method. Journal of the Electrochemical Society, 2015, 162, D137-D141.	1.3	6
2861	A New Fullereneâ€Free Bulkâ€Heterojunction System for Efficient Highâ€Voltage and Highâ€Fill Factor Solutionâ€Processed Organic Photovoltaics. Advanced Materials, 2015, 27, 1900-1907.	11.1	84
2863	Synthesis of simple, low cost and benign sol–gel Cu2ZnSnS4 thin films: influence of different annealing atmospheres. Journal of Materials Science: Materials in Electronics, 2015, 26, 1900-1907.	1.1	34
2864	Highly efficient spin-conversion effect leading to energy up-converted electroluminescence in singlet fission photovoltaics. Scientific Reports, 2015, 5, 7787.	1.6	45

#	Article	IF	CITATIONS
2865	Thorough subcells diagnosis in a multi-junction solar cell via absolute electroluminescence-efficiency measurements. Scientific Reports, 2015, 5, 7836.	1.6	74
2866	Strain effects on the electronic structure of ZnSnP2 via modified Becke–Johnson exchange potential. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 427-430.	0.9	9
2867	A design strategy for intramolecular singlet fission mediated by charge-transfer states inÂdonor–acceptor organic materials. Nature Materials, 2015, 14, 426-433.	13.3	298
2868	Making structured metals transparent for ultrabroadband electromagnetic waves and acoustic waves. Annals of Physics, 2015, 358, 5-19.	1.0	1
2869	High efficiency solar cells combining a perovskite and a silicon heterojunction solar cells via an optical splitting system. Applied Physics Letters, 2015, 106, .	1.5	119
2870	Polymer Homoâ€Tandem Solar Cells with Best Efficiency of 11.3%. Advanced Materials, 2015, 27, 1767-1773.	11.1	408
2871	Combinatorial Exploration of the Effects of Intrinsic and Extrinsic Defects in Cu <inline-formula> <tex-math>\$_{f 2}\$</tex-math></inline-formula> ZnSn(S,Se) <inline-formula><tex-math>\$_{f 4}\$&lt;:/tex-math&gt;: &lt;:/inline-formula&gt;: IEFE Journal of Photovoltaics, 2015, 5, 288-298</tex-math></inline-formula>	1.5	73
2872	Facile preparation of organometallic perovskite films and high-efficiency solar cells using solid-state chemistry. Nano Research, 2015, 8, 263-270.	5.8	32
2873	Band Gap Engineering of Alloyed Cu <sub>2</sub> ZnGe <sub><i>x</i></sub> Sn <sub>1–<i>x</i></sub> Q <sub>4</sub> (Q = S,Se) Films for Solar Cell. Journal of Physical Chemistry C, 2015, 119, 1706-1713.	1.5	127
2874	The effect of TiO <sub>2</sub> surface on the electron injection efficiency in PbS quantum dot solar cells: a first-principles study. Physical Chemistry Chemical Physics, 2015, 17, 6076-6086.	1.3	20
2875	Theoretical limits of photovoltaics efficiency and possible improvements by intuitive approaches learned from photosynthesis and quantum coherence. Renewable and Sustainable Energy Reviews, 2015, 43, 1073-1089.	8.2	153
2876	A Phonon Scattering Bottleneck for Carrier Cooling in Lead Chalcogenide Nanocrystals. ACS Nano, 2015, 9, 778-788.	7.3	29
2877	Theoretical Description of Structural and Electronic Properties of Organic Photovoltaic Materials. Annual Review of Physical Chemistry, 2015, 66, 305-330.	4.8	82
2878	Design for energy: Modeling of spectrum, temperature and device structure dependences of solar cell energy production. Solar Energy Materials and Solar Cells, 2015, 136, 48-63.	3.0	38
2879	Photonic quasicrystal nanopatterned silicon thin film for photovoltaic applications. Journal of Optics (United Kingdom), 2015, 17, 035901.	1.0	6
2880	The energetic impact of small Cd Te clusters on Cadmium Telluride. Thin Solid Films, 2015, 584, 41-45.	0.8	3
2881	Structural Evolution of Multilayer SnS/Cu/ZnS Stack to Phase-Pure Cu <sub>2</sub> ZnSnS <sub>4</sub> Thin Films by Thermal Processing. ECS Journal of Solid State Science and Technology, 2015, 4, P91-P96.	0.9	21
2882	Improved photovoltaic performance of CdS/CdSe co-sensitized solar cells by using calcined starch–ZnO mesoporous spheres. Journal of Materials Science: Materials in Electronics, 2015, 26, 2955-2961.	1.1	2

#	Article	IF	CITATIONS
2883	A facile room temperature iodination route to in situ fabrication of patterned copper-iodide/silicon quasi-bulk-heterojunction thin films for photovoltaic application. Dalton Transactions, 2015, 44, 5848-5853.	1.6	12
2884	Inverting Transient Absorption Data to Determine Transfer Rates in Quantum Dot–TiO <sub>2</sub> Heterostructures. Journal of Physical Chemistry C, 2015, 119, 6337-6343.	1.5	24
2885	Ordering-induced direct-to-indirect band gap transition in multication semiconductor compounds. Physical Review B, 2015, 91, .	1.1	20
2886	Enhanced Light Trapping in Multiple Quantum Wells by Thin-Film Structure and Backside Grooves With Dielectric Interface. IEEE Journal of Photovoltaics, 2015, 5, 697-703.	1.5	24
2887	Tailoring the diameter and density of self-catalyzed GaAs nanowires on silicon. Nanotechnology, 2015, 26, 105603.	1.3	57
2888	Fabrication of single-crystal/phase Cu2ZnSnS4nanorods via a two-step spin coating route. Applied Physics Express, 2015, 8, 035202.	1.1	2
2889	Probing Highly Luminescent Europium-Doped Lanthanum Orthophosphate Nanorods for Strategic Applications. Inorganic Chemistry, 2015, 54, 2616-2625.	1.9	54
2890	Enhanced near-infrared emission by co-doping Ce <sup>3+</sup> in Ba <sub>2</sub> Y(BO <sub>3</sub> ) <sub>2</sub> Cl:Tb <sup>3+</sup> , Yb <sup>3+</sup> phosphor. RSC Advances, 2015, 5, 28299-28304.	1.7	30
2891	Raman study of laser-induced heating effects in free-standing silicon nanocrystals. Nanoscale, 2015, 7, 8389-8397.	2.8	36
2892	Silicon quantum dot solar cell using top-down approach. International Nano Letters, 2015, 5, 61-65.	2.3	15
2893	Parameter extraction from S-shaped current-voltage characteristics in organic photocell with opposed two-diode model: Effects of ideality factors and series resistance. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1731-1734.	0.8	8
2894	Two-dimensional boron–nitrogen–carbon monolayers with tunable direct band gaps. Nanoscale, 2015, 7, 12023-12029.	2.8	74
2895	Electrodeposited semiconductors at room temperature: an X-ray Absorption Spectroscopy study of Cu-, Zn-, S-bearing thin films. Electrochimica Acta, 2015, 179, 495-503.	2.6	12
2896	GaAsP on SiGe/Si material quality improvements with in-situ stress sensor and resulting tandem device performance. Materials Science in Semiconductor Processing, 2015, 39, 614-620.	1.9	13
2897	Basic physics of ICT. , 2015, , 19-49.		2
2898	Capped carbon nanotube photovoltaic cells: Influence of distribution of the five-membered rings on the efficiency. Diamond and Related Materials, 2015, 58, 24-30.	1.8	4
2899	Competition between singlet exciton fission, radiation, and dissociation measured in rubrene-doped amorphous films. Synthetic Metals, 2015, 207, 13-17.	2.1	13
2900	Fabrication of TiO2 nanostructures on TiO2/Au/quartz device for solar cell applications. Optik, 2015, 126, 3407-3410.	1.4	9

#	Article	IF	CITATIONS
2901	Transforming the cost of solar-to-electrical energy conversion: Integrating thin-film GaAs solar cells with non-tracking mini-concentrators. Light: Science and Applications, 2015, 4, e288-e288.	7.7	78
2902	Fabrication of ZnSnP2 thin films by phosphidation. Thin Solid Films, 2015, 589, 66-71.	0.8	12
2903	Control of composition and properties by the use of reflector wall in RF sputter deposition of Cu2ZnSnS4 thin films. Thin Solid Films, 2015, 589, 433-440.	0.8	6
2904	Recent Advances in Bulk Heterojunction Polymer Solar Cells. Chemical Reviews, 2015, 115, 12666-12731.	23.0	2,308
2905	Effect of defects in TiO2 nanotube thin film on the photovoltaic properties of quantum dot-sensitized solar cells. Thin Solid Films, 2015, 590, 90-97.	0.8	10
2906	Boron Subphthalocyanines as Triplet Harvesting Materials within Organic Photovoltaics. Journal of Physical Chemistry Letters, 2015, 6, 3121-3125.	2.1	48
2907	Composition controlled preparation of Cu–Zn–Sn precursor films for Cu2ZnSnS4 solar cells using pulsed electrodeposition. Journal of Alloys and Compounds, 2015, 650, 1-7.	2.8	32
2908	The role of MoS <sub>2</sub> as an interfacial layer in graphene/silicon solar cells. Physical Chemistry Chemical Physics, 2015, 17, 8182-8186.	1.3	59
2909	Efficient Multiterminal Spectrum Splitting via a Nanowire Array Solar Cell. ACS Photonics, 2015, 2, 1284-1288.	3.2	26
2910	Growth of Cu2ZnSnS4 absorber layer on flexible metallic substrates for thin film solar cell applications. Thin Solid Films, 2015, 589, 563-573. First-principles calculation of the bulk photovoltaic effect in complimate	0.8	40
2911	xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mml:msub><mml:mrow><mml:mi mathvariant="normal"&gt;KNbO</mml:mi </mml:mrow><mml:mn>3</mml:mn></mml:msub> and (K,Ba)(Ni,Nb) <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathMI"&gt;<mml:msub><mml:mrow><mml:mi< td=""><td>1.1</td><td>53</td></mml:mi<></mml:mrow></mml:msub></mml:math 	1.1	53
2912	mathvariant="normal">O <mml:mrow><mml:mn>3</mml:mn><mml:mo>â^'</mml:mo>&lt; Direct Observation of Two-Step Photon Absorption in an InAs/GaAs Single Quantum Dot for the Operation of Intermediate-Band Solar Cells. Nano Letters, 2015, 15, 4483-4487.</mml:mrow>	mml:mi>Î 4.5	' <br 25
2913	Evaluation of sputtering damage in Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> solar cells with CdS and (Cd,Zn)S buffer layers by photoluminescence measurement. Japanese Journal of Applied Physics, 2015, 54, 042302.	0.8	7
2914	Perovskite Solar Cells with Near 100% Internal Quantum Efficiency Based on Large Single Crystalline Grains and Vertical Bulk Heterojunctions. Journal of the American Chemical Society, 2015, 137, 9210-9213.	6.6	246
2915	Delocalized quantum states enhance photocell efficiency. Physical Chemistry Chemical Physics, 2015, 17, 5743-5750.	1.3	49
2916	Improved open-circuit voltage in Cu(In,Ga)Se2 solar cells with high work function transparent electrodes. Journal of Applied Physics, 2015, 117, .	1.1	26
2917	Optical properties of Al Ga1â^'As/GaAs superlattice solar cells. Journal of Crystal Growth, 2015, 425, 333-336.	0.7	1
2918	Recombination current in AlGaAs/GaAs superlattice solar-cells grown by molecular beam epitaxy. Journal of Crystal Growth, 2015, 425, 326-329.	0.7	3

#	Article	IF	CITATIONS
2919	Exploration of Metal Chloride Uptake for Improved Performance Characteristics of PbSe Quantum Dot Solar Cells. Journal of Physical Chemistry Letters, 2015, 6, 2892-2899.	2.1	43
2920	One-step synthesis of Cu2ZnSnS4 thin films by reactive magnetron co-sputtering. Acta Materialia, 2015, 96, 80-88.	3.8	18
2921	Colloidal Quantum Dot Solar Cells. Chemical Reviews, 2015, 115, 12732-12763.	23.0	987
2922	Prospects for high-performance thermophotovoltaic conversion efficiencies exceeding the Shockley–Queisser limit. Energy Conversion and Management, 2015, 97, 63-69.	4.4	53
2923	Colloidal Nanoparticles for Intermediate Band Solar Cells. ACS Nano, 2015, 9, 6882-6890.	7.3	37
2924	Experimental evidence of hot carriers solar cell operation in multi-quantum wells heterostructures. Applied Physics Letters, 2015, 106, .	1.5	55
2925	Determination of deep-level defects in Cu2ZnSn(S,Se)4 thin-films using photocapacitance method. Applied Physics Letters, 2015, 106, .	1.5	20
2926	AlGaAs Photovoltaics for Indoor Energy Harvesting in mm-Scale Wireless Sensor Nodes. IEEE Transactions on Electron Devices, 2015, 62, 2170-2175.	1.6	87
2927	Synthesis of wurtzite Cu2ZnSnS4 thin films directly on glass substrates by the solvothermal method. Materials Letters, 2015, 159, 200-203.	1.3	8
2928	Particle suspension reactors and materials for solar-driven water splitting. Energy and Environmental Science, 2015, 8, 2825-2850.	15.6	344
2929	Study of Cu2ZnSn(S,Se)4Thin Films for Solar Cell Application. Journal of Physics: Conference Series, 2015, 596, 012019.	0.3	2
2930	Deuteration of Perylene Enhances Photochemical Upconversion Efficiency. Journal of Physical Chemistry Letters, 2015, 6, 3061-3066.	2.1	21
2931	Generation-recombination processes in InGaAs/GaAs heterostructures with one-dimensional nanostructures. , 2015, , .		1
2932	First-principles calculations of a promising intermediate-band photovoltaic material based on Co-hyperdoped crystalline silicon. Applied Physics Express, 2015, 8, 081302.	1.1	9
2933	Ultimate efficiency limit of single-junction perovskite and dual-junction perovskite/silicon two-terminal devices. Japanese Journal of Applied Physics, 2015, 54, 08KD04.	0.8	45
2934	Energy in the small: micro-scale energy sources. , 2015, , 51-100.		0
2935	18.5% efficient graphene/GaAs van der Waals heterostructure solar cell. Nano Energy, 2015, 16, 310-319.	8.2	180
2936	Detailed balance evaluation of tandem thermophotovoltaic devices residing on 6.1Ã Sb-based alloys. Solar Energy Materials and Solar Cells, 2015, 141, 391-397.	3.0	13

#	Article	IF	CITATIONS
2937	Quantitative Intramolecular Singlet Fission in Bipentacenes. Journal of the American Chemical Society, 2015, 137, 8965-8972.	6.6	324
2938	Thin-film â€~Thermal Well' Emitters and Absorbers for High-Efficiency Thermophotovoltaics. Scientific Reports, 2015, 5, 10661.	1.6	119
2939	Optical-Electronic Analysis of the Intrinsic Behaviors of Nanostructured Ultrathin Crystalline Silicon Solar Cells. ACS Photonics, 2015, 2, 883-889.	3.2	20
2940	A generic concept to overcome bandgap limitations for designing highly efficient multi-junction photovoltaic cells. Nature Communications, 2015, 6, 7730.	5.8	67
2941	Perovskites for photovoltaics: a combined review of organic–inorganic halide perovskites and ferroelectric oxide perovskites. Journal of Materials Chemistry A, 2015, 3, 18809-18828.	5.2	232
2942	Electronic structures of two types of TiO <sub>2</sub> electrodes: inverse opal and nanoparticulate cases. RSC Advances, 2015, 5, 49623-49632.	1.7	26
2943	Fill factor in organic solar cells can exceed the Shockley-Queisser limit. Scientific Reports, 2015, 5, 11478.	1.6	16
2944	Solvothermal synthesis and tunable bandgap of Cu2(Zn1â^'xCox)SnS4 and Cu2(Fe1â^'xCox)SnS4 nanocrystals. Journal of Alloys and Compounds, 2015, 646, 1015-1022.	2.8	23
2945	Structural and optical tunability by reaction time of selenization in Cu2FeSnSe4 thin films. Journal of Alloys and Compounds, 2015, 646, 68-72.	2.8	5
2946	Under the spotlight: The organic–inorganic hybrid halide perovskite for optoelectronic applications. Nano Today, 2015, 10, 355-396.	6.2	891
2947	Fabrication of double- and triple-junction solar cells with hydrogenated amorphous silicon oxide (a-SiOx:H) top cell. Solar Energy Materials and Solar Cells, 2015, 141, 148-153.	3.0	25
2948	Ultrafast Transient Absorption Study of the Nature of Interaction between Oppositely Charged Photoexcited CdTe Quantum Dots and Cresyl Violet. Journal of Physical Chemistry C, 2015, 119, 15661-15668.	1.5	31
2949	A sustainable future for photonic colloidal nanocrystals. Chemical Society Reviews, 2015, 44, 5897-5914.	18.7	115
2950	Sn <sub><i>x</i></sub> Ge <sub>1–<i>x</i></sub> Alloy Nanocrystals: A First Step toward Solution-Processed Group IV Photovoltaics. Chemistry of Materials, 2015, 27, 4640-4649.	3.2	51
2951	Variational method for the minimization of entropy generation in solar cells. Journal of Applied Physics, 2015, 117, .	1.1	8
2952	Resonant Nanophotonic Spectrum Splitting for Ultrathin Multijunction Solar Cells. ACS Photonics, 2015, 2, 816-821.	3.2	44
2953	Device Performance of the Mott Insulator <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow><mml:msub><mml:mrow><mml:mi>LaVO</mml:mi></mml:mrow><mml:mrow><n a Photovoltaic Material. Physical Review Applied. 2015. 3.</n </mml:mrow></mml:msub></mml:mrow></mml:math 	1.5 1ml:mn>3	</td
2954	Fast Dissociation and Reduced Auger Recombination of Multiple Excitons in Closely Packed PbS Nanocrystal Thin Films. Journal of Physical Chemistry Letters, 2015, 6, 1327-1332.	2.1	21

#	Article	IF	CITATIONS
2955	<i>In situ</i> fabrication and optoelectronic analysis of axial CdS/p-Si nanowire heterojunctions in a high-resolution transmission electron microscope. Nanotechnology, 2015, 26, 154001.	1.3	17
2956	Hexavalent chromium removal using metal oxide photocatalysts. Applied Catalysis B: Environmental, 2015, 176-177, 740-748.	10.8	135
2957	Nanoscale Effects in Water Splitting Photocatalysis. Topics in Current Chemistry, 2015, 371, 105-142.	4.0	36
2958	Synthesis and characterization of Cu2ZnSnS4 nanocrystals by hot-injection method. Journal of Materials Science: Materials in Electronics, 2015, 26, 5426-5432.	1.1	13
2959	Intermediate band solar cells: Recent progress and future directions. Applied Physics Reviews, 2015, 2, 021302.	5.5	314
2960	Tuning the structure and preferred orientation in reactively sputtered copper oxide thin films. Applied Surface Science, 2015, 335, 85-91.	3.1	44
2961	Three-terminal heterojunction bipolar transistor solar cell for high-efficiency photovoltaic conversion. Nature Communications, 2015, 6, 6902.	5.8	47
2962	Singlet fission in pentacene dimers. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5325-5330.	3.3	368
2963	Impact of charge transport on current–voltage characteristics and power-conversion efficiency of organic solar cells. Nature Communications, 2015, 6, 6951.	5.8	255
2964	On the comparison of energy sources: Feasibility of radio frequency and ambient light harvesting. Renewable Energy, 2015, 81, 804-807.	4.3	11
2965	Hybrid Si nanocones/PEDOT:PSS solar cell. Nanoscale Research Letters, 2015, 10, 191.	3.1	26
2966	Broadband near-infrared quantum-cutting by cooperative energy transfer in Yb3+–Bi3+ co-doped CaTiO3 for solar cells. Journal of Alloys and Compounds, 2015, 640, 280-284.	2.8	29
2967	Computational 2D Materials Database: Electronic Structure of Transition-Metal Dichalcogenides and Oxides. Journal of Physical Chemistry C, 2015, 119, 13169-13183.	1.5	902
2968	Carrier recombination effects on the performance of InGaAs/GaAs quantum dot intermediate band solar cell: A drift–diffusion study. Optik, 2015, 126, 972-976.	1.4	3
2969	Efficiency improvement in Si thin film solar cells by employing composite nanocone-shaped grating structure. Japanese Journal of Applied Physics, 2015, 54, 062301.	0.8	7
2970	Bright Fission: Singlet Fission into a Pair of Emitting States. Journal of Chemical Theory and Computation, 2015, 11, 2642-2650.	2.3	20
2971	Layered thermal metamaterials for the directing and harvesting of conductive heat. AIP Advances, 2015, 5, .	0.6	33
2972	Reversible Structural Transformation and Enhanced Performance of PEDOT:PSS-Based Hybrid Solar Cells Driven by Light Intensity. ACS Applied Materials & Interfaces, 2015, 7, 7466-7470.	4.0	35

#	Article	IF	CITATIONS
2973	Using pyridal[2,1,3]thiadiazole as an acceptor unit in a low band-gap copolymer for photovoltaic applications. Organic Electronics, 2015, 23, 171-178.	1.4	5
2974	Synthesis, structure, optics and electrical properties of Cu2FeSnS4 thin film by sputtering metallic precursor combined with rapid thermal annealing sulfurization process. Materials Letters, 2015, 151, 61-63.	1.3	58
2975	Open-Circuit Voltage Deficit, Radiative Sub-Bandgap States, and Prospects in Quantum Dot Solar Cells. Nano Letters, 2015, 15, 3286-3294.	4.5	223
2976	Advanced Ill–V nanowire growth toward large-scale integration. , 2015, , 71-124.		2
2977	Semiconductor nanowires for solar cells. , 2015, , 411-439.		2
2978	Influence of annealing temperature on structural and optical properties of Cu2MnSnS4 thin films fabricated by sol–gel technique. Journal of Alloys and Compounds, 2015, 640, 23-28.	2.8	53
2979	Solvothermal synthesis of Cu2Zn(Sn1â^'xGex)S4 and Cu2(Sn1â^'xGex)S3 nanoparticles with tunable band gap energies. Journal of Alloys and Compounds, 2015, 640, 75-81.	2.8	14
2980	Quantum dot solar concentrator: Optical transportation and doping concentration optimization. Solar Energy, 2015, 115, 552-561.	2.9	25
2981	Alternative Model of a Subwavelength Diffractive Lens Proposed for PV Cells Applications. IEEE Photonics Technology Letters, 2015, 27, 1317-1320.	1.3	1
2982	Effects of rapid thermal annealing on the structural and local atomic properties of ZnO: Ge nanocomposite thin films. Journal of Applied Physics, 2015, 117, .	1.1	13
2983	SnS-based thin film solar cells: perspectives over the last 25Âyears. Journal of Materials Science: Materials in Electronics, 2015, 26, 4541-4556.	1.1	137
2984	Analysis of Thermal Losses for a Variety of Single-Junction Photovoltaic Cells: An Interesting Means of Thermoelectric Heat Recovery. Journal of Electronic Materials, 2015, 44, 1809-1813.	1.0	15
2985	Electrical characterization of vacuum-deposited p-CdTe/n-ZnSe heterojunctions. Applied Nanoscience (Switzerland), 2015, 5, 1003-1007.	1.6	9
2986	Enhanced absorption of thin-film photovoltaic cells using an optical cavity. Journal of Optics (United) Tj ETQq1 1	0.784314 1.0	rgBT /Overlo
2987	Numerical study of a highly efficient solar cell with graded band gap design. Japanese Journal of Applied Physics, 2015, 54, 054301.	0.8	1
2988	High absorption efficiency of AlGaAs/GaAs superlattice solar cells. Japanese Journal of Applied Physics, 2015, 54, 052301.	0.8	5
2989	Analysis and Calculation of Electronic Properties and Light Absorption of Defective Sulfur-Doped Silicon and Theoretical Photoelectric Conversion Efficiency. Journal of Physical Chemistry A, 2015, 119, 3753-3761.	1.1	11
2990	Physics of the temperature coefficients of solar cells. Solar Energy Materials and Solar Cells, 2015, 140, 92-100.	3.0	233

#	Article	IF	CITATIONS
2991	Spin-boson theory for charge photogeneration in organic molecules: Role of quantum coherence. Physical Review B, 2015, 91, .	1.1	13
2992	Device Operation. , 2015, , 25-56.		0
2993	Recalibrating the Orthodoxy. , 2015, , 119-123.		0
2994	Polymer:fullerene solar cells: materials, processing issues, and cell layouts to reach power conversion efficiency over 10%, a review. Journal of Photonics for Energy, 2015, 5, 057214.	0.8	63

2995 Synthesis and characterization of Cu-based selenide photovoltaic materials: Cu2FeSnSe4 and Cu(In,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf

2996	Research progress of perovskite materials in photocatalysis- and photovoltaics-related energy conversion and environmental treatment. Chemical Society Reviews, 2015, 44, 5371-5408.	18.7	725
2997	Multifaceted Excited State of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . Charge Separation, Recombination, and Trapping. Journal of Physical Chemistry Letters, 2015, 6, 2086-2095.	2.1	107
2998	High-efficiency solar-thermophotovoltaic system equipped with a monolithic planar selective absorber/emitter. Journal of Photonics for Energy, 2015, 5, 053099.	0.8	66
2999	Wurtzite-derived ternary l–Ill–O <sub>2</sub> semiconductors. Science and Technology of Advanced Materials, 2015, 16, 024902.	2.8	23
3000	Advances in CZTS thin films and nanostructured. Opto-electronics Review, 2015, 23, .	2.4	3
3001	Energy flows in graphene: hot carrier dynamics and cooling. Journal of Physics Condensed Matter, 2015, 27, 164201.	0.7	53
3002	Origin of the high open circuit voltage in planar heterojunction perovskite solar cells: Role of the reduced bimolecular recombination. Journal of Applied Physics, 2015, 117, .	1.1	69
3003	BaCl <sub>2</sub> :Er <sup>3+</sup> —A High Efficient Upconversion Phosphor for Broadband Nearâ€Infrared Photoresponsive Devices. Journal of the American Ceramic Society, 2015, 98, 2508-2513.	1.9	17
3004	A-site strontium doping effects on structure, magnetic, and photovoltaic properties of (Bilâ^'Sr )FeO3â^' multiferroic ceramics. Ceramics International, 2015, 41, 8417-8424.	2.3	18
3005	Design principles for single standing nanowire solar cells: going beyond the planar efficiency limits. Scientific Reports, 2014, 4, 4915.	1.6	17
3006	Experimental demonstrations of spontaneous, solar-driven photoelectrochemical water splitting. Energy and Environmental Science, 2015, 8, 2811-2824.	15.6	520
3007	Energy payback time (EPBT) and energy return on energy invested (EROI) of solar photovoltaic systems: A systematic review and meta-analysis. Renewable and Sustainable Energy Reviews, 2015, 47, 133-141.	8.2	348
3008	Simultaneous Enhancement of Upconversion and Downshifting Luminescence via Plasmonic Structure. Nano Letters, 2015, 15, 2491-2497.	4.5	64

#	Article	IF	CITATIONS
3009	Stabilization of the Trigonal High-Temperature Phase of Formamidinium Lead Iodide. Journal of Physical Chemistry Letters, 2015, 6, 1249-1253.	2.1	477
3010	LUMO's modulation by electron withdrawing unit modification in amorphous TAT dumbbell-shaped molecules. Journal of Materials Chemistry A, 2015, 3, 6620-6628.	5.2	20
3011	Monolithic DSSC/CIGS tandem solar cell fabricated by a solution process. Scientific Reports, 2015, 5, 8970.	1.6	27
3013	The photovoltaic properties of novel narrow band gap Cu <sub>2</sub> SnS <sub>3</sub> films prepared by a spray pyrolysis method. RSC Advances, 2015, 5, 28885-28891.	1.7	40
3014	Preparation and Application of Strong Nearâ€Infrared Emission Phosphor Sr <sub>3</sub> SiO <sub>5</sub> :Ce <sup>3+</sup> ,Al <sup>3+</sup> ,Nd <sup>3+</sup> .Journal of the American Ceramic Society, 2015, 98, 1836-1841.	1.9	8
3015	Structural, optical and electrical properties of Cu2FeSnX4 (X=S, Se) thin films prepared by chemical spray pyrolysis. Journal of Alloys and Compounds, 2015, 638, 103-108.	2.8	64
3016	High intrinsic carrier mobility and photon absorption in the perovskite CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . Physical Chemistry Chemical Physics, 2015, 17, 11516-11520.	1.3	182
3017	Radiative dark current in optically thin III-V photovoltaic devices. , 2015, , .		1
3018	Tandem Solar Cell—Concept and Practice in Organic Solar Cells. Topics in Applied Physics, 2015, , 315-346.	0.4	8
3019	Enhanced energy conversion of up-conversion solar cells by the integration of compound parabolic concentrating optics. Solar Energy Materials and Solar Cells, 2015, 140, 217-223.	3.0	52
3020	Monolithically interconnected lamellar Cu(In,Ga)Se <sub>2</sub> micro solar cells under full white light concentration. Progress in Photovoltaics: Research and Applications, 2015, 23, 1929-1939.	4.4	16
3021	Realizing high photovoltaic efficiency with parallel multijunction solar cells based on spectrum-splitting and -concentrating diffractive optical element. Chinese Physics B, 2015, 24, 054201.	0.7	3
3022	Limiting efficiency calculation of silicon single-nanowire solar cells with considering Auger recombination. Applied Physics Letters, 2015, 106, .	1.5	10
3023	Tin perovskite/fullerene planar layer photovoltaics: improving the efficiency and stability of lead-free devices. Journal of Materials Chemistry A, 2015, 3, 11631-11640.	5.2	188
3024	Synthesis and characterization of Cu2ZnSnS4 nanocrystals prepared by microwave irradiation method. Journal of Materials Science: Materials in Electronics, 2015, 26, 5645-5652.	1.1	11
3025	Effect of thermal pretreatment of metal precursor on the properties of Cu <sub>2</sub> ZnSnS <sub>4</sub> films. Chinese Physics B, 2015, 24, 056805.	0.7	4
3026	Near-Infrared-to-Visible Photon Upconversion Enabled by Conjugated Porphyrinic Sensitizers under Low-Power Noncoherent Illumination. Journal of Physical Chemistry A, 2015, 119, 5642-5649.	1.1	33
3027	Design of two-photon molecular tandem architectures for solar cells by ab initio theory. Chemical Science, 2015, 6, 3018-3025.	3.7	9

#	Article	IF	CITATIONS
3029	Cross-correlation analysis of dispersive spectrum splitting techniques for photovoltaic systems. Journal of Photonics for Energy, 2015, 5, 1.	0.8	20
3030	Microwave-Assisted Solution–Liquid–Solid Synthesis of Single-Crystal Copper Indium Sulfide Nanowires. Crystal Growth and Design, 2015, 15, 2859-2866.	1.4	4
3031	Optical characterization of GaInP p–i–n solar cells. Japanese Journal of Applied Physics, 2015, 54, 04DR06.	0.8	0
3032	Hotâ€Hole Extraction from Quantum Dot to Molecular Adsorbate. Chemistry - A European Journal, 2015, 21, 4405-4412.	1.7	30
3033	Efficient Near-Infrared Downconversion and Energy Transfer Mechanism of Ce <sup>3+</sup> /Yb <sup>3+</sup> Codoped Calcium Scandate Phosphor. Inorganic Chemistry, 2015, 54, 4806-4810.	1.9	49
3034	First-Principles Modeling of Core/Shell Quantum Dot Sensitized Solar Cells. Journal of Physical Chemistry C, 2015, 119, 12739-12748.	1.5	20
3035	Emerging Thinâ€Film Photovoltaic Technologies. Chemie-Ingenieur-Technik, 2015, 87, 376-389.	0.4	14
3036	Photoinduced Energy Shift in Quantum-Dot-Sensitized TiO2: A First-Principles Analysis. Journal of Physical Chemistry Letters, 2015, 6, 1423-1429.	2.1	10
3037	Symmetry-Breaking Charge Transfer in a Zinc Chlorodipyrrin Acceptor for High Open Circuit Voltage Organic Photovoltaics. Journal of the American Chemical Society, 2015, 137, 5397-5405.	6.6	82
3040	Modelling and experimental analysis of the angular distribution of the emitted light from the edge of luminescent solar concentrators. Optical Materials, 2015, 42, 532-537.	1.7	14
3041	The expanding world of hybrid perovskites: materials properties and emerging applications. MRS Communications, 2015, 5, 7-26.	0.8	132
3042	CH_3NH_3PbI_3 perovskite / silicon tandem solar cells: characterization based optical simulations. Optics Express, 2015, 23, A263.	1.7	258
3043	Cu <sub>2</sub> ZnSnSe <sub>4</sub> thin-film solar cells fabricated using Cu <sub>2</sub> SnSe <sub>3</sub> and ZnSe bilayers. Applied Physics Express, 2015, 8, 042301.	1.1	21
3044	A theoretical analysis of optical absorption limits and performance of tandem devices and series interconnected architectures for solar hydrogen production. Solar Energy Materials and Solar Cells, 2015, 138, 86-95.	3.0	34
3046	Mechanosynthesis, deposition and characterization of CZTS and CZTSe materials for solar cell applications. Journal of Solid State Chemistry, 2015, 227, 165-177.	1.4	56
3047	Spectrum Sensitivity, Energy Yield, and Revenue Prediction of PV Modules. IEEE Journal of Photovoltaics, 2015, 5, 258-262.	1.5	33
3048	Electron Barrier Engineering in a Thin-Film Intermediate-Band Solar Cell. IEEE Journal of Photovoltaics, 2015, 5, 878-884.	1.5	10
3049	Supercharging Silicon Solar Cell Performance by Means of Multijunction Concept. IEEE Journal of Photovoltaics, 2015, 5, 968-976.	1.5	96

#	Article	IF	CITATIONS
3050	Er <sup>3+</sup> /Yb <sup>3+</sup> upconverters for InGaP solar cells under concentrated broadband illumination. Physical Chemistry Chemical Physics, 2015, 17, 11234-11243.	1.3	24
3051	Near-infrared quantum cutting in Nd^3+ and Yb^3+ Doped BaGd_2ZnO_5 phosphors. Optical Materials Express, 2015, 5, 756.	1.6	23
3052	Plasmon enhancement of luminescence upconversion. Chemical Society Reviews, 2015, 44, 2940-2962.	18.7	242
3053	Evaluating Crystalline Silicon Solar Cells at Low Light Intensities Using Intensity-Dependent Analysis of <i>l–V</i> Parameters. IEEE Journal of Photovoltaics, 2015, 5, 926-931.	1.5	46
3054	Combinatorial insights into doping control and transport properties of zinc tin nitride. Journal of Materials Chemistry C, 2015, 3, 11017-11028.	2.7	128
3055	A solution based route to GaAs thin films from As(NMe <sub>2</sub> ) <sub>3</sub> and GaMe <sub>3</sub> for solar cells. RSC Advances, 2015, 5, 11812-11817.	1.7	11
3056	Bi-phasic titanium dioxide nanoparticles doped with nitrogen and neodymium for enhanced photocatalysis. Nanoscale, 2015, 7, 17735-17744.	2.8	11
3057	Study on weak-light photovoltaic characteristics of solar cell with a microgroove lens array on glass substrate. Optics Express, 2015, 23, A192.	1.7	21
3058	The realistic energy yield potential of GaAs-on-Si tandem solar cells: a theoretical case study. Optics Express, 2015, 23, A382.	1.7	72
3059	Highly efficient upconversion in Er^3+ doped BaY_2F_8 single crystals: dependence of quantum yield on excitation wavelength and thickness. Optics Express, 2015, 23, A903.	1.7	17
3060	Design of a solar-pumped semiconductor laser. Optica, 2015, 2, 56.	4.8	13
3061	Ultrafast carrier dynamics in Landau-quantized graphene. Nanophotonics, 2015, 4, 224-249.	2.9	33
3062	Multiple-exciton generation in lead selenide nanorod solar cells with external quantum efficiencies exceeding 120%. Nature Communications, 2015, 6, 8259.	5.8	120
3063	Limiting efficiencies of solar energy conversion and photo-detection via internal emission of hot electrons and hot holes in gold. , 2015, , .		7
3064	Photon management for enhanced open-circuit voltage in nanostructured solar cells. Journal Physics D: Applied Physics, 2015, 48, 413001.	1.3	4
3065	PVMirror: A New Concept for Tandem Solar Cells and Hybrid Solar Converters. IEEE Journal of Photovoltaics, 2015, 5, 1791-1799.	1.5	57
3066	Assessing the Efficiency of Advanced Multijunction Solar Cells in Real Working Conditions: A Theoretical Analysis. IEEE Journal of Photovoltaics, 2015, 5, 1805-1812.	1.5	12
3067	Ultrathin amorphous silicon thin-film solar cells by magnetic plasmonic metamaterial absorbers. RSC Advances, 2015, 5, 81866-81874.	1.7	22

#	Article	IF	CITATIONS
3068	Near-infrared down-conversion and energy transfer mechanism in Yb <sup>3+</sup> -doped Ba <sub>2</sub> LaV <sub>3</sub> O <sub>11</sub> phosphors. Physical Chemistry Chemical Physics, 2015, 17, 26330-26337.	1.3	43
3069	Device engineering of perovskite solar cells to achieve near ideal efficiency. Applied Physics Letters, 2015, 107, .	1.5	55
3070	Hot carrier extraction using energy selective contacts and its impact on the limiting efficiency of a hot carrier solar cell. Applied Physics Letters, 2015, 107, .	1.5	16
3071	Dynamic reconfiguration of solar systems for avoiding MPPT faults due to architectural partial shading. , 2015, , .		3
3072	Hot electron plasmon-protected solar cell. Optics Express, 2015, 23, A1087.	1.7	13
3073	Improving photovoltaic performance through radiative cooling in both terrestrial and extraterrestrial environments. Optics Express, 2015, 23, A1120.	1.7	85
3074	Solar thermophotovoltaic system using nanostructures. Optics Express, 2015, 23, A1149.	1.7	61
3075	Light-trapping in photon enhanced thermionic emitters. Optics Express, 2015, 23, A1220.	1.7	14
3076	Refractive index and extinction coefficient of CH_3NH_3PbI_3 studied by spectroscopic ellipsometry. Optical Materials Express, 2015, 5, 29.	1.6	135
3077	Tandem Solar Cells Using GaAs Nanowires on Si: Design, Fabrication, and Observation of Voltage Addition. Nano Letters, 2015, 15, 7217-7224.	4.5	114
3078	Symmetry-Directed Control of Electronic Coupling for Singlet Fission in Covalent Bis–Acene Dimers. Journal of Physical Chemistry Letters, 2015, 6, 4456-4462.	2.1	22
3079	Solution-based synthesis and purification of zinc tin phosphide nanowires. Nanoscale, 2015, 7, 19317-19323.	2.8	5
3080	Insights into dye design for efficient p-type photoelectrodes: effect of oligothiophene length between the donor and the NiO surface. RSC Advances, 2015, 5, 93652-93658.	1.7	13
3081	Thermodynamic and achievable efficiencies for solar-driven electrochemical reduction of carbon dioxide to transportation fuels. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E6111-8.	3.3	103
3082	Retrograde solubility of formamidinium and methylammonium lead halide perovskites enabling rapid single crystal growth. Chemical Communications, 2015, 51, 17658-17661.	2.2	349
3083	Theoretical limit of power conversion efficiency for organic and hybrid halide perovskite photovoltaics. Japanese Journal of Applied Physics, 2015, 54, 08KF04.	0.8	22
3084	Materials Design of Visible-Light Ferroelectric Photovoltaics from First Principles. Ferroelectrics, 2015, 483, 1-12.	0.3	27
3085	Small Organic Molecules for Efficient Singlet Fission: Role of Silicon Substitution. Journal of Physical Chemistry C, 2015, 119, 25696-25702.	1.5	36

#	Article	IF	CITATIONS
3086	Switchable Photovoltaic Effects in Hexagonal Manganite Thin Films Having Narrow Band Gaps. Chemistry of Materials, 2015, 27, 7425-7432.	3.2	67
3087	Theoretical maximum efficiency of solar energy conversion in plasmonic metal–semiconductor heterojunctions. Physical Chemistry Chemical Physics, 2015, 17, 30013-30022.	1.3	58
3088	Synthesis, deposition and crystal growth of CZTS nanoparticles onto ceramic tiles. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2015, 54, 175-180.	0.9	11
3089	Multi-photon quantum cutting in Gd2O2S:Tm3+ to enhance the photo-response of solar cells. Light: Science and Applications, 2015, 4, e344-e344.	7.7	88
3090	Effect of Halide Treatments on PbSe Quantum Dot Thin Films: Stability, Hot Carrier Lifetime, and Application to Photovoltaics. Journal of Physical Chemistry C, 2015, 119, 24149-24155.	1.5	40
3091	Photon Upconversion and Photocurrent Generation via Self-Assembly at Organic–Inorganic Interfaces. Journal of Physical Chemistry Letters, 2015, 6, 4510-4517.	2.1	70
3092	Synthesis of a NaYF4:Yb,Er upconversion film on a silicon substrate and its tribological behavior. RSC Advances, 2015, 5, 94980-94985.	1.7	3
3093	Photovoltaic and Photoelectrochemical Solar Energy Conversion with Cu <sub>2</sub> O. Journal of Physical Chemistry C, 2015, 119, 26243-26257.	1.5	160
3094	Analysing the effect of crystal size and structure in highly efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells by spatially resolved photo- and electroluminescence imaging. Nanoscale, 2015, 7, 19653-19662.	2.8	84
3095	Miniband Calculation of 3-D Nanostructure Array for Solar Cell Applications. IEEE Transactions on Electron Devices, 2015, 62, 3709-3714.	1.6	17
3096	Photon Upconversion from Chemically Bound Triplet Sensitizers and Emitters on Mesoporous ZrO <sub>2</sub> : Implications for Solar Energy Conversion. Journal of Physical Chemistry C, 2015, 119, 25792-25806.	1.5	27
3097	Pronounced Photovoltaic Response from Multilayered Transition-Metal Dichalcogenides PN-Junctions. Nano Letters, 2015, 15, 7532-7538.	4.5	98
3098	Impact of realistic energy levels on the efficiency of intermediate Band Solar Cells: Impact of carrier loss. , 2015, , .		0
3099	Photoelectric performance of TiO2 nanotube array photoelectrodes sensitized with CdS0.54Se0.46 quantum dots. Applied Surface Science, 2015, 355, 1279-1288.	3.1	30
3100	Graphene-based technologies for energy applications, challenges and perspectives. 2D Materials, 2015, 2, 030204.	2.0	74
3101	Approaching the Shockley-Queisser limit: General assessment of the main limiting mechanisms in photovoltaic cells. Journal of Applied Physics, 2015, 117, .	1.1	26
3102	Time-resolved photoluminescence measurements for determining voltage-dependent charge-separation efficiencies of subcells in triple-junction solar cells. Applied Physics Letters, 2015, 106, .	1.5	21
3103	Effects of angular confinement and concentration to realistic solar cells. Journal of Applied Physics, 2015, 117, 034503.	1.1	7

#	Article	IF	CITATIONS
3104	Absorption enhancement through Fabry-Pérot resonant modes in a 430 nm thick InGaAs/GaAsP multiple quantum wells solar cell. Applied Physics Letters, 2015, 106, .	1.5	33
3105	Dynamics of the phase formation process upon the low temperature selenization of Cu/In-multilayer stacks. Journal of Applied Physics, 2015, 117, 105302.	1.1	1
3106	Determination of effective optical gap in dye/TiO2systems inspired by p-n junctions. Applied Physics Letters, 2015, 106, 143502.	1.5	3
3107	Review on the application of nanostructure materials in solar cells. Modern Physics Letters B, 2015, 29, 1550118.	1.0	10
3108	Metallonaphthalocyanines as triplet sensitizers for near-infrared photon upconversion beyond 850 nm. Physical Chemistry Chemical Physics, 2015, 17, 22557-22560.	1.3	31
3109	Theoretical efficiency limits for thermoradiative energy conversion. Journal of Applied Physics, 2015, 117, .	1.1	91
3110	Influence of molecular orientation on the coupling of surface plasmons to excitons in semitransparent inverted organic solar cells. Applied Physics Letters, 2015, 106, .	1.5	6
3111	Size control, quantum confinement, and oxidation kinetics of silicon nanocrystals synthesized at a high rate by expanding thermal plasma. Applied Physics Letters, 2015, 106, 213106.	1.5	3
3112	Artificial Photosynthesis on TiO <sub>2</sub> -Passivated InP Nanopillars. Nano Letters, 2015, 15, 6177-6181.	4.5	86
3113	Contrastive analysis of multiple exciton generation theories. , 2015, , .		0
3113 3114	Contrastive analysis of multiple exciton generation theories. , 2015, , . <i>GW</i> Band Structures and Carrier Effective Masses of CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> and Hypothetical Perovskites of the Type APbl <sub>3</sub> : A = NH <sub>4</sub> , PH <sub>4</sub> , AsH <sub>4</sub> , and SbH <sub>4</sub> . Journal of Physical Chemistry C, 2015, 119, 25209-25219.	1.5	0
3113 3114 3115	Contrastive analysis of multiple exciton generation theories. , 2015, , . <i>&gt;GW</i> Band Structures and Carrier Effective Masses of CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> and Hypothetical Perovskites of the Type APbl <sub>3</sub> : A = NH <sub>4</sub> , PH <sub>4</sub> , AsH <sub>4</sub> , and SbH <sub>4</sub> . Journal of Physical Chemistry C, 2015, 119, 25209-25219. Numerical simulation of highly periodical Ge/Si quantum dot array for intermediate-band solar cell applications. , 2015, .	1.5	0 144 0
<ul> <li>3113</li> <li>3114</li> <li>3115</li> <li>3116</li> </ul>	Contrastive analysis of multiple exciton generation theories. , 2015, , . <i>&gt;GW</i> Band Structures and Carrier Effective Masses of CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> and Hypothetical Perovskites of the Type APbl <sub>3</sub> : A = NH <sub>4</sub> , PH <sub>4</sub> , AsH <sub>4</sub> , and SbH <sub>4</sub> . Journal of Physical Chemistry C, 2015, 119, 25209-25219. Numerical simulation of highly periodical Ge/Si quantum dot array for intermediate-band solar cell applications. , 2015, . Synthesis and layering of Si quantum dots/SiO2 composite films for third generation solar cells. Thin Solid Films, 2015, 593, 96-101.	1.5 0.8	0 144 0 6
<ul> <li>3113</li> <li>3114</li> <li>3115</li> <li>3116</li> <li>3117</li> </ul>	Contrastive analysis of multiple exciton generation theories. , 2015, , . <i>&gt; GW</i> > Band Structures and Carrier Effective Masses of CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> and Hypothetical Perovskites of the Type APbl <sub>3</sub> . A = NH <sub>4</sub> , PH <sub>4</sub> , AsH <sub>4</sub> , and SbH <sub>4</sub> . Journal of Physical Chemistry C, 2015, 119, 25209-25219.         Numerical simulation of highly periodical Ge/Si quantum dot array for intermediate-band solar cell applications. , 2015, , .         Synthesis and layering of Si quantum dots/SiO2 composite films for third generation solar cells. Thin Solid Films, 2015, 593, 96-101.         Reflective Barrier Optimization in Ultrathin Single-Junction GaAs Solar Cell. IEEE Journal of Photovoltaics, 2015, 5, 1621-1625.	1.5 0.8 1.5	0 144 0 6
<ul> <li>3113</li> <li>3114</li> <li>3115</li> <li>3116</li> <li>3117</li> <li>3118</li> </ul>	Contrastive analysis of multiple exciton generation theories. , 2015, , . <i>&gt;GW</i> > Band Structures and Carrier Effective Masses of CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> and Hypothetical Perovskites of the Type APbl <sub>3</sub> NH <sub>4</sub> , AsH <sub>, AsH<sub>, and SbH<sub>4</sub>, Journal of Physical Chemistry C, 2015, 119, 25209-25219.Numerical simulation of highly periodical Ge/Si quantum dot array for intermediate-band solar cell applications. , 2015,Synthesis and layering of Si quantum dots/SiO2 composite films for third generation solar cells. Thin Solid Films, 2015, 593, 96-101.Reflective Barrier Optimization in Ultrathin Single-Junction GaAs Solar Cell. IEEE Journal of Photovoltaics, 2015, 5, 1621-1625.Light-Driven Heterogeneous Reduction of Carbon Dioxide: Photocatalysts and Photoelectrodes. Chemical Reviews, 2015, 115, 12888-12935.</sub></sub>	1.5 0.8 1.5 23.0	0 144 0 6 13 1,386
<ul> <li>3113</li> <li>3114</li> <li>3115</li> <li>3116</li> <li>3117</li> <li>3118</li> <li>3119</li> </ul>	Contrastive analysis of multiple exciton generation theories. , 2015, , . <i>&gt;CONTrastive analysis of multiple exciton generation theories. , 2015, , .<i>&gt;CW</i>&gt;<i>&gt;CH<sub>3</sub>NH<sub>3</sub>NH<sub>3</sub>NH<sub>3</sub>NH<sub>3</sub>NH<sub>3</sub>NH<sub>4</sub>, and Hypothetical Perovskites of the Type APbl<sub>3</sub>NH<sub>4</sub>, AsH<sub>4</sub>, and SbH<sub>4</sub>.Applications of Physical Chemistry C, 2015, 119, 25209-25219.Numerical simulation of highly periodical Ge/Si quantum dot array for intermediate-band solar cell applications. , 2015, , .Synthesis and layering of Si quantum dots/SiO2 composite films for third generation solar cells. Thin Solid Films, 2015, 593, 96-101.Reflective Barrier Optimization in Ultrathin Single-Junction GaAs Solar Cell. IEEE Journal of Photovoltaics, 2015, 5, 1621-1625.Light-Driven Heterogeneous Reduction of Carbon Dioxide: Photocatalysts and Photoelectrodes. Chemical Reviews, 2015, 115, 12888-12935.Holistic design guidelines for solar hydrogen production by photo-electrochemical routes. Energy and Environmental Science, 2015, 8, 3614-3628.</i></i>	1.5 0.8 1.5 23.0	0 144 0 6 13 1,386
<ul> <li>3113</li> <li>3114</li> <li>3115</li> <li>3116</li> <li>3117</li> <li>3118</li> <li>3119</li> <li>3120</li> </ul>	Contrastive analysis of multiple exciton generation theories. , 2015, , . <i>Contrastive analysis of multiple exciton generation theories. , 2015, , .<i>CH<sub>3</sub>NH<sub>3</sub>Pbl<sub>3</sub> and Hypothetical Perovskites of the Type APbl<sub>3</sub>NH<sub>4</sub>, AsH<sub>4</sub>, and SbH<sub>4</sub>, Journal of Physical Chemistry C, 2015, 119, 25209-25219.Numerical simulation of highly periodical Ge/Si quantum dot array for intermediate-band solar cell applications. , 2015, , .Synthesis and layering of Si quantum dots/SiO2 composite films for third generation solar cells. Thin Solid Films, 2015, 593, 96-101.Reflective Barrier Optimization in Ultrathin Single-Junction GaAs Solar Cell. IEEE Journal of Photovoltaics, 2015, 5, 1621-1625.Light-Driven Heterogeneous Reduction of Carbon Dioxide: Photocatalysts and Photoelectrodes. Chemical Reviews, 2015, 115, 12888-12935.Holistic design guidelines for solar hydrogen production by photo-electrochemical routes. Energy and Environmental Science, 2015, 8, 3614-3628.New Phosphorene Allotropes Containing Ridges with 2- and 4-Coordination. Journal of Physical Chemistry C, 2015, 119, 24674-24680.</i></i>	1.5 0.8 1.5 23.0 15.6	0 144 0 6 13 1,386 67 37

#	ARTICLE	IF	CITATIONS
3122	Aqueous-Processed Inorganic Thin-Film Solar Cells Based on CdSe <sub><i>x</i></sub> Te <sub>1–<i>x</i></sub> Nanocrystals: The Impact of Composition on Photovoltaic Performance. ACS Applied Materials & amp; Interfaces, 2015, 7, 23223-23230.	4.0	48
3123	Comparison of Electron and Hole Mobilities in Multiple-Quantum-Well Solar Cells Using a Time-of-Flight Technique. IEEE Journal of Photovoltaics, 2015, 5, 1613-1620.	1.5	12
3124	The role of photonics in energy. Journal of Photonics for Energy, 2015, 5, 050997.	0.8	18
3125	Radiative cooling for solar cells. , 2015, , .		3
3126	Light trapping in randomly arranged silicon nanorocket arrays for photovoltaic applications. Nanotechnology, 2015, 26, 375401.	1.3	9
3127	Point-focus spectral splitting solar concentrator for multiple cells concentrating photovoltaic system. Journal of Optics (United Kingdom), 2015, 17, 105901.	1.0	11
3128	Multi-junction-solar-cell designs and characterizations based on detailed-balance principle and luminescence yields. Proceedings of SPIE, 2015, , .	0.8	2
3129	Review on Tin (II) Sulfide (SnS) Material: Synthesis, Properties, and Applications. Critical Reviews in Solid State and Materials Sciences, 2015, 40, 359-398.	6.8	161
3130	Inorganic dye-sensitized solar cell employing In-enriched Cu–In–S ternary colloids prepared in water media. RSC Advances, 2015, 5, 71743-71748.	1.7	9
3131	Equivalent circuit analysis of radiative coupling in monolithic tandem solar cells. Applied Physics Letters, 2015, 106, .	1.5	14
3132	Quantitative optical measurement of chemical potentials in intermediate band solar cells. Journal of Photonics for Energy, 2015, 5, 053092.	0.8	7
3133	Sustainable Energy Application. , 2015, , 181-231.		1
3134	Comparison of Cu2ZnSnS4 thin films and solar cell performance using Zn target with ZnS target. Journal of Alloys and Compounds, 2015, 650, 641-646.	2.8	14
3135	Improved modeling of photoluminescent and electroluminescent coupling in multijunction solar cells. Solar Energy Materials and Solar Cells, 2015, 143, 48-51.	3.0	30
3136	Raman and photoluminescence investigation of CdS/CdSe quantum dots on TiO2 nanoparticles with multi-walled carbon nanotubes and their application in solar cells. Vibrational Spectroscopy, 2015, 80, 66-69.	1.2	10
3137	Low-Bandgap Near-IR Conjugated Polymers/Molecules for Organic Electronics. Chemical Reviews, 2015, 115, 12633-12665.	23.0	1,029
3138	Antagonism between Spin–Orbit Coupling and Steric Effects Causes Anomalous Band Gap Evolution in the Perovskite Photovoltaic Materials CH <sub>3</sub> NH <sub>3</sub> Sn <sub>1–<i>xx</i></sub> Pb <sub><i>xx</i></sub> I <sub>3</sub> . Journal of Physical Chemistry Letters 2015 6, 3503-3509	2.1	202
3139	Ligands Slow Down Pure-Dephasing in Semiconductor Quantum Dots. ACS Nano, 2015, 9, 9106-9116.	7.3	59

#	Article	IF	CITATIONS
3140	Solid state photon upconversion utilizing thermally activated delayed fluorescence molecules as triplet sensitizer. Applied Physics Letters, 2015, 107, .	1.5	80
3141	An intermediate band dye-sensitised solar cell using triplet–triplet annihilation. Physical Chemistry Chemical Physics, 2015, 17, 24826-24830.	1.3	77
3142	Smooth CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> from controlled solid–gas reaction for photovoltaic applications. RSC Advances, 2015, 5, 73760-73766.	1.7	17
3143	Hybrid solar converters for maximum exergy and inexpensive dispatchable electricity. Energy and Environmental Science, 2015, 8, 3083-3091.	15.6	83
3144	Role of Polymer Fractionation in Energetic Losses and Charge Carrier Lifetimes of Polymer: Fullerene Solar Cells. Journal of Physical Chemistry C, 2015, 119, 19668-19673.	1.5	22
3145	Direct nm-Scale Spatial Mapping of Traps in CIGS. IEEE Journal of Photovoltaics, 2015, 5, 1482-1486.	1.5	32
3146	Shape controlled growth of ZnO nanorods and fabrication of ZnO/CuO heterojunctions by chemical bath deposition using zinc nitrate hexahydrate and copper (III) nitrate trihydrate. Thin Solid Films, 2015, 596, 201-208.	0.8	8
3147	Enhanced Visible Light-Induced Charge Separation and Charge Transport in Cu <sub>2</sub> O-Based Photocathodes by Urea Treatment. ACS Applied Materials & Interfaces, 2015, 7, 19887-19893.	4.0	27
3148	Sb2Se3 sensitized heterojunction solar cells. Materials for Renewable and Sustainable Energy, 2015, 4, 1.	1.5	35
3149	Functionalized silicon nanowires/conjugated polymer hybrid solar cells: Optical, electrical and morphological characterizations. Journal of Luminescence, 2015, 168, 315-324.	1.5	14
3150	Improved Photoelectrochemical Cell Performance of Tin Oxide with Functionalized Multiwalled Carbon Nanotubes–Cadmium Selenide Sensitizer. ACS Applied Materials & Interfaces, 2015, 7, 25094-25104.	4.0	24
3151	Room temperature fabrication of CH3NH3PbBr3 by anti-solvent assisted crystallization approach for perovskite solar cells with fast response and small J–V hysteresis. Nano Energy, 2015, 17, 269-278.	8.2	148
3152	Electronic, optical, and mechanical properties of Cu <sub>2</sub> ZnSnS <sub>4</sub> with four crystal structures. Journal of Semiconductors, 2015, 36, 083004.	2.0	15
3153	Nanoimprint lithography: an enabling technology for nanophotonics. Applied Physics A: Materials Science and Processing, 2015, 121, 327-333.	1.1	29
3154	Effect of top-cell CGS thickness on the performance of CGS/CIGS tandem solar cell. Solar Energy, 2015, 122, 104-112.	2.9	64
3155	Efficient direct solar-to-hydrogen conversion by in situ interface transformation of a tandem structure. Nature Communications, 2015, 6, 8286.	5.8	243
3156	High performance of PbSe/PbS core/shell quantum dot heterojunction solar cells: short circuit current enhancement without the loss of open circuit voltage by shell thickness control. Nanoscale, 2015, 7, 17473-17481.	2.8	31
3157	Sputter grown sub-micrometer thick Cu2ZnSnS4 thin film for photovoltaic device application. Materials Letters, 2015, 160, 45-50.	1.3	42

#	Article	IF	Citations
3158	Investigating photoluminescence quantum yield of silicon nanocrystals formed in SiO <sub>x</sub> with different initial Si excess. Proceedings of SPIE, 2015, , .	0.8	3
3159	Status and Potential of CdTe Solar-Cell Efficiency. IEEE Journal of Photovoltaics, 2015, 5, 1217-1221.	1.5	129
3160	Role of Surface Termination on Hot Electron Relaxation in Silicon Quantum Dots: A First-Principles Dynamics Simulation Study. Nano Letters, 2015, 15, 6429-6433.	4.5	73
3161	Collective aspects of singlet fission in molecular crystals. Journal of Chemical Physics, 2015, 143, 044118.	1.2	36
3162	Investigation of single-layer/multilayer self-assembled InAs quantum dots on GaAs1-xSbx/GaAs composite substrates. Journal of Applied Physics, 2015, 118, .	1.1	4
3163	Electrical equivalent model of intermediate band solar cell using PSpice. Sadhana - Academy Proceedings in Engineering Sciences, 2015, 40, 1473-1479.	0.8	2
3164	Strain Tuning of Tin–Halide and Lead–Halide Perovskites: A First-Principles Atomic and Electronic Structure Study. Journal of Physical Chemistry C, 2015, 119, 22832-22837.	1.5	129
3165	Enhanced multiple exciton generation in amorphous silicon nanowires and films. Molecular Physics, 0, , 1-15.	0.8	7
3166	Performance characterization of photovoltaic technology with highly efficient Multi-Junction Solar Cells for Space Solar Power Satellite system. , 2015, , .		0
3167	Current–Voltage Enhancement of a Single Coaxial Nanowire Solar Cell. ACS Photonics, 2015, 2, 1698-1704.	3.2	11
3168	<i>&gt;p</i> - to <i>n</i> -Type Conversion and Nonmetal–Metal Transition of Lithium-Inserted Cu <sub>3</sub> N Films. Chemistry of Materials, 2015, 27, 8076-8083.	3.2	35
3169	Spectral splitting photovoltaics using perovskite and wideband dye-sensitized solar cells. Nature Communications, 2015, 6, 8834.	5.8	122
3170	Enhanced broadband spectral response and energy conversion efficiency for hetero-junction solar cells with graded-sized Si quantum dots/SiC multilayers. Journal of Materials Chemistry C, 2015, 3, 12061-12067.	2.7	24
3171	High-Efficiency Plasmonic Metamaterial Selective Emitter Based on an Optimized Spherical Core-Shell Nanostructure for Planar Solar Thermophotovoltaics. Plasmonics, 2015, 10, 529-538.	1.8	20
3172	A sensitivity analysis to assess the relative importance of improvements in electrocatalysts, light absorbers, and system geometry on the efficiency of solar-fuels generators. Energy and Environmental Science, 2015, 8, 876-886.	15.6	32
3173	Properties of Cu(In,Ca)Se <sub>2</sub> solar cells with new record efficiencies up to 21.7%. Physica Status Solidi - Rapid Research Letters, 2015, 9, 28-31.	1.2	813
3174	Solution-Processable Singlet Fission Photovoltaic Devices. Nano Letters, 2015, 15, 354-358.	4.5	133
3175	Bandgap optimization of submicronâ€thick Cu(In,Ga)Se <sub>2</sub> solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 1157-1163.	4.4	26

#	Article	IF	CITATIONS
3176	Electron relaxation in the CdSe quantum dot - ZnO composite: prospects for photovoltaic applications. Scientific Reports, 2015, 4, 7244.	1.6	25
3177	Performance Limits and Status of Single-Junction Solar Cells With Emphasis on CIGS. IEEE Journal of Photovoltaics, 2015, 5, 360-365.	1.5	31
3178	Quantum-Dot-Based Solar Cells: Recent Advances, Strategies, and Challenges. Journal of Physical Chemistry Letters, 2015, 6, 85-99.	2.1	187
3179	The Next Breakthrough for Organic Photovoltaics?. Journal of Physical Chemistry Letters, 2015, 6, 77-84.	2.1	126
3180	Design Meets Nature: Tetrahedrite Solar Absorbers. Advanced Energy Materials, 2015, 5, 1401506.	10.2	45
3181	Cu <sub>2</sub> ZnSnSe <sub>4</sub> Thinâ€Film Solar Cells by Thermal Coâ€evaporation with 11.6% Efficiency and Improved Minority Carrier Diffusion Length. Advanced Energy Materials, 2015, 5, 1401372.	10.2	408
3182	Black Silicon Photovoltaics. Advanced Optical Materials, 2015, 3, 147-164.	3.6	169
3183	Optical properties and limiting photocurrent of thin-film perovskite solar cells. Energy and Environmental Science, 2015, 8, 602-609.	15.6	417
3184	Highly Efficient Tandem Polymer Solar Cells with a Photovoltaic Response in the Visible Light Range. Advanced Materials, 2015, 27, 1189-1194.	11.1	130
3185	Envisioning advanced solar electricity generation: Parametric studies of CPV/T systems with spectral filtering and high temperature PV. Applied Energy, 2015, 140, 224-233.	5.1	76
3186	Photonic Crystalâ€Driven Spectral Concentration for Upconversion Photovoltaics. Advanced Optical Materials, 2015, 3, 568-574.	3.6	26
3187	A nanoscale study of charge extraction in organic solar cells: the impact of interfacial molecular configurations. Nanoscale, 2015, 7, 104-112.	2.8	13
3188	Optimizing GaNP Coaxial Nanowires for Efficient Light Emission by Controlling Formation of Surface and Interfacial Defects. Nano Letters, 2015, 15, 242-247.	4.5	20
3189	Competition and Conflicts on Resource Use. , 2015, , .		3
3190	Efficient Spray oated Colloidal Quantum Dot Solar Cells. Advanced Materials, 2015, 27, 116-121.	11.1	139
3191	Low-temperature growth of single-crystal Cu(In,Ga)Se2 films by pulsed electron deposition technique. Solar Energy Materials and Solar Cells, 2015, 133, 82-86.	3.0	23
3192	Density functional theory investigation of opto-electronic properties of thieno[3,4-b]thiophene and benzodithiophene polymer and derivatives and their applications in solar cell. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2015, 136, 373-380.	2.0	11
3193	Metal-oxide broken-gap tunnel junction for copper indium gallium diselenide tandem solar cells. Solar Energy Materials and Solar Cells, 2015, 133, 133-142.	3.0	26

#	Article	IF	CITATIONS
3194	Activation of silicon surfaces for H2 evolution by electrografting of pyridine molecules. Surface Science, 2015, 631, 185-189.	0.8	8
3195	Electronic and Optoelectronic Materials and Device Innovations. , 2015, , 1049-1092.		0
3196	Solution-based synthesis of high yield CZTS (Cu 2 ZnSnS 4 ) spherical quantum dots. Superlattices and Microstructures, 2015, 77, 305-312.	1.4	26
3197	Highly efficient photochemical upconversion in a quasi-solid organogel. Journal of Materials Chemistry C, 2015, 3, 616-622.	2.7	72
3198	Electronic properties of PbX <sub>3</sub> CH <sub>3</sub> NH <sub>3</sub> (X = Cl, Br, I) compounds for photovoltaic and photocatalytic applications. Physical Chemistry Chemical Physics, 2015, 17, 2199-2209.	1.3	52
3199	Tandem-structured, hot electron based photovoltaic cell with double Schottky barriers. Scientific Reports, 2014, 4, 4580.	1.6	25
3200	Modeling photon transport in fluorescent solar concentrators. Progress in Photovoltaics: Research and Applications, 2015, 23, 1357-1366.	4.4	3
3201	Cu2ZnSnS4 thin film solar cell fabricated by co-electrodeposited metallic precursor. Journal of Materials Science: Materials in Electronics, 2015, 26, 204-210.	1.1	10
3202	Synthesis of an open-framework allotrope ofÂsilicon. Nature Materials, 2015, 14, 169-173.	13.3	233
3203	Hot carrier solar cell with semi infinite energy filtering. Solar Energy, 2015, 111, 1-9.	2.9	19
3203 3204	Hot carrier solar cell with semi infinite energy filtering. Solar Energy, 2015, 111, 1-9. Photochemical upconversion: present status and prospects for its application to solar energy conversion. Energy and Environmental Science, 2015, 8, 103-125.	2.9 15.6	19 471
3203 3204 3205	Hot carrier solar cell with semi infinite energy filtering. Solar Energy, 2015, 111, 1-9.         Photochemical upconversion: present status and prospects for its application to solar energy conversion. Energy and Environmental Science, 2015, 8, 103-125.         Influence of deposition parameters and annealing on Cu2ZnSnS4 thin films grown by SILAR. Journal of Alloys and Compounds, 2015, 622, 942-947.	2.9 15.6 2.8	19 471 29
3203 3204 3205 3206	Hot carrier solar cell with semi infinite energy filtering. Solar Energy, 2015, 111, 1-9.         Photochemical upconversion: present status and prospects for its application to solar energy conversion. Energy and Environmental Science, 2015, 8, 103-125.         Influence of deposition parameters and annealing on Cu2ZnSnS4 thin films grown by SILAR. Journal of Alloys and Compounds, 2015, 622, 942-947.         Lanthanideâ€Doped Fluoride Core/Multishell Nanoparticles for Broadband Upconversion of Infrared Light. Advanced Optical Materials, 2015, 3, 575-582.	2.9 15.6 2.8 3.6	19 471 29 50
3203 3204 3205 3206 3207	Hot carrier solar cell with semi infinite energy filtering. Solar Energy, 2015, 111, 1-9.         Photochemical upconversion: present status and prospects for its application to solar energy conversion. Energy and Environmental Science, 2015, 8, 103-125.         Influence of deposition parameters and annealing on Cu2ZnSnS4 thin films grown by SILAR. Journal of Alloys and Compounds, 2015, 622, 942-947.         Lanthanideâ€Doped Fluoride Core/Multishell Nanoparticles for Broadband Upconversion of Infrared Light. Advanced Optical Materials, 2015, 3, 575-582.         Control of hot-carrier relaxation for realizing ideal quantum-dot intermediate-band solar cells. Scientific Reports, 2014, 4, 4125.	2.9 15.6 2.8 3.6	19 471 29 50
<ul> <li>3203</li> <li>3204</li> <li>3205</li> <li>3206</li> <li>3207</li> <li>3208</li> </ul>	Hot carrier solar cell with semi infinite energy filtering. Solar Energy, 2015, 111, 1-9.         Photochemical upconversion: present status and prospects for its application to solar energy conversion. Energy and Environmental Science, 2015, 8, 103-125.         Influence of deposition parameters and annealing on Cu2ZnSnS4 thin films grown by SILAR. Journal of Alloys and Compounds, 2015, 622, 942-947.         Lanthanideâ€Doped Fluoride Core/Multishell Nanoparticles for Broadband Upconversion of Infrared Light. Advanced Optical Materials, 2015, 3, 575-582.         Control of hot-carrier relaxation for realizing ideal quantum-dot intermediate-band solar cells. Scientific Reports, 2014, 4, 4125.         The identification and characterization of defect states in hybrid organic–inorganic perovskite photovoltaics. Physical Chemistry Chemical Physics, 2015, 17, 112-116.	2.9 15.6 2.8 3.6 1.6	19         471         29         50         26         335
<ul> <li>3203</li> <li>3204</li> <li>3205</li> <li>3206</li> <li>3207</li> <li>3208</li> <li>3209</li> </ul>	Hot carrier solar cell with semi infinite energy filtering. Solar Energy, 2015, 111, 1-9.         Photochemical upconversion: present status and prospects for its application to solar energy conversion. Energy and Environmental Science, 2015, 8, 103-125.         Influence of deposition parameters and annealing on Cu2ZnSnS4 thin films grown by SILAR. Journal of Alloys and Compounds, 2015, 622, 942-947.         Lanthanideâ€Doped Fluoride Core/Multishell Nanoparticles for Broadband Upconversion of Infrared Light. Advanced Optical Materials, 2015, 3, 575-582.         Control of hot-carrier relaxation for realizing ideal quantum-dot intermediate-band solar cells. Scientific Reports, 2014, 4, 4125.         The identification and characterization of defect states in hybrid organic–inorganic perovskite photovoltaics. Physical Chemistry Chemical Physics, 2015, 17, 112-116.         Sputtered metal oxide broken gap junctions for tandem solar cells. Solar Energy Materials and Solar Cells, 2015, 132, 515-522.	2.9 15.6 2.8 3.6 1.6 1.3	19         471         29         50         26         335         13
<ul> <li>3203</li> <li>3204</li> <li>3205</li> <li>3206</li> <li>3207</li> <li>3208</li> <li>3209</li> <li>3210</li> </ul>	Hot carrier solar cell with semi infinite energy filtering. Solar Energy, 2015, 111, 1-9.         Photochemical upconversion: present status and prospects for its application to solar energy conversion. Energy and Environmental Science, 2015, 8, 103-125.         Influence of deposition parameters and annealing on Cu22nSnS4 thin films grown by SILAR. Journal of Alloys and Compounds, 2015, 622, 942-947.         Lanthanideâ€Doped Fluoride Core/Multishell Nanoparticles for Broadband Upconversion of Infrared Light. Advanced Optical Materials, 2015, 3, 575-582.         Control of hot-carrier relaxation for realizing ideal quantum-dot intermediate-band solar cells. Scientific Reports, 2014, 4, 4125.         The identification and characterization of defect states in hybrid organic–inorganic perovskite photovoltaics. Physical Chemistry Chemical Physics, 2015, 17, 112-116.         Sputtered metal oxide broken gap junctions for tandem solar cells. Solar Energy Materials and Solar cells, 2015, 132, 515-522.         Air Gaps as Intermediate Selective Reflectors to Reach Theoretical Efficiency Limits of Multibandgap Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 410-417.	2.9 15.6 2.8 3.6 1.6 1.3 3.0 1.5	19         471         29         50         26         335         13         17

#	Article	IF	CITATIONS
3212	Generation of hot carriers for photon management in future photovoltaics. Solar Energy Materials and Solar Cells, 2015, 135, 67-71.	3.0	6
3213	Temperature dependence of hole conductor free formamidinium lead iodide perovskite based solar cells. Journal of Materials Chemistry A, 2015, 3, 9171-9178.	5.2	191
3214	DFT calculations study of structural, electronic, and optical properties of Cu2ZnSn(S1â^'Se )4 alloys. Journal of Alloys and Compounds, 2015, 618, 248-253.	2.8	11
3215	Radiative efficiency of lead iodide based perovskite solar cells. Scientific Reports, 2014, 4, 6071.	1.6	283
3216	Light absorption and manyâ€particle electron–phonon interactions in intermediate band quantum well solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 1238-1249.	4.4	3
3217	Economic analysis of the contribution of photovoltaics to the decarbonization of the power sector. Renewable and Sustainable Energy Reviews, 2015, 41, 1288-1297.	8.2	21
3218	Extended short-wavelength spectral response of organic/(silver nanoparticles/Si nanoholes) Tj ETQq0 0 0 rgBT /O Science, 2015, 334, 110-114.	verlock 10 3.1	) Tf 50 507 T 8
3219	Route towards low cost-high efficiency second generation solar cells: current status and perspectives. Journal of Materials Science: Materials in Electronics, 2015, 26, 5562-5573.	1.1	38
3220	Thin Film Co <sub>3</sub> O <sub>4</sub> /TiO <sub>2</sub> Heterojunction Solar Cells. Advanced Energy Materials, 2015, 5, 1401007.	10.2	86
3221	The Scope and Limitations of Ternary Blend Organic Photovoltaics. Advanced Energy Materials, 2015, 5, 1400891.	10.2	116
3222	The formation mechanism of secondary phases in Cu 2 ZnSnSe 4 absorber layer. Thin Solid Films, 2015, 582, 245-248.	0.8	8
3223	Device Architectures for Enhanced Photon Recycling in Thinâ€Film Multijunction Solar Cells. Advanced Energy Materials, 2015, 5, 1400919.	10.2	41
3224	A review on pulsed laser deposited CZTS thin films for solar cell applications. Journal of Alloys and Compounds, 2015, 619, 109-121.	2.8	203
3225	Modeling of multi-junction photovoltaic cell using MATLAB/Simulink to improve the conversion efficiency. Renewable Energy, 2015, 74, 917-924.	4.3	55
3226	Inâ€plane coupling effect on absorption coefficients of InAs/GaAs quantum dots arrays for intermediate band solar cell. Progress in Photovoltaics: Research and Applications, 2015, 23, 546-558.	4.4	36
3227	Optical spectrum of bottom-up graphene nanoribbons: towards efficient atom-thick excitonic solar cells. Scientific Reports, 2014, 4, 6579.	1.6	24
3228	A new class of multiâ€bandgap highâ€efficiency photovoltaics enabled by broadband diffractive optics. Progress in Photovoltaics: Research and Applications, 2015, 23, 1073-1079.	4.4	29
3229	A general framework for the assessment of solar fuel technologies. Energy and Environmental Science, 2015, 8, 126-157.	15.6	293

#	Article	IF	CITATIONS
3230	Physical characterization of Cu2ZnGeSe4 thin films from annealing of Cu–Zn–Ge precursor layers. Thin Solid Films, 2015, 582, 171-175.	0.8	31
3231	Predicting the Openâ€Circuit Voltage of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Solar Cells Using Electroluminescence and Photovoltaic Quantum Efficiency Spectra: the Role of Radiative and Nonâ€Radiative Recombination. Advanced Energy Materials, 2015, 5, 1400812.	10.2	425
3232	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. Nanoscale, 2015, 7, 4598-4810.	2.8	2,452
3233	Highâ€Efficiency Organic Photovoltaic Cells Based on the Solutionâ€Processable Hole Transporting Interlayer Copper Thiocyanate (CuSCN) as a Replacement for PEDOT:PSS. Advanced Energy Materials, 2015, 5, 1401529.	10.2	133
3234	Multilayered Solar Energy Converters with Flexible Sequence of p and n Semiconductor Films. , 0, , .		0
3235	Photovoltaic Cell: Optimum Photon Utilisation. PAM Review Energy Science & Technology, 2016, 3, 64-85.	0.2	0
3237	Screenâ€Printed Front Junction nâ€Type Silicon Solar Cells. , 2016, , .		4
3238	Modeling of Optical Properties of Black Silicon/Crystalline Silicon. Journal of Scientific and Industrial Metrology, 2016, 01, .	0.1	4
3241	Recent Developments in Solar Energy Applications Based on Perovskites: A Current Commentary. Science Progress, 2016, 99, 335-345.	1.0	2
3242	Applications of Near-Field Thermal Radiation. , 2016, , 379-457.		0
3243	Fabrication of Si/SiO <sub>2</sub> Superlattice Microwire Array Solar Cells Using Microsphere Lithography. Journal of Nanomaterials, 2016, 2016, 1-8.	1.5	2
3244	Organic Tandem Solar Cells. , 2016, , .		0
3245	Photovoltaics: Advanced Inorganic Materials. , 2016, , .		1
3246	Introduction to solar heating andÂcooling systems. , 2016, , 3-12.		11
3247	Recent Progress on Solution-Processed CdTe Nanocrystals Solar Cells. Applied Sciences (Switzerland), 2016, 6, 197.	1.3	24
3248	Unified Quantum Model of Work Generation in Thermoelectric Generators, Solar and Fuel Cells. Entropy, 2016, 18, 210.	1.1	9
3249	Nanostructured p-Type Semiconductor Electrodes and Photoelectrochemistry of Their Reduction Processes. Energies, 2016, 9, 373.	1.6	46
3250	Design and Optimization of Thermophotovoltaic System Cavity with Mirrors. Energies, 2016, 9, 722.	1.6	4

#	Article	IF	CITATIONS
3251	Perovskite Solar Cells: Progress and Advancements. Energies, 2016, 9, 861.	1.6	106
3252	Emission Enhancement and Intermittency in Polycrystalline Organolead Halide Perovskite Films. Molecules, 2016, 21, 1081.	1.7	33
3253	Theoretical study of intrinsic defects in CdTe. Journal of Physics: Conference Series, 2016, 720, 012031.	0.3	5
3254	Upconversion in a Bragg structure: photonic effects of a modified local density of states and irradiance on luminescence and upconversion quantum yield. Optics Express, 2016, 24, 14895.	1.7	24
3255	Hybrid dielectric light trapping designs for thin-film CdZnTe/Si tandem cells. Optics Express, 2016, 24, A1008.	1.7	8
3256	Influence of hydration water on CH_3NH_3PbI_3 perovskite films prepared through one-step procedure. Optics Express, 2016, 24, A1431.	1.7	25
3257	Symmetry-breaking nanostructures on crystalline silicon for enhanced light trapping in thin film solar cells. Optics Express, 2016, 24, A1586.	1.7	10
3258	First-principles prediction of a rising star of solar energy material: SrTcO_3. Optics Express, 2016, 24, A1612.	1.7	1
3259	Super-wideband perfect solar light absorbers using titanium and silicon dioxide thin-film cascade optical nanocavities. Optical Materials Express, 2016, 6, 3804.	1.6	30
3260	Numerical Simulations on Perovskite Photovoltaic Devices. , 0, , .		20
3261	A Kinetic Rate Model of Novel Upconversion Nanostructures for High-Efficiency Photovoltaics. IEEE Journal of Photovoltaics, 2016, 6, 1183-1190.	1.5	6
3262	Assessing material qualities and efficiency limits of III-V on silicon solar cells using external radiative efficiency. Progress in Photovoltaics: Research and Applications, 2016, 24, 1310-1318.	4.4	18
3263	Recent Advances in Organic Photovoltaics: Device Structure and Optical Engineering Optimization on the Nanoscale. Small, 2016, 12, 1547-1571.	5.2	77
3264	An Efficient Dualâ€Mode Solar Spectral Modification for câ€Si Solar Cells in Tm <sup>3+</sup> /Yb <sup>3+</sup> Codoped Tellurite Glasses. Journal of the American Ceramic Society, 2016, 99, 2300-2305.	1.9	20
3265	Broadband Absorption Enhancement in Thin Film Solar Cells Using Asymmetric Double-Sided Pyramid Gratings. Journal of Electronic Materials, 2016, 45, 5685-5694.	1.0	12
3266	Overcoming the Interface Losses in Planar Heterojunction Perovskiteâ€Based Solar Cells. Advanced Materials, 2016, 28, 5112-5120.	11.1	188
3267	Lithographyâ€Free Largeâ€Area Metamaterials for Stable Thermophotovoltaic Energy Conversion. Advanced Optical Materials, 2016, 4, 671-676.	3.6	23
3268	Bandgapâ€Tunable Cesium Lead Halide Perovskites with High Thermal Stability for Efficient Solar Cells. Advanced Energy Materials, 2016, 6, 1502458.	10.2	1,265

#	Article	IF	CITATIONS
3269	Toward Highâ€Performance Carbon Nanotube Photovoltaic Devices. Advanced Energy Materials, 2016, 6, 1600522.	10.2	28
3270	Si/Zn <i><sub>x</sub></i> Cd <sub>1-</sub> <i><sub>x</sub></i> Te heterostructures with different Zn contents: growth, electrical and photoelectrical properties. Journal of Physics: Conference Series, 2016, 690, 012019.	0.3	0
3271	Nanoscale Tailored Plasmonic Material for Optimum Broadband Solar Harvesting. Advanced Optical Materials, 2016, 4, 413-418.	3.6	3
3272	Using atomistic simulations to model cadmium telluride thin film growth. Journal of Physics Condensed Matter, 2016, 28, 105002.	0.7	3
3273	Mapping photovoltaic performance with nanoscale resolution. Progress in Photovoltaics: Research and Applications, 2016, 24, 315-325.	4.4	22
3274	Effect of sodium acetate additive in successive ionic layer adsorption and reaction on the performance of CdS quantum-dot-sensitized solar cells. Journal of Power Sources, 2016, 325, 706-713.	4.0	25
3275	Optimum band gap combinations to make best use of new photovoltaic materials. Solar Energy, 2016, 135, 750-757.	2.9	46
3276	Thermophotovoltaics: a potential pathway to high efficiency concentrated solar power. Energy and Environmental Science, 2016, 9, 2654-2665.	15.6	60
3277	Photoluminescent and electroluminescent couplings in monolithic tandem solar cells. Progress in Photovoltaics: Research and Applications, 2016, 24, 1566-1576.	4.4	15
3278	Highâ€Throughput Preparation of New Photoactive Nanocomposites. ChemSusChem, 2016, 9, 1279-1289.	3.6	18
3279	Solar energy integration into advanced building design for meeting energy demand and environment problem. International Journal of Energy Research, 2016, 40, 1293-1300.	2.2	69
3280	Comparison of Ge, InGaAs p-n junction solar cell. Journal of Physics: Conference Series, 2016, 707, 012035.	0.3	9
3281	Identifying Fundamental Limitations in Halide Perovskite Solar Cells. Advanced Materials, 2016, 28, 2439-2445.	11.1	129
3282	Evaluation of Small Molecules as Front Cell Donor Materials for Highâ€Efficiency Tandem Solar Cells. Advanced Materials, 2016, 28, 7008-7012.	11.1	43
3283	Interfacial Engineering for Quantumâ€Đotâ€Sensitized Solar Cells. Chemistry - an Asian Journal, 2016, 11, 1183-1193.	1.7	21
3284	Atomic layer deposition of In <sub>2</sub> O <sub>3</sub> transparent conductive oxide layers for application in Cu(In,Ga)Se <sub>2</sub> solar cells with different buffer layers. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1541-1552.	0.8	17
3285	The ultimate efficiency of organolead halide perovskite solar cells limited by Auger processes. Journal of Materials Research, 2016, 31, 2197-2203.	1.2	6
3286	A brief review of co-doping. Frontiers of Physics, 2016, 11, 1.	2.4	98

#	Article	IF	CITATIONS
3287	Energy transfer and downconversion near-infrared material of Tb 3+ and Yb 3+ doped Ca 5 (BO 3 ) 3 F. Physica B: Condensed Matter, 2016, 500, 44-47.	1.3	1
3288	Nanostructuring Mixedâ€Ðimensional Perovskites: A Route Toward Tunable, Efficient Photovoltaics. Advanced Materials, 2016, 28, 3653-3661.	11.1	251
3289	Breaking the 10% Efficiency Barrier in Organic Photovoltaics: Morphology and Device Optimization of Wellâ€Known PBDTTT Polymers. Advanced Energy Materials, 2016, 6, 1502529.	10.2	285
3290	Compositional and electrical properties of line and planar defects in Cu(In,Ga)Se <sub>2</sub> thin films for solar cells – a review. Physica Status Solidi - Rapid Research Letters, 2016, 10, 363-375.	1.2	47
3291	CdS/CdSe quantum dots and ZnPc dye co-sensitized solar cells with Au nanoparticles/graphene oxide as efficient modified layer. Journal of Colloid and Interface Science, 2016, 480, 49-56.	5.0	22
3292	Developments in and prospects for photocathodic and tandem dye-sensitized solar cells. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2016, 28, 44-71.	5.6	42
3293	Growth and characterization of Cu2ZnGeSe4 thin films by selenization of multiple stacks (Cu/Se/ZnSe/Se/Ge/Se) in high vacuum. Vacuum, 2016, 131, 264-270.	1.6	10
3294	Status and Prognosis of Future-Generation Photoconversion to Photovoltaics and Solar Fuels. ACS Energy Letters, 2016, 1, 344-347.	8.8	9
3295	High-efficiency two-dimensional Ruddlesden–Popper perovskite solar cells. Nature, 2016, 536, 312-316.	13.7	2,767
3296	Optical analysis of CH <sub>3</sub> NH <sub>3</sub> Sn <sub>x</sub> Pb <sub>1â^'x</sub> I <sub>3</sub> absorbers: a roadmap for perovskite-on-perovskite tandem solar cells. Journal of Materials Chemistry A, 2016, 4, 11214-11221.	5.2	101
3297	Characterization and current–voltage characteristics of solar cells based on the composite of synthesized Sb <sub>2</sub> S <sub>3</sub> powder with small band gap and natural dye. Environmental Progress and Sustainable Energy, 2016, 35, 512-516.	1.3	10
3298	ls the Cu/Zn Disorder the Main Culprit for the Voltage Deficit in Kesterite Solar Cells?. Advanced Energy Materials, 2016, 6, 1502276.	10.2	277
3299	Combining sunlight concentration and angular confinement: Studying the effects of series resistance and external radiative efficiency. AIP Conference Proceedings, 2016, , .	0.3	0
3300	Efficiency limits for photoelectrochemical water-splitting. Nature Communications, 2016, 7, 13706.	5.8	218
3301	Shift current bulk photovoltaic effect in polar materials—hybrid and oxide perovskites and beyond. Npj Computational Materials, 2016, 2, .	3.5	246
3302	Review on carrier multiplication in graphene. Physica Status Solidi (B): Basic Research, 2016, 253, 2303-2310.	0.7	17
3303	Auger Up-Conversion of Low-Intensity Infrared Light in Engineered Quantum Dots. ACS Nano, 2016, 10, 10829-10841.	7.3	31
3304	All-silicon tandem solar cells: Practical limits for energy conversion and possible routes for improvement. Journal of Applied Physics, 2016, 119, .	1.1	12

	C	ITATION REPOR	RT	
#	Article	IF		CITATIONS
3305	Study of molybdenum sulphide as a novel buffer layer for CZTS solar cells. , 2016, , .			10
3306	Theoretical efficiency and cell parameters of AlAs/GaAs/Ge based new multijunction solar cell. , 2016	, , ,		1
3307	Stabilization of orthorhombic phase in single-crystal ZnSnN2 films. AIP Advances, 2016, 6, .	0.	6	38
3308	Sn doped CdTe as candidate for intermediate-band solar cells: A first principles DFT+GW study. Journ of Physics: Conference Series, 2016, 720, 012033.	al o.	3	1
3309	Efficient Si photovoltaic devices with integrated micro/nano holes. , 2016, , .			1
3310	Efficient singlet exciton fission in pentacene prepared from a soluble precursor. APL Materials, 2016, 4, .	2.	2	13
3311	Theoretical predictions on efficiency of bi-exciton formation and dissociation in chiral carbon nanotubes. Journal of Chemical Physics, 2016, 145, 154112.	1.:	2	14
3312	Palladium nanoparticle array-mediated semiconductor bonding that enables high-efficiency multi-junction solar cells. Japanese Journal of Applied Physics, 2016, 55, 025001.	0.	8	37
3313	Internal luminescence efficiencies in InGaP/GaAs/Ge triple-junction solar cells evaluated from photoluminescence through optical coupling between subcells. Scientific Reports, 2016, 6, 38297.	1.0	6	13
3314	Design of a high-efficiency and low-cost reflection-type diffractive optical element as the spectrum splitting solar concentrator for lateral multi-junction solar cells architecture. , 2016, , .			1
3315	Cobalt (II) oxide and nickel (II) oxide alloys as potential intermediate-band semiconductors: A theoretical study. Journal of Applied Physics, 2016, 119, .	1.:	1	26
3316	Modeling of Concurrent CO <sub>2</sub> and Water Splitting by Practical Photoelectrochemical Devices. Journal of the Electrochemical Society, 2016, 163, H1008-H1018.	1.5	3	10
3317	Temperature Dependence of Commercially Available Betavoltaic Cells. , 2016, , .			0
3318	In <inf>x</inf> Ga <inf>1â^'x</inf> As/GaAs-based intermediate band solar cell: Effects of quantum dot 2016, , .	S.,		1
3319	Interface oxygen and heat sensitivity of Cu(In,Ga)Se2 and CuGaSe2 solar cells. Applied Physics Lette 2016, 108, 203902.	rs, 1.{	5	10
3320	First-principles calculation for phonon and optoelectronic properties of CsSnI3. AIP Conference Proceedings, 2016, , .	0.	3	4
3321	Quantifying point defects in Cu2ZnSn(S,Se)4 thin films using resonant x-ray diffraction. Applied Physics Letters, 2016, 109, .	1.{	5	13
3322	Segmented holographic spectrum splitting concentrator. Proceedings of SPIE, 2016, , .	0.	8	0

#	ARTICLE Investigation of the optical absorption in Si/SiO <sub>2</sub> superlattice for the application to solar	IF 0.8	Citations
3324	cells. Japanese Journal of Applied Physics, 2016, 55, 04ES06. Exciton luminescence from Cu2SnS3 bulk crystals. Applied Physics Letters, 2016, 108, .	1.5	30
3325	High-density InAs/GaAs1â^' <i>x</i> Sb <i>x</i> quantum-dot structures grown by molecular beam epitaxy	1.1	9
3326	Structure and optical properties of aSiAl and aSiAlH <i>x</i> Materials, 2016, 4.	2.2	8
3327	Improvement of the output performance of CZTS thin film solar cell. , 2016, , .		1
3328	A Planarized Thermophotovoltaic Emitter With Idealized Selective Emission. IEEE Photonics Journal, 2016, 8, 1-9.	1.0	3
3329	Room-temperature dynamic correlation between methylammonium molecules in lead-iodine based perovskites: An <i>ab initio</i> molecular dynamics perspective. Physical Review B, 2016, 94, .	1.1	62
3330	Photon management with index-near-zero materials. Applied Physics Letters, 2016, 109, .	1.5	9
3331	Theoretical efficiency limit for a two-terminal multi-junction "step-cell―using detailed balance method. Journal of Applied Physics, 2016, 119, .	1.1	19
3332	Temperature dependence of photoconversion efficiency in silicon heterojunction solar cells: Theory vs experiment. Journal of Applied Physics, 2016, 119, .	1.1	31
3333	Size consistent formulations of the perturb-then-diagonalize MÃ,ller-Plesset perturbation theory correction to non-orthogonal configuration interaction. Journal of Chemical Physics, 2016, 145, 054105.	1.2	26
3334	Synthesis and characterization of nanoparticles of CZTSe by microwave-assited chemical synthesis. Materials Research Express, 2016, 3, 125017.	0.8	12
3335	First-principles investigation of the structural, dynamical, and dielectric properties of kesterite, stannite, and PMCA phases of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mml:mrow> <mml:msub> <mml:mi>Cu</mml:mi> <mml:n .<="" 2016,="" 94,="" b,="" physical="" review="" td=""><td>11,1 1n&gt;2<td>וו:mn&gt;</td></td></mml:n></mml:msub></mml:mrow></mml:math>	11,1 1n>2 <td>וו:mn&gt;</td>	וו:mn>
3336	Energy transfer between Ni2+ sensitizers and Er3+ emitters in broadband-sensitive upconverters La(Ga,Sc,In)O3:Er,Ni,Nb. Journal of Applied Physics, 2016, 120, .	1.1	14
3337	Improvement of minority-carrier lifetime in tin monosulfide via substrate engineering. , 2016, , .		0
3338	A broadband-sensitive upconverter La(Ga0.5Sc0.5)O3:Er,Ni,Nb for crystalline silicon solar cells. Applied Physics Letters, 2016, 108, .	1.5	24
3339	Extended hot carrier lifetimes observed in bulk In0.265±0.02Ga0.735N under high-density photoexcitation. Applied Physics Letters, 2016, 108, .	1.5	22
3340	Modeling and simulation of InGaN/GaN quantum dots solar cell. AIP Conference Proceedings, 2016, , .	0.3	3
# 3341	ARTICLE First-principles study of the optoelectronic properties and photovoltaic absorber layer efficiency of Cu-based chalcogenides. Journal of Applied Physics, 2016, 120, .	IF 1.1	CITATIONS
-----------	--	-----------	-----------
3342	Back- and Front-side Texturing for Light-management in Perovskite / Silicon-heterojunction Tandem Solar Cells. Energy Procedia, 2016, 102, 43-48.	1.8	14
3343	Effect of Se flux on CuGaSe2 absorbers deposited on ITO-coated SLG substrates by using a three-stage co-evaporation process. Journal of the Korean Physical Society, 2016, 69, 1553-1557.	0.3	0
3344	Pinning down high-performance Cu-chalcogenides as thin-film solar cell absorbers: A successive screening approach. Journal of Chemical Physics, 2016, 144, 194706.	1.2	18
3345	First principles modeling of grain boundaries in CdTe. , 2016, , .		0
3346	Enhancing the photovoltaic performance of CdTe/CdS solar cell via luminescent downshifting using K2SiF6:Mn4+ phosphors. AIP Conference Proceedings, 2016, , .	0.3	4
3347	Effect of doping on room temperature carrier escape mechanisms in InAs/GaAs quantum dot p-i-n junction photovoltaic cells. Journal of Applied Physics, 2016, 119, 194301.	1.1	5
3348	Optimal laser wavelength for efficient laser power converter operation over temperature. Applied Physics Letters, 2016, 108, .	1.5	53
3349	Highly efficient thermophotovoltaics enabled by photon re-use. , 2016, , .		4
3350	Solution-processed image sensors on flexible substrates. Flexible and Printed Electronics, 2016, 1, 043001.	1.5	45
3351	Detailed balance analysis of photovoltaic materials and devices. , 2016, , .		1
3352	Broadband angular selectivity of light at the nanoscale: Progress, applications, and outlook. Applied Physics Reviews, 2016, 3, 011103.	5.5	59
3353	Multiscale modeling of silicon heterojunction solar cells. , 2016, , .		1
3354	Design of coated standing nanowire array solar cell performing beyond the planar efficiency limits. Journal of Applied Physics, 2016, 119, 203108.	1.1	2
3355	Accurate expressions for solar cell fill factors including series and shunt resistances. Applied Physics Letters, 2016, 108, .	1.5	32
3356	Pathways to exotic metastable silicon allotropes. Applied Physics Reviews, 2016, 3, .	5.5	62
3357	Spectral splitting optimization for high-efficiency solar photovoltaic and thermal power generation. Applied Physics Letters, 2016, 109, .	1.5	25
3358	FA <sub>0.8</sub> MA <sub>0.2</sub> Sn <sub><i>x</i></sub> Pb <sub>1–<i>x</i></sub> I <sub>3</sub> Hybrid Perovskite Solid Solution: Toward Environmentally Friendly, Stable, and Near-IR Absorbing Materials. Inorganic Chemistry, 2016, 55, 12752-12757.	1.9	11

#	Article	IF	CITATIONS
3359	Impact of the spectrum, location and interconnection between solar cells in the annual production of photovoltaic energies in photovoltaic concentration systems. , 2016, , .		1
3360	Improving the figures of merit of intermediate band solar cells by controlling the capping procedure of the quantum dots. , 2016, , .		2
3361	Back-contacted thin-film GaAs solar cells. , 2016, , .		4
3362	Concentrator photovoltaic module architectures with capabilities for capture and conversion of full global solar radiation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E8210-E8218.	3.3	48
3363	Universal linear relationship on two-step photon absorption processes in In(Ga)As quantum dot solar cells. , 2016, , .		3
3364	Exosolar photovoltaics: Exploring the detailed balance of other star and planetary systems. , 2016, , .		0
3365	Dark states enhance the photocell power via phononic dissipation. Physical Chemistry Chemical Physics, 2016, 18, 31845-31849.	1.3	13
3366	Near infrared emission of TbAG:Ce3+,Yb3+ phosphor for solar cell applications. AIP Conference Proceedings, 2016, , .	0.3	4
3367	1.7 eV MgCdTe double-heterostructure solar cells for tandem device applications. , 2016, , .		2
3368	An optimized structure for CdTe solar cells. , 2016, , .		1
3369	Solar thermophotovoltaics: reshaping the solar spectrum. Nanophotonics, 2016, 5, 1-21.	2.9	117
3370	The purpose of a photon ratchet in intermediate band solar cells. , 2016, , .		2
3371	Study of GaP/Si Heterojunction Solar Cells. Energy Procedia, 2016, 102, 56-63.	1.8	22
3372	Modeling Mathematical of the Behavior of Up Converter when Implemented in Bifacial Silicon Solar Cells. Energy Procedia, 2016, 102, 80-86.	1.8	2
3373	Investigation of InAs/GaAs <inf>1â^'x</inf> Sb <inf>x</inf> quantum dots for applications in intermediate band solar cells. , 2016, , .		1
3374	Single vacuum chamber with multiple close space sublimation sources to fabricate CdTe solar cells. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	72
3375	Theory of photovoltaic characteristics of semiconductor quantum dot solar cells. Journal of Applied Physics, 2016, 120, .	1.1	4
3376	Photocarrier transport dynamics in InAs/GaAs quantum dot superlattice solar cells using time-of-flight spectroscopy. Physical Review B, 2016, 94, .	1.1	7

#	Article	IF	CITATIONS
3377	Numerical study on doping and positioning effect of type-II GaSb/GaAs quantum ring layer on solar cell performances. , 2016, , .		0
3378	Conduction and rectification in NbOx- and NiO-based metal-insulator-metal diodes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	5
3379	Thermodynamic efficiency limits of classical and bifacial multi-junction tandem solar cells: An analytical approach. Applied Physics Letters, 2016, 109, .	1.5	24
3380	Atomic and electronic structure of Lomer dislocations at CdTe bicrystal interface. Scientific Reports, 2016, 6, 27009.	1.6	35
3381	Shape-dependent conversion efficiency of Si nanowire solar cells with polygonal cross-sections. Journal of Applied Physics, 2016, 119, 225101.	1.1	10
3382	Radiative cooling of a GaAs solar cell to improve power conversion efficiency. , 2016, , .		4
3383	The voltage boost enabled by luminescence extraction in solar cells. , 2016, , .		1
3384	Shape engineering for electronic and optoelectronic properties of Si nanostructure solar cells. Journal of Applied Physics, 2016, 120, 144302.	1.1	14
3385	State hybridization shapes the photocurrent in triple quantum dot nanojunctions. Applied Physics Letters, 2016, 109, 073501.	1.5	3
3386	Time-resolved photoluminescence spectroscopy of CdTe/CdS/CdSe quantum dot complexes for photon upconversion. , 2016, , .		2
3387	Simulation of IQE tuning of individual cells for DC-balancing multijunction tandem cells. , 2016, , .		0
3388	Comparison of the sensitivity to spectral variation of voltage- and current-matched tandem devices with luminescent coupling and thickness optimization. , 2016, , .		2
3389	Radiative recombination dominated n-type monocrystalline CdTe/MgCdTe double-heterostructures. , 2016, , .		7
3390	Laser beam induced current (LBIC) mapping of InGaP/GaAs/Ge triple junction solar cells with luminescence coupling. , 2016, , .		8
3391	Universal behavior of time-resolved photoluminescence decays in III-V solar cells: Comparison of subcell current generation dynamics. , 2016, , .		0
3392	Photovoltaic characteristics of multiple quantum well solar cells with distributed Bragg reflector and selective filters. , 2016, , .		0
3393	Molecular dynamics simulations of ZnTe/Cu back contacts for CdTe solar cells. , 2016, , .		1
3394	Spin dependent recombination in CdTe/CdS solar cells. , 2016, , .		0

#	Article	IF	CITATIONS
3395	A â€ $pprox$ smart stackâ€ $\cdot$ triple-junction cell consisting of InGaP/GaAs and crystalline Si. , 2016, , .		6
3396	Impact of the Ga/In ratio on defects in Cu(In, Ga)Se <inf>2</inf> . , 2016, , .		7
3397	Bandgap and carrier transport engineering of quantum confined mixed phase nanocrystalline/amorphous silicon. , 2016, , .		1
3398	Intragranular defects in As-deposited and cadmium chloride-treated polycrystalline cadmium telluride solar cells. , 2016, , .		5
3399	High built-in potential and V <inf>oc</inf> of monocrystalline CdTe/MgCdTe double-heterostructure solar cells with p-type a-Si:H hole-contacts. , 2016, , .		0
3400	V <inf>OC</inf> overestimation from photoluminescence quantum yield in disordered absorber layers. , 2016, , .		2
3401	A comparative study on charge carrier recombination across the junction region of Cu2ZnSn(S,Se)4 and Cu(In,Ga)Se2 thin film solar cells. AIP Advances, 2016, 6, .	0.6	10
3402	Investigation of carrier dynamics in InAs/GaAsSb quantum dots with different silicon delta-doping levels. Semiconductor Science and Technology, 2016, 31, 125010.	1.0	0
3403	Limiting efficiencies of GaInP/GaAs/Ge up-conversion systems: Addressing the issue of radiative coupling. Applied Physics Letters, 2016, 109, .	1.5	4
3404	Pathway to oxide photovoltaics via band-structure engineering of SnO. APL Materials, 2016, 4, 106103.	2.2	28
3405	Limiting efficiencies for intermediate band solar cells with partial absorptivity: the case for a quantum ratchet. Progress in Photovoltaics: Research and Applications, 2016, 24, 656-662.	4.4	31
3406	Electronic Structure and Bonding in Co-Based Single and Mixed Valence Oxides: A Quantum Chemical Perspective. Inorganic Chemistry, 2016, 55, 3307-3315.	1.9	40
3407	Biomineralization of PbS and PbS–CdS core–shell nanocrystals and their application in quantum dot sensitized solar cells. Journal of Materials Chemistry A, 2016, 4, 6107-6115.	5.2	46
3408	Photovoltaic properties of LixCo3â^'xO4/TiO2 heterojunction solar cells with high open-circuit voltage. Solar Energy Materials and Solar Cells, 2016, 157, 126-133.	3.0	18
3409	Synthesis, Structure, Band Gap, and Near-Infrared Photosensitivity of a New Chalcogenide Crystal, (NH <sub>4</sub> ) <sub>4</sub> Ag <sub>12</sub> Sn <sub>7</sub> Se <sub>22</sub> . Inorganic Chemistry, 2016, 55, 5110-5112.	1.9	13
3410	Efficient organic ternary solar cells with the third component as energy acceptor. Nano Energy, 2016, 26, 180-191.	8.2	88
3411	Liquid contacting as a method to study photovoltaic properties of PbS quantum dot solids. Journal of Materials Chemistry A, 2016, 4, 9009-9013.	5.2	0
3412	Evaluation of photovoltaic properties of nanocrystalline-FeSi 2 /Si heterojunctions. Solid-State Electronics, 2016, 123, 111-118.	0.8	9

	CITATION I	LEPORT	
#	ARTICLE	IF	CITATIONS
3413	Dielectric Nanomaterials for Silicon Solar Cells. Nanoscience and Technology, 2016, , 41-94.	1.5	4
3414	A comparative study of the effect of fluorine substitution on the photovoltaic performance of benzothiadiazole-based copolymers. RSC Advances, 2016, 6, 47676-47686.	1.7	9
3415	Advancing colloidal quantum dot photovoltaic technology. Nanophotonics, 2016, 5, 31-54.	2.9	19
3416	The effect of CdS on the charge separation and recombination dynamics in PbS/CdS double-layered quantum dot sensitized solar cells. Chemical Physics, 2016, 478, 159-163.	0.9	10
3417	Ferrocene as a rapid charge regenerator in dye-sensitized solar cells. Dyes and Pigments, 2016, 132, 360-368.	2.0	31
3418	Towards optical optimization of planar monolithic perovskite/silicon-heterojunction tandem solar cells. Journal of Optics (United Kingdom), 2016, 18, 064012.	1.0	82
3419	Photoelectrochemical Solar Cells Consisting of a Pt-Modified CdS Photoanode and an Fe(ClO <sub>4</sub> ) <sub>2</sub> /Fe(ClO <sub>4</sub> ) <sub>3</sub> Redox Shuttle in a Nonaqueous Electrolyte. Journal of Physical Chemistry C, 2016, 120, 10781-10790.	1.5	7
3420	(S)TEM Analysis of the Strain and Morphology of InAs Quantum Dots using GaAs(Sb)(N) Capping Layers for Solar Cell Applications. Microscopy and Microanalysis, 2016, 22, 46-47.	0.2	Ο
3421	Influence of selenium amount on the structural and electronic properties of Cu(In,Ga)Se2 thin films and solar cells formed by the stacked elemental layer process. Thin Solid Films, 2016, 608, 62-70.	0.8	4
3422	8.2% pure selenide kesterite thinâ€film solar cells from largeâ€area electrodeposited precursors. Progress in Photovoltaics: Research and Applications, 2016, 24, 38-51.	4.4	52
3423	Development of High-Bandgap AlGaInP Solar Cells Grown by Organometallic Vapor-Phase Epitaxy. IEEE Journal of Photovoltaics, 2016, 6, 770-776.	1.5	48
3424	Effective drift mobility approximation in multiple quantum-well solar cell. , 2016, , .		4
3425	Obtaining phase-pure CZTS thin films by annealing vacuum evaporated CuS/SnS/ZnS stack. Journal of Crystal Growth, 2016, 445, 15-23.	0.7	44
3426	Fabrication of Cu2ZnSnSe4 solar cells through multi-step selenization of layered metallic precursor film. Thin Solid Films, 2016, 618, 42-49.	0.8	11
3427	Organic Salts as a Route to Energy Level Control in Low Bandgap, High Open ircuit Voltage Organic and Transparent Solar Cells that Approach the Excitonic Voltage Limit. Advanced Energy Materials, 2016, 6, 1501659.	10.2	29
3428	3Dâ€printed external light trap for solar cells. Progress in Photovoltaics: Research and Applications, 2016, 24, 623-633.	4.4	26
3429	Connection between modeled blackbody radiation and dipole emission in large-area nanostructures. Optics Letters, 2016, 41, 1494.	1.7	4
3430	Sodium induced grain growth, defect passivation and enhancement in the photovoltaic properties of Cu 2 ZnSnS 4 thin film solar cell. Materials Chemistry and Physics, 2016, 177, 293-298.	2.0	34

#	Article	IF	CITATIONS
3431	Performance analysis of solar thermophotovoltaic conversion enhanced by selective metamaterial absorbers and emitters. International Journal of Heat and Mass Transfer, 2016, 98, 788-798.	2.5	69
3432	Photovoltaic materials: Present efficiencies and future challenges. Science, 2016, 352, aad4424.	6.0	1,592
3433	Strong Infrared NLO Tellurides with Multifunction: CsX <sup>II</sup> <sub>4</sub> In <sub>5</sub> Te <sub>12</sub> (X <sup>II</sup> = Mn, Zn, Cd). Inorganic Chemistry, 2016, 55, 4470-4475.	1.9	47
3434	CZTS absorber layer for thin film solar cells from electrodeposited metallic stacked precursors (Zn/Cu-Sn). Applied Surface Science, 2016, 379, 91-97.	3.1	49
3435	Ordering kesterite improves solar cells: A low temperature post-deposition annealing study. Solar Energy Materials and Solar Cells, 2016, 151, 131-138.	3.0	60
3436	Application of Engineered Si Nanoparticles in Light-Induced Advanced Oxidation Remediation of a Water-Borne Model Contaminant. ACS Nano, 2016, 10, 5405-5412.	7.3	24
3437	Influence of oxygen pressure on the structural and electrical properties of CuO thin films prepared by pulsed laser deposition. Materials Letters, 2016, 176, 282-284.	1.3	36
3438	Integrated Photon Upconversion Solar Cell via Molecular Self-Assembled Bilayers. ACS Energy Letters, 2016, 1, 3-8.	8.8	86
3439	Theory of plasmonic quantum-dot-based intermediate band solar cells. Applied Optics, 2016, 55, 3405.	2.1	7
3440	Preparation of Sn-doped CuAlS <sub>2</sub> films with an intermediate band and wide-spectrum solar response. RSC Advances, 2016, 6, 40806-40810.	1.7	21
3441	Inorganic photovoltaics – Planar and nanostructured devices. Progress in Materials Science, 2016, 82, 294-404.	16.0	50
3442	Influence of ï€-bridge in N-fluorenyl indoline sensitizers on the photovoltaic performance of dye-sensitized solar cells. Journal of Photochemistry and Photobiology A: Chemistry, 2016, 326, 1-8.	2.0	23
3443	Tb3+/Yb3+ Activated Silica-Hafnia Glass and Glass Ceramics to Improve the Efficiency of Photovoltaic Solar Cells. Lecture Notes in Electrical Engineering, 2016, , 475-482.	0.3	0
3444	Experimental analysis and performance evaluation of a tandem photovoltaic–thermoelectric hybrid system. Energy Conversion and Management, 2016, 117, 490-500.	4.4	121
3445	Impact of the selenisation temperature on the structural and optical properties of CZTSe absorbers. Solar Energy Materials and Solar Cells, 2016, 152, 42-50.	3.0	27
3446	Enhanced Ultraviolet Photon Capture in Ligand-Sensitized Nanocrystals. ACS Photonics, 2016, 3, 547-552.	3.2	18
3447	Life Cycle Assessment (LCA) of perovskite PV cells projected from lab to fab. Solar Energy Materials and Solar Cells, 2016, 156, 157-169.	3.0	168
3448	Computer calculations across time and length scales in photovoltaic solar cells. Energy and Environmental Science, 2016, 9, 2197-2218.	15.6	27

#	Article	IF	Citations
3449	Impact of Minor Phases on the Performances of CZTSSe Thin-Film Solar Cells. Chemistry of Materials, 2016, 28, 3540-3563.	3.2	112
3450	Photocurrent Enhancement from Solid-State Triplet–Triplet Annihilation Upconversion of Low-Intensity, Low-Energy Photons. ACS Photonics, 2016, 3, 784-790.	3.2	68
3451	One-step electrodeposition for targeted off-stoichiometry Cu2ZnSnS4 thin films. Applied Surface Science, 2016, 383, 253-260.	3.1	49
3452	Trade-off between photovoltaic systems installation and agricultural practices on arable lands: An environmental and socio-economic impact analysis for Italy. Land Use Policy, 2016, 56, 90-99.	2.5	55
3453	Photoelectrochemical Solar Fuel Production. , 2016, , .		87
3454	Effect of Indium Doping on Surface Optoelectrical Properties of Cu <sub>2</sub> ZnSnS <sub>4</sub> Photoabsorber and Interfacial/Photovoltaic Performance of Cadmium Free In <sub>2</sub> S <sub>3</sub> /Cu <sub>2</sub> ZnSnS <sub>4</sub> Heterojunction Thin Film Solar Cell. Chemistry of Materials. 2016. 28. 3283-3291.	3.2	45
3455	Mixed Ge/Pb perovskite light absorbers with an ascendant efficiency explored from theoretical view. Physical Chemistry Chemical Physics, 2016, 18, 14408-14418.	1.3	74
3456	Charge Delocalization in the Cascade Band Structure CdS/CdSe and CdS/CdTe Core–Shell Sensitized with Re(I)–Polypyridyl Complex. Journal of Physical Chemistry C, 2016, 120, 10051-10061.	1.5	17
3457	Fundamental Limitations to Plasmonic Hot-Carrier Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 1852-1858.	2.1	64
3458	Interface Engineering of Semiconductor Electrodes for Photoelectrochemical Water Splitting: Application of Surface Characterization with Photoelectron Spectroscopy. , 2016, , 199-280.		8
3459	Organometallic halide perovskite/barium di-silicide thin-film double-junction solar cells. Proceedings of SPIE, 2016, , .	0.8	16
3460	In command of non-equilibrium. Chemical Society Reviews, 2016, 45, 2768-2784.	18.7	20
3461	Comprehensive analysis of photonic effects on up-conversion of β-NaYF4:Er3+nanoparticles in an organic-inorganic hybrid 1D photonic crystal. , 2016, , .		0
3462	Solution-based intramolecular singlet fission in cross-conjugated pentacene dimers. Nanoscale, 2016, 8, 10113-10123.	2.8	108
3463	N-type conduction in SnS by anion substitution with Cl. Applied Physics Express, 2016, 9, 051201.	1.1	19
3464	Structurally Diverse Poly(thienylene vinylene)s (PTVs) with Systematically Tunable Properties through Acyclic Diene Metathesis (ADMET) and Postpolymerization Modification. Macromolecules, 2016, 49, 3318-3327.	2.2	21
3465	Diffractive Spectral-Splitting Optical Element Designed by Adjoint-Based Electromagnetic Optimization and Fabricated by Femtosecond 3D Direct Laser Writing. ACS Photonics, 2016, 3, 886-894.	3.2	63
3466	The Voltage Boost Enabled by Luminescence Extraction in Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 801-809.	1.5	35

#	Article	IF	CITATIONS
3467	Host sensitized near-infrared emission in Nd3+-Yb3+ Co-doped Na2GdMg2V3O12 phosphor. Ceramics International, 2016, 42, 12988-12994.	2.3	26
3468	Quality Factor of Luminescent Solar Concentrators and Practical Concentration Limits Attainable with Semiconductor Quantum Dots. ACS Photonics, 2016, 3, 1138-1148.	3.2	154
3469	Optical analysis of perovskite/silicon tandem solar cells. Journal of Materials Chemistry C, 2016, 4, 5679-5689.	2.7	112
3470	An optimized efficient dual junction InGaN/CIGS solar cell: A numerical simulation. Superlattices and Microstructures, 2016, 96, 104-110.	1.4	10
3471	Excessive Exoergicity Reduces Singlet Exciton Fission Efficiency of Heteroacenes in Solutions. Journal of the American Chemical Society, 2016, 138, 6739-6745.	6.6	77
3472	Efficiently-designed hybrid tandem photovoltaic with organic and inorganic single cells. Journal of the Korean Physical Society, 2016, 68, 1094-1098.	0.3	3
3473	Optical properties of a grating-nanorod assembly structure for solar cells. Optics Communications, 2016, 376, 14-20.	1.0	27
3474	Electronic structure of p-type perylene monoimide-based donor–acceptor dyes on the nickel oxide (100) surface: a DFT approach. Physical Chemistry Chemical Physics, 2016, 18, 14382-14389.	1.3	14
3475	The temperature dependence of the characteristics of crystalline-silicon-based heterojunction solar cells. Technical Physics Letters, 2016, 42, 313-316.	0.2	7
3476	Impact of the Ga Droplet Wetting, Morphology, and Pinholes on the Orientation of GaAs Nanowires. Crystal Growth and Design, 2016, 16, 5781-5786.	1.4	38
3477	Opportunities and Limitations for Nanophotonic Structures To Exceed the Shockley–Queisser Limit. ACS Nano, 2016, 10, 8620-8631.	7.3	48
3478	Strong 1D localization and highly anisotropic electron–hole masses in heavy-halogen functionalized graphenes. Physical Chemistry Chemical Physics, 2016, 18, 25629-25636.	1.3	0
3479	Enhancing energy absorption in quantum dot solar cells via periodic light-trapping microstructures. Journal of Optics (United Kingdom), 2016, 18, 094002.	1.0	6
3480	Smart multifunction diffractive lens experimental validation for future PV cell applications. Optics Express, 2016, 24, A139.	1.7	3
3481	A promising two-dimensional solar cell donor: Black arsenic–phosphorus monolayer with 1.54 eV direct bandgap and mobility exceeding 14,000 cm2Vâ~'1sâ~'1. Nano Energy, 2016, 28, 433-439.	8.2	212
3482	Boosting Solar Cell Photovoltage via Nanophotonic Engineering. Nano Letters, 2016, 16, 6467-6471.	4.5	55
3483	Impact of Photon Recycling on the Open-Circuit Voltage of Metal Halide Perovskite Solar Cells. ACS Energy Letters, 2016, 1, 731-739.	8.8	130
3484	Perspectives on organolead halide perovskite photovoltaics. Journal of Photonics for Energy, 2016, 6, 032001.	0.8	4

		CITATION REPC	ЭКТ	
#	Article	I	F	Citations
3485	An Illustrative History of Artificial Photosynthesis. Advances in Botanical Research, 2016, 79, 1	42. 0	0.5	5
3486	Printable Solar Cells from Advanced Solution-Processible Materials. CheM, 2016, 1, 197-219.	E	5.8	68
3487	Origin of the wide band gap from 0.6 to 2.3 eV in photovoltaic material InN: quantum confiner from surface nanostructure. Journal of Materials Chemistry A, 2016, 4, 17412-17418.	nent E	5.2	6
3488	The 2016 oxide electronic materials and oxide interfaces roadmap. Journal Physics D: Applied P 2016, 49, 433001.	hysics, 1	L.3	266
3489	Improving Process Efficiency by Waste Heat Recuperation. , 2016, , 475-498.			0
3490	Photovoltaic potential of III-nitride based tandem solar cells. Journal of Science: Advanced Mate and Devices, 2016, 1, 379-381.	erials 1	L.5	6
3491	Rare Earth Solar Spectral Convertor for Si Solar Cells. , 2016, , 139-166.			2
3492	Manufacturing and Characterization of III-V on Silicon Multijunction Solar Cells. Energy Proced 2016, 92, 242-247.	a, 1	L.8	10
3493	Triplet excitons as sensitive spin probes for structure analysis of extended defects in microcrystalline silicon. Physical Review B, 2016, 94, .	1	l <b>.1</b>	1
3494	Broadband-sensitive upconverters co-doped with Er3+ and Ni2+ for crystalline silicon solar cell 2016, , .	5.,		0
3495	Spectroscopic and Device Aspects of Nanocrystal Quantum Dots. Chemical Reviews, 2016, 11 10513-10622.	5, 2	23.0	744
3496	Highly Monodispersed PbS Quantum Dots for Outstanding Cascaded-Junction Solar Cells. ACS Letters, 2016, 1, 834-839.	Energy a	3.8	90
3497	Optimization of the short-circuit current in an InP nanowire array solar cell through opto-electronic modeling. Nanotechnology, 2016, 27, 435404.	1	L.3	33
3498	Fabrication and characterization of ternary Cu8SiS6 and Cu8SiSe6 thin film layers for optoelec applications. Thin Solid Films, 2016, 616, 649-654.	tronic d	0.8	6
3499	Photovoltage Tomography in Polycrystalline Solar Cells. ACS Energy Letters, 2016, 1, 899-905.	٤	3.8	12
3500	Characterization and modeling tools for light management in heterogeneous thin film layers. ,	2016, , .		0
3501	Efficiency Limit of Perovskite/Si Tandem Solar Cells. ACS Energy Letters, 2016, 1, 863-868.	٤	3.8	198
3502	Inverse Funnel Effect of Excitons in Strained Black Phosphorus. Physical Review X, 2016, 6, .	2	2.8	34

#	Article	IF	CITATIONS
3503	Performance of GaAs Nanowire Array Solar Cells for Varying Incidence Angles. IEEE Journal of Photovoltaics, 2016, 6, 1502-1508.	1.5	18
3504	Molecular diodes in optical rectennas. Proceedings of SPIE, 2016, , .	0.8	2
3505	Through space and through bridge channels of charge transfer at p-n nano-junctions: A DFT study. Chemical Physics, 2016, 481, 144-156.	0.9	7
3506	Hot Carrier Extraction from Multilayer Graphene. Nano Letters, 2016, 16, 6761-6766.	4.5	15
3507	Silicon Nanocrystal/Nanocarbon Hybrids. , 2016, , 543-561.		1
3508	Nanoscale tailored plasmonic material for optimum broadband solar harvesting. Proceedings of SPIE, 2016, , .	0.8	0
3509	Chapter 1 Purity Requirements for Silicon in Photovoltaic Applications. , 2016, , 1-48.		0
3510	Solar-thermophotovoltaic systems using spectrally selective absorber/emitter based on metal-dielectric multilayer. , 2016, , .		1
3511	Intrinsic Trade-off between Up-Conversion and Trapping Rates in InAs Quantum Dots for Intermediate-Band Solar Cells. Physical Review Applied, 2016, 6, .	1.5	6
3512	Enhanced Absorption and <1% Spectrum-and-Angle-Averaged Reflection in Tapered Microwire Arrays. ACS Photonics, 2016, 3, 1854-1861.	3.2	24
3513	Radiative cooling for thermophotovoltaic systems. , 2016, , .		14
3514	Solution-Processed Air-Stable Mesoscopic Selenium Solar Cells. ACS Energy Letters, 2016, 1, 469-473.	8.8	44
3515	ORGANIC PHOTOVOLTAICS: PHYSICAL CONCEPTS BEHIND DEVICE OPERATION. Materials and Energy, 2016, , 115-157.	2.5	1
3516	Copper(I)-Based <i>p</i> -Type Oxides for Photoelectrochemical and Photovoltaic Solar Energy Conversion. Chemistry of Materials, 2016, 28, 5999-6016.	3.2	163
3517	Quantitative Framework for Evaluating Semitransparent Photovoltaic Windows. ACS Energy Letters, 2016, 1, 391-394.	8.8	11
3518	Conversion efficiency limits and bandgap designs for multi-junction solar cells with internal radiative efficiencies below unity. Optics Express, 2016, 24, A740.	1.7	34
3519	Surface Passivation for Reliable Measurement of Bulk Electronic Properties of Heterojunction Devices. Small, 2016, 12, 5339-5346.	5.2	17
3520	Effects of conjugated polymer incorporation on the morphology and energy harvesting of solution-processed, phthalocyanine-based thin films. Synthetic Metals, 2016, 220, 469-476.	2.1	1

#	Article	IF	CITATIONS
3521	Electronic Processes within Quantum Dot-Molecule Complexes. Chemical Reviews, 2016, 116, 12865-12919.	23.0	276
3522	Power conversion efficiency exceeding the Shockley–Queisser limit in a ferroelectric insulator. Nature Photonics, 2016, 10, 611-616.	15.6	335
3523	Effect of ultrasonically generated water vapor treatment on the Cu2ZnSnS4/CdS heterojunction-based photovoltaic cells. Solar Energy Materials and Solar Cells, 2016, 157, 765-776.	3.0	9
3524	Preparation of multiband structure with Cu2Se/Ga3Se2/In3Se2 thin films by thermal evaporation technique for maximal solar spectrum utilization. Superlattices and Microstructures, 2016, 98, 46-53.	1.4	6
3525	Nanowire Array Structures for Photocatalytic Energy Conversion and Utilization: A Review of Design Concepts, Assembly and Integration, and Function Enabling. Advanced Energy Materials, 2016, 6, 1600683.	10.2	89
3526	From Model Hamiltonians to ab Initio Hamiltonians and Back Again: Using Single Excitation Quantum Chemistry Methods To Find Multiexciton States in Singlet Fission Materials. Journal of Chemical Theory and Computation, 2016, 12, 4263-4273.	2.3	18
3527	Ultrafast Hole Transfer from (6,5) SWCNT to P3HT:PCBM Blend by Resonant Excitation. Journal of Physical Chemistry Letters, 2016, 7, 3353-3358.	2.1	5
3528	Hybrid crystalline sp 2 sp 3 carbon as a high-efficiency solar cell absorber. Carbon, 2016, 109, 246-252.	5.4	31
3529	Physical aspects of ferroelectric semiconductors for photovoltaic solar energy conversion. Physics Reports, 2016, 653, 1-40.	10.3	166
3530	NIR upconversion emission of Tm 3+ doped glassceramics for solar cells applications. Journal of Luminescence, 2016, 179, 40-43.	1.5	12
3531	Preparation and characterization of methylammonium tin iodide layers as photovoltaic absorbers. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 975-981.	0.8	54
3532	Growth and optical properties of colloidal graphene quantum dots. Physica Status Solidi - Rapid Research Letters, 2016, 10, 91-101.	1.2	14
3533	Maximum Efficiency and Open-Circuit Voltage of Perovskite Solar Cells. , 2016, , 53-77.		27
3534	Engineering of electronic and optical properties of PbS thin films via Cu doping. Superlattices and Microstructures, 2016, 97, 519-528.	1.4	26
3535	Guidance for Mutual Disposition of Chromophores for Singlet Fission. Israel Journal of Chemistry, 2016, 56, 96-106.	1.0	40
3536	Light Harvesting and Enhanced Performance of Si Quantum Dot/Si Nanowire Heterojunction Solar Cells. Particle and Particle Systems Characterization, 2016, 33, 38-43.	1.2	13
3537	Enhancement of emission intensity of LaVO <sub>4</sub> :RE <sup>3+</sup> luminescent solar light absorbers. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 40-46.	0.8	18
3538	Indium as a p-type dopant of thin film silicon solar cells. Thin Solid Films, 2016, 615, 358-365.	0.8	6

#	Article	IF	CITATIONS
3539	The electronic structure, elastic and optical properties of Cu <sub>2</sub> ZnGe(Se <i><sub>x</sub></i> S <sub>1 â^'</sub> <i><sub>x</sub></i> ) <sub>4</sub> alloys: density functional calculations. Molecular Physics, 2016, 114, 2948-2957.	0.8	6
3540	Fabrication and phase characterization study of SnS thin films under controlled sulfur deposition temperature. Materials Today: Proceedings, 2016, 3, 2077-2084.	0.9	10
3541	Plasma diagnostic approach for the low-temperature deposition of silicon quantum dots using dual frequency PECVD. Journal Physics D: Applied Physics, 2016, 49, 395203.	1.3	5
3542	Stable Lowâ€Bandgap Pb–Sn Binary Perovskites for Tandem Solar Cells. Advanced Materials, 2016, 28, 8990-8997.	11.1	302
3543	On the local approximation of the electron–photon interaction self-energy. Journal of Computational Electronics, 2016, 15, 1233-1239.	1.3	10
3544	Photovoltaic effect in earth abundant solution processed Cu2MnSnS4 and Cu2MnSn(S,Se)4 thin films. Solar Energy Materials and Solar Cells, 2016, 157, 867-873.	3.0	57
3545	A road towards 25% efficiency and beyond: perovskite tandem solar cells. Molecular Systems Design and Engineering, 2016, 1, 370-376.	1.7	108
3546	Nonthermal Plasma Synthesis of Nanocrystals: Fundamental Principles, Materials, and Applications. Chemical Reviews, 2016, 116, 11061-11127.	23.0	309
3547	Carrier-Selective NiO/Si and TiO <sub>2</sub> /Si Contacts for Silicon Heterojunction Solar Cells. IEEE Transactions on Electron Devices, 2016, 63, 3584-3590.	1.6	64
3548	Edge or interface effect on bandgap openings in graphene nanostructures: A thermodynamic approach. Coordination Chemistry Reviews, 2016, 326, 1-33.	9.5	16
3549	Enhancement of the electrical response in high concentrating photovoltaic systems by antireflective coatings based on silica nanoparticles. Solar Energy, 2016, 137, 273-280.	2.9	3
3550	Valence and conduction band tuning in halide perovskites for solar cell applications. Journal of Materials Chemistry A, 2016, 4, 15997-16002.	5.2	132
3551	Plasmonic enhanced solar cells. , 2016, , .		0
3552	Enabling singlet fission by controlling intramolecular charge transfer in π-stacked covalent terrylenediimide dimers. Nature Chemistry, 2016, 8, 1120-1125.	6.6	273
3553	Hybrid strategies and technologies for full spectrum solar conversion. Energy and Environmental Science, 2016, 9, 2776-2788.	15.6	40
3554	Temperature Dependent Energy Transfer in Ce <sup>3+</sup> -Yb <sup>3+</sup> Co-Doped YAG Phosphors. ECS Journal of Solid State Science and Technology, 2016, 5, R146-R149.	0.9	3
3555	Structural and physical characteristics optimization of a dual junction CGS/CIGS solar cell: A numerical simulation. Optik, 2016, 127, 10232-10237.	1.4	12
3556	Cu2ZnSnS4 solar cells prepared by sulfurization of sputtered ZnS/Sn/CuS precursors. Physica B: Condensed Matter, 2016, 502, 56-60.	1.3	11

#	Article	IF	CITATIONS
3557	Perspective of a new trend in organic photovoltaic: ternary blend polymer solar cells. Science China Materials, 2016, 59, 444-458.	3.5	37
3558	Depth-Profiling Electronic and Structural Properties of Cu(In,Ga)(S,Se) <sub>2</sub> Thin-Film Solar Cell. ACS Applied Materials & Interfaces, 2016, 8, 24152-24160.	4.0	8
3559	Decoupled front/back dielectric textures for flat ultra-thin c-Si solar cells. Optics Express, 2016, 24, A708.	1.7	15
3560	Grain-to-Grain Compositional Variations and Phase Segregation in Copper–Zinc–Tin–Sulfide Films. ACS Applied Materials & Interfaces, 2016, 8, 22971-22976.	4.0	13
3561	Theoretical efficiency of AlAs/GaAs/GaAs0.91Bi0.085 based new multijunction solar cell and effects of solar radiation and sun concentration on it. , 2016, , .		1
3562	A high-temperature narrowband selective emitter for Solar Thermophotovoltaic systems. , 2016, , .		0
3563	Dynamic Exchange During Triplet Transport in Nanocrystalline TIPS-Pentacene Films. Journal of the American Chemical Society, 2016, 138, 16069-16080.	6.6	84
3564	Multiple-layered type-II GaSb/GaAs quantum ring solar cells under concentrated solar illumination. , 2016, , .		0
3565	Electrical properties of Cu <sub>4</sub> ZnSnS <sub>2</sub> /ZnS heterojunction prepared by ultrasonic spray pyrolysis. Journal of Semiconductors, 2016, 37, 122001.	2.0	7
3566	Enhanced stability and efficiency in hole-transport-layer-free CsSnI3 perovskite photovoltaics. Nature Energy, 2016, 1, .	19.8	491
3567	Probing Photocurrent Nonuniformities in the Subcells of Monolithic Perovskite/Silicon Tandem Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 5114-5120.	2.1	22
3568	Surpassing the Exciton Diffusion Limit in Single-Walled Carbon Nanotube Sensitized Solar Cells. ACS Nano, 2016, 10, 11258-11265.	7.3	22
3569	Purple-bacterial photosynthetic reaction centers and quantumâ€dot hybridâ€assemblies in lecithin liposomes and thin films. Journal of Photochemistry and Photobiology B: Biology, 2016, 164, 73-82.	1.7	12
3570	Multidimensional Perovskites: A Mixed Cation Approach Towards Ambient Stable and Tunable Perovskite Photovoltaics. ChemSusChem, 2016, 9, 2541-2558.	3.6	88
3571	Quantum efficiency enhancement in multi-junction solar cells with spectrally selective and conducting 1D photonic crystals. Journal of Materials Chemistry C, 2016, 4, 9276-9286.	2.7	3
3572	Aboveâ€Bandgap Photovoltages in Antiferroelectrics. Advanced Materials, 2016, 28, 9644-9647.	11.1	39
3573	Design principles for block polymer organic double heterojunction solar cells. Materials Horizons, 2016, 3, 575-580.	6.4	4
3574	Effect of packing motifs on the energy ranking and electronic properties of putative crystal structures of tricyano-1,4-dithiino[ <i>c</i> ]-isothiazole. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2016, 72, 562-570.	0.5	17

#	Article	IF	CITATIONS
3575	Photovoltaics from first principles. , 2016, , .		0
3576	FeS2 nanocrystals prepared in hierarchical porous carbon for lithium-ion battery. Journal of Power Sources, 2016, 331, 366-372.	4.0	36
3577	Quantification of hot carrier thermalization in PbS colloidal quantum dots by power and temperature dependent photoluminescence spectroscopy. RSC Advances, 2016, 6, 90846-90855.	1.7	20
3578	Effect of Cu content on the photovoltaic properties of wide bandgap CIGS thin-film solar cells prepared by single-stage process. Current Applied Physics, 2016, 16, 1517-1522.	1.1	8
3579	Quantifying losses and thermodynamic limits in nanophotonic solar cells. Nature Nanotechnology, 2016, 11, 1071-1075.	15.6	50
3580	Inorganic Double Helices in Semiconducting SnIP. Advanced Materials, 2016, 28, 9783-9791.	11.1	73
3581	Advances in Perovskite Solar Cells. Advanced Science, 2016, 3, 1500324.	5.6	482
3582	First-principles analysis of the spectroscopic limited maximum efficiency of photovoltaic absorber layers for CuAu-like chalcogenides and silicon. Physical Chemistry Chemical Physics, 2016, 18, 20542-20549.	1.3	54
3583	Towards the modeling of quantum-dot sensitized solar cells: from structural and vibrational features to electron injection through lattice-mismatched interfaces. Journal of Materials Chemistry A, 2016, 4, 13081-13092.	5.2	4
3584	Review on photonic properties of nanowires for photovoltaics [Invited]. Optics Express, 2016, 24, 17345.	1.7	40
3585	Fundamental Role of Oxygen Stoichiometry in Controlling the Band Gap and Reactivity of Cupric Oxide Nanosheets. Journal of the American Chemical Society, 2016, 138, 10978-10985.	6.6	39
3586	Organised chaos: entropy in hybrid inorganic–organic systems and other materials. Chemical Science, 2016, 7, 6316-6324.	3.7	62
3587	Techno-economic analysis of tandem photovoltaic systems. RSC Advances, 2016, 6, 66911-66923.	1.7	47
3588	A Strategy to Achieve High-Efficiency Organolead Trihalide Perovskite Solar Cells. Journal of Electronic Materials, 2016, 45, 5746-5755.	1.0	6
3589	Phosphorene and Phosphoreneâ€Based Materials – Prospects for Future Applications. Advanced Materials, 2016, 28, 8586-8617.	11.1	378
3590	The Effect of Fluorine Doping on the Characteristic Behaviour of CdTe. Journal of Electronic Materials, 2016, 45, 5728-5738.	1.0	11
3591	Phonovoltaic. I. Harvesting hot optical phonons in a nanoscalepâ^'njunction. Physical Review B, 2016, 93, .	1.1	8
3592	Correlation effects on electron-phonon coupling in semiconductors: Many-body theory along thermal lines. Physical Review B, 2016, 93, .	1.1	59

#	Article	IF	CITATIONS
3593	Coherent dynamics of singlet fission controlled by nonlocal electron-phonon coupling. Physical Review B, 2016, 93, .	1.1	29
3594	Thermal-to-electrical energy conversion by diodes under negative illumination. Physical Review B, 2016, 93, .	1.1	74
3595	First-principles analysis of the intermediate band in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mrow><mml:msub><mml:mi>CuGa</mml:mi><mm mathvariant="normal"&gt;S<mml:mn>2</mml:mn></mm </mml:msub></mml:mrow>. Physical Review B, 2016, 93, .</mml:math 	l:mrow>< 1.1	mml:mn>1 </td
3596	Structure-induced resonant tail-state regime absorption in polymer: fullerene bulk-heterojunction solar cells. Physical Review B, 2016, 93, .	1.1	2
3597	Self-passivation rule and structure of CdTe Σ3 (112) grain boundaries. Physical Review B, 2016, 93, .	1.1	21
3598	Atomic structure of metal-halide perovskites from first principles: The chicken-and-egg paradox of the organic-inorganic interaction. Physical Review B, 2016, 94, .	1.1	65
3599	Novel nanostructures for efficient photon upconversion and high-efficiency photovoltaics. Solar Energy Materials and Solar Cells, 2016, 155, 446-453.	3.0	32
3600	Influences of bulk and surface recombinations on the power conversion efficiency of perovskite solar cells. Journal Physics D: Applied Physics, 2016, 49, 275106.	1.3	3
3603	An assessment of silver copper sulfides for photovoltaic applications: theoretical and experimental insights. Journal of Materials Chemistry A, 2016, 4, 12648-12657.	5.2	42
3604	Thin Film Silicon Nanowire/PEDOT:PSS Hybrid Solar Cells with Surface Treatment. Nanoscale Research Letters, 2016, 11, 311.	3.1	23
3606	Simultaneous band-gap narrowing and carrier-lifetime prolongation of organic–inorganic trihalide perovskites. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8910-8915.	3.3	269
3607	NIR emission and Ce 3+ $\hat{a} \in Nd$ 3+ energy transfer in LaCaAl 3 O 7 phosphor prepared by combustion synthesis. Journal of Luminescence, 2016, 179, 350-354.	1.5	11
3608	Face-Dependent Electron Transfer in CdSe Nanoplatelet–Methyl Viologen Complexes. Journal of Physical Chemistry C, 2016, 120, 17052-17059.	1.5	21
3609	Insight into the Controlled Synthesis of Cu <sub>2</sub> Zn(Ge,Sn)S <sub>4</sub> Nanoparticles with Selective Grain Size. Journal of Physical Chemistry C, 2016, 120, 16969-16976.	1.5	12
3610	Stable Tin Chloride Perovskite Sensitized Silver Doped Titania Nanosticks Photoanode Solar Cells with Different Hole Transport Materials. Journal of Inorganic and Organometallic Polymers and Materials, 2016, 26, 981-990.	1.9	2
3611	Energy-yield prediction for II–VI-based thin-film tandem solar cells. Energy and Environmental Science, 2016, 9, 2644-2653.	15.6	43
3612	Morphological Tuning of the Energetics in Singlet Fission Organic Solar Cells. Advanced Functional Materials, 2016, 26, 6489-6494.	7.8	24
3613	Electronic band structure trends of perovskite halides: Beyond Pb and Sn to Ge and Si. Physical Review B, 2016, 93, .	1.1	130

#	Article	IF	CITATIONS
3614	Role of Carrier Mobility and Band Alignment Engineering on the Efficiency of Colloidal Quantum Dot Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1488-1493.	1.5	2
3615	Toward a Highâ€Efficient Utilization of Solar Radiation by Quadâ€Band Solar Spectral Splitting. Advanced Materials, 2016, 28, 10659-10663.	11.1	25
3616	Growth and Strain Evaluation of InGaP/InGaAs/Ge Triple-Junction Solar Cell Structures. Journal of Electronic Materials, 2016, 45, 4823-4832.	1.0	4
3617	O-Doping Profile along ZnTe Nanowires Obtained Using Power-Dependent Microphotoluminescence Measurements. Journal of Physical Chemistry C, 2016, 120, 24457-24462.	1.5	6
3618	Anticorrelation between Local Photoluminescence and Photocurrent Suggests Variability in Contact to Active Layer in Perovskite Solar Cells. ACS Nano, 2016, 10, 10258-10266.	7.3	73
3619	Enhanced photovoltaic energy conversion using thermally based spectral shaping. Nature Energy, 2016, 1, .	19.8	231
3620	Fast charge separation in a non-fullerene organic solar cell with a small driving force. Nature Energy, 2016, 1, .	19.8	1,167
3621	Facile Growth of Cu2ZnSnS4 Thin-Film by One-Step Pulsed Hybrid Electrophoretic and Electroplating Deposition. Scientific Reports, 2016, 6, 19102.	1.6	21
3622	Light-trapping and recycling for extraordinary power conversion in ultra-thin gallium-arsenide solar cells. Scientific Reports, 2016, 6, 28303.	1.6	37
3623	Highly stable tandem solar cell monolithically integrating dye-sensitized and CIGS solar cells. Scientific Reports, 2016, 6, 30868.	1.6	25
3624	Natural Regulation of Energy Flow in a Green Quantum Photocell. Nano Letters, 2016, 16, 7461-7466.	4.5	11
3625	Persistent Energetic Electrons in Methylammonium Lead Iodide Perovskite Thin Films. Journal of the American Chemical Society, 2016, 138, 15717-15726.	6.6	107
3626	Efficient Electrosynthesis of Ag <sup>II</sup> SO <sub>4</sub> : A Powerful Oxidizer and Narrow Band Gap Semiconductor. European Journal of Inorganic Chemistry, 2016, 2016, 5401-5404.	1.0	15
3627	Stabilized Wide Bandgap Perovskite Solar Cells by Tin Substitution. Nano Letters, 2016, 16, 7739-7747.	4.5	193
3628	Temperature-dependent device performance of organic photovoltaic cells based on a squaraine dye. Synthetic Metals, 2016, 222, 293-298.	2.1	13
3629	Slow Singlet Fission Observed in a Polycrystalline Perylenediimide Thin Film. Journal of Physical Chemistry Letters, 2016, 7, 4922-4928.	2.1	95
3630	Sn doping induced intermediate band in CuGaS <sub>2</sub> . RSC Advances, 2016, 6, 110511-110516.	1.7	16
3631	Measurements and Modeling of III-V Solar Cells at High Temperatures up to 400 <inline-formula> <tex-math notation="latex">\${}^{circ}\$</tex-math> </inline-formula> C. IEEE Journal of Photovoltaics, 2016, 6, 1345-1352.	1.5	40

High pe 3632 water:	rformance of TiO2 based solar cells sensitized with copper-indium sulfide colloids prepared in		
Electro	Roles of surface modifications with indium sulfide and zinc sulfide by SILAR methods. chimica Acta, 2016, 222, 867-874.	2.6	9
3633 A gener Compu	al-purpose machine learning framework for predicting properties of inorganic materials. Npj tational Materials, 2016, 2, .	3.5	922
3634 Transiti Researc	on metals doped CuAlSe <sub>2</sub> for promising intermediate band materials. Materials h Express, 2016, 3, 045905.	0.8	16
3635 Photoc	ell Optimization Using Dark State Protection. Physical Review Letters, 2016, 117, 203603.	2.9	29
3636 Manipu applica	lating and trapping light with photonic crystals from fundamental studies to practical tions. Journal of Materials Chemistry C, 2016, 4, 11032-11049.	2.7	15
3637 Contro transiti	ling thermal emission with refractory epsilon-near-zero metamaterials via topological ons. Nature Communications, 2016, 7, 11809.	5.8	233
3638 Giant p 11193.	hotostriction in organic–inorganic lead halide perovskites. Nature Communications, 2016, 7,	5.8	164
3639 Establis Reports	hing the limits of efficiency of perovskite solar cells from first principles modeling. Scientific 5, 2016, 6, 36108.	1.6	40
3640 Entropy Science	y-driven structural transition and kinetic trapping in formamidinium lead iodide perovskite. Advances, 2016, 2, e1601650.	4.7	203
3641 Efficien Airâ€Pr	t and Versatile Interconnection Layer by Solvent Treatment of PEDOT:PSS Interlayer for ocessed Organic Tandem Solar Cells. Advanced Materials Interfaces, 2016, 3, 1600770.	1.9	25
3642 Photon Self-Ass	Upconversion and Molecular Solar Energy Storage by Maximizing the Potential of Molecular sembly. Langmuir, 2016, 32, 12304-12322.	1.6	63
3643 Design	for strong absorption in a nanowire array tandem solar cell. Scientific Reports, 2016, 6, 32349.	1.6	27
3644 Effect o 7353-7	of crystal packing on the excitonic properties of rubrene polymorphs. CrystEngComm, 2016, 18, 362.	1.3	57
3645 Compu capture	tational modelling of panchromatic porphyrins with strong NIR absorptions for solar energy 2. Chemical Physics Letters, 2016, 665, 40-46.	1.2	4
3646 Perform outdoo	nance and stability of mixed FAPbI3(0.85)MAPbBr3(0.15) halide perovskite solar cells under r conditions and the effect of low light irradiation. Nano Energy, 2016, 30, 570-579.	8.2	110
3647 Thermo	dynamic theory of the plasmoelectric effect. Scientific Reports, 2016, 6, 23283.	1.6	28
3648 Modula and Enl	tion of PEDOT:PSS pH for Efficient Inverted Perovskite Solar Cells with Reduced Potential Loss nanced Stability. ACS Applied Materials & amp; Interfaces, 2016, 8, 32068-32076.	4.0	178
3649 Therma Commu	lly enhanced photoluminescence for heat harvesting in photovoltaics. Nature Inications, 2016, 7, 13167.	5.8	20

	CITATION	REPORT	
#	Article	IF	CITATIONS
3650	Hot carrier multiplication on graphene/TiO2 Schottky nanodiodes. Scientific Reports, 2016, 6, 27549.	1.6	34
3651	Discovery of earth-abundant nitride semiconductors by computational screening and high-pressure synthesis. Nature Communications, 2016, 7, 11962.	5.8	208
3652	Quantum efficiency modeling of thin film solar cells under biased conditions with a case study of CZTSSe solar cells. Thin Solid Films, 2016, 619, 208-213.	0.8	6
3653	Simulation study of InGaN intermediate-band solar cells. Journal Physics D: Applied Physics, 2016, 49, 485102.	1.3	0
3654	Solar Cells and Their Generations. , 2016, , 1-53.		0
3655	Entropic and Near-Field Improvements of Thermoradiative Cells. Scientific Reports, 2016, 6, 34837.	1.6	74
3656	Effect of the chemical composition of Cu–In–Ga–Se layers on the photoconductivity and conversion efficiency of CdS/CIGSe solar cells. Semiconductors, 2016, 50, 1344-1351.	0.2	1
3657	Theory of highly efficient multiexciton generation in type-II nanorods. Nature Communications, 2016, 7, 13178.	5.8	22
3658	Through-Linker Intramolecular Singlet Fission: General Mechanism and Designing Small Chromophores. Journal of Physical Chemistry Letters, 2016, 7, 4405-4412.	2.1	48
3659	Applications of ferroelectrics in photovoltaic devices. Science China Materials, 2016, 59, 851-866.	3.5	35
3660	Beyond Bulk Lifetimes: Insights into Lead Halide Perovskite Films from Time-Resolved Photoluminescence. Physical Review Applied, 2016, 6, .	1.5	194
3661	Defects in perovskite-halides and their effects in solar cells. Nature Energy, 2016, 1, .	19.8	886
3663	Limits for Recombination in a Low Energy Loss Organic Heterojunction. ACS Nano, 2016, 10, 10736-10744.	7.3	79
3664	Two-terminal DSSC/silicon tandem solar cells exceeding 18% efficiency. Energy and Environmental Science, 2016, 9, 3657-3665.	15.6	41
3665	Ab initio calculation of halide ligand passivation onÂPbSe quantum dot facets. RSC Advances, 2016, 6, 104699-104707.	1.7	9
3666	Vibration-induced coherence enhancement of the performance of a biological quantum heat engine. Physical Review E, 2016, 94, 052101.	0.8	29
3668	Optical generation of electron–hole pairs in phosphor and boron coâ€doped Si nanocrystals in SiO <sub>2</sub> . Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2863-2866.	0.8	6
3669	Comparison of holographic lens and filter systems for lateral spectrum splitting. Proceedings of SPIE, 2016, , .	0.8	0

#	Article	IF	CITATIONS
3670	Spectrum-Splitting Diffractive Optical Element of High Concentration Factor and High Optical Efficiency for Three-Junction Photovoltaics. Chinese Physics Letters, 2016, 33, 094207.	1.3	3
3671	Digital Printing of Titanium Dioxide for Dye Sensitized Solar Cells. Journal of Visualized Experiments, 2016, , .	0.2	6
3672	Study of sprayed CZTS thin films containing various copper content. , 2016, , .		2
3673	Outdoor measurements of a photovoltaic system using diffractive spectrum-splitting and concentration. AIP Advances, 2016, 6, 095311.	0.6	5
3674	TEM Characterization of InAs Quantum Dots with GaAsSb Spacer Layers. Microscopy and Microanalysis, 2016, 22, 1656-1657.	0.2	0
3675	Concept and demonstration of an intermediate band tandem device for solar energy conversion. Progress in Photovoltaics: Research and Applications, 2016, 24, 307-314.	4.4	0
3676	Anisotropic and Ultralow Phonon Thermal Transport in Organic–Inorganic Hybrid Perovskites: Atomistic Insights into Solar Cell Thermal Management and Thermoelectric Energy Conversion Efficiency. Advanced Functional Materials, 2016, 26, 5297-5306.	7.8	125
3677	Bandgap Engineering of Leadâ€Halide Perovskiteâ€Type Ferroelectrics. Advanced Materials, 2016, 28, 2579-2586.	11.1	298
3678	Fast Freeâ€Carrier Diffusion in CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Single Crystals Revealed by Timeâ€Resolved Oneâ€and Twoâ€Photon Excitation Photoluminescence Spectroscopy. Advanced Electronic Materials, 2016, 2, 1500290.	2.6	111
3679	Plasmonâ€Induced Broadband Lightâ€Harvesting for Dyeâ€Sensitized Solar Cells Using a Mixture of Gold Nanocrystals. ChemSusChem, 2016, 9, 813-819.	3.6	31
3680	Heat meets light on the nanoscale. Nanophotonics, 2016, 5, 134-160.	2.9	58
3681	Achieving an Accurate Surface Profile of a Photonic Crystal for Near-Unity Solar Absorption in a Super Thin-Film Architecture. ACS Nano, 2016, 10, 6116-6124.	7.3	77
3682	Increasing efficiency in intermediate band solar cells with overlapping absorptions. Journal of Optics (United Kingdom), 2016, 18, 074010.	1.0	17
3683	Low Bandgap InAs-Based Thermophotovoltaic Cells for Heat-Electricity Conversion. Journal of Electronic Materials, 2016, 45, 2826-2830.	1.0	32
3684	Electrodeposited cobalt-copper sulfide counter electrodes for highly efficient quantum dot sensitized solar cells. Electrochimica Acta, 2016, 210, 630-638.	2.6	43
3685	Self-assembled molecular p/n junctions for applications in dye-sensitized solar energy conversion. Nature Chemistry, 2016, 8, 845-852.	6.6	84
3686	A DFT study of pressure-induced phase transitions, structural and electronic properties of Cu <sub>2</sub> ZnSnS <sub>4</sub> . Modern Physics Letters B, 2016, 30, 1650176.	1.0	4
3687	Photon-enhanced electron tunneling solar cells. Energy, 2016, 111, 52-56.	4.5	7

#	Article	IF	CITATIONS
3688	Transformation of Sintered CsPbBr <sub>3</sub> Nanocrystals to Cubic CsPbI <sub>3</sub> and Gradient CsPbBr <sub><i>x</i></sub> I <sub>3–<i>x</i></sub> through Halide Exchange. Journal of the American Chemical Society, 2016, 138, 8603-8611.	6.6	327
3689	Modelling potential photovoltaic absorbers Cu <sub>3</sub> <i>MCh</i> <sub>4</sub> ( <i>M</i> =â€% 175801.	‰â€‰V, N 0.7	b,) Tj ETQq1 16
3690	Low Open-Circuit Voltage Loss in Solution-Processed Small-Molecule Organic Solar Cells. ACS Energy Letters, 2016, 1, 302-308.	8.8	59
3691	High efficiency nanostructured thin film solar cells for energy harvesting. Proceedings of SPIE, 2016, ,	0.8	2
3692	A study on the effects of amphoteric defect concentration on the characteristics parameters of In x Ga1â <sup>~'</sup> x N thin-film solar cells. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	2
3693	A comprehensive theoretical study of halide perovskites ABX3. Organic Electronics, 2016, 37, 61-73.	1.4	186
3694	Roadmap on optical energy conversion. Journal of Optics (United Kingdom), 2016, 18, 073004.	1.0	85
3695	The rising star in photovoltaics-perovskite solar cells: The past, present and future. Science China Technological Sciences, 2016, 59, 989-1006.	2.0	33
3696	Quantum dot sensitized solar cell: Recent advances and future perspectives in photoanode. Solar Energy Materials and Solar Cells, 2016, 155, 294-322.	3.0	136
3697	Conductivity studies of poly(ethylene oxide)(PEO)/poly(vinyl alcohol) (PVA) blend gel polymer electrolytes for dye-sensitized solar cells. Ionics, 2016, 22, 2133-2142.	1.2	32
3698	Black silicon solar cell: analysis optimization and evolution towards a thinner and flexible future. Nanotechnology, 2016, 27, 305302.	1.3	31
3699	Optoelectronic Properties of (CH <sub>3</sub> NH <sub>3</sub> ) <sub>3</sub> Sb <sub>2</sub> I <sub>9</sub> Thin Films for Photovoltaic Applications. ACS Energy Letters, 2016, 1, 309-314.	8.8	318
3700	BaCu <sub>2</sub> Sn(S,Se) <sub>4</sub> : Earth-Abundant Chalcogenides for Thin-Film Photovoltaics. Chemistry of Materials, 2016, 28, 4771-4780.	3.2	131
3701	An efficient double junction CIGS solar cell using a 4H-SiC nano layer. Optik, 2016, 127, 8646-8653.	1.4	7
3702	Broadband-sensitive Ni <sup>2+</sup> –Er <sup>3+</sup> based upconverters for crystalline silicon solar cells. RSC Advances, 2016, 6, 55499-55506.	1.7	32
3703	Development of polymer–fullerene solar cells. National Science Review, 2016, 3, 222-239.	4.6	78
3704	Broadband Scattering With Strong Electric Field Coupling Between Metal Nanostructures Using DDA Simulation: Role of Different Organic Environments. IEEE Journal of Photovoltaics, 2016, 6, 940-951.	1.5	5
3705	Temperature dependency of the Ga/In distribution in Cu(In,Ga)Se2 absorbers in high temperature processes. Journal of Crystal Growth, 2016, 442, 31-40.	0.7	0

#	Article	IF	CITATIONS
3706	On the possibility of direct conversion of solar energy to mechanical work. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2016, 38, 1089-1095.	1.2	0
3707	Quantum Cascade Photon Ratchets for Intermediate-Band Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 673-678.	1.5	11
3708	Heating rate tuning in structure, morphology and electricity properties of Cu2FeSnS4 thin films prepared by sulfurization of metallic precursors. Journal of Alloys and Compounds, 2016, 680, 446-451.	2.8	52
3709	Si-Doped InAs/GaAs Quantum-Dot Solar Cell With AlAs Cap Layers. IEEE Journal of Photovoltaics, 2016, 6, 906-911.	1.5	16
3710	Review on recent trend of solar photovoltaic technology. Energy Exploration and Exploitation, 2016, 34, 485-526.	1.1	192
3711	Tuning of the stability and energy levels of singlet exciton fission relevant excited states of pentacenes by site-specific substitution. Journal of Molecular Graphics and Modelling, 2016, 66, 187-195.	1.3	11
3712	Effect of sputter deposited Zn precursor film thickness and annealing time on the properties of Cu2ZnSnS4 thin films deposited by sequential reactive sputtering of metal targets. Materials Science in Semiconductor Processing, 2016, 52, 38-45.	1.9	13
3713	Mismatched front and back gratings for optimum light trapping in ultra-thin crystalline silicon solar cells. Optics Communications, 2016, 377, 52-58.	1.0	25
3714	Antimony selenide thin-film solar cells. Semiconductor Science and Technology, 2016, 31, 063001.	1.0	178
3715	Simulation study of GaAsP/Si tandem cells including the impact of threading dislocations on the luminescent coupling between the cells. Proceedings of SPIE, 2016, , .	0.8	0
3716	A facile single injection Hydrothermal method for the synthesis of thiol capped CdTe Quantum dots as light harvesters. Journal of Luminescence, 2016, 178, 362-367.	1.5	29
3717	Effects of Charge Transfer State and Exciton Migration on Singlet Fission Dynamics in Organic Aggregates. Journal of Physical Chemistry C, 2016, 120, 13351-13359.	1.5	31
3718	Solar energy conversion with photon-enhanced thermionic emission. Journal of Optics (United) Tj ETQq0 0 0 rgBT	/Overlock 1.0	10 Tf 50 26
3719	High-Efficiency Light-Emitting Diodes of Organometal Halide Perovskite Amorphous Nanoparticles. ACS Nano, 2016, 10, 6623-6630.	7.3	347
3720	An outdoor investigation of the absorption degradation of single-junction amorphous silicon photovoltaic module due to localized heat/hot spot formation. Pramana - Journal of Physics, 2016, 86, 901-909.	0.9	2
3721	Three-dimensional minority-carrier collection channels at shunt locations in silicon solar cells. Solar Energy, 2016, 135, 163-168.	2.9	4
3722	Imbalanced charge carrier mobility and Schottky junction induced anomalous current-voltage characteristics of excitonic PbS colloidal quantum dot solar cells. Solar Energy Materials and Solar Cells, 2016, 155, 155-165.	3.0	37
3723	Developments in numerical treatments for large data sets of XPS images. Surface and Interface Analysis, 2016, 48, 301-309.	0.8	18

#	Article	IF	CITATIONS
3724	Raman Vibrations, Domain Structures, and Photovoltaic Effects in Aâ€Site Laâ€Modified BiFeO 3 Multiferroic Ceramics. Journal of the American Ceramic Society, 2016, 99, 674-681.	1.9	20
3725	Singlet Fission in Quinoidal Oligothiophenes. Journal of Physical Chemistry C, 2016, 120, 13901-13910.	1.5	28
3726	Near-Infrared-to-Visible Photon Upconversion Sensitized by a Metal Complex with Spin-Forbidden yet Strong S <sub>0</sub> –T <sub>1</sub> Absorption. Journal of the American Chemical Society, 2016, 138, 8702-8705.	6.6	178
3727	Optimum Single-Gap Solar Cells for Missions to Mercury. Journal of Spacecraft and Rockets, 2016, 53, 787-791.	1.3	1
3728	On the Efficiency Limit of Conjugated Polymer:Fullereneâ€Based Bulk Heterojunction Solar Cells. Advanced Materials, 2016, 28, 1994-2001.	11.1	176
3729	Photovoltaics with Ferroelectrics: Current Status and Beyond. Advanced Materials, 2016, 28, 5153-5168.	11.1	330
3730	Fill Factor Losses in Cu <sub>2</sub> ZnSn(S <i><sub>x</sub></i> Se <sub>1â^'<i>x</i></sub> ) <sub>4</sub> Solar Cells: Insights from Physical and Electrical Characterization of Devices and Exfoliated Films. Advanced Energy Materials, 2016, 6, 1501609.	10.2	84
3731	Multicolor Electroluminescence from Intermediate Band Solar Cell Structures. Advanced Energy Materials, 2016, 6, 1501820.	10.2	13
3732	Hafnium nitride for hot carrier solar cells. Solar Energy Materials and Solar Cells, 2016, 144, 781-786.	3.0	24
3733	Releasing confined holes from type-II quantum dots by inelastic scattering with hot photoelectrons. Solar Energy Materials and Solar Cells, 2016, 144, 767-774.	3.0	3
3734	Dependence of quantum dot photocurrent on the carrier escape nature in InAs/GaAs quantum dot solar cells. Semiconductor Science and Technology, 2016, 31, 025018.	1.0	15
3735	Dye decorated ZnO-NWs /CdS-NPs heterostructures for efficiency improvement of quantum dots sensitized solar cell. Superlattices and Microstructures, 2016, 91, 244-251.	1.4	10
3736	Effect of blend composition on ternary blend organic solar cells using a low band gap polymer. Synthetic Metals, 2016, 212, 142-153.	2.1	5
3737	First-principles study of energy band gap of single-layer Mo <sub>1â^'</sub> <sub>x</sub> Cr <sub>x</sub> S <sub>2</sub> . Japanese Journal of Applied Physics, 2016, 55, 028003.	0.8	19
3738	Dynamic Growth of Pinhole-Free Conformal CH3NH3PbI3 Film for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 4684-4690.	4.0	50
3739	Thermodynamics of the S–Sn system: Implication for synthesis of earth abundant photovoltaic absorber materials. Solar Energy, 2016, 125, 314-323.	2.9	34
3740	Trigonal Cu <sub>2</sub> -II-Sn-VI <sub>4</sub> (II = Ba, Sr and VI = S, Se) quaternary compounds for earth-abundant photovoltaics. Physical Chemistry Chemical Physics, 2016, 18, 4828-4834.	1.3	94
3741	A perovskite cell with a record-high-V <sub>oc</sub> of 1.61 V based on solvent annealed CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> /ICBA active layer. Nanoscale, 2016, 8, 4077-4085.	2.8	122

#	Article	IF	CITATIONS
3742	Localization-dependent charge separation efficiency at an organic/inorganic hybrid interface. Chemical Physics Letters, 2016, 646, 25-30.	1.2	6
3743	Enhanced performance of thin-film amorphous silicon solar cells with a top film of 2.85 nm silicon nanoparticles. Solar Energy, 2016, 125, 332-338.	2.9	25
3744	Energy structure of CdSe/CdTe type II colloidal quantum dots—Do phonon bottlenecks remain for thick shells?. Solar Energy Materials and Solar Cells, 2016, 158, 160-167.	3.0	14
3745	Temperature dependent competition between different recombination channels in organic heterojunction solar cells. Journal of Optics (United Kingdom), 2016, 18, 024007.	1.0	8
3746	Advances in nanostructured thin film materials for solar cell applications. Renewable and Sustainable Energy Reviews, 2016, 59, 726-737.	8.2	133
3747	Highly Efficient LiYF <sub>4</sub> :Yb <sup>3+</sup> , Er <sup>3+</sup> Upconversion Single Crystal under Solar Cell Spectrum Excitation and Photovoltaic Application. ACS Applied Materials & amp; Interfaces, 2016, 8, 9071-9079.	4.0	151
3748	Plasma assisted molecular beam epitaxy of Cu2O on MgO(001): Influence of copper flux on epitaxial orientation. Journal of Crystal Growth, 2016, 436, 87-91.	0.7	11
3749	Dye-sensitized solar cell for a solar concentrator system. Solar Energy, 2016, 125, 307-313.	2.9	13
3750	Alloying and Defect Control within Chalcogenide Perovskites for Optimized Photovoltaic Application. Chemistry of Materials, 2016, 28, 821-829.	3.2	175
3751	In situ growth of SnS absorbing layer by reactive sputtering for thin film solar cells. RSC Advances, 2016, 6, 4108-4115.	1.7	53
3752	Simulation study of GaAsP/Si tandem solar cells. Solar Energy Materials and Solar Cells, 2016, 145, 206-216.	3.0	26
3753	Correlations between electrical and optical properties in lattice-matched GaAsPN/GaP solar cells. Solar Energy Materials and Solar Cells, 2016, 147, 53-60.	3.0	25
3754	Efficient upconversion in Er3+ doped Y2O3/Si thin film deposited by aerosol UV-assisted MOCVD process. Journal of Luminescence, 2016, 170, 231-239.	1.5	9
3755	Boosting the efficiency of pure sulfide CZTS solar cells using the In/Cd-based hybrid buffers. Solar Energy Materials and Solar Cells, 2016, 144, 700-706.	3.0	101
3756	Polymorphism influences singlet fission rates in tetracene thin films. Chemical Science, 2016, 7, 1185-1191.	3.7	114
3757	Ultrafast and fast charge separation processes in real dye-sensitized solar cells. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2016, 26, 1-30.	5.6	92
3758	Synthesis of subnanometer-diameter vertically aligned single-walled carbon nanotubes with copper-anchored cobalt catalysts. Nanoscale, 2016, 8, 1608-1617.	2.8	61
3759	Cu2ZnSnS4 thin-films grown by dip-coating: Effects of annealing. Journal of Alloys and Compounds, 2016, 663, 842-847.	2.8	25

#	Article	IF	CITATIONS
3760	Computational Screening of Homovalent Lead Substitution in Organic–Inorganic Halide Perovskites. Journal of Physical Chemistry C, 2016, 120, 166-173.	1.5	208
3761	Formation of all-oxide solar cells in atmospheric condition based on Cu 2 O thin-films grown through SILAR technique. Solar Energy Materials and Solar Cells, 2016, 147, 17-26.	3.0	77
3762	Wavelength-modulated spectroscopy of the sub-bandgap response of solar cell devices. Physica B: Condensed Matter, 2016, 480, 88-90.	1.3	0
3763	Cesium-containing triple cation perovskite solar cells: improved stability, reproducibility and high efficiency. Energy and Environmental Science, 2016, 9, 1989-1997.	15.6	4,560
3764	Synthesis and photophysical properties of a single bond linked tetracene dimer. Journal of Molecular Structure, 2016, 1116, 200-206.	1.8	8
3765	Near infrared emission and energy transfer in Eu2+ - Nd3+ co-doped Ca2BO3Cl. Optical Materials, 2016, 55, 44-48.	1.7	19
3766	High-throughput realization of an infrared selective absorber/emitter by DUV microsphere projection lithography. Nanotechnology, 2016, 27, 035301.	1.3	19
3767	Lead halides join the top optoelectronic league. Science, 2016, 351, 1401-1401.	6.0	56
3768	Design of Small Intramolecular Singlet Fission Chromophores: An Azaborine Candidate and General Small Size Effects. Journal of Physical Chemistry Letters, 2016, 7, 1351-1358.	2.1	66
3769	Mixed Valence Tin Oxides as Novel van der <i>W</i> aals Materials: Theoretical Predictions and Potential Applications. Advanced Energy Materials, 2016, 6, 1501190.	10.2	79
3770	Gasâ€Phase Plasma Synthesis of Freeâ€6tanding Silicon Nanoparticles for Future Energy Applications. Plasma Processes and Polymers, 2016, 13, 19-53.	1.6	16
3771	From steam engine to solar cells: can thermodynamics guide the development of future generations of photovoltaics?. Wiley Interdisciplinary Reviews: Energy and Environment, 2016, 5, 543-569.	1.9	21
3772	Numerical modeling of photon recycling and luminescence coupling in non-ideal multijunction solar cell. , 2016, , .		1
3773	Phase transformation during Cu2ZnSnS4 synthesis by reactive magnetron co-sputtering. Acta Materialia, 2016, 110, 53-60.	3.8	7
3774	Band gap engineering of organo metal lead halide perovskite photovoltaic absorber. Optical and Quantum Electronics, 2016, 48, 1.	1.5	13
3775	Design optimization for two-step photon absorption in quantum dot solar cells by using infrared photocurrent spectroscopy. Proceedings of SPIE, 2016, , .	0.8	1
3776	Strong quantum confinement effect in Cu4SnS4 quantum dots synthesized via an improved hydrothermal approach. Journal of Alloys and Compounds, 2016, 672, 204-211.	2.8	21
3777	Enhanced Conversion Efficiency of Cu(In,Ga)Se <sub>2</sub> Solar Cells via Electrochemical Passivation Treatment. ACS Applied Materials & amp; Interfaces, 2016, 8, 7777-7782.	4.0	3

#	Article	IF	CITATIONS
3778	Benchmarking the Performance of Boost-Derived Converters Under Start-Up and Load Transients. IEEE Transactions on Industrial Electronics, 2016, 63, 3125-3136.	5.2	16
3779	ls enhanced radiative cooling of solar cell modules worth pursuing?. Solar Energy Materials and Solar Cells, 2016, 150, 39-42.	3.0	67
3780	High-efficiency crystalline silicon solar cells: status and perspectives. Energy and Environmental Science, 2016, 9, 1552-1576.	15.6	790
3781	Design Flexibility of Ultrahigh Efficiency Four-Junction Inverted Metamorphic Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 578-583.	1.5	79
3782	Investigation on current collection from a silicon quantum-dot <i>p-i-n</i> solar cell by varying dot size and insulating barrier layer thickness. Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems, 2016, 230, 44-50.	0.5	1
3783	Influence of the inverse Auger process on the performance of In Ga1â^'N/GaN quantum dot solar cells. Optik, 2016, 127, 4799-4802.	1.4	7
3784	Theoretical Comparative Study of Quantum Dot Solar Cell Behavior for Single and Multi-Intermediate Bands. Journal of Energy Engineering - ASCE, 2016, 142, .	1.0	4
3785	The group VA element non-compensated n–p codoping in CuGaS2 for intermediate band materials. Solar Energy Materials and Solar Cells, 2016, 144, 664-670.	3.0	15
3786	Design of CdZnTe and Crystalline Silicon Tandem Junction Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 301-308.	1.5	18
3787	Experimental Evidence of Localized Shallow States in Orthorhombic Phase of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Thin Films Revealed by Photocurrent Beat Spectroscopy. Journal of Physical Chemistry C, 2016, 120, 5347-5352.	1.5	33
3788	Non-fullerene acceptor with low energy loss and high external quantum efficiency: towards high performance polymer solar cells. Journal of Materials Chemistry A, 2016, 4, 5890-5897.	5.2	219
3789	Insight into the band structure engineering of single-layer SnS <sub>2</sub> with in-plane biaxial strain. Physical Chemistry Chemical Physics, 2016, 18, 7860-7865.	1.3	13
3790	Efficient ternary cobalt spinel counter electrodes for quantum-dot sensitized solar cells. Journal of Power Sources, 2016, 312, 93-100.	4.0	37
3791	Edge-Modified Phosphorene Nanoflake Heterojunctions as Highly Efficient Solar Cells. Nano Letters, 2016, 16, 1675-1682.	4.5	176
3792	The atomistic origin of interface confinement and enhanced conversion efficiency in Si nanowire solar cells. Physical Chemistry Chemical Physics, 2016, 18, 7001-7006.	1.3	11
3793	Challenges and Perspectives in Tandem Thermoelectric–Photovoltaic Solar Energy Conversion. IEEE Nanotechnology Magazine, 2016, 15, 348-355.	1.1	31
3794	Nanostructure in energy conversion. Journal of Energy Chemistry, 2016, 25, 171-190.	7.1	73
3795	Influence of the composition of hybrid perovskites on their performance in solar cells. Journal of Materials Chemistry A, 2016, 4, 4353-4364.	5.2	56

#	Article	IF	CITATIONS
3796	Organohalide Perovskites for Solar Energy Conversion. Accounts of Chemical Research, 2016, 49, 545-553.	7.6	135
3797	Effects of Crystal Morphology on Singlet Exciton Fission in Diketopyrrolopyrrole Thin Films. Journal of Physical Chemistry B, 2016, 120, 1357-1366.	1.2	128
3798	Photoelectrochemical Approach for Water Splitting. Lecture Notes in Energy, 2016, , 249-260.	0.2	5
3799	Photoelectrochemical Water Splitting Using Photovoltaic Materials. Lecture Notes in Energy, 2016, , 261-279.	0.2	3
3800	Thermal effects of microinverter placement on the performance of silicon photovoltaics. Solar Energy, 2016, 125, 444-452.	2.9	7
3801	Stimulated emission and lasing in Cu(In,Ga)Se2thin films. Journal Physics D: Applied Physics, 2016, 49, 095106.	1.3	8
3802	Effect of Dot-Height Truncation on the Device Performance of Multilayer InAs/GaAs Quantum Dot Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 584-589.	1.5	3
3803	Process simulation of a near-zero-carbon-emission power plant using CO 2 as the renewable energy storage medium. International Journal of Greenhouse Gas Control, 2016, 47, 240-249.	2.3	15
3804	Effects of formamidinium and bromide ion substitution in methylammonium lead triiodide toward high-performance perovskite solar cells. Nano Energy, 2016, 22, 328-337.	8.2	180
3805	Hybrid Organic–Inorganic Coordination Complexes as Tunable Optical Response Materials. Inorganic Chemistry, 2016, 55, 3393-3400.	1.9	31
3806	Long-Lived Triplet Excited States of Bent-Shaped Pentacene Dimers by Intramolecular Singlet Fission. Journal of Physical Chemistry A, 2016, 120, 1867-1875.	1.1	133
3807	Correlation of Ti3+ states with photocatalytic enhancement in TiO2-passivated p-GaAs. Journal of Catalysis, 2016, 337, 133-137.	3.1	25
3808	Functional Mode Hot Electron Transfer Theory. Journal of Physical Chemistry C, 2016, 120, 20579-20587.	1.5	10
3809	Zero-dimensional (CH3NH3)3Bi2l9 perovskite for optoelectronic applications. Solar Energy Materials and Solar Cells, 2016, 158, 195-201.	3.0	182
3810	Method for optimizing the parameters of heterojunction photovoltaic cells based on crystalline silicon. Semiconductors, 2016, 50, 257-260.	0.2	10
3811	Role of the chemical substitution on the structural and luminescence properties of the mixed halide perovskite thin MAPbI3â^'xBrx (0 ≤ ≤) films. Applied Surface Science, 2016, 371, 112-117.	3.1	98
3812	Tabulated values of the Shockley–Queisser limit for single junction solar cells. Solar Energy, 2016, 130, 139-147.	2.9	1,103
3813	Pressure effect on the structural and electronic properties of CuInS 2. Solid State Sciences, 2016, 55, 42-47.	1.5	3

#	Article	IF	CITATIONS
3814	Performance of CZTSxSe1â^'x solar cell with various mole fractions of sulfur for different buffer layers. , 2016, , .		5
3815	Ab initio materials design using conformational space annealing and its application to searching for direct band gap silicon crystals. Computer Physics Communications, 2016, 203, 110-121.	3.0	55
3816	Ligand enhanced upconversion of near-infrared photons with nanocrystal light absorbers. Chemical Science, 2016, 7, 4101-4104.	3.7	74
3817	Fabrication of nanocone forests with high optical absorption based on a plasma repolymerization technique. , 2016, , .		7
3818	Recent emergence of photon upconversion based on triplet energy migration in molecular assemblies. Chemical Communications, 2016, 52, 5354-5370.	2.2	152
3819	Smart Power Systems and Renewable Energy System Integration. Studies in Systems, Decision and Control, 2016, , .	0.8	11
3820	Simulation and development of a multi-leg homogeniser concentrating assembly for concentrated photovoltaic (CPV) system with electrical rating analysis. Energy Conversion and Management, 2016, 116, 58-71.	4.4	42
3821	Simple Vacuum Evaporation Route to BaSi2 Thin Films for Solar Cell Applications. Procedia Engineering, 2016, 141, 27-31.	1.2	20
3822	The optimization functions of ICP discharge in preparation of Cu–Zn–Sn precursors and CZTS films by co-evaporation. Journal of Semiconductors, 2016, 37, 023003.	2.0	1
3823	Design, fabrication and modification of metal oxide semiconductor for improving conversion efficiency of excitonic solar cells. Coordination Chemistry Reviews, 2016, 320-321, 193-215.	9.5	56
3824	Designing a dual-mode broadband solar spectral converter: The example of Bi3+, Cr3+, Yb3+-tridoped perovskite. Journal of Alloys and Compounds, 2016, 673, 411-419.	2.8	13
3825	Beyond the Pipeline: Assessing the Efficiency Limits of Advanced Technologies for Solar Water Disinfection. Environmental Science and Technology Letters, 2016, 3, 73-80.	3.9	52
3826	Cu 2 ZnSnS 4 ceramic target: Determination of sintering temperature by TG–DSC. Ceramics International, 2016, 42, 9630-9635.	2.3	9
3827	Ruddlesden–Popper perovskite sulfides A3B2S7: A new family of ferroelectric photovoltaic materials for the visible spectrum. Nano Energy, 2016, 22, 507-513.	8.2	66
3828	Si/PEDOT:PSS hybrid solar cells incorporated with silver plasmonic nanospheres. Thin Solid Films, 2016, 599, 37-41.	0.8	2
3829	Cost-Effective Electrophoretic Deposition of Cu <sub>2</sub> ZnSnS <sub>4</sub> Nanocrystals for Photovoltaic Films. Journal of the Electrochemical Society, 2016, 163, H3110-H3115.	1.3	5
3830	Enhanced photovoltaic effects in A-site samarium doped BiFeO3 ceramics: The roles of domain structure and electronic state. Journal of the European Ceramic Society, 2016, 36, 1149-1157.	2.8	57
3831	Optoelectronic Quality and Stability of Hybrid Perovskites from MAPbI <sub>3</sub> to MAPbI <sub>2</sub> Br Using Composition Spread Libraries. Journal of Physical Chemistry C, 2016, 120, 893-902.	1.5	65

#	Article	IF	CITATIONS
3832	Solar energy for electricity and fuels. Ambio, 2016, 45, 15-23.	2.8	50
3833	Mechanisms for Engineering Highly Anisotropic Conductivity in a Layered Covalent-Organic Framework. Journal of Physical Chemistry C, 2016, 120, 174-178.	1.5	24
3834	Si Hybrid Solar Cells with 13% Efficiency <i>via</i> Concurrent Improvement in Optical and Electrical Properties by Employing Graphene Quantum Dots. ACS Nano, 2016, 10, 815-821.	7.3	76
3835	Nonideal Effects Limit the Efficiency Gain for Angle-Restricted Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 172-178.	1.5	0
3836	Stability of perovskite solar cells. Solar Energy Materials and Solar Cells, 2016, 147, 255-275.	3.0	726
3837	Tailoring high-temperature radiation and the resurrection of the incandescent source. Nature Nanotechnology, 2016, 11, 320-324.	15.6	153
3838	Photovoltaic properties of Bi <sub>2</sub> FeCrO <sub>6</sub> films epitaxially grown on (100)-oriented silicon substrates. Nanoscale, 2016, 8, 3237-3243.	2.8	31
3839	Ultrafast Nonadiabatic Dynamics of Singlet Fission: Quantum Dynamics with the Multilayer Multiconfigurational Time-Dependent Hartree (ML-MCTDH) Method. Journal of Physical Chemistry C, 2016, 120, 1375-1389.	1.5	55
3840	Singlet Fission in a Covalently Linked Cofacial Alkynyltetracene Dimer. Journal of the American Chemical Society, 2016, 138, 617-627.	6.6	248
3841	Efficiency Enhancement of Silicon Heterojunction Solar Cells via Photon Management Using Graphene Quantum Dot as Downconverters. Nano Letters, 2016, 16, 309-313.	4.5	115
3842	Low-defect metamorphic Si (Ge) epilayers on Si (001) with a buried template of nanocavities for multiple-junction solar cells. Solar Energy Materials and Solar Cells, 2016, 144, 775-780.	3.0	5
3843	Controlled Intramolecular Charge Transfer Using a Sulfur-Containing Acceptor Group. Journal of Physical Chemistry C, 2016, 120, 70-77.	1.5	16
3844	Investigation of InAs/GaAs 1â^'x Sb x quantum dots for applications in intermediate band solar cells. Solar Energy Materials and Solar Cells, 2016, 147, 94-100.	3.0	23
3845	Photoconductivity of composites based on CdSe quantum dots and low-band-gap polymers. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 79, 206-211.	1.3	16
3846	Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. Journal of Physical Chemistry Letters, 2016, 7, 295-301.	2.1	332
3847	Significant effects of hydrothermal condition and annealing atmosphere on the properties of Cu2ZnSn(S ,Se1–)4 films. Applied Surface Science, 2016, 362, 512-516.	3.1	4
3848	Generation of hot carrier population in colloidal silicon quantum dots for high-efficiency photovoltaics. Solar Energy Materials and Solar Cells, 2016, 145, 391-396.	3.0	19
3849	Open circuit voltage and efficiency in ternary organic photovoltaic blends. Energy and Environmental Science, 2016, 9, 257-266.	15.6	85

#	Article	IF	CITATIONS
3850	Fabrication of CdSe sensitized SnO 2 nanofiber quantum dot solar cells. Materials Science in Semiconductor Processing, 2016, 41, 370-377.	1.9	14
3851	Broadband Near-Infrared to Visible Upconversion in Quantum Dot–Quantum Well Heterostructures. ACS Nano, 2016, 10, 446-452.	7.3	54
3852	Engineering of organic dyes for highly efficient p-type dye-sensitized solar cells. Dyes and Pigments, 2016, 124, 93-100.	2.0	24
3853	Local photocurrent mapping of InAs/InGaAs/GaAs intermediate-band solar cells using scanning near-field optical microscopy. Solar Energy Materials and Solar Cells, 2016, 144, 324-330.	3.0	12
3854	Design of Core/Shell Colloidal Quantum Dots for MEG Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 179-184.	1.5	17
3855	Open circuit voltage of organic solar cells: an in-depth review. Energy and Environmental Science, 2016, 9, 391-410.	15.6	644
3856	What is the bandgap of kesterite?. Solar Energy Materials and Solar Cells, 2016, 158, 126-129.	3.0	59
3857	SiNx:Tb3+–Yb3+, an efficient down-conversion layer compatible with a silicon solar cell process. Solar Energy Materials and Solar Cells, 2016, 145, 84-92.	3.0	31
3858	Effects of selenization on phase transition and S/(S+Se) ratios of as-deposited Cu2ZnSnS4 absorbers sputtered by a quaternary target. Materials Letters, 2016, 164, 140-143.	1.3	18
3859	Versatile ternary organic solar cells: a critical review. Energy and Environmental Science, 2016, 9, 281-322.	15.6	585
3860	Monolithic perovskite/silicon-heterojunction tandem solar cells processed at low temperature. Energy and Environmental Science, 2016, 9, 81-88.	15.6	536
3861	Four-band Hamiltonian for fast calculations in intermediate-band solar cells. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 76, 127-134.	1.3	2
3862	Earth-Abundant Cu2ZnSn(S,Se)4 (CZTSSe) Solar Cells. Springer Series in Materials Science, 2016, , 25-74.	0.4	19
3863	Impact of alloyed capping layers on the performance of InAs quantum dot solar cells. Solar Energy Materials and Solar Cells, 2016, 144, 128-135.	3.0	11
3864	Raman vibrations and photovoltaic conversion in rare earth doped (Bi0.93RE0.07)FeO3 (RE=Dy, Gd, Eu,) Tj ETQq	0	/Qyerlock 10
3865	Influence of hydrogen on the properties of titanium doped hydrogenated amorphous silicon prepared by sputtering. Vacuum, 2016, 125, 93-97.	1.6	2
3866	Near-Infrared Down-Conversion and Energy Transfer Mechanism of Ce3+-Yb3+Co-Doped Ba2Y(BO3)2Cl Phosphors. ECS Journal of Solid State Science and Technology, 2016, 5, R3055-R3058.	0.9	8
3867	Hot Carrier Cooling in In <sub>0.17</sub> Ga <sub>0.83</sub> As/GaAs <sub>0.80</sub> P <sub>0.20</sub> Multiple Quantum Wells: The Effect of Barrier Thickness. IEEE Journal of Photovoltaics, 2016, 6, 166-171.	1.5	7

#	Article	IF	CITATIONS
3868	Experimental and theoretical optical properties of methylammonium lead halide perovskites. Nanoscale, 2016, 8, 6317-6327.	2.8	385
3869	Solar Energy for Fuels. Topics in Current Chemistry, 2016, , .	4.0	7
3870	Increased upconversion performance for thin film solar cells: a trimolecular composition. Chemical Science, 2016, 7, 559-568.	3.7	78
3871	Discovering lead-free perovskite solar materials with a split-anion approach. Nanoscale, 2016, 8, 6284-6289.	2.8	116
3872	Absorption threshold extended to 1.15 eV using InGaAs/GaAsP quantum wells for overâ€50%â€efficient latticeâ€matched quadâ€junction solar cells. Progress in Photovoltaics: Research and Applications, 2016, 24, 533-542.	4.4	56
3873	Towards a near-field concentrated solar thermophotovoltaic microsystem: Part I – Modeling. Solar Energy, 2017, 141, 323-333.	2.9	25
3874	Synergistic effects of nanotexturization and down shifting CdTe quantum dots in solar cell performance. Microsystem Technologies, 2017, 23, 3945-3953.	1.2	8
3875	Influence of elevated radiative lifetime on efficiency of CdSe/CdTe Type II colloidal quantum dot based solar cells. Solar Energy Materials and Solar Cells, 2017, 159, 657-663.	3.0	29
3876	Measuring impact in research evaluations: a thorough discussion of methods for, effects of and problems with impact measurements. Higher Education, 2017, 73, 775-787.	2.8	57
3877	Innovation highway: Breakthrough milestones and key developments in chalcopyrite photovoltaics from a retrospective viewpoint. Thin Solid Films, 2017, 633, 2-12.	0.8	32
3878	Investigation of the Energy-Transfer Mechanism in Ho <sup>3+</sup> - and Yb <sup>3+</sup> -Codoped Lu <sub>2</sub> O <sub>3</sub> Phosphor with Efficient Near-Infrared Downconversion. Inorganic Chemistry, 2017, 56, 1498-1503.	1.9	22
3879	Photoinduced charge recombination in dipolar D–A–A photonic liquid crystal polymorphs. Physical Chemistry Chemical Physics, 2017, 19, 4588-4596.	1.3	2
3880	Status review on earth-abundant and environmentally green Sn-X (XÂ=ÂSe, S) nanoparticle synthesis by solution methods for photovoltaic applications. International Journal of Hydrogen Energy, 2017, 42, 2790-2831.	3.8	59
3881	Acoustic-optical phonon up-conversion and hot-phonon bottleneck in lead-halide perovskites. Nature Communications, 2017, 8, 14120.	5.8	330
3882	Effect of heat treating metallic constituents on the properties of Cu2ZnSnSe4 thin films formed by a two-stage process. Thin Solid Films, 2017, 624, 167-174.	0.8	25
3883	AgBil <sub>4</sub> as a Lead-Free Solar Absorber with Potential Application in Photovoltaics. Chemistry of Materials, 2017, 29, 1538-1549.	3.2	102
3884	Synthesis of Y <sub>2</sub> O <sub>3</sub> :Bi <sup>3+</sup> ,Yb <sup>3+</sup> nanosheets from layered yttrium hydroxide precursor and their photoluminescence properties. RSC Advances, 2017, 7, 6671-6678.	1.7	10
3885	Fabrication and properties of pure-phase Cu2O co-doped with zinc and indium. Journal of Alloys and Compounds, 2017, 697, 5-10.	2.8	13

#	Article	IF	CITATIONS
3886	Solid phase crystallization of germanium films on crystalline silicon. Thin Solid Films, 2017, 621, 207-210.	0.8	4
3887	Quantum-Confined and Enhanced Optical Absorption of Colloidal PbS Quantum Dots at Wavelengths with Expected Bulk Behavior. Nano Letters, 2017, 17, 1248-1254.	4.5	42
3888	A thermodynamic cycle for the solar cell. Annals of Physics, 2017, 378, 71-87.	1.0	29
3889	Multiple Exciton Generation and Dynamics in InP/CdS Colloidal Quantum Dots. Journal of Physical Chemistry C, 2017, 121, 2099-2107.	1.5	24
3890	Efficient Multijunction Solar Cell Design for Maximum Annual Energy Yield by Representative Spectrum Selection. IEEE Journal of Photovoltaics, 2017, 7, 695-701.	1.5	10
3891	High-Pressure Study of Perovskite-Like Organometal Halide: Band-Gap Narrowing and Structural Evolution of [NH <sub>3</sub> -(CH <sub>2</sub> ) <sub>4</sub> -NH <sub>3</sub> ]CuCl <sub>4</sub> . Journal of Physical Chemistry Letters, 2017, 8, 500-506.	2.1	65
3892	Materials aspects of semiconductor nanocrystals for optoelectronic applications. Materials Horizons, 2017, 4, 155-205.	6.4	78
3893	Enhancement of the conversion efficiency of Cu2ZnSnS4 thin film solar cell through the optimization of some device parameters. Optik, 2017, 133, 122-131.	1.4	59
3894	Solar-Pumping Upconversion of Interfacial Coordination Nanoparticles. Scientific Reports, 2017, 7, 41446.	1.6	11
3895	Enhanced Carrier Collection in Silver Nanoparticle Embedded Zinc Oxide Nanorod Top Electrodes for Thin-Film Photovoltaic Devices. IEEE Electron Device Letters, 2017, 38, 349-352.	2.2	2
3896	Carbonâ€Nanodot Solar Cells from Renewable Precursors. ChemSusChem, 2017, 10, 1004-1013.	3.6	57
3897	Ferroelectric Alignment of Organic Cations Inhibits Nonradiative Electron–Hole Recombination in Hybrid Perovskites: Ab Initio Nonadiabatic Molecular Dynamics. Journal of Physical Chemistry Letters, 2017, 8, 812-818.	2.1	52
3898	Structural transitions of ordered kesterite-type Cu2ZnSnS4 under pressure. Applied Physics Letters, 2017, 110, .	1.5	12
3900	Leadâ€Free Organic–Inorganic Hybrid Perovskites for Photovoltaic Applications: Recent Advances and Perspectives. Advanced Materials, 2017, 29, 1605005.	11.1	568
3901	Green science: Independent building technology to mitigate energy, environment, and climate change. Renewable and Sustainable Energy Reviews, 2017, 73, 695-705.	8.2	65
3902	Quantum dot-induced improved performance of cadmium telluride (CdTe) solar cells without a Cu buffer layer. Journal of Materials Chemistry A, 2017, 5, 4904-4911.	5.2	14
3903	Controlling metastable native point-defect populations in Cu(In,Ga)Se2 and Cu2ZnSnSe4 materials and solar cells through voltage-bias annealing. Journal of Applied Physics, 2017, 121, .	1.1	5
3904	Crystallinity dependent thermal degradation in organic solar cell. Applied Physics Letters, 2017, 110, .	1.5	12

#	Article	IF	CITATIONS
3905	Resonant Broadband Field Enhancement in Cylindrical Plasmonic Structure Surrounded by Perovskite Environment. Plasmonics, 2017, 12, 1511-1522.	1.8	4
3906	First-Principles Study of Novel Two-Dimensional (C <sub>4</sub> H <sub>9</sub> NH <sub>3</sub> ) <sub>2</sub> PbX <sub>4</sub> Perovskites for Solar Cell Absorbers. Journal of Physical Chemistry Letters, 2017, 8, 876-883.	2.1	61
3907	Broadband Epsilon-near-Zero Reflectors Enhance the Quantum Efficiency of Thin Solar Cells at Visible and Infrared Wavelengths. ACS Applied Materials & Interfaces, 2017, 9, 5556-5565.	4.0	25
3908	Slow cooling and efficient extraction of C-exciton hot carriers in MoS2 monolayer. Nature Communications, 2017, 8, 13906.	5.8	132
3909	A core–multiple shell nanostructure enabling concurrent upconversion and quantum cutting for photon management. Nanoscale, 2017, 9, 1934-1941.	2.8	26
3910	Theoretical band alignment in an intermediate band chalcopyrite based material. Applied Surface Science, 2017, 424, 132-136.	3.1	15
3911	Review: Progress in solar cells from hydrogenated amorphous silicon. Renewable and Sustainable Energy Reviews, 2017, 76, 1497-1523.	8.2	134
3912	Efficient CdS/CdSe/ZnS quantum dot sensitized solar cells prepared by ZnS treatment from methanol solvent. Solar Energy, 2017, 144, 63-70.	2.9	47
3913	Defect Engineering in Multinary Earthâ€Abundant Chalcogenide Photovoltaic Materials. Advanced Energy Materials, 2017, 7, 1602366.	10.2	250
3914	A radioisotope thermophotovoltaic converter with nanophotonic emitters and filters. International Journal of Heat and Mass Transfer, 2017, 108, 1115-1125.	2.5	28
3915	Black Phosphorus Quantum Dots for Hole Extraction of Typical Planar Hybrid Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2017, 8, 591-598.	2.1	191
3916	An innovative thermodynamic model for performance evaluation of photovoltaic systems: Effect of wind speed and cell temperature. Energy Conversion and Management, 2017, 136, 152-160.	4.4	19
3917	Exploring the potential of semiconducting BaSi <sub>2</sub> for thin-film solar cell applications. Journal Physics D: Applied Physics, 2017, 50, 023001.	1.3	99
3918	Study of surface sulfurization of Cu2ZnSn(S, Se)4 thin film solar cell by sequential H2Se-selenization/H2S-sulfurization. Solar Energy Materials and Solar Cells, 2017, 163, 31-37.	3.0	18
3919	Polymorphism Controlled Singlet Fission in TIPS-Anthracene: Role of Stacking Orientation. Journal of Physical Chemistry C, 2017, 121, 1412-1420.	1.5	60
3920	Functional Mode Singlet Fission Theory. Journal of Physical Chemistry C, 2017, 121, 4130-4138.	1.5	22
3921	A Silicon–Singlet Fission Tandem Solar Cell Exceeding 100% External Quantum Efficiency with High Spectral Stability. ACS Energy Letters, 2017, 2, 476-480.	8.8	77
3922	Design principles for shift current photovoltaics. Nature Communications, 2017, 8, 14176.	5.8	219

#	Article	IF	CITATIONS
3923	Triplet exciton dissociation and electron extraction in graphene-templated pentacene observed with ultrafast spectroscopy. Physical Chemistry Chemical Physics, 2017, 19, 4809-4820.	1.3	11
3924	Efficient perovskite solar cells by combination use of Au nanoparticles and insulating metal oxide. Nanoscale, 2017, 9, 2852-2864.	2.8	59
3925	Effects of release agents on the film morphology of TiO2 photoanodes for FDSSCs by the roll-to-roll method. Journal of Alloys and Compounds, 2017, 702, 366-371.	2.8	2
3926	Optimal Bandgap of Double Perovskite La-Substituted Bi <sub>2</sub> FeCrO <sub>6</sub> for Solar Cells: an <i>ab initio</i> GGA+ <i>U</i> Study. Chinese Physics Letters, 2017, 34, 016101.	1.3	13
3927	Low-temperature molten salt synthesis and characterization of Cu2ZnSnS4 ultrafine powders. Optik, 2017, 138, 568-572.	1.4	12
3928	Ultrafast Hot-Carrier Photovoltaics of Type-I Monolayer Heterojunctions in the Broad Spectral Ranges. ACS Photonics, 2017, 4, 429-434.	3.2	6
3929	Towards high efficiency thin film solar cells. Progress in Materials Science, 2017, 87, 246-291.	16.0	85
3930	Simulation calculations of efficiencies and silicon consumption for CH3NH3PbI3â^'xâ^'y Br x Cl y /crystalline silicon tandem solar cells. Journal Physics D: Applied Physics, 2017, 50, 155102.	1.3	3
3931	Design of Contact Electrodes for Semiconductor Nanowire Solar Energy Harvesting Devices. Nano Letters, 2017, 17, 2118-2125.	4.5	7
3932	Origins and mechanisms of hysteresis in organometal halide perovskites. Journal of Physics Condensed Matter, 2017, 29, 193001.	0.7	55
3933	Indium gallium zinc oxide layer used to decrease optical reflection loss at intermediate adhesive region for fabricating mechanical stacked multijunction solar cells. Japanese Journal of Applied Physics, 2017, 56, 012602.	0.8	2
3935	The detailed balance limit of perovskite/silicon and perovskite/CdTe tandem solar cells. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600955.	0.8	44
3936	Influence of the growth method on the photoluminescence spectra and electronic properties of CuInS2 single crystals. Journal of Luminescence, 2017, 186, 123-126.	1.5	4
3937	Between the Sheets: Postsynthetic Transformations in Hybrid Perovskites. Chemistry of Materials, 2017, 29, 1868-1884.	3.2	75
3938	High saturation intensity in InAs/GaAs quantum dot solar cells and impact on the realization of the intermediate band concept at room-temperature. Applied Physics Letters, 2017, 110, 061107.	1.5	8
3939	ZnSnP 2 thin-film solar cell prepared by phosphidation method under optimized Zn/Sn atomic ratio of its absorbing layer. Current Applied Physics, 2017, 17, 557-564.	1.1	12
3940	Computational investigation to improve the External Quantum Efficiency of thin film tandem solar cell. , 2017, , .		0
3941	Effects of Nitrogen Incorporation on Structural and Optical Properties of GaNAsP Nanowires. Journal of Physical Chemistry C, 2017, 121, 7047-7055.	1.5	12

#	Article	IF	CITATIONS
3942	Application of Impedance Matching for Enhanced Transmitted Power in a Thermophotovoltaic System. Physical Review Applied, 2017, 7, .	1.5	15
3943	Specific tools for studying the optical response of heterogeneous thin film layers. Journal of Nanophotonics, 2017, 11, 016009.	0.4	2
3944	Cu(In,Ga)(Se,S) <sub>2</sub> solar cell research in Solar Frontier: Progress and current status. Japanese Journal of Applied Physics, 2017, 56, 04CA02.	0.8	142
3945	Progress on lead-free metal halide perovskites for photovoltaic applications: a review. Monatshefte Für Chemie, 2017, 148, 795-826.	0.9	431
3946	Theoretical study of thieno-thiophene based low band gap copolymers and substituent effect on the optoelectronic properties of them. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2017, 181, 24-29.	2.0	4
3947	Generation of Long-Lived Redox Equivalents in Self-Assembled Bilayer Structures on Metal Oxide Electrodes. Journal of Physical Chemistry C, 2017, 121, 5882-5890.	1.5	24
3948	Seawater operating bio-photovoltaic cells coupling semiconductor photoanodes and enzymatic biocathodes. Sustainable Energy and Fuels, 2017, 1, 842-850.	2.5	9
3949	Low light illumination study on commercially available homojunction photovoltaic cells. Applied Energy, 2017, 191, 10-21.	5.1	46
3950	GaAsSb-capped InAs QD type-II solar cell structures — improvement by composition profiling of layers surrounding QD. Materials Research Express, 2017, 4, 025502.	0.8	0
3951	Naphthobischalcogenadiazole Conjugated Polymers: Emerging Materials for Organic Electronics. Advanced Materials, 2017, 29, 1605218.	11.1	91
3952	Optimisation of pH of cadmium chloride post-growth-treatment in processing CDS/CDTE based thin film solar cells. Journal of Materials Science: Materials in Electronics, 2017, 28, 7231-7242.	1.1	6
3953	Novel bonding patterns and optoelectronic properties of the two-dimensional Si <sub>x</sub> C <sub>y</sub> monolayers. Journal of Materials Chemistry C, 2017, 5, 3561-3567.	2.7	41
3954	Degradation in photoelectrochemical devices: review with an illustrative case study. Journal Physics D: Applied Physics, 2017, 50, 124002.	1.3	63
3955	Efficiency limit of solar cells with index-near-zero photon management layers. Physica B: Condensed Matter, 2017, 513, 7-9.	1.3	1
3956	Multiple Exciton Generation in Si and Ge Nanocrystals: An ab Initio Comparative Study. Journal of Physical Chemistry C, 2017, 121, 6374-6379.	1.5	12
3957	Chemical Vapor Deposition Synthesis and Terahertz Photoconductivity of Low-Band-Gap <i>N</i> = 9 Armchair Graphene Nanoribbons. Journal of the American Chemical Society, 2017, 139, 3635-3638.	6.6	88
3958	Strategies for stable water splitting via protected photoelectrodes. Chemical Society Reviews, 2017, 46, 1933-1954.	18.7	427
3959	Sensitive monitoring of photocarrier densities in the active layer of a photovoltaic device with time-resolved terahertz reflection spectroscopy. Applied Physics Letters, 2017, 110, 071108.	1.5	10

#	Article	IF	CITATIONS
3960	Dialectics of nature: Temporal and spatial regulation in material sciences. Nano Research, 2017, 10, 1115-1124.	5.8	3
3961	Tuning the band gap and polarization of BaSnO <sub>3</sub> /SrSnO <sub>3</sub> superlattices for photovoltaic applications. Physical Chemistry Chemical Physics, 2017, 19, 7032-7039.	1.3	29
3962	Limits of Visibly Transparent Luminescent Solar Concentrators. Advanced Optical Materials, 2017, 5, 1600851.	3.6	100
3963	p-type cuprous oxide thin films with high conductivity deposited by high power impulse magnetron sputtering. Ceramics International, 2017, 43, 6214-6220.	2.3	25
3964	Development of one-dimensional photonic selective emitters for energy harvesting applications. Solar Energy Materials and Solar Cells, 2017, 163, 191-199.	3.0	6
3965	Electron Transfer from Triplet State of TIPS-Pentacene Generated by Singlet Fission Processes to CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite. Journal of Physical Chemistry Letters, 2017, 8, 884-888.	2.1	33
3966	Effect of precursor components on the photovoltaic performance of MA <sub>1â^x</sub> FA <sub>x</sub> PbI <sub>3â~y</sub> Br <sub>y</sub> films prepared via a one-step method. Inorganic Chemistry Frontiers, 2017, 4, 850-859.	3.0	6
3967	Recovering dynamic correlation in spin flip configuration interaction through a difference dedicated approach. Journal of Chemical Physics, 2017, 146, 014103.	1.2	38
3968	Enhanced Ferroelectric and Visibleâ€Light Photoelectric Properties in Multiferroic KBiFe <sub>2</sub> O <sub>5</sub> via Pressureâ€Induced Phase Transition. Advanced Electronic Materials, 2017, 3, 1600498.	2.6	34
3969	On the benchmarking of multi-junction photoelectrochemical fuel generating devices. Sustainable Energy and Fuels, 2017, 1, 492-503.	2.5	31
3970	100 GW solar power in India by 2022 – A critical review. Renewable and Sustainable Energy Reviews, 2017, 73, 1041-1050.	8.2	89
3971	Synthesis of 4-aminothiophenol functionalized quantum dots to sensitize silver nanowires and its application for solar cells. Synthetic Metals, 2017, 226, 50-55.	2.1	6
3972	The Lightâ€Induced Fieldâ€Effect Solar Cell Concept – Perovskite Nanoparticle Coating Introduces Polarization Enhancing Silicon Cell Efficiency. Advanced Materials, 2017, 29, 1606370.	11.1	35
3973	Progress in development of graded bandgap thin film solar cells with electroplated materials. Journal of Materials Science: Materials in Electronics, 2017, 28, 6359-6365.	1.1	6
3974	Materials for downconversion in solar cells: Perspectives and challenges. Solar Energy Materials and Solar Cells, 2017, 165, 59-71.	3.0	190
3975	The role of Sb in solar cell material Cu <sub>2</sub> ZnSnS <sub>4</sub> . Journal of Materials Chemistry A, 2017, 5, 6606-6612.	5.2	36
3976	A new family of multifunctional silicon clathrates: Optoelectronic and thermoelectric applications. Journal of Applied Physics, 2017, 121, .	1.1	12
3977	Nonuniform Effect of Carrier Separation Efficiency and Light Absorption in Type-II Perovskite Nanowire Solar Cells. Nanoscale Research Letters, 2017, 12, 160.	3.1	11

#	Article	IF	CITATIONS
3978	Decreasing Radiative Recombination Coefficients via an Indirect Band Gap in Lead Halide Perovskites. Journal of Physical Chemistry Letters, 2017, 8, 1265-1271.	2.1	57
3979	Design and Analysis of Light Trapping in Thin Film GaAs Solar Cells Using 2-D Photonic Crystal Structures at Front Surface. IEEE Journal of Quantum Electronics, 2017, 53, 1-9.	1.0	28
3980	Preparation and characterization of Cu2ZnSn(S,Se)4 thin films by sulfurization of Cu-Zn-Sn-Se precursor layers. Journal of the Korean Physical Society, 2017, 70, 281-285.	0.3	1
3982	Optimization of spectrally selective Si/SiO2 based filters for thermophotovoltaic devices. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 197, 123-131.	1.1	19
3983	Comparative study of the structural and optical properties of epitaxial CuFeO2 and CuFe1â^'xGaxO2 delafossite thin films grown by pulsed laser deposition methods. Thin Solid Films, 2017, 626, 110-116.	0.8	18
3984	Radiative Recombination Dominated Monocrystalline CdTe/MgCdTe Double-Heterostructures. IEEE Journal of Photovoltaics, 2017, 7, 690-694.	1.5	3
3985	Lifetime of excess electrons in Cu–Zn–Sn–Se powders. Semiconductors, 2017, 51, 18-22.	0.2	1
3986	Energy level alignment at planar organic heterojunctions: influence of contact doping and molecular orientation. Journal of Physics Condensed Matter, 2017, 29, 133001.	0.7	25
3987	Luminescent YbVO <sub>4</sub> by atomic layer deposition. Dalton Transactions, 2017, 46, 3008-3013.	1.6	10
3988	Formation of hybrid ABX <sub>3</sub> perovskite compounds for solar cell application: first-principles calculations of effective ionic radii and determination of tolerance factors. Dalton Transactions, 2017, 46, 3500-3509.	1.6	133
3989	Recent Development of Boron Nitride towards Electronic Applications. Advanced Electronic Materials, 2017, 3, 1600485.	2.6	98
3990	Development of organic-inorganic tin halide perovskites: A review. Solar Energy, 2017, 149, 54-59.	2.9	67
3991	Compound Copper Chalcogenide Nanocrystals. Chemical Reviews, 2017, 117, 5865-6109.	23.0	670
3992	Intrinsic non-radiative voltage losses in fullerene-based organic solar cells. Nature Energy, 2017, 2, .	19.8	494
3993	The passivating effect of cadmium in PbS/CdS colloidal quantum dots probed by nm-scale depth profiling. Nanoscale, 2017, 9, 6056-6067.	2.8	29
3994	Recent developments in complex metal oxide photoelectrodes. Journal Physics D: Applied Physics, 2017, 50, 193002.	1.3	127
3995	Seeing the invisible plasma with transient phonons in cuprous oxide. Physical Chemistry Chemical Physics, 2017, 19, 1151-1157.	1.3	1
3996	The air and thermal stabilities of lead-free perovskite variant Cs 2 SnI 6 powder. Materials Letters, 2017, 199, 50-52.	1.3	59
#	Article	IF	CITATIONS
------	---	------	-----------
3997	Performance optimization analysis of solar thermophotovoltaic energy conversion systems. Solar Energy, 2017, 149, 44-53.	2.9	13
3998	Predicting the outdoor performance of flat-plate Ill–V/Si tandem solar cells. Solar Energy, 2017, 149, 77-84.	2.9	18
3999	Mechanosynthesis of pure phase mixed-cation MA <sub>x</sub> FA <sub>1â°'x</sub> PbI <sub>3</sub> hybrid perovskites: photovoltaic performance and electrochemical properties. Sustainable Energy and Fuels, 2017, 1, 689-693.	2.5	78
4001	Improved Charge Collection in Highly Efficient CsPbBrI <sub>2</sub> Solar Cells with Light-Induced Dealloying. ACS Energy Letters, 2017, 2, 1043-1049.	8.8	103
4002	Lifetime improvement in silicon wafers using weak magnetic fields. Materials Science in Semiconductor Processing, 2017, 66, 99-104.	1.9	0
4003	Earthâ€Abundant Chalcogenide Photovoltaic Devices with over 5% Efficiency Based on a Cu <sub>2</sub> BaSn(S,Se) <sub>4</sub> Absorber. Advanced Materials, 2017, 29, 1606945.	11.1	112
4004	Tuning Energy Levels without Negatively Affecting Morphology: A Promising Approach to Achieving Optimal Energetic Match and Efficient Nonfullerene Polymer Solar Cells. Advanced Energy Materials, 2017, 7, 1602119.	10.2	39
4005	The numerical computation of lumped parameter values using the multi-dimensional Newton-Raphson method for the characterisation of a multi-junction CPV module using the five-parameter approach. Solar Energy, 2017, 149, 302-313.	2.9	21
4006	Enhancing dye-sensitized solar cell efficiency through broadband near-infrared upconverting nanoparticles. Nanoscale, 2017, 9, 6711-6715.	2.8	99
4007	c-Si/n-ZnO-based flexible solar cells with silica nanoparticles as a light trapping metamaterial. Physical Chemistry Chemical Physics, 2017, 19, 12838-12844.	1.3	17
4008	Effect of ruthenium alloy on the band gap value of FeS 2 -pyrite. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 525, 13-19.	2.3	19
4009	Synthesis and Characterization of Chemical Spray Pyrolysed CZTS Thin Films for Solar Cell Applications. Energy Procedia, 2017, 110, 180-187.	1.8	46
4010	Universal modal radiation laws for all thermal emitters. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4336-4341.	3.3	93
4011	Properties of sputtered ZnS and ZnS:A (A = Er, Yb) films grown at low substrate temperatures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, 031505.	0.9	5
4012	Design of photovoltaics for modules with 50% efficiency. Energy Science and Engineering, 2017, 5, 69-80.	1.9	9
4013	Observation of Photovoltaic Action from Photoacid-Modified Nafion Due to Light-Driven Ion Transport. Journal of the American Chemical Society, 2017, 139, 11726-11733.	6.6	66
4014	Computational Modeling of Novel Bulk Materials for the Intermediate-Band Solar Cells. ACS Omega, 2017, 2, 1454-1462.	1.6	26
4015	DFT investigation into the underperformance of sulfide materials in photovoltaic applications. Journal of Materials Chemistry A, 2017, 5, 9132-9140.	5.2	19

#	Article	IF	CITATIONS
4016	Benchmarking photoactive thinâ€film materials using a laserâ€induced steadyâ€state photocarrier grating. Progress in Photovoltaics: Research and Applications, 2017, 25, 605-613.	4.4	4
4017	Halide Perovskites for Tandem Solar Cells. Journal of Physical Chemistry Letters, 2017, 8, 1999-2011.	2.1	47
4018	Fabrication of germanium nanodisk array by neutral beam etching with protein as etching mask. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, .	0.6	2
4019	Photovoltaic Hybrid Perovskites under Pressure. Journal of Physical Chemistry Letters, 2017, 8, 2496-2506.	2.1	104
4020	Group-IV (Si, Ge, and Sn)-doped AgAlTe <sub>2</sub> for intermediate band solar cell from first-principles study. Semiconductor Science and Technology, 2017, 32, 065007.	1.0	12
4021	Towards exploitation of singlet-exciton fission in organic crystals and potential integration with inorganic semiconductors. Proceedings of SPIE, 2017, , .	0.8	0
4022	Perovskite Chalcogenides with Optimal Bandgap and Desired Optical Absorption for Photovoltaic Devices. Advanced Energy Materials, 2017, 7, 1700216.	10.2	128
4023	Highly efficient ultra thin Cu(In, Ga)Se <sub>2</sub> solar cell with Tin Selenide BSF. , 2017, , .		6
4024	Perovskite Tandem Solar Cells. Advanced Energy Materials, 2017, 7, 1602761.	10.2	193
4025	Cd 2+ doped PbS thin films for photovoltaic applications: Novel low-cost perspective. Materials Science in Semiconductor Processing, 2017, 67, 20-27.	1.9	31
4026	Photocatalytic water splitting solar-to-hydrogen energy conversion: Perovskite-type hydride XBeH3 (X) Tj ETQq0 (	OgrgBT/C	Verlock 10
4027	Effect of the inclusion of galium in normal cadmium chloride treatment on electrical properties OF CdS/CdTe solar cell. Materials Chemistry and Physics, 2017, 196, 229-236.	2.0	10
4028	Vibronic exciton theory of singlet fission. II. Two-dimensional spectroscopic detection of the correlated triplet pair state. Journal of Chemical Physics, 2017, 146, 174704.	1.2	53
4029	Vibronic exciton theory of singlet fission. I. Linear absorption and the anatomy of the correlated triplet pair state. Journal of Chemical Physics, 2017, 146, 174703.	1.2	77
4030	Lattice dynamics properties of chalcopyrite ZnSnP 2 : Density-functional calculations by using a linear response theory. Chinese Physics B, 2017, 26, 046302.	0.7	3
4031	Effect of Alkyl Chain Length on the Sensitizing Action of Substituted Non‣ymmetric Squaraines for pâ€Type Dye‣ensitized Solar Cells. ChemElectroChem, 2017, 4, 2385-2397.	1.7	17
4032	Enhancement of the near-infrared emission of Ce <sup>3+</sup> –Yb <sup>3+</sup> co-doped Y <sub>3</sub> Al <sub>5</sub> O <sub>12</sub> phosphors by doping Bi <sup>3+</sup> ions. RSC Advances, 2017, 7, 24674-24678.	1.7	16
4033	Engineering solar cells based on correlative X-ray microscopy. Journal of Materials Research, 2017, 32, 1825-1854.	1.2	61

T

#	Article	IF	CITATIONS
4034	Understanding and Eliminating Hysteresis for Highly Efficient Planar Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700414.	10.2	190
4035	X-ray photoelectron spectroscopy investigation of nanoporous NiO electrodes sensitized with Erythrosine B. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 532, 464-471.	2.3	14
4036	Optimizing the Efficiency of Solar Photon Upconversion. ACS Energy Letters, 2017, 2, 1346-1354.	8.8	104
4037	Novel chemical cleaning of textured crystalline silicon for realizing surface recombination velocity <0.2 cm/s using passivation catalytic CVD SiN <i><sub></sub></i> /amorphous silicon stacked layers. Japanese Journal of Applied Physics, 2017, 56, 056502.	0.8	10
4038	Singlet Fission in Weakly Interacting Acene Molecules. Journal of Physical Chemistry Letters, 2017, 8, 2068-2073.	2.1	16
4039	Enhanced Photovoltaic Properties Induced by Ferroelectric Domain Structures in Organometallic Halide Perovskites. Journal of Physical Chemistry C, 2017, 121, 11151-11158.	1.5	44
4040	Role of the Dark 2A <sub>g</sub> State in Donor–Acceptor Copolymers as a Pathway for Singlet Fission: A DMRG Study. Journal of Physical Chemistry Letters, 2017, 8, 2175-2181.	2.1	30
4041	Strong ferroelectric polarization of CH <sub>3</sub> NH <sub>3</sub> GeI <sub>3</sub> with high-absorption and mobility transport anisotropy: theoretical study. Journal of Materials Chemistry C, 2017, 5, 5356-5364.	2.7	101
4042	Scalable Indium Phosphide Thin-Film Nanophotonics Platform for Photovoltaic and Photoelectrochemical Devices. ACS Nano, 2017, 11, 5113-5119.	7.3	30
4043	Lattice dynamics of the tin sulphides SnS <sub>2</sub> , SnS and Sn <sub>2</sub> S <sub>3</sub> : vibrational spectra and thermal transport. Physical Chemistry Chemical Physics, 2017, 19, 12452-12465.	1.3	187
4044	Stable and conductive lead halide perovskites facilitated by X-type ligands. Nanoscale, 2017, 9, 7252-7259.	2.8	62
4045	Impact of high electric field on the detailed balance limit of efficiency of solar cells. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	1.1	1
4046	A high efficient antireflective down-conversion Y2O3:Bi3+, Yb3+ thin films. Optical and Quantum Electronics, 2017, 49, 1.	1.5	2
4047	Modeling Singlet Fission in Rylene and Diketopyrrolopyrrole Derivatives: The Role of the Charge Transfer State in Superexchange and Excimer Formation. Journal of Physical Chemistry C, 2017, 121, 10345-10350.	1.5	73
4048	Hole Trapping by Iodine Interstitial Defects Decreases Free Carrier Losses in Perovskite Solar Cells: A Time-Domain <i>Ab Initio</i> Study. ACS Energy Letters, 2017, 2, 1270-1278.	8.8	151
4049	Enhanced sub-bandgap efficiency of a solid-state organic intermediate band solar cell using triplet–triplet annihilation. Energy and Environmental Science, 2017, 10, 1465-1475.	15.6	54
4050	Influence of Schottky contact on the C-V and J-V characteristics of HTM-free perovskite solar cells. EPJ Photovoltaics, 2017, 8, 85501.	0.8	19
4051	Combinatorial screening of halide perovskite thin films and solar cells by mask-defined IR laser molecular beam epitaxy. Science and Technology of Advanced Materials, 2017, 18, 307-315.	2.8	26

#	Article	IF	CITATIONS
4052	Perovskite semiconductors for photoelectrochemical water splitting applications. Current Opinion in Electrochemistry, 2017, 2, 144-147.	2.5	37
4053	Understanding chemically processed solar cells based on quantum dots. Science and Technology of Advanced Materials, 2017, 18, 334-350.	2.8	32
4054	Growth and properties of Cu2ZnSnS4 thin films prepared by multiple metallic layer stacks as a function of sulfurization time. Journal of Materials Science: Materials in Electronics, 2017, 28, 11702-11711.	1.1	15
4055	12.35% efficient graphene quantum dots/silicon heterojunction solar cells using graphene transparent electrode. Nano Energy, 2017, 31, 359-366.	8.2	114
4056	Towards 3D organic solar cells. Nano Energy, 2017, 31, 582-589.	8.2	18
4057	Open-circuit Voltage Loss in CH <sub>3</sub> NH <sub>3</sub> SnI <sub>3</sub> Perovskite Solar Cells. Chemistry Letters, 2017, 46, 253-256.	0.7	46
4058	Thermal Behavior of Photovoltaic Devices. , 2017, , .		90
4059	Towards high efficiency nanowire solar cells. Nano Today, 2017, 12, 31-45.	6.2	153
4060	Synthesis and Characterization of Cu <sub>3</sub> (Sb <sub>1–<i>x</i></sub> As <sub><i>x</i></sub> )S <sub>4</sub> Semiconducting Nanocrystal Alloys with Tunable Properties for Optoelectronic Device Applications. Chemistry of Materials, 2017, 29, 573-578.	3.2	22
4061	Pressureâ€Induced Bandgap Optimization in Leadâ€Based Perovskites with Prolonged Carrier Lifetime and Ambient Retainability. Advanced Functional Materials, 2017, 27, 1604208.	7.8	167
4062	Temperature Coefficients of Photovoltaic Devices. , 2017, , 29-74.		7
4063	Cuprous oxide thin films obtained by dip-coating method using rapid thermal annealing treatments. Materials Science in Semiconductor Processing, 2017, 68, 133-139.	1.9	28
4064	Improved CdTe Solar-Cell Performance with An Evaporated Te Layer before The Back Contact. MRS Advances, 2017, 2, 3195-3201.	0.5	13
4065	Solution-processed planar lead iodide photovoltaic device. Journal of Materials Science: Materials in Electronics, 2017, 28, 9183-9189.	1.1	1
4066	Intramolecular Singlet Fission in an Antiaromatic Polycyclic Hydrocarbon. Angewandte Chemie - International Edition, 2017, 56, 9400-9404.	7.2	60
4067	Hole-transporting layer-free inverted planar mixed lead-tin perovskite-based solar cells. Frontiers of Optoelectronics, 2017, 10, 103-110.	1.9	15
4068	Direct evaluation of influence of electron damage on the subcell performance in triple-junction solar cells using photoluminescence decays. Scientific Reports, 2017, 7, 1985.	1.6	7
4069	Near-field enhanced thermionic energy conversion for renewable energy recycling. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 198, 59-67.	1.1	15

#	Article	IF	CITATIONS
4070	Nanosecond long excited state lifetimes observed in hafnium nitride. Solar Energy Materials and Solar Cells, 2017, 169, 13-18.	3.0	19
4071	Electronic structures of Cu <sub>2</sub> ZnSnSe <sub>4</sub> surface and CdS/Cu <sub>2</sub> ZnSnSe <sub>4</sub> heterointerface. Japanese Journal of Applied Physics, 2017, 56, 065701.	0.8	7
4072	Towards Efficient Spectral Converters through Materials Design for Luminescent Solar Devices. Advanced Materials, 2017, 29, 1606491.	11.1	174
4073	First-principles calculations of electronic and optical properties of Fe 1â^'x Zn x S 2 and Zn 1â^'x Mg x O alloys. Current Applied Physics, 2017, 17, 1169-1180.	1.1	4
4074	Bandgap engineering of Cu2ZnSn1-xGexS(e)4 by adjusting Sn-Ge ratios for almost full solar spectrum absorption. Journal of Alloys and Compounds, 2017, 718, 236-245.	2.8	29
4075	Computer Simulation of Singlet Fission in Single Crystalline Pentacene by Functional Mode Vibronic Theory. Journal of Physical Chemistry C, 2017, 121, 11159-11165.	1.5	10
4076	Third-generation Cu-In-Ga-(S, Se)-based solar inverters. Physics-Uspekhi, 2017, 60, 161-178.	0.8	22
4077	Oxide-induced grain growth in CZTS nanoparticle coatings. RSC Advances, 2017, 7, 25575-25581.	1.7	4
4078	Effect of water on the effective Goldschmidt tolerance factor and photoelectric conversion efficiency of organic–inorganic perovskite: insights from first-principles calculations. Physical Chemistry Chemical Physics, 2017, 19, 14955-14960.	1.3	10
4079	Analysis of the recombination mechanisms of a silicon solar cell with low bandgap-voltage offset. Journal of Applied Physics, 2017, 121, .	1.1	57
4080	Van der Waals bilayer antimonene: A promising thermophotovoltaic cell material with 31% energy conversion efficiency. Nano Energy, 2017, 38, 561-568.	8.2	92
4081	Optimization of post-deposition annealing in Cu 2 ZnSnS 4 thin film solar cells and its impact on device performance. Solar Energy Materials and Solar Cells, 2017, 170, 287-294.	3.0	48
4082	Directing solar photons to sustainably meet food, energy, and water needs. Scientific Reports, 2017, 7, 3133.	1.6	25
4083	Perovskite Nanopillar Array Based Tandem Solar Cell. ACS Photonics, 2017, 4, 2025-2035.	3.2	24
4084	Investigation of Physical and Electronic Properties of GeSe for Photovoltaic Applications. Advanced Electronic Materials, 2017, 3, 1700141.	2.6	81
4085	Narrow-Bandgap Interband Cascade Thermophotovoltaic Cells. IEEE Journal of Photovoltaics, 2017, 7, 1462-1468.	1.5	20
4086	High Photovoltaic Quantum Efficiency in Ultrathin van der Waals Heterostructures. ACS Nano, 2017, 11, 7230-7240.	7.3	193
4087	Band offsets of Ag2ZnSnSe4/CdS heterojunction: An experimental and first-principles study. Journal of Applied Physics, 2017, 121, .	1.1	22

ARTICLE IF CITATIONS Refractive index and extinction coefficient of NH<sub>2</sub>CH  a€‰nH<sub>2</sub>Pbl<sub>3≤/sub> 27 4088 perovskite photovoltaic material. Journal of Physics Condensed Matter, 2017, 29, 245702. Robustp-type doping of copper oxide using nitrogen implantation. Materials Research Express, 2017, 4, 4089 0.8 075905 Natural and artificial spectral edges in exoplanets. Monthly Notices of the Royal Astronomical 4090 1.2 27 Society: Letters, 2017, 470, L82-L86. The Emergence of the Mixed Perovskites and Their Applications as Solar Cells. Advanced Energy 4091 120 Materials, 2017, 7, 1700491. Opto-electrical characterisation of In-doped SnS thin films for photovoltaic applications. Thin Solid 4092 0.8 14 Films, 2017, 636, 158-163. Enhancing Singlet Fission Dynamics by Suppressing Destructive Interference between Charge-Transfer Pathways. Journal of Physical Chemistry Letters, 2017, 8, 2480-2488. 4093 2.1 Hybrid Perovskites: Effective Crystal Growth for Optoelectronic Applications. Advanced Energy 4094 10.2 62 Materials, 2017, 7, 1602596. Approaching the fill factor Shockley–Queisser limit in stable, dopant-free triple cation perovskite 4095 15.6 311 solar cells. Energy and Environmental Science, 2017, 10, 1530-1539. Reduced Interfaceâ€Mediated Recombination for High Openâ€Circuit Voltages in 4096 11.1 210 CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub>Solar Cells. Advanced Materials, 2017, 29, 1700159. Breaking the Open-Circuit Voltage Deficit Floor in PbS Quantum Dot Solar Cells through Synergistic 4097 8.8 74 Ligand and Architecture Engineering. ACS Energy Letters, 2017, 2, 1444-1449. Unified model for singlet fission within a non-conjugated covalent pentacene dimer. Nature 4098 5.8 176 Communications, 2017, 8, 15171. A design of intermediate band solar cell for photon ratchet with multi-layer MoS2 nanoribbons. 4099 1.5 Applied Physics Letters, 2017, 110, . Effect of substrate temperature during the three-stage process on the CuInSe 2 solar cell 4100 1.1 8 characteristics. Current Applied Physics, 2017, 17, 1194-1201. Limiting Efficiencies of Novel Solar Cell Concepts in Space. E3S Web of Conferences, 2017, 16, 03004. 4101 0.2 III-nitride nanowires for solar light harvesting: A review. Renewable and Sustainable Energy Reviews, 4102 8.2 35 2017, 79, 1002-1015. Origin of Open-Circuit Voltage Loss in Polymer Solar Cells and Perovskite Solar Cells. ACS Applied Materials & amp; Interfaces, 2017, 9, 19988-19997. 30 Coherent singlet fission activated by symmetry breaking. Nature Chemistry, 2017, 9, 983-989. 4104 6.6 165 Metal–Ligand Complexâ€Induced Ultrafast Chargeâ€Carrier Relaxation and Chargeâ€Transfer Dynamics in CdX (X=S, Se, Te) Quantum Dots Sensitized with Nitrocatechol. Chemistry - A European Journal, 2017, 1.7 23, 10590-10596.

#	Article	IF	CITATIONS
4106	Double stack layer structure of SiN x /pm-Si thin films for downshifting and antireflection properties. Materials Letters, 2017, 203, 50-53.	1.3	5
4107	Near-field transport imaging applied to photovoltaic materials. Solar Energy, 2017, 153, 134-141.	2.9	9
4108	Exploring the PbS–Bi <sub>2</sub> S <sub>3</sub> Series for Next Generation Energy Conversion Materials. Chemistry of Materials, 2017, 29, 5156-5167.	3.2	32
4109	Thermodynamic considerations on interfacial reactivity concerning carrier transport characteristics in metal/p-Zn <sub>3</sub> P <sub>2</sub> junctions. Journal of Materials Chemistry C, 2017, 5, 5538-5543.	2.7	1
4110	Halide perovskite solar cells using monocrystalline TiO <sub>2</sub> nanorod arrays as electron transport layers: impact of nanorod morphology. Nanotechnology, 2017, 28, 274001.	1.3	67
4111	Boosting Biexciton Collection Efficiency at Quantum Dot–Oxide Interfaces by Hole Localization at the Quantum Dot Shell. Journal of Physical Chemistry Letters, 2017, 8, 2654-2658.	2.1	5
4112	Electronic and optical properties of Cu2 <i>X</i> SnS4 ( <i>X</i> = Be, Mg, Ca, Mn, Fe, and Ni) and the impact of native defect pairs. Journal of Applied Physics, 2017, 121, .	1.1	31
4113	Zr-doped TiO <sub>2</sub> nanoparticles synthesized via a sol–gel route and their application in dye-sensitized solar cells for thermo-stabilization. Materials Research Express, 2017, 4, 065501.	0.8	8
4114	Highly qualified copper-indium sulfide colloids prepared in water under microwave irradiation and their applications to the TiO 2 based quantum dot-sensitized solar cells. Solar Energy Materials and Solar Cells, 2017, 169, 203-209.	3.0	15
4115	Non-Poissonian photon statistics from macroscopic photon cutting materials. Nature Communications, 2017, 8, 15537.	5.8	15
4116	CaTiO <sub>3</sub> :Er <sup>3+</sup> ,Ni <sup>2+</sup> broadbandâ€sensitive upconverter: An effective way to harvest unused NIR solar irradiation for crystalline silicon solar cells. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600899.	0.8	10
4117	Two-step photocurrent generation enhanced by miniband formation in InAs/GaAs quantum dot superlattice intermediate-band solar cells. Applied Physics Letters, 2017, 110, .	1.5	8
4118	Broadband Emission in Tellurite Glasses. Springer Series in Materials Science, 2017, , 155-211.	0.4	2
4119	Numerical simulation of metal subwavelength nanogeometries in organic media using DDA technique: a coupled broadband resonant near electric field perspective. Journal of Optics (India), 2017, 46, 132-142.	0.8	0
4120	Role of Defects and Surface States in the Carrier Transport and Nonlinearity of the Diode Characteristics in PbS/ZnO Quantum Dot Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 13269-13277.	4.0	16
4121	Beyond 11% Efficient Sulfide Kesterite Cu <sub>2</sub> Zn <sub><i>x</i></sub> Cd <sub>1–<i>x</i></sub> SnS <sub>4</sub> Solar Cell: Effects of Cadmium Alloying. ACS Energy Letters, 2017, 2, 930-936.	8.8	249
4122	Multiple exciton generation for photoelectrochemical hydrogen evolution reactions with quantum yields exceeding 100%. Nature Energy, 2017, 2, .	19.8	172
4123	Improved photoelectrochemical performance of GaN nanopillar photoanodes. Nanotechnology, 2017, 28, 154001.	1.3	29

#	ARTICLE	IF	CITATIONS
4124	Cation disorder and vacancies in the sulfosalt-like phase Sn4.11Bi22.60Se38 - A resonant X-ray diffraction study. Journal of Alloys and Compounds, 2017, 701, 581-586.	2.8	7
4125	WS2/Silicon Heterojunction Solar Cells: A CVD Process for the Fabrication of WS2 Films on p-Si Substrates for Photovoltaic and Spectral Responses. IEEE Nanotechnology Magazine, 2017, 11, 33-38.	0.9	21
4126	Performance Enhancement of Tri ation and Dualâ€Anion Mixed Perovskite Solar Cells by Au@SiO <sub>2</sub> Nanoparticles. Advanced Functional Materials, 2017, 27, 1606545.	7.8	52
4127	Investigating sulfur distribution and corresponding bandgap grading in Cu(In,Ga)(S,Se)2 absorber layers processed by fast atmospheric chalcogenization of metal precursors. Journal of Alloys and Compounds, 2017, 703, 600-604.	2.8	10
4128	Performance of photovoltaic cells in different segments of spatial-spectral distributions. Vacuum, 2017, 146, 542-547.	1.6	2
4129	A critical review on tin halide perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 11518-11549.	5.2	463
4130	Luminescence spectroscopy of lead-halide perovskites: materials properties and application as photovoltaic devices. Journal of Materials Chemistry C, 2017, 5, 3427-3437.	2.7	111
4131	Defects-assisted solar absorption of plasmonic nanoshell-based nanofluids. Solar Energy, 2017, 146, 503-510.	2.9	30
4132	Near-infrared quantum cutting and energy transfer mechanism in Lu2O3: Tm3+/Yb3+ phosphor for high-efficiency photovoltaics. Journal of Materials Science: Materials in Electronics, 2017, 28, 8017-8022.	1.1	6
4133	Effect of external applied electric field on the silicon solar cell's thermodynamic efficiency. Iranian Physical Journal, 2017, 11, 51-58.	1.2	3
4134	High-Quality LaVO <sub>3</sub> Films as Solar Energy Conversion Material. ACS Applied Materials & Interfaces, 2017, 9, 12556-12562.	4.0	26
4135	Two-step photon up-conversion solar cells. Nature Communications, 2017, 8, 14962.	5.8	88
4136	Influence of Si doping on InAs/GaAs quantum dot solar cells with AlAs cap layers. , 2017, , .		0
4137	Seleniumâ€Graded Sb <sub>2</sub> (S <sub>1â<sup>~</sup>x</sub> Se <sub>x</sub> ) <sub>3</sub> for Planar Heterojunction Solar Cell Delivering a Certified Power Conversion Efficiency of 5.71%. Solar Rrl, 2017, 1, 1700017.	3.1	82
4138	One-Step Nanosecond-Laser Microstructuring, Sulfur-Hyperdoping, and Annealing of Silicon Surfaces in Liquid Carbon Disulfide. Journal of Russian Laser Research, 2017, 38, 185-190.	0.3	5
4139	Technological Advances in Tellurite Glasses. Springer Series in Materials Science, 2017, , .	0.4	39
4140	Effects of radiative forcing of building integrated photovoltaic systems in different urban climates. Solar Energy, 2017, 147, 399-405.	2.9	17
4141	Subcutaneous Photovoltaic Infrared Energy Harvesting for Bio-implantable Devices. IEEE Transactions on Electron Devices, 2017, 64, 2432-2437.	1.6	65

#	Article	IF	Citations
4142	Compositional and morphological engineering of mixed cation perovskite films for highly efficient planar and flexible solar cells with reduced hysteresis. Nano Energy, 2017, 35, 223-232.	8.2	162
4143	Transformation of PbI <sub>2</sub> , PbBr <sub>2</sub> and PbCl <sub>2</sub> salts into MAPbBr <sub>3</sub> perovskite by halide exchange as an effective method for recombination reduction. Physical Chemistry Chemical Physics, 2017, 19, 10913-10921.	1.3	27
4144	Two-junction holographic spectrum-splitting microconcentrating photovoltaic system. Journal of Photonics for Energy, 2017, 7, 017001.	0.8	7
4145	Nitrogen chemical state in N-doped Cu2O thin films. Applied Physics Letters, 2017, 110, .	1.5	18
4146	Analytic \$JV\$ -Characteristics of Ideal Intermediate Band Solar Cells and Solar Cells With Up and Downconverters. IEEE Transactions on Electron Devices, 2017, 64, 2275-2282.	1.6	21
4147	Monitoring of the energy levels by heteroatom substitution to hexacene and controlling over singlet fission and photo-oxidative resistance. Journal of Molecular Graphics and Modelling, 2017, 74, 24-37.	1.3	4
4148	Design of Heterogeneous Chalcogenide Nanostructures with Pressure-Tunable Gaps and without Electronic Trap States. Nano Letters, 2017, 17, 2547-2553.	4.5	8
4149	A Comprehensive Photonic Approach for Solar Cell Cooling. ACS Photonics, 2017, 4, 774-782.	3.2	262
4150	Multicolor emission from intermediate band semiconductor ZnO1â^'xSex. Scientific Reports, 2017, 7, 44214.	1.6	19
4151	Influence of built-in charge on photogeneration and recombination processes in InAs/GaAs quantum dot solar cells. Journal Physics D: Applied Physics, 2017, 50, 165101.	1.3	5
4152	Recent progress of interconnecting layer for tandem organic solar cells. Science China Chemistry, 2017, 60, 460-471.	4.2	21
4153	Enhancing the efficiency of the intermediate band solar cells by introducing: carrier losses, alloying and strain. IET Optoelectronics, 2017, 11, 38-43.	1.8	2
4154	Cyclic Voltammetry Measurement for n-Type Cu <sub>2</sub> O Thin Film Using Copper Sulphate-Based Solution. Key Engineering Materials, 0, 730, 119-124.	0.4	4
4155	Photovoltage at semiconductor–electrolyte junctions. Current Opinion in Electrochemistry, 2017, 2, 104-110.	2.5	60
4156	Solution processing of air-stable molecular semiconducting iodosalts, Cs <sub>2</sub> SnI <sub>6â^'x</sub> Br <sub>x</sub> , for potential solar cell applications. Sustainable Energy and Fuels, 2017, 1, 710-724.	2.5	174
4157	Ultrathin Al <sub>2</sub> O <sub>3</sub> interface achieving an 11.46% efficiency in planar n-Si/PEDOT:PSS hybrid solar cells. Nanotechnology, 2017, 28, 155402.	1.3	22
4158	Visible and near infrared light active photocatalysis based on conjugated polymers. Journal of Industrial and Engineering Chemistry, 2017, 51, 27-43.	2.9	73
4159	Optical determination of Shockley-Read-Hall and interface recombination currents in hybrid perovskites. Scientific Reports, 2017, 7, 44629.	1.6	175

#	Article	IF	CITATIONS
4160	First-principles simulations of vibrational decay and lifetimes ina-Si:H anda-Si:D. Physical Review B, 2017, 95, .	1.1	1
4161	Enhancing Open-Circuit Voltage of Solution-Processed Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Solar Cells With Ag Substitution. IEEE Journal of Photovoltaics, 2017, 7, 874-881.	1.5	44
4162	Fabrication of p-CuO/n-ZnO heterojunction diode via sol-gel spin coating technique. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2017, 220, 82-90.	1.7	66
4163	Cd and Impurity Redistribution at the CdS/CICS Interface After Annealing of CICS-Based Solar Cells Resolved by Atom Probe Tomography. IEEE Journal of Photovoltaics, 2017, 7, 313-321.	1.5	19
4164	Dual Interfacial Modifications Enable High Performance Semitransparent Perovskite Solar Cells with Large Open Circuit Voltage and Fill Factor. Advanced Energy Materials, 2017, 7, 1602333.	10.2	209
4165	Strongly emissive perovskite nanocrystal inks for high-voltage solar cells. Nature Energy, 2017, 2, .	19.8	544
4166	Bandgap Control via Structural and Chemical Tuning of Transition Metal Perovskite Chalcogenides. Advanced Materials, 2017, 29, 1604733.	11.1	154
4167	Fluorene Conjugated Polymer/Nickel Oxide Nanocomposite Hole Transport Layer Enhances the Efficiency of Organic Photovoltaic Devices. ACS Applied Materials & Interfaces, 2017, 9, 2232-2239.	4.0	20
4168	Enhanced Triplet–Triplet Annihilation Upconversion in Dual-Sensitizer Systems: Translating Broadband Light Absorption to Practical Solid-State Materials. ACS Photonics, 2017, 4, 127-137.	3.2	25
4169	Characterization techniques for dye-sensitized solar cells. Energy and Environmental Science, 2017, 10, 672-709.	15.6	136
4170	Numerical study of InGaN tandem solar cells with intermediate bands. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600429.	1.2	2
4171	Co-solvent effect on microwave-assisted Cu2ZnSnS4 nanoparticles synthesis for thin film solar cell. Solar Energy Materials and Solar Cells, 2017, 161, 416-423.	3.0	12
4172	Chemical bath deposition produced ZnO nanorod arrays as an antireflective layer in the polycrystalline Si solar cells. Journal of Alloys and Compounds, 2017, 698, 719-724.	2.8	27
4173	An overview of the Challenges in the commercialization of dye sensitized solar cells. Renewable and Sustainable Energy Reviews, 2017, 71, 675-686.	8.2	153
4174	Functionality-Directed Screening of Pb-Free Hybrid Organic–Inorganic Perovskites with Desired Intrinsic Photovoltaic Functionalities. Chemistry of Materials, 2017, 29, 524-538.	3.2	135
4175	Enhanced Charge Carrier Transport and Device Performance Through Dual-Cesium Doping in Mixed-Cation Perovskite Solar Cells with Near Unity Free Carrier Ratios. ACS Applied Materials & Interfaces, 2017, 9, 2358-2368.	4.0	28
4176	Impacts of surface or interface chemistry of ZnSe passivation layer on the performance of CdS/CdSe quantum dot sensitized solar cells. Nano Energy, 2017, 32, 433-440.	8.2	70
4177	All-oxide solar cells based on electrodeposited Cu2O absorber and atomic layer deposited ZnMgO on precious-metal-free electrode. Solar Energy Materials and Solar Cells, 2017, 161, 449-459.	3.0	43

#	Article	IF	CITATIONS
4178	Thermodynamic study of solar photovoltaic energy conversion: An overview. Renewable and Sustainable Energy Reviews, 2017, 71, 630-638.	8.2	36
4179	Is conversion efficiency still relevant to qualify advanced multi-junction solar cells?. Progress in Photovoltaics: Research and Applications, 2017, 25, 242-254.	4.4	18
4180	Photovoltaic and impedance spectroscopic characteristics of heterojunction of graphene-PEDOT:PSS composite and n-silicon prepared via solution-based process. Materials Research Innovations, 2017, 21, 263-268.	1.0	5
4181	Thermoradiative Energy Conversion With Quasi-Fermi Level Variations. IEEE Transactions on Electron Devices, 2017, 64, 250-255.	1.6	25
4182	Effect of A-site cations on the broadband-sensitive upconversion of AZrO 3 :Er 3+ ,Ni 2+ (AÂ=ÂCa, Sr, Ba) phosphors. Optical Materials, 2017, 64, 314-322.	1.7	18
4183	Strategic review of interface carrier recombination in earth abundant Cu–Zn–Sn–S–Se solar cells: current challenges and future prospects. Journal of Materials Chemistry A, 2017, 5, 3069-3090.	5.2	175
4184	Long Minorityâ€Carrier Diffusion Length and Low Surfaceâ€Recombination Velocity in Inorganic Leadâ€Free CsSnI <sub>3</sub> Perovskite Crystal for Solar Cells. Advanced Functional Materials, 2017, 27, 1604818.	7.8	164
4185	Twoâ€Ðimensional Single‣ayer Organic–Inorganic Hybrid Perovskite Semiconductors. Advanced Energy Materials, 2017, 7, 1601731.	10.2	93
4186	Band Gap Engineering of Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> Perovskites with Trivalent Atoms Using a Dual Metal Cation. Journal of Physical Chemistry C, 2017, 121, 969-974.	1.5	49
4187	Elementary Processes in Organic Photovoltaics. Advances in Polymer Science, 2017, , .	0.4	15
4188	Tin monosulfide (SnS) thin films grown by liquid-phase deposition. Solar Energy, 2017, 145, 33-41.	2.9	43
4189	Energy conversion approaches and materials for high-efficiency photovoltaics. Nature Materials, 2017, 16, 23-34.	13.3	498
4190	Materials for solar fuels and chemicals. Nature Materials, 2017, 16, 70-81.	13.3	1,163
4192	Charge Separation at Nanostructured Molecular Donor–Acceptor Interfaces. Advances in Polymer Science, 2017, , 77-108.	0.4	2
4193	Simultaneous large continuous band gap tunability and photoluminescence enhancement in GaSe nanosheets via elastic strain engineering. Nano Energy, 2017, 32, 157-164.	8.2	41
4194	GeSe Thin-Film Solar Cells Fabricated by Self-Regulated Rapid Thermal Sublimation. Journal of the American Chemical Society, 2017, 139, 958-965.	6.6	238
4195	Investigation of electrically active defects in InGaAs quantum wire intermediate-band solar cells using deep-level transient spectroscopy technique. Nanotechnology, 2017, 28, 045707.	1.3	11
4196	Sol-gel Based Nanoceramic Materials: Preparation, Properties and Applications. , 2017, , .		9

	CITATION REI	PORT	
#	Article	IF	CITATIONS
4197	Singlet Fission: Progress and Prospects in Solar Cells. Advanced Materials, 2017, 29, 1601652.	11.1	158
4198	Electrochemical Hydrogen Production. , 2017, , 897-940.		5
4199	Sn-doped CdTe as promising intermediate-band photovoltaic material. Journal Physics D: Applied Physics, 2017, 50, 035501.	1.3	17
4200	Multinary wurtzite-type oxide semiconductors: present status and perspectives. Semiconductor Science and Technology, 2017, 32, 013007.	1.0	10
4201	Photovoltaic mixed-cation lead mixed-halide perovskites: links between crystallinity, photo-stability and electronic properties. Energy and Environmental Science, 2017, 10, 361-369.	15.6	482
4202	Advancement of Glass-Ceramic Materials for Photonic Applications. , 2017, , 133-155.		1
4203	Direct Observation of a Charge-Transfer State Preceding High-Yield Singlet Fission in Terrylenediimide Thin Films. Journal of the American Chemical Society, 2017, 139, 663-671.	6.6	149
4204	CsPbBr <sub>3</sub> Solar Cells: Controlled Film Growth through Layer-by-Layer Quantum Dot Deposition. Chemistry of Materials, 2017, 29, 9767-9774.	3.2	178
4205	Exceptional Optical Response of Archimedean Boron and Group-V Ultrathin Nanosheets. Journal of Physical Chemistry C, 2017, 121, 24489-24494.	1.5	1
4206	Van der Waals Materials for Atomically-Thin Photovoltaics: Promise and Outlook. ACS Photonics, 2017, 4, 2962-2970.	3.2	241
4207	Multiple exciton generation in chiral carbon nanotubes: Density functional theory based computation. Journal of Chemical Physics, 2017, 147, 154106.	1.2	12
4208	Highâ€Pressure Bandâ€Gap Engineering in Leadâ€Free Cs <sub>2</sub> AgBiBr <sub>6</sub> Double Perovskite. Angewandte Chemie, 2017, 129, 16185-16189.	1.6	28
4209	Highâ€Pressure Bandâ€Gap Engineering in Leadâ€Free Cs <sub>2</sub> AgBiBr <sub>6</sub> Double Perovskite. Angewandte Chemie - International Edition, 2017, 56, 15969-15973.	7.2	200
4210	Design of new photovoltaic systems based on two-dimensional group-IV monochalcogenides for high performance solar cells. Journal of Materials Chemistry A, 2017, 5, 24145-24152.	5.2	64
4211	Triplet-sensitized photon upconversion in deep eutectic solvents. Physical Chemistry Chemical Physics, 2017, 19, 30603-30615.	1.3	27
4212	Modeling and optimization of core/shell p-i-n Si/Si0.2Ge0.8 nanowire for photovoltaic. Optik, 2017, 149, 246-251.	1.4	1
4213	High-performance near-field thermophotovoltaics for waste heat recovery. Nano Energy, 2017, 41, 344-350.	8.2	115
4214	Modelling the deposition process on the CdTe/CdS interface. Nuclear Instruments & Methods in Physics Research B, 2017, 412, 66-70.	0.6	1

#	Article	IF	CITATIONS
4215	Quantum Interference in Singlet Fission: J- and H-Aggregate Behavior. Journal of Physical Chemistry Letters, 2017, 8, 5105-5112.	2.1	37
4216	Production of Liquid Solar Fuels and Their Use in Fuel Cells. Joule, 2017, 1, 689-738.	11.7	149
4217	Prediction and optimization of the performance characteristics of CZTS thin film solar cell using band gap grading. Optical and Quantum Electronics, 2017, 49, 1.	1.5	32
4218	Multiferroic Double Perovskites <mml:math <br="" xmins:mml="http://www.w3.org/1998/Math/MathML">display="inline"&gt;<mml:msub><mml:mtext>ScFe</mml:mtext><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^'</mml:mo></mml:mrow></mml:msub></mml:math>	<td>&gt;<mml:mi>&gt;</mml:mi></td>	> <mml:mi>&gt;</mml:mi>

#	Article	IF	CITATIONS
4233	First Examples of Pyran Based Colorants as Sensitizing Agents ofp-Type Dye-Sensitized Solar Cells. Journal of the Electrochemical Society, 2017, 164, F1412-F1418.	1.3	13
4234	Hysteresis and Photoinstability Caused by Mobile Ions in Colloidal Quantum Dot Photovoltaics. Journal of Physical Chemistry Letters, 2017, 8, 5259-5263.	2.1	14
4235	Physical and electrical characteristics of Si/SiC quantum dot superlattice solar cells with passivation layer of aluminum oxide. Nanotechnology, 2017, 28, 485401.	1.3	0
4236	Eulli -Based Nanolayers as Highly Efficient Downshifters for CIGS Solar Cells. European Journal of Inorganic Chemistry, 2017, 2017, 5318-5326.	1.0	10
4237	Free Carrier Radiative Recombination and Photon Recycling in Lead Halide Perovskite Solar Cell Materials. Bulletin of the Chemical Society of Japan, 2017, 90, 1129-1140.	2.0	65
4238	Semiconducting Metal Oxide Nanostructures for Water Splitting and Photovoltaics. Advanced Energy Materials, 2017, 7, 1700706.	10.2	108
4239	Realâ€īime Observation of Iodide Ion Migration in Methylammonium Lead Halide Perovskites. Small, 2017, 13, 1701711.	5.2	148
4240	One – step nanosecond laser microstructuring, sulfur hyperdoping, and annealing of silicon surfaces in liquid carbondisulfide. AIP Conference Proceedings, 2017, , .	0.3	0
4241	Design of Organic Solar Cells as a Function of Radiative Quantum Efficiency. Physical Review Applied, 2017, 8, .	1.5	11
4242	Topology optimized gold nanostrips for enhanced near-infrared photon upconversion. Applied Physics Letters, 2017, 111, .	1.5	13
4243	Optoelectronic insights into the photovoltaic losses from photocurrent, voltage, and energy perspectives. AIP Advances, 2017, 7, .	0.6	12
4244	Influence of Hot-Carrier Extraction from a Photovoltaic Absorber: An Evaporative Approach. Physical Review Applied, 2017, 8, .	1.5	10
4245	Up and Down Conversion of Photons with modified Perturb and Observe MPPT technique for Efficient Solar Energy Generation. Energy Procedia, 2017, 117, 786-793.	1.8	11
4246	Difference in hot carrier cooling rate between Langmuir–Blodgett and drop cast PbS QD films due to strong electron–phonon coupling. Nanoscale, 2017, 9, 17133-17142.	2.8	11
4247	Junction diodes in organic solar cells. Nano Energy, 2017, 41, 717-730.	8.2	20
4248	Highly Efficient Photocatalytic Water Splitting over Edge-Modified Phosphorene Nanoribbons. Journal of the American Chemical Society, 2017, 139, 15429-15436.	6.6	244
4249	Monolithic perovskite/silicon-homojunction tandem solar cell with over 22% efficiency. Energy and Environmental Science, 2017, 10, 2472-2479.	15.6	178
4250	Lead halide perovskites: Crystal-liquid duality, phonon glass electron crystals, and large polaron formation. Science Advances, 2017, 3, e1701469.	4.7	323

ARTICLE IF CITATIONS # Structural stability and electronic property in K<sub>2</sub>S under pressure. RSC Advances, 2017, 7, 4251 1.7 13 7424-7430. Efficient hybrid solar cell with P3HT:PCBM and Cu<sub>2</sub>ZnSnS<sub>4</sub> nanocrystals. 4252 0.3 Journal of Physics: Conference Series, 2017, 864, 012065. 4253 Perovskite Precursors Get a pH Tune-Up. Joule, 2017, 1, 221-223. 11.7 5 Determination of n-Type Doping Level in Single GaAs Nanowires by Cathodoluminescence. Nano Letters, 4254 2017, 17, 6667-6675. Perovskite Photovoltaics: The Path to a Printable Terawatt-Scale Technology. ACS Energy Letters, 2017, 4255 8.8 64 2,2540-2544. Quantum Engineering of InAs/GaAs Quantum Dot Based Intermediate Band Solar Cells. ACS Photonics, 2017, 4, 2745-2750. 3.2 64 Packing Guidelines for Optimizing Singlet Fission Matrix Elements in Noncovalent Dimers. Journal of 4257 6.6 41 the American Chemical Society, 2017, 139, 15572-15575. ABX3 Perovskites for Tandem Solar Cells. Joule, 2017, 1, 769-793. 11.7 4258 176 Analyzing the Electrical Performance of a Solar Cell with Time-Resolved Photoluminescence: 4259 1.5 19 Methodology for Fast Optical Screening. Physical Review Applied, 2017, 7, . Radiative Efficiency Limit with Band Tailing Exceeds 30% for Quantum Dot Solar Cells. ACS Energy 8.8 Letters, 2017, 2, 2616-2624. From the GKLS Equation to the Theory of Solar and Fuel Cells. Open Systems and Information 4261 0.5 10 Dynamics, 2017, 24, 1740007. Analytical modeling and performance study of GaAsNSb based single junction solar cell lattice 4262 2.9 matched to GaAs substrate for use in tandem solar cells. Solar Energy, 2017, 158, 483-489. Rare Earth Doped Zinc Oxide Nanophosphor Powder: A Future Material for Solid State Lighting and 4263 3.2 219 Solar Cells. ACS Photonics, 2017, 4, 2613-2637. Analysis of the electronic properties of all-electroplated ZnS, CdS and CdTe graded bandgap photovoltaic device configuration. Solar Energy, 2017, 158, 721-727. 4264 Contribution of Jahn-Teller and charge transfer excitations to the photovoltaic effect of 4265 1.2 11 manganite/titanite heterojunctions. New Journal of Physics, 2017, 19, 063046. Slow Cooling of Hot Polarons in Halide Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 2647-2652. 4266 8.8 132 Hot carrier solar cell (HCSC): A new generation nano-structured solar cell., 2017, , . 4267 1 Design and Simulation of Intermediate Band Solar Cell With Ultradense Type-II Multilayer Ge/Si 4268 1.6 Quantum Dot Superlattice. IEEE Transactions on Electron Devices, 2017, 64, 4547-4553.

#	Article	IF	CITATIONS
4269	Monolithic tandem solar cells comprising electrodeposited CuInSe <sub>2</sub> and perovskite solar cells with a nanoparticulate ZnO buffer layer. Journal of Materials Chemistry A, 2017, 5, 19439-19446.	5.2	45
4270	Modulating the Band Gap of the FeS <sub>2</sub> by O and Se Doping. Journal of Physical Chemistry C, 2017, 121, 19334-19340.	1.5	18
4271	Solution-Processed Short-Wave Infrared PbS Colloidal Quantum Dot/ZnO Nanowire Solar Cells Giving High Open-Circuit Voltage. ACS Energy Letters, 2017, 2, 2110-2117.	8.8	55
4272	Singlet fission in chiral carbon nanotubes: Density functional theory based computation. Journal of Chemical Physics, 2017, 147, 034106.	1.2	11
4273	Effect of Stoichiometry on the Lifetime and Doping Concentration of Polycrystalline CdTe. IEEE Journal of Photovoltaics, 2017, 7, 1450-1455.	1.5	9
4274	Computational design of high performance hybrid perovskite on silicon 2-T tandem solar cells based on a tunnel junction. , 2017, , .		2
4275	Ion Migration Heals Trapping Centers in CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Perovskite. ACS Energy Letters, 2017, 2, 2133-2139.	8.8	51
4276	Cooperative down-conversion of UV light in disordered scheelitelike Yb-doped NaGd(MoO4)2 and NaLa(MoO4)2 crystals. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2017, 123, 49-55.	0.2	8
4277	A Model for Materials Science in Physics and Chemistry Curricula and Research at a Primarily Undergraduate Institution. MRS Advances, 2017, 2, 1651-1660.	0.5	0
4278	Peeling process of thin-film solar cells using graphene layers. Applied Physics Express, 2017, 10, 082301.	1.1	5
4279	Intermediate band materials obtained by rapid thermal process of Co-implanted silicon. Materials Letters, 2017, 209, 522-524.	1.3	3
4280	Modeling the Performance Limitations and Prospects of Perovskite/Si Tandem Solar Cells under Realistic Operating Conditions. ACS Energy Letters, 2017, 2, 2089-2095.	8.8	86
4281	Low temperature crystallization of Cu2ZnSnSe4 thin films using binary selenide precursors. Journal of Materials Science: Materials in Electronics, 2017, 28, 18244-18253.	1.1	7
4282	Selection Metric for Photovoltaic Materials Screening Based on Detailed-Balance Analysis. Physical Review Applied, 2017, 8, .	1.5	51
4283	Structural, optical and electrical properties of Ag doped PbS thin films: role of Ag concentration. Journal of Materials Science: Materials in Electronics, 2017, 28, 18387-18395.	1.1	15
4284	Hybrid Ag Nanowire–ITO as Transparent Conductive Electrode for Pure Sulfide Kesterite Cu <sub>2</sub> ZnSnS <sub>4</sub> Solar Cells. Journal of Physical Chemistry C, 2017, 121, 20597-20604.	1.5	14
4285	Graphene-Based Hole-Selective Layers for High-Efficiency, Solution-Processed, Large-Area, Flexible, Hydrogen-Evolving Organic Photocathodes. Journal of Physical Chemistry C, 2017, 121, 21887-21903.	1.5	30
4286	Quantum-Enhanced Capture of Photons Using Optical Ratchet States. Journal of Physical Chemistry C, 2017, 121, 20714-20719.	1.5	24

#	Article	IF	CITATIONS
4287	Room temperature nanoparticulate interfacial layers for perovskite solar cells <i>via</i> solvothermal synthesis. Journal of Materials Chemistry A, 2017, 5, 20381-20389.	5.2	33
4288	Impact of Heterointerfaces in Solar Cells Using ZnSnP <sub>2</sub> Bulk Crystals. ACS Applied Materials & Interfaces, 2017, 9, 33827-33832.	4.0	13
4289	Detailed Balance Limit of Efficiency of Broadband-Pumped Lasers. Scientific Reports, 2017, 7, 11497.	1.6	10
4290	Near-infrared luminescence in perovskite BaSnO3 epitaxial films. Applied Physics Letters, 2017, 111, 091903.	1.5	9
4291	Numerical simulation of HTM-free and WO <inf>x</inf> based perovskite cells: Effects of interface conditions. , 2017, , .		0
4292	Infrared Energy Harvesting in Millimeter-Scale GaAs Photovoltaics. IEEE Transactions on Electron Devices, 2017, 64, 4554-4560.	1.6	12
4293	A New Passivation Route Leading to Over 8% Efficient PbSe Quantumâ€Dot Solar Cells via Direct Ion Exchange with Perovskite Nanocrystals. Advanced Materials, 2017, 29, 1703214.	11.1	69
4294	1,3-Diphenylisobenzofuran: a Model Chromophore for Singlet Fission. Topics in Current Chemistry, 2017, 375, 80.	3.0	30
4295	Spatially Resolved Laser-Induced Modification Raman Spectroscopy for Probing the Microscopic Structural Variations in the Quaternary Alloy Cu2ZnSnSe4. Physical Review Applied, 2017, 8, .	1.5	8
4296	Solar cell device simulations. , 2017, , .		0
4297	Monolithic Wide Band Gap Perovskite/Perovskite Tandem Solar Cells with Organic Recombination Layers. Journal of Physical Chemistry C, 2017, 121, 27256-27262.	1.5	40
4298	Discovery of Pb-Free Perovskite Solar Cells via High-Throughput Simulation on the K Computer. Journal of Physical Chemistry Letters, 2017, 8, 4826-4831.	2.1	134
4299	Functionalization of Silicon Nanostructures for Energyâ€Related Applications. Small, 2017, 13, 1701713.	5.2	49
4300	Synthesis and Characterization of Alkylamine-Functionalized Si(111) for Perovskite Adhesion With Minimal Interfacial Oxidation or Electronic Defects. ACS Applied Materials & Interfaces, 2017, 9, 34377-34388.	4.0	18
4301	Strain-induced ferroelectricity and lattice coupling in BaSnO3 and SrSnO3. Physical Chemistry Chemical Physics, 2017, 19, 26047-26055.	1.3	18
4302	A simple structure of Cu2ZnSnS4/CdS solar cells prepared by sputtering. Physica B: Condensed Matter, 2017, 526, 80-83.	1.3	9
4303	Water adsorption on α-V2O5 surface and absorption in V2O5â^™nH2O xerogel: DFT study of electronic structure. Surface Science, 2017, 666, 76-83.	0.8	4
4304	Decoupling recombination mechanisms and trap state localization in direct bandgap semiconductors using photoluminescence decay. Journal of Applied Physics, 2017, 122, .	1.1	3

#	Article	IF	CITATIONS
4305	Catalytic growth of vertically aligned SnS/SnS <sub>2</sub> p–n heterojunctions. Materials Research Express, 2017, 4, 094002.	0.8	23
4306	Improved performance of CH3NH3PbBr3 perovskite solar cells utilizing PbI2 precursors. Chemical Physics Letters, 2017, 687, 106-109.	1.2	5
4307	Triplet Harvesting from Intramolecular Singlet Fission in Polytetracene. Advanced Materials, 2017, 29, 1701416.	11.1	70
4308	Application of Methylamine Gas in Fabricating Organic–Inorganic Hybrid Perovskite Solar Cells. Energy Technology, 2017, 5, 1750-1761.	1.8	46
4309	Threshold energy reduction for carrier multiplication in Si-QDs by phosphorus doping. Physica B: Condensed Matter, 2017, 524, 104-108.	1.3	1
4310	Inorganic materials for photovoltaics: Status and futures challenges. EPJ Web of Conferences, 2017, 148, 00007.	0.1	3
4311	Largeâ€Area Ultrabroadband Absorber for Solar Thermophotovoltaics Based on 3D Titanium Nitride Nanopillars. Advanced Optical Materials, 2017, 5, 1700552.	3.6	126
4312	Too Many Junctions? A Case Study of Multijunction Thinâ€Film Silicon Solar Cells. Advanced Sustainable Systems, 2017, 1, 1700077.	2.7	11
4313	Experimental and DFT Study of Structural and Optical Properties of Kesterite-Type Cu2ZnSnS4 Compound for Solar Cell Applications. Jom, 2017, 69, 2492-2496.	0.9	5
4314	Ureasil organic–inorganic hybrids as photoactive waveguides for conjugated polyelectrolyte luminescent solar concentrators. Materials Chemistry Frontiers, 2017, 1, 2271-2282.	3.2	18
4315	Single-nanowire, low-bandgap hot carrier solar cells with tunable open-circuit voltage. Nanotechnology, 2017, 28, 434001.	1.3	17
4316	Valence and conduction band edges of selenide and sulfide-based kesterites—a study by x-ray based spectroscopy andab initiotheory. Semiconductor Science and Technology, 2017, 32, 104010.	1.0	1
4317	Characterization of quenching defects in methylammonium lead triiodide (CH3NH3PbI3). Journal of Luminescence, 2017, 192, 1191-1195.	1.5	7
4318	Enhanced optical absorption via cation doping hybrid lead iodine perovskites. Scientific Reports, 2017, 7, 7843.	1.6	61
4319	Surface passivation and carrier selectivity of the thermal-atomic-layer-deposited TiO <sub>2</sub> on crystalline silicon. Japanese Journal of Applied Physics, 2017, 56, 08MA11.	0.8	19
4320	Highly Efficient Colored Perovskite Solar Cells Integrated with Ultrathin Subwavelength Plasmonic Nanoresonators. Scientific Reports, 2017, 7, 10640.	1.6	51
4321	Unraveling the High Open Circuit Voltage and High Performance of Integrated Perovskite/Organic Bulk-Heterojunction Solar Cells. Nano Letters, 2017, 17, 5140-5147.	4.5	78
4322	In- and Ga-based inorganic double perovskites with direct bandgaps for photovoltaic applications. Physical Chemistry Chemical Physics, 2017, 19, 21691-21695.	1.3	37

#	Article	IF	CITATIONS
4323	Lifetime enhancement for multiphoton absorption in intermediate band solar cells. Journal Physics D: Applied Physics, 2017, 50, 305501.	1.3	5
4324	Zigzag nanowire arrays for high efficiency and low cost solar cells. , 2017, , .		1
4325	Highly transparent singlet fission solar cell with multistacked thin metal contacts for tandem applications. Progress in Photovoltaics: Research and Applications, 2017, 25, 936-941.	4.4	5
4326	High efficiency organic solar cells based on amorphous electron-donating polymer and modified fullerene acceptor. Nano Energy, 2017, 39, 478-488.	8.2	62
4327	Influence of GaAsSb structural properties on the optical properties of InAs/GaAsSb quantum dots. Physica E: Low-Dimensional Systems and Nanostructures, 2017, 94, 7-14.	1.3	3
4328	Intermediate bands in type-II silicon clathrate with Cu and Ag guest atoms. Physical Review B, 2017, 95, .	1.1	0
4329	Spectroscopic signatures of triplet states in acenes. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 154007.	0.6	4
4330	High density quantum dot solar cells for concentrating photovoltaics (CPV). , 2017, , .		1
4331	Homogenous Alloys of Formamidinium Lead Triiodide and Cesium Tin Triiodide for Efficient Idealâ€Bandgap Perovskite Solar Cells. Angewandte Chemie - International Edition, 2017, 56, 12658-12662.	7.2	69
4332	Calculation of point defect concentration in Cu2ZnSnS4: Insights into the high-temperature equilibrium and quenching. Journal of Applied Physics, 2017, 122, .	1.1	5
4333	Irreversible Thermodynamic Bound for the Efficiency of Light-Emitting Diodes. Physical Review Applied, 2017, 8, .	1.5	15
4334	Effects of alloying on band gap and morphology of iron pyrite nanoparticles. Materials Letters, 2017, 207, 202-205.	1.3	2
4335	Current-Induced Phase Segregation in Mixed Halide Hybrid Perovskites and its Impact on Two-Terminal Tandem Solar Cell Design. ACS Energy Letters, 2017, 2, 1841-1847.	8.8	161
4336	Low-bandgap conjugated polymers enabling solution-processable tandem solar cells. Nature Reviews Materials, 2017, 2, .	23.3	284
4337	Homogenous Alloys of Formamidinium Lead Triiodide and Cesium Tin Triiodide for Efficient Idealâ€Bandgap Perovskite Solar Cells. Angewandte Chemie, 2017, 129, 12832-12836.	1.6	3
4338	Zinc oxide nanoparticles for improvement of thin film photovoltaic structures' efficiency through down shifting conversion. Opto-electronics Review, 2017, 25, 99-102.	2.4	26
4339	Reducing Voltage Losses in Cascade Organic Solar Cells while Maintaining High External Quantum Efficiencies. Advanced Energy Materials, 2017, 7, 1700855.	10.2	122
4340	Optical Analysis of Planar Multicrystalline Perovskite Solar Cells. Advanced Optical Materials, 2017, 5, 1700151.	3.6	51

#	Article	IF	CITATIONS
4341	Mixedâ€Organicâ€Cation Tin lodide for Leadâ€Free Perovskite Solar Cells with an Efficiency of 8.12%. Advanced Science, 2017, 4, 1700204.	5.6	404
4342	Speed Limit for Triplet-Exciton Transfer in Solid-State PbS Nanocrystal-Sensitized Photon Upconversion. ACS Nano, 2017, 11, 7848-7857.	7.3	130
4343	Environmental analysis of perovskites and other relevant solar cell technologies in a tandem configuration. Energy and Environmental Science, 2017, 10, 1874-1884.	15.6	104
4344	Nanoengineered devices for solar energy conversion. , 2017, , .		0
4345	Ohmic shunts in two-terminal dual-junction solar cells with current mismatch. Japanese Journal of Applied Physics, 2017, 56, 08MA05.	0.8	10
4346	Multiple Exciton Harvesting at Zero-Dimensional/Two-Dimensional Heterostructures. ACS Energy Letters, 2017, 2, 1879-1885.	8.8	29
4347	External Luminescence and Photon Recycling in Near-Field Thermophotovoltaics. Physical Review Applied, 2017, 8, .	1.5	26
4348	Harnessing Molecular Photon Upconversion in a Solar Cell at Sub-solar Irradiance: Role of the Redox Mediator. Journal of the American Chemical Society, 2017, 139, 10988-10991.	6.6	83
4349	Charge carrier localised in zero-dimensional (CH3NH3)3Bi2I9 clusters. Nature Communications, 2017, 8, 170.	5.8	62
4350	Thermal radiation of Er doped dielectric crystals: Probing the range of applicability of the Kirchhoff's law. Scientific Reports, 2017, 7, 2040.	1.6	7
4351	Carrier dynamics of Mn-induced states in GaN thin films. Scientific Reports, 2017, 7, 5788.	1.6	8
4352	Metal-Insulator Transition in Nanoparticle Solids: Insights from Kinetic Monte Carlo Simulations. Scientific Reports, 2017, 7, 7071.	1.6	13
4353	Localized states and quantum effect of photo-generated carriers in photovoltaic system. Scientific Reports, 2017, 7, 7221.	1.6	3
4354	Contribution of Nanostructures in High Performance Solar Cells. Journal of Electronic Materials, 2017, 46, 6282-6294.	1.0	3
4355	ZnO/Si heterojunction solar cell fabricated by atomic layer deposition and hydrothermal methods. Solar Energy, 2017, 155, 1282-1288.	2.9	55
4356	Rationalizing the light-induced phase separation of mixed halide organic–inorganic perovskites. Nature Communications, 2017, 8, 200.	5.8	399
4357	On the performance of a photosystem II reaction centre-based photocell. Chemical Science, 2017, 8, 6871-6880.	3.7	8
4358	Complexity of the hot carrier relaxation in Si nanowires compared to bulk. Physical Review B, 2017, 95, .	1.1	3

#	Article	IF	CITATIONS
4359	Using Heterodyne-Detected Electronic Sum Frequency Generation To Probe the Electronic Structure of Buried Interfaces. Journal of Physical Chemistry C, 2017, 121, 18653-18664.	1.5	24
4360	Nanoscale Back Contact Perovskite Solar Cell Design for Improved Tandem Efficiency. Nano Letters, 2017, 17, 5206-5212.	4.5	85
4361	Effects of various dopants on properties of GaAs tunneling junctions and p–i–n solar cells. Japanese Journal of Applied Physics, 2017, 56, 08MC11.	0.8	2
4362	Colloidal quantum dot solar cell power conversion efficiency optimization using analysis of currentâ€voltage characteristics and electrode contact imaging by lockâ€in carrierography. Progress in Photovoltaics: Research and Applications, 2017, 25, 1034-1050.	4.4	14
4363	Review of sustainable solar hydrogen production using photon fuel on artificial leaf. International Journal of Hydrogen Energy, 2017, 42, 22704-22712.	3.8	25
4364	Triisopropylsilylethynyl-Pentacene on Au(111): Adsorption Properties, Electronic Structure, and Singlet Fission Dynamics. Journal of Physical Chemistry C, 2017, 121, 18075-18083.	1.5	14
4365	Substituent Effects on Singlet Exciton Fission in Polycrystalline Thin Films of Cyano-Substituted Diaryltetracenes. Journal of Physical Chemistry C, 2017, 121, 21262-21271.	1.5	26
4366	Combining theory and experiment in the design of a lead-free ((CH <sub>3</sub> NH <sub>3</sub> ) <sub>2</sub> AgBil <sub>6</sub> ) double perovskite. New Journal of Chemistry, 2017, 41, 9598-9601.	1.4	72
4367	Photosynthetic reaction center-based biophotovoltaics. Current Opinion in Electrochemistry, 2017, 5, 126-134.	2.5	62
4368	Energy transfer in co- and tri-doped Y3Al5O12 phosphors. Journal of Rare Earths, 2017, 35, 775-782.	2.5	14
4369	Performance enhancement of quantum dot-sensitized solar cells based on polymer nano-composite catalyst. Electrochimica Acta, 2017, 249, 337-342.	2.6	2
4370	Fabrication and characterization of Cu2ZnSnS4 thin films by sputtering a single target at different temperature. Physica B: Condensed Matter, 2017, 523, 62-66.	1.3	14
4371	β-CuGaO <sub>2</sub> as a Strong Candidate Material for Efficient Ferroelectric Photovoltaics. Chemistry of Materials, 2017, 29, 7596-7603.	3.2	28
4372	Cation Disorder In Cu <sub>2</sub> ZnSnS <sub>4</sub> Thin Films: Effect On Solar Cell Performances. Solar Rrl, 2017, 1, 1700101.	3.1	34
4373	A molecular heterojunction of zinc phthalocyanine and peanut-shaped fullerene polymer: A density functional study. Chemical Physics Letters, 2017, 686, 68-73.	1.2	3
4374	Photophysical characterization and time-resolved spectroscopy of a anthradithiophene dimer: exploring the role of conformation in singlet fission. Physical Chemistry Chemical Physics, 2017, 19, 23162-23175.	1.3	31
4375	Candidate photoferroic absorber materials for thin-film solar cells from naturally occurring minerals: enargite, stephanite, and bournonite. Sustainable Energy and Fuels, 2017, 1, 1339-1350.	2.5	32
4376	Fabrication of β-CuGaO2thin films by ion-exchange of β-NaGaO2thin films. Applied Physics Express, 2017, 10, 095501.	1.1	5

#	Article	IF	CITATIONS
4377	Electronic and Optical Properties of TiO <sub>2</sub> Solid-Solution Nanosheets for Bandgap Engineering: A Hybrid Functional Study. Journal of Physical Chemistry C, 2017, 121, 18683-18691.	1.5	5
4378	Enhancement of CdS/CdTe solar cells by the interbuilding of a nanostructured Te-rich layer. Materials Research Express, 2017, 4, 086403.	0.8	14
4379	Giant magneto-photoelectric effect in suspended graphene. New Journal of Physics, 2017, 19, 063028.	1.2	7
4380	Ultrafast Quantum Effects and Vibrational Dynamics in Organic and Biological Systems. Springer Theses, 2017, , .	0.0	0
4381	Unravelling complex nature of CdS/CdTe based thin film solar cells. Journal of Materials Science: Materials in Electronics, 2017, 28, 16598-16617.	1.1	36
4382	Optical Properties and Optoelectronic Applications of Black Phosphorus. , 0, , 435-457.		0
4383	Ultrafast Electron Dynamics in Solar Energy Conversion. Chemical Reviews, 2017, 117, 10940-11024.	23.0	266
4384	Efficient two-step photocarrier generation in bias-controlled InAs/GaAs quantum dot superlattice intermediate-band solar cells. Scientific Reports, 2017, 7, 5865.	1.6	17
4385	Influence of the Conditions of Sensitization on the Characteristics ofp-DSCs Sensitized with Asymmetric Squaraines. Journal of the Electrochemical Society, 2017, 164, H1099-H1111.	1.3	6
4386	Broadband light trapping strategies for quantum-dot photovoltaic cells (>10%) and their issues with the measurement of photovoltaic characteristics. Scientific Reports, 2017, 7, 17393.	1.6	8
4387	Parametric design criteria of an updated thermoradiative cell operating at optimal states. Journal of Applied Physics, 2017, 122, .	1.1	37
4388	Power conversion efficiency of non-equilibrium light absorption. AIP Advances, 2017, 7, .	0.6	3
4389	Toward a nanoimprinted nanoantenna to perform optical rectification through molecular diodes. Journal of Nanoparticle Research, 2017, 19, 1.	0.8	1
4390	Photoelectric Solar Power Revisited. Joule, 2017, 1, 639-642.	11.7	3
4391	Geometry-dependent band shift and dielectric modification of nanoporous Si nanowires. Scientific Reports, 2017, 7, 14456.	1.6	4
4392	Metal halide perovskite tandem and multiple-junction photovoltaics. Nature Reviews Chemistry, 2017, 1,	13.8	344
4393	Upconversion manipulation by local electromagnetic field. Nano Today, 2017, 17, 54-78.	6.2	103
4394	Interfacial Molecular Packing Determines Exciton Dynamics in Molecular Heterostructures: The Case	4.0	15

#	Article	IF	CITATIONS
4395	Femtosecond Raman Microscopy Reveals Structural Dynamics Leading to Triplet Separation in Rubrene Singlet Fission. Journal of Physical Chemistry Letters, 2017, 8, 5929-5934.	2.1	45
4396	Strategy for reliable strain measurement in InAs/GaAs materials from high-resolution Z-contrast STEM images. Journal of Physics: Conference Series, 2017, 902, 012021.	0.3	2
4397	Ideal Bandgap Organic–Inorganic Hybrid Perovskite Solar Cells. Advanced Materials, 2017, 29, 1704418.	11.1	133
4398	Optical rectification using geometrical field enhancement in gold nano-arrays. Journal of Applied Physics, 2017, 122, .	1.1	13
4399	Humidity sensitive polymers In solution processed adjustable pore-volume Cu(In,Ga)S <sub>2</sub> photocathodes for solar hydrogen production. Journal Physics D: Applied Physics, 2017, 50, 445102.	1.3	2
4400	Theoretical design of conjugated diradicaloids as singlet fission sensitizers: quinones and methylene derivatives. Physical Chemistry Chemical Physics, 2017, 19, 30227-30238.	1.3	29
4401	Design Principles and Top Non-Fullerene Acceptor Candidates for Organic Photovoltaics. Joule, 2017, 1, 857-870.	11.7	157
4402	Efficient kesterite solar cells with high open-circuit voltage for applications in powering distributed devices. Nature Energy, 2017, 2, 884-890.	19.8	66
4403	Comprehensive investigations of near infrared downshift and upconversion luminescence mechanisms in Yb <sup>3+</sup> single-doped and Er <sup>3+</sup> ,Yb <sup>3+</sup> co-doped SiO <sub>2</sub> inverse opals. Physical Chemistry Chemical Physics, 2017, 19, 31997-32006.	1.3	19
4404	Planar n-Si/PEDOT:PSS hybrid heterojunction solar cells utilizing functionalized carbon nanoparticles synthesized via simple pyrolysis route. Nanotechnology, 2017, 28, 475402.	1.3	10
4406	Two-dimensional van der Waals heterojunctions for functional materials and devices. Journal of Materials Chemistry C, 2017, 5, 12289-12297.	2.7	151
4407	Determination of the Lifetime Influence Upon the Conversion Efficiency of the Photovoltaic Silicon Solar Cells. The Scientific Bulletin of Electrical Engineering Faculty, 2017, 17, 20-24.	0.3	0
4408	Conduction-band effective mass and bandgap of ZnSnN2 earth-abundant solar absorber. Scientific Reports, 2017, 7, 14987.	1.6	33
4409	Stability and Band-Gap Tuning of the Chalcogenide Perovskite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow><mml:msub><mml:mrow><mml:mi>BaZrS</mml:mi></mml:mrow><mml:mrow><r in Raman and Ontical Investigations at High Pressures, Physical Review Applied, 2017, 8</r </mml:mrow></mml:msub></mml:mrow></mml:math 	nml:mn>3	<del 65ml:mn><
4410	Rubidium segregation at random grain boundaries in Cu(In,Ga)Se2 absorbers. Nano Energy, 2017, 42, 307-313.	8.2	70
4411	High absorption coefficients of the CuSb(Se,Te) <sub>2</sub> and CuBi(S,Se) <sub>2</sub> alloys enable high-efficient 100 nm thin-film photovoltaics. EPJ Photovoltaics, 2017, 8, 85504.	0.8	19
4412	Optical properties of bimodally distributed InAs quantum dots grown on digital AlAs0.56Sb0.44matrix for use in intermediate band solar cells. Journal of Applied Physics, 2017, 121, 214304.	1.1	5
4413	A crossâ€sectional scanning capacitance microscopy characterization of GaAs based solar cell structures. Crystal Research and Technology, 2017, 52, 1700019.	0.6	7

#	Article	IF	CITATIONS
4414	Electrical and optical properties of InSb/GaAs QDSC for photovoltaic. International Journal of Hydrogen Energy, 2017, 42, 19518-19524.	3.8	5
4415	Electrical properties and back contact study of CZTS/ZnS heterojunction. Optik, 2017, 144, 180-190.	1.4	44
4416	Intramolecular Singlet Fission in an Antiaromatic Polycyclic Hydrocarbon. Angewandte Chemie, 2017, 129, 9528-9532.	1.6	11
4417	Thermal Treatment Effects on Electrodeposited Sb <sub>2</sub> Se <sub>3</sub> Photovoltaic Thin Films. ChemElectroChem, 2017, 4, 2507-2514.	1.7	21
4418	Energy Losses in Smallâ€Molecule Organic Photovoltaics. Advanced Energy Materials, 2017, 7, 1700237.	10.2	49
4419	xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml27" display="inline" overflow="scroll" altimg="si1.gif"> <mml:msub><mml:mrow><mml:mi mathvariant="normal"&gt;Al</mml:mi </mml:mrow><mml:mrow><mml:mi>x</mml:mi></mml:mrow><mml:mo>1<mml:mo>1</mml:mo>1</mml:mo>11</mml:msub>	< 10 < mml:ms	ub <sup>33</sup> <mml:rnr< td=""></mml:rnr<>
4420	mathyariant="normal">As<. Optics Communications, 2017, 402, 85-90. Si <sub>24</sub> : An Efficient Solar Cell Material. Journal of Physical Chemistry C, 2017, 121, 15574-15579.	1.5	17
4421	Simple and universal method in designs of high-efficiency diffractive optical elements for spectrum separation and beam concentration. Chinese Physics B, 2017, 26, 074202.	0.7	1
4422	High efficiency solar cells using quantum interferences. Optical and Quantum Electronics, 2017, 49, 1.	1.5	6
4423	A theoretical study of hybrid lead iodide perovskite homologous semiconductors with 0D, 1D, 2D and 3D structures. Journal of Materials Chemistry A, 2017, 5, 16786-16795.	5.2	43
4424	A two-step dry process for Cs <sub>2</sub> Snl <sub>6</sub> perovskite thin film. Materials Research Letters, 2017, 5, 540-546.	4.1	40
4425	Luminescence properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt; <mml:mrow> <mml:msub> <mml:mi>Cu</mml:mi> <mml:m cell absorbers: State filling versus screening of electrostatic potential fluctuations. Physical Review</mml:m </mml:msub></mml:mrow></mml:math 	1n>21.1	ıl:mn>17
4426	8, 2017, 95, . Band Gap Tuning via Lattice Contraction and Octahedral Tilting in Perovskite Materials for Photovoltaics. Journal of the American Chemical Society, 2017, 139, 11117-11124.	6.6	570
4427	Efficiency Potential of Photovoltaic Materials and Devices Unveiled by Detailed-Balance Analysis. Physical Review Applied, 2017, 7, .	1.5	252
4428	Understanding the physical properties of hybrid perovskites for photovoltaic applications. Nature Reviews Materials, 2017, 2, .	23.3	927
4429	Strategies to reduce the open-circuit voltage deficit in Cu2ZnSn(S,Se)4 thin film solar cells. Electronic Materials Letters, 2017, 13, 373-392.	1.0	28
4430	Mobility dependent recombination models for organic solar cells. Journal of Physics Condensed Matter, 2017, 29, 373001.	0.7	11
4431	Magnetic field enhancement of organic photovoltaic cells performance. Scientific Reports, 2017, 7, 4297.	1.6	16

#	Article	IF	CITATIONS
4432	Progress on Perovskite Materials and Solar Cells with Mixed Cations and Halide Anions. ACS Applied Materials & Interfaces, 2017, 9, 30197-30246.	4.0	453
4433	Effect of Si doping and sunlight concentration on the performance of InAs/GaAs quantum dot solar cells. Journal of Photonics for Energy, 2017, 7, 025505.	0.8	5
4434	Top PV market solar cells 2016. Opto-electronics Review, 2017, 25, 55-64.	2.4	67
4435	Critical review on sputter-deposited Cu2ZnSnS4 (CZTS) based thin film photovoltaic technology focusing on device architecture and absorber quality on the solar cells performance. Solar Energy Materials and Solar Cells, 2017, 171, 239-252.	3.0	110
4436	Band Gap Engineering of Multi-Junction Solar Cells: Effects of Series Resistances and Solar Concentration. Scientific Reports, 2017, 7, 1766.	1.6	39
4437	Highly efficient halogen-free solvent processed small-molecule organic solar cells enabled by material design and device engineering. Energy and Environmental Science, 2017, 10, 1739-1745.	15.6	285
4438	Enhancing Thermoelectric Performance Using Nonlinear Transport Effects. Physical Review Applied, 2017, 7, .	1.5	28
4439	On the efficiency limit of ZnO/CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /CuI perovskite solar cells. Physical Chemistry Chemical Physics, 2017, 19, 19916-19921.	1.3	12
4440	Impact of the Spectrum in the Annual Energy Production of Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 1479-1484.	1.5	13
4441	Iron(II) and ruthenium(II) complexes with polypyridine derivatives as sensitizers for DSSC: the structure and spectral properties, as studied by quantum chemistry methods. Russian Chemical Bulletin, 2017, 66, 23-29.	0.4	5
4442	Experiments and modeling on effects of temperature on electrical performance of a betavoltaic. Nuclear Engineering and Design, 2017, 325, 256-260.	0.8	4
4443	Inter-level carrier dynamics and photocurrent generation in large band gap quantum dot solar cell by multistep growth. Solar Energy Materials and Solar Cells, 2017, 171, 142-147.	3.0	8
4444	On thermodynamic inconsistencies in several photosynthetic and solar cell models and how to fix them. Chemical Science, 2017, 8, 1008-1014.	3.7	25
4445	Effect of thickness: a case study of electrodeposited CdS in CdS/CdTe based photovoltaic devices. Journal of Materials Science: Materials in Electronics, 2017, 28, 3254-3263.	1.1	22
4446	Effect of metal layer stacking order on the growth of Cu2ZnSnS4thin films. Applied Surface Science, 2017, 396, 644-651.	3.1	28
4447	Comparison of CIGS Solar Cells Made With Different Structures and Fabrication Techniques. IEEE Journal of Photovoltaics, 2017, 7, 286-293.	1.5	25
4448	On the Impact of Contact Selectivity and Charge Transport on the Open ircuit Voltage of Organic Solar Cells. Advanced Energy Materials, 2017, 7, 1601750.	10.2	41
4449	Solar cells using bulk crystals of rare metal-free compound semiconductor ZnSnP <sub>2</sub> . Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600650.	0.8	15

#	Article	IF	CITATIONS
4450	Ternary solar cells with a mixed face-on and edge-on orientation enable an unprecedented efficiency of 12.1%. Energy and Environmental Science, 2017, 10, 258-265.	15.6	318
4451	Highly Transparent Compositionally Graded Buffers for New Metamorphic Multijunction Solar Cell Designs. IEEE Journal of Photovoltaics, 2017, 7, 347-353.	1.5	19
4452	Argon plasma treatment of silicon nitride (SiN) for improved antireflection coating on c-Si solar cells. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2017, 215, 29-36.	1.7	17
4453	Effect of different alkali (Li, Na, K, Rb, Cs) metals on Cu 2 ZnSnSe 4 solar cells. Thin Solid Films, 2017, 633, 156-161.	0.8	52
4454	Study of reduced graphene oxide film incorporated of TiO2 species for efficient visible light driven dye-sensitized solar cell. Journal of Materials Science: Materials in Electronics, 2017, 28, 3819-3836.	1.1	29
4455	Carrier-selective p- and n-contacts for efficient and stable photocatalytic water reduction. Catalysis Today, 2017, 290, 59-64.	2.2	35
4456	Exploring the potential of a hybrid device combining solar water heating and molecular solar thermal energy storage. Energy and Environmental Science, 2017, 10, 728-734.	15.6	106
4457	<i>Ex situ</i> and <i>in situ</i> sensitized quantum dot solar cells. Physica Status Solidi (B): Basic Research, 2017, 254, 1600443.	0.7	3
4458	GaAsSb/InAs/(In)GaAs type II quantum dots for solar cell applications. Journal of Crystal Growth, 2017, 464, 64-68.	0.7	12
4459	Up-conversion photoluminescence of BaTiO3 doped with Er3+ under excitation at 1500 nm. Materials Research Bulletin, 2017, 86, 95-100.	2.7	12
4461	A Review on Si, SiGe, GaN, SiC, InP and GaAs as Enabling Technologies in EW and Space. Signals and Communication Technology, 2017, , 301-329.	0.4	2
4462	Ferroelectric Oxides with Strong Visible-Light Absorption from Charge Ordering. Chemistry of Materials, 2017, 29, 2445-2451.	3.2	32
4463	Advances in hybrid solar photovoltaic and thermoelectric generators. Renewable and Sustainable Energy Reviews, 2017, 72, 1295-1302.	8.2	153
4464	Open-Shell-Character-Based Molecular Design Principles: Applications to Nonlinear Optics and Singlet Fission. Chemical Record, 2017, 17, 27-62.	2.9	124
4465	Understanding individual defects in CdTe thin-film solar cells via STEM: From atomic structure to electrical activity. Materials Science in Semiconductor Processing, 2017, 65, 64-76.	1.9	36
4466	On a better estimate of the charge collection function in CdTe solar cells: Al2O3 enhanced electron beam induced current measurements. Thin Solid Films, 2017, 633, 218-221.	0.8	7
4467	Studies on the disorder in DC magnetron sputtered Cu2ZnSnS4 (CZTS) thin films grown in sulfide plasma. Surface and Coatings Technology, 2017, 314, 85-91.	2.2	20
4468	From unstable CsSnI3 to air-stable Cs2SnI6: A lead-free perovskite solar cell light absorber with bandgap of 1.48 eV and high absorption coefficient. Solar Energy Materials and Solar Cells, 2017, 159, 227-234.	3.0	388

#	Article	IF	CITATIONS
4469	<i>In situ</i> sulfurization to generate Sb <sub>2</sub> (Se <sub>1 â^ <i>x</i></sub> S <i><sub>x</sub></i> ) <sub>3</sub> alloyed films and the application for photovoltaics. Progress in Photovoltaics: Research and Applications, 2017, 25, 113-122.	1e <b>#.</b> 4	70
4470	Nanostructures for Enhanced Light-Trapping in Thin-Film Silicon Solar Cells. Springer Theses, 2017, , 11-51.	0.0	0
4471	Beyond methylammonium lead iodide: prospects for the emergent field of ns <sup>2</sup> containing solar absorbers. Chemical Communications, 2017, 53, 20-44.	2.2	357
4472	Ferroelectric BiFeO <sub>3</sub> as an Oxide Dye in Highly Tunable Mesoporous All-Oxide Photovoltaic Heterojunctions. Small, 2017, 13, 1602355.	5.2	53
4473	A comparative study of the effects of sputtering deposition conditions for ZnO surface electrode layers on Cu(In,Ga)Se2 and CuGaSe2 solar cells. Thin Solid Films, 2017, 633, 49-54.	0.8	5
4474	Effects of sputtering period on the performance of Cu2ZnSnS4 solar cells. Physica B: Condensed Matter, 2017, 507, 35-40.	1.3	5
4475	Piezophototronicâ€Effectâ€Enhanced Electrically Pumped Lasing. Advanced Materials, 2017, 29, 1602832.	11.1	35
4476	Small-Area Si Photovoltaics for Low-Flux Infrared Energy Harvesting. IEEE Transactions on Electron Devices, 2017, 64, 15-20.	1.6	18
4477	Significant Improvement in the Performance of PbSe Quantum Dot Solar Cell by Introducing a CsPbBr <sub>3</sub> Perovskite Colloidal Nanocrystal Back Layer. Advanced Energy Materials, 2017, 7, 1601773.	10.2	56
4478	Hydrogen Treatment as a Detergent of Electronic Trap States in Lead Chalcogenide Nanoparticles. Chemistry of Materials, 2017, 29, 2485-2493.	3.2	14
4479	Microscale Plasmas for Metal and Metal Oxide Nanoparticle Synthesis. , 2017, , 89-108.		0
4480	High-sulfur Cu2ZnSn(S,Se)4 films by sulfurizing as-deposited CZTSe film: The evolutions of phase, crystallinity and S/(S+Se) ratio. Journal of Alloys and Compounds, 2017, 695, 3139-3145.	2.8	22
4481	Effects of Ga concentration in Cu(In,Ga)Se 2 thin film solar cells with a sputtered-Zn(O,S) buffer layer. Solar Energy, 2017, 145, 59-65.	2.9	11
4482	Improving efficiency of thin film CdS/CdTe solar cells with layered BSF. , 2017, , .		0
4483	Solid-phase crystallization of Si <sub>1â^'</sub> <i><sub>x</sub></i> C <i><sub>a^'</sub></i> Sn <i><sub>x</sub></i> C <i><sub>y alloy layers and characterization of their crystalline and optical properties. Japanese Journal of Applied Physics, 2017, 56, 01AB02.</sub></i>	0.8	>ternary
4484	Performance comparison of plasmonic solar cell employing aluminum and silver nano particles. , 2017,		0
4485	Simulation of InGaAs/InGaP multiple quantum well systems for multijunction solar cell. , 2017, , .		4
4486	The Influence of Spectral Albedo on Bifacial Solar Cells: A Theoretical and Experimental Study. IEEE Journal of Photovoltaics, 2017, 7, 1611-1618.	1.5	83

#	Article	IF	CITATIONS
4487	Simulation of high efficiency InGaP/InP tandem solar cells under flat plate and concentrator conditions. , 2017, , .		1
4488	Studying of Perovskite Nanoparticles in PMMA Matrix Used As Light Converter for Silicon Solar Cell. Archives of Metallurgy and Materials, 2017, 62, 1733-1739.	0.6	4
4489	Performance comparison between photovoltaic and thermoradiative devices. Journal of Applied Physics, 2017, 122, .	1.1	26
4490	Methodology to Improve Strain Measurement in III-V Semiconductors Materials. Microscopy and Microanalysis, 2017, 23, 1416-1417.	0.2	0
4491	Structural and Chemical Assessment of InAs/AlGaAs quantum Dot Structures for Enlarged Bandgap Intermediate Band Solar Cells. Microscopy and Microanalysis, 2017, 23, 1478-1479.	0.2	0
4492	Influence of external electric field on the electronic structure and optical properties of pyrite. RSC Advances, 2017, 7, 56676-56681.	1.7	11
4493	Investigation of Temperature Dependent Current-Voltage Characteristics of all-Si Quantum Dot Solar Cell. Materials Today: Proceedings, 2017, 4, 12554-12557.	0.9	1
4494	NIR Emission and Eu 2+ Nd 3+ Energy Transfer in KSrCl 3 :Eu 2+ , Nd 3+ phosphor. Materials Today: Proceedings, 2017, 4, 12582-12585.	0.9	3
4495	RBS Analysis of Down-conversion Layers Comprising Two Rare-Earth Elements. Physics Procedia, 2017, 90, 32-40.	1.2	0
4497	Charge separation and carrier dynamics in donor-acceptor heterojunction photovoltaic systems. Structural Dynamics, 2017, 4, 061503.	0.9	13
4498	Si-Doped InAs/GaAs Quantum Dot Solar Cell with Alas Cap Layers. E3S Web of Conferences, 2017, 16, 16001.	0.2	2
4499	Bonding of Dissimilar Semiconductor Materials for Energy-Harvesting and Energy-Saving Devices. Journal of the Vacuum Society of Japan, 2017, 60, 421-427.	0.3	Ο
4500	On the potential of solar cells to efficiently operate at high temperature. AIP Conference Proceedings, 2017, , .	0.3	2
4501	The effect of laser processing on the structural characteristics and elemental composition of CZTS thin film obtained by spray pyrolysis method. , 2017, , .		2
4502	Cation germanium incorporation. New direction toward high-efficiency kesterite solar cells. , 2017, , .		1
4503	Simulation study of multijunction solar cell incorporating GaAsBi. , 2017, , .		5
4504	Consideration of equilibrium condition in Shockley-Queisser limit for solar cell efficiency. , 2017, , .		0
4505	An efficient DC grid based PV $\hat{a} \in$ " wind power generation using modified P&O tracking technique. , 2017, , .		3

#	Article	IF	CITATIONS
4506	Monocrystalline 1.7 eV MgCdTe double-heterostructure solar cell with 11.2% efficiency. , 2017, , .		0
4507	A Novel Defect Passivation Method for Multicrystalline Si Wafer by H2S Reaction. , 2017, , .		0
4508	Enhanced Photoresponse of InN Devices Using Indium-Tin Oxide Nanorods. , 2017, , .		0
4509	Type-II Quantum Dots for Application to Photon Ratchet Intermediate Band Solar Cells. , 2017, , .		1
4510	Experimental Evidence For CdS-related Transport Barrier in Thin Film Solar Cells and Its Impact on Admittance Spectroscopy. , 2017, , .		2
4511	Scalable, Self ontained Sodium Metal Production Plant for a Hydrogen Fuel Clean Energy Cycle. , 2017, , .		1
4513	Optimized Design of Back-Contact Thin-Film GaAs Solar Cells. , 2017, , .		0
4514	Effects of CdCl2Passivation on Thin CdTe Absorbers Fabricated by Close-Space Sublimation. , 2017, , .		0
4515	Analysis of open-circuit voltage and conversion efficiency in quantum-dot solar cells via detailed-balance-limit theory. , 2017, , .		0
4516	Systematic Thermalphotovoltaic Solar Cell Optimization. , 2017, , .		0
4517	Efficiency of GaAs P/Si Two-junction Solar Cells with Multi-Quantum Wells: a Realistic Modeling with Carrier Collection Efficiency. , 2017, , .		0
4518	Simultaneous fabrication of a microcavity absorber–emitter on a Ni–W alloy film. Japanese Journal of Applied Physics, 2017, 56, 100310.	0.8	1
4519	Reflection reduction in silicon solar cells by means of laser and plasma treatment. , 2017, , .		0
4520	Performance Evaluation of Nanostructured Solar Cells. , 0, , .		2
4521	High built-in potential and Voc of monocrystalline CdTe/MgCdTe double-heterostructure solar cells with p-type a-Si:H hole-contacts. , 2017, , .		1
4522	Highâ€Efficiency Front Junction nâ€Type Crystalline Silicon Solar Cells. , 0, , .		4
4523	Effect of Cu/Ga ratio on deep-level defects in CuGaSe_2 thin films studied by photocapacitance measurements with two-wavelength excitation. Applied Optics, 2017, 56, 4090.	2.1	6
4524	Back-contacted BaSi_2 solar cells: an optical study. Optics Express, 2017, 25, A402.	1.7	21

#	Article	IF	CITATIONS
4525	Numerical optical optimization of monolithic planar perovskite-silicon tandem solar cells with regular and inverted device architectures. Optics Express, 2017, 25, A473.	1.7	114
4526	Optical analysis of a III-V-nanowire-array-on-Si dual junction solar cell. Optics Express, 2017, 25, A665.	1.7	12
4527	Toward high performance nanoscale optoelectronic devices: super solar energy harvesting in single standing core-shell nanowire. Optics Express, 2017, 25, A1111.	1.7	10
4528	GaAsSb spacer effect in quasi-type-II InAs coupled-QDs for intraband absorption enhancement. Optical Materials Express, 2017, 7, 1351.	1.6	7
4529	Effect of high temperature rapid thermal annealing on optical properties of InGaAsP grown by molecular beam epitaxy. Optical Materials Express, 2017, 7, 3826.	1.6	3
4530	On the broadband continuous polarization-independent excitation of surface-plasmon-polariton waves for energy-harvesting applications. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 270.	0.9	1
4531	Temperature dependence of photoemission characteristics from Al_xGa_1â^'xAs/GaAs photocathodes. Applied Optics, 2017, 56, 6015.	0.9	3
4532	GaAsP Nanowire Solar Cell Development Towards Nanowire/Si Tandem Applications. , 2017, , .		0
4533	Photovoltaic Performance Characterization of Textured Silicon Solar Cells Using Luminescent Down-Shifting Eu-Doped Phosphor Particles of Various Dimensions. Materials, 2017, 10, 21.	1.3	12
4534	Carrier Multiplication Mechanisms and Competing Processes in Colloidal Semiconductor Nanostructures. Materials, 2017, 10, 1095.	1.3	24
4535	Enhancing Photovoltaic Performance Using Broadband Luminescent Down-Shifting by Combining Multiple Species of Eu-Doped Silicate Phosphors. Nanomaterials, 2017, 7, 340.	1.9	22
4536	Rationally Controlled Synthesis of CdSexTe1â^x Alloy Nanocrystals and Their Application in Efficient Graded Bandgap Solar Cells. Nanomaterials, 2017, 7, 380.	1.9	25
4537	Reliability and Degradation of Solar PV Modules—Case Study of 19-Year-Old Polycrystalline Modules in Ghana. Technologies, 2017, 5, 22.	3.0	43
4538	Performance Investigation of Air Velocity Effects on PV Modules under Controlled Conditions. International Journal of Photoenergy, 2017, 2017, 1-10.	1.4	15
4539	Introduction to Solar Energy and Solar Photovoltaics. , 0, , 1-30.		0
4540	Back-contacted thin-film GaAs solar cells. , 2017, , .		0
4541	ZnSiP2 Thin Film Growth for Si-Based Tandem Photovoltaics. , 2017, , .		0
4542	III- V/Si Tandem Cells Utilizing Interdigitated Back Contact Si Cells and Varying Terminal Configurations. , 2017, , .		3

# 4544	ARTICLE Grand Challenges for Nanoscience and Nanotechnology in Energy and Health. Frontiers in Chemistry, 2017, 5, 80.	IF 1.8	CITATIONS
4545	Atomic Layer Growth of InSe and Sb2Se3 Layered Semiconductors and Their Heterostructure. Electronics (Switzerland), 2017, 6, 27.	1.8	32
4546	THz Rectennas and Their Design Rules. Electronics (Switzerland), 2017, 6, 99.	1.8	20
4547	Sensitivity of the Drift-Diffusion Approach in Estimating the Power Conversion Efficiency of Bulk Heterojunction Polymer Solar Cells. Energies, 2017, 10, 285.	1.6	1
4548	Notice of Removal Measurements and modeling of III-V solar cells at high temperatures up to 400°C. , 2017, , .		1
4549	Influence of hetero-interfaces on photovoltaic performance in solar cells based on ZnSnP2 bulk crystal. , 2017, , .		0
4550	The Effects of Interdot Spacing and Dot Size on the Performance of InGaAs/GaAs QDIBSC. International Journal of Photoenergy, 2017, 2017, 1-10.	1.4	3
4551	Cause of Current-Collection Failure Observed in -Reduction Phase of PV Cells and Modules Exposed to Acetic Acid. , 2017, , .		0
4552	PL Study of Phosphorus-Doped CdTe EVT Films. , 2017, , .		1
4553	Notice of Removal Highly transparent compositionally graded buffers for new metamorphic multi-junction solar cell designs. , 2017, , .		0
4554	A Fine Model of Power Degradation for Crystalline Silicon Solar Modules. , 2017, , .		0
4555	A PCBM-Modified TiO <sub>2</sub> Blocking Layer towards Efficient Perovskite Solar Cells. International Journal of Photoenergy, 2017, 2017, 1-9.	1.4	20
4556	A Framework for Comparing the Economic Performance and Associated Emissions of Grid-connected Battery Storage Systems in Existing Building Stock: a NYISO Case Study. , 2017, , .		0
4557	Enhanced Power Conversion Efficiency in Single Nanowire Devices through Symmetry Breaking Design. , 2017, , .		0
4558	Nanostructured Semiconductor Materials for Dye-Sensitized Solar Cells. Journal of Nanomaterials, 2017, 2017, 1-31.	1.5	93
4559	Singlet Fission: Optimization of Chromophore Dimer Geometry. Advances in Quantum Chemistry, 2017, 75, 175-227.	0.4	34
4560	Green Intelligent Nanomaterials by Design (Using Nanoparticulate/2D-Materials Building Blocks) Current Developments and Future Trends. , 2017, , .		1
4561	Perovskite as Light Harvester: Prospects, Efficiency, Pitfalls and Roadmap. , 0, , .		1

#	Article	IF	CITATIONS
4562	Detailed balance analysis of photovoltaic materials and devices. , 2017, , .		0
4563	Test Methods for Hydrophobic Coatings on Solar Cover Glass. , 2017, , .		7
4564	Oxygen Incorporation into Si Nanocrystal/SiC Multilayers. , 2017, , .		0
4565	Modified Limiting Efficiency for Multiple Exciton Generation Solar Cells. , 2017, , .		0
4566	Recent Advancement of Semiconductor Materials and Devices. Zairyo/Journal of the Society of Materials Science, Japan, 2017, 66, 244-249.	0.1	0
4567	Computational Design of Dopants in CdTe Grain Boundaries for Efficient Photovoltaics. , 2017, , .		0
4568	Thermodynamic Efficiency Limit of Bifacial Solar Cells for Various Spectral Albedos. , 2017, , .		6
4569	The Planar Thermophotovoltaic Selective Nearly-Perfect Absorbers/Emitters. , 2017, , .		0
4570	Efficient Photon Upconversion in Semiconductor Nanostructures: Constraints and Opportunities. , 2017, , .		0
4571	Bipolar Effects in Photovoltage of Metamorphic InAs/InGaAs/GaAs Quantum Dot Heterostructures: Characterization and Design Solutions for Light-Sensitive Devices. Nanoscale Research Letters, 2017, 12, 559.	3.1	7
4572	Micro-optical Tandem Luminescent Solar Concentrator. , 2017, , .		6
4573	Photovoltaics Fundamentals, Technology and Application. , 2017, , 765-850.		1
4574	Recent Research Progress on Lead-free or Less-lead Perovskite Solar Cells. International Journal of Electrochemical Science, 2017, , 4915-4927.	0.5	2
4575	Band-Gap Engineering in Cu2ZnSn(S,Se)4 Solar Cells by Post-Sulphurization of Selenized Absorber Layers. , 2017, , .		1
4576	An investigation of the role of recombination processes in the operation of InAs/GaAsl-xSbx quantum dot solar cells. , 2017, , .		0
4577	Pypvcell: An Open-Source Solar Cell Modeling Library in Python. , 2017, , .		2
4578	Optimization of Structure InAs <inf>x</inf> Sb <inf>1</inf> - xl GaAs Quantum Dot Solar Cell. , 2017, , .		0
4579	Mechanical tolerances study through simulations and experimental characterization for a 1000X micro-concentrator CPV module. AlP Conference Proceedings, 2017, , .	0.3	5

		CITATION RE	PORT	
#	Article		IF	CITATIONS
4580	Spectral Responses in Quantum Efficiency of Emerging Kesterite Thin-Film Solar Cells.	,2017,,.		1
4581	Hybrid Solar Cells Based on Organic Inorganic Materials Photovoltaic Applications: A R of Powder Metallurgy and Mining, 2017, 06, .	eview. Journal	0.2	2
4582	New Developments in the Modeling and Simulations of the Thermal Behavior and Elect Photovoltaics Panels With the Consideration of Desert Environmental Conditions. , 20	trical Yield of )17, , .		0
4583	A Three-Dimensional Finite Element Based Dynamic Thermal Model of PV Modules with Thermal Network. , 2017, , .	n an Improved		5
4584	Hot carrier transfer processes in nonstoichiometric titanium hydride. Japanese Journal Physics, 2017, 56, 08MA10.	of Applied	0.8	5
4585	The index of dispersion as a metric of quanta – unravelling the Fano factor. Acta Cry Section B: Structural Science, Crystal Engineering and Materials, 2017, 73, 675-695.	stallographica	0.5	6
4586	MBE growth of 1.7eV Al0.2Ga0.8As and 1.42eV GaAs solar cells on Si using dislocation alternative pathway toward III-V/ Si solar cells architectures. , 2017, , .	าร filters: an		0
4587	Quantum Cutting Luminescent PMMA Films Containing Ce3+ - Yb3+ Codoped YAG Ph Concentrator Solar Cells. , 2017, , .	iosphor for Si		0
4588	Characterization of Tellurium as a Back Contact for CdTe Solar Cells. , 2017, , .			3
4589	First-Principles Density Functional Theory Calculation of Metal-Substituted Lead Halide 2017, , .	e Perovskite. ,		0
4590	Reducing UV induced degradation losses of solar modules with c-Si solar cells featuring passivation layers. , 2017, , .	g dielectric		5
4591	Study of Defect Properties in CuGaSe2 Thin-Film Solar-Cells Using Admittance Spectro	оscopy. , 2017, , .		0
4592	Enhancement of Si Photovoltaic Module by Introducing III-V/Si Hybrid Configurations a Evaluations under Various Cost Ratios of III-V/Si Photovoltaics. , 2017, , .	and Cost		0
4593	Fundamental Device Characteristics of Hot Carrier Solar Cell Using InAs/GaAs Quantur Superlattices Zairyo/Journal of the Society of Materials Science, Japan, 2017, 66, 629	n Dot -633.	0.1	0
4594	Thermodynamics of Photovoltaics â~†. , 2017, , .			5
4595	Efficiency Enhancement In Thin Film ITO-cSi Heterojunction Solar Cell Using Photonic (	Crystal. , 2017, , .		0
4596	Transparent Conductive Adhesives for Tandem Solar Cells Using Polymer–Particle Co Applied Materials & Interfaces, 2018, 10, 8086-8091.	omposites. ACS	4.0	25
4597	Achieving the classical Carnot efficiency in a strongly coupled quantum heat engine. P E, 2018, 97, 022130.	hysical Review	0.8	13

#	Article	IF	CITATIONS
4598	Depth Profile of Impurity Phase in Wide-Bandgap Cu(In1â^'x,Gax)Se2 Film Fabricated by Three-Stage Process. Journal of Electronic Materials, 2018, 47, 4944-4949.	1.0	6
4599	A comparative life cycle assessment of chalcogenide/Si tandem solar modules. Energy, 2018, 145, 700-709.	4.5	26
4600	A first-principles prediction on the "healing effect―of graphene preventing carrier trapping near the surface of metal halide perovskites. Chemical Science, 2018, 9, 3341-3353.	3.7	19
4601	Bandgap Engineering of Stable Leadâ€Free Oxide Double Perovskites for Photovoltaics. Advanced Materials, 2018, 30, e1705901.	11.1	57
4602	An Ultrafast Transient Absorption Study of Charge Separation and Recombination Dynamics in CdSe QDs and Methyl Viologen: Dependence on Surface Stoichiometry. ChemistrySelect, 2018, 3, 2675-2682.	0.7	8
4603	Broadband surface plasmon resonance enhanced self-powered graphene/GaAs photodetector with ultrahigh detectivity. Nano Energy, 2018, 47, 140-149.	8.2	82
4604	Singlet Fission and Triplet Transfer to PbS Quantum Dots in TIPS-Tetracene Carboxylic Acid Ligands. Journal of Physical Chemistry Letters, 2018, 9, 1454-1460.	2.1	53
4605	Challenges and Prospects in Solar Water Splitting and CO <sub>2</sub> Reduction with Inorganic and Hybrid Nanostructures. ACS Catalysis, 2018, 8, 3602-3635.	5.5	365
4606	Quantitative experimental assessment of hot carrier-enhanced solar cells at room temperature. Nature Energy, 2018, 3, 236-242.	19.8	86
4607	Utilizing hot electrons. Nature Energy, 2018, 3, 170-171.	19.8	40
4607 4608	Utilizing hot electrons. Nature Energy, 2018, 3, 170-171. A sunny future: expert elicitation of China's solar photovoltaic technologies. Environmental Research Letters, 2018, 13, 034038.	19.8 2,2	40 24
4607 4608 4609	Utilizing hot electrons. Nature Energy, 2018, 3, 170-171.         A sunny future: expert elicitation of China's solar photovoltaic technologies. Environmental Research Letters, 2018, 13, 034038.         Towards efficient solid-state triplet–triplet annihilation based photon upconversion: Supramolecular, macromolecular and self-assembled systems. Coordination Chemistry Reviews, 2018, 362, 54-71.	19.8 2.2 9.5	40 24 201
4607 4608 4609 4610	Utilizing hot electrons. Nature Energy, 2018, 3, 170-171.         A sunny future: expert elicitation of China's solar photovoltaic technologies. Environmental Research Letters, 2018, 13, 034038.         Towards efficient solid-state triplet–triplet annihilation based photon upconversion: Supramolecular, macromolecular and self-assembled systems. Coordination Chemistry Reviews, 2018, 362, 54-71.         Synthesis by Low Temperature Solution Processing of Ferroelectric Perovskite Oxide Thin Films as Candidate Materials for Photovoltaic Applications., 2018, , 45-81.	19.8 2.2 9.5	40 24 201 2
4607 4608 4609 4610	Utilizing hot electrons. Nature Energy, 2018, 3, 170-171.         A sunny future: expert elicitation of China's solar photovoltaic technologies. Environmental Research Letters, 2018, 13, 034038.         Towards efficient solid-state triplet–triplet annihilation based photon upconversion: Supramolecular, macromolecular and self-assembled systems. Coordination Chemistry Reviews, 2018, 362, 54-71.         Synthesis by Low Temperature Solution Processing of Ferroelectric Perovskite Oxide Thin Films as Candidate Materials for Photovoltaic Applications., 2018, 45-81.         Preparation and characterization of Y2O3:Bi3+,Yb3+ nanosheets with wavelength conversion from near-ultraviolet to near-infrared. Journal of Luminescence, 2018, 198, 243-250.	19.8 2.2 9.5 1.5	40 24 201 2 6
4607 4608 4609 4610 4611	Utilizing hot electrons. Nature Energy, 2018, 3, 170-171.         A sunny future: expert elicitation of China's solar photovoltaic technologies. Environmental Research Letters, 2018, 13, 034038.         Towards efficient solid-state triplet–triplet annihilation based photon upconversion: Supramolecular, macromolecular and self-assembled systems. Coordination Chemistry Reviews, 2018, 362, 54-71.         Synthesis by Low Temperature Solution Processing of Ferroelectric Perovskite Oxide Thin Films as Candidate Materials for Photovoltaic Applications., 2018, , 45-81.         Preparation and characterization of Y2O3:Bi3+,Yb3+ nanosheets with wavelength conversion from near-ultraviolet to near-infrared. Journal of Luminescence, 2018, 198, 243-250.         Formation of SnS phase obtained by thermal vacuum annealing of SnS2 thin films and its application in solar cells. Materials Science in Semiconductor Processing, 2018, 79, 32-39.	19.8 2.2 9.5 1.5	<ul> <li>40</li> <li>24</li> <li>201</li> <li>2</li> <li>6</li> <li>19</li> </ul>
4607 4608 4609 4610 4611 4612	Utilizing hot electrons. Nature Energy, 2018, 3, 170-171.         A sunny future: expert elicitation of China's solar photovoltaic technologies. Environmental Research Letters, 2018, 13, 034038.         Towards efficient solid-state tripletâC <sup>er</sup> triplet annihilation based photon upconversion: Supramolecular, macromolecular and self-assembled systems. Coordination Chemistry Reviews, 2018, 362, 54-71.         Synthesis by Low Temperature Solution Processing of Ferroelectric Perovskite Oxide Thin Films as Candidate Materials for Photovoltaic Applications. , 2018, , 45-81.         Preparation and characterization of Y2O3:Bi3+,Yb3+ nanosheets with wavelength conversion from near-ultraviolet to near-infrared. Journal of Luminescence, 2018, 198, 243-250.         Formation of SnS phase obtained by thermal vacuum annealing of SnS2 thin films and its application in solar cells. Materials Science in Semiconductor Processing, 2018, 79, 32-39.         Limits of Contact Selectivity/Recombination on the Open-Circuit Voltage of a Photovoltaic. ACS Applied Energy Materials, 2018, 1, 1037-1046.	19.8 2.2 9.5 1.5 1.9 2.5	40 24 201 2 3 19 31
4607 4608 4609 4610 4611 4612 4613	Utilizing hot electrons, Nature Energy, 2018, 3, 170-171.         A sunny future: expert elicitation of China's solar photovoltaic technologies. Environmental Research Letters, 2018, 13, 034038.         Towards efficient solid-state tripletãe <sup>(*</sup> triplet annihilation based photon upconversion: Supramolecular, macromolecular and self-assembled systems. Coordination Chemistry Reviews, 2018, 362, 54-71.         Synthesis by Low Temperature Solution Processing of Ferroelectric Perovskite Oxide Thin Films as Candidate Materials for Photovoltaic Applications., 2018, 45-81.         Preparation and characterization of Y2O3:Bi3+, Yb3+ nanosheets with wavelength conversion from near-ultraviolet to near-infrared. Journal of Luminescence, 2018, 198, 243-250.         Formation of SnS phase obtained by thermal vacuum annealing of SnS2 thin films and its application in solar cells. Materials Science in Semiconductor Processing, 2018, 79, 32-39.         Limits of Contact Selectivity/Recombination on the Open-Circuit Voltage of a Photovoltaic. ACS Applied Energy Materials, 2018, 1, 1037-1046.         Preparation of Se-based solar cell using spin-coating method in ambient condition. Chinese Physics B, 2018, 27, 015202.	<ol> <li>19.8</li> <li>2.2</li> <li>9.5</li> <li>1.5</li> <li>1.9</li> <li>2.5</li> <li>0.7</li> </ol>	40 24 201 2 3 19 31

#	Article	IF	CITATIONS
4616	Crystal Growth and Atom Diffusion in (Cu)ZnTe/CdTe via Molecular Dynamics. IEEE Journal of Photovoltaics, 2018, 8, 594-599.	1.5	5
4617	Next-generation organic photovoltaics based on non-fullerene acceptors. Nature Photonics, 2018, 12, 131-142.	15.6	1,535
4618	Solution-Processed Cu <sub>2</sub> S Photocathodes for Photoelectrochemical Water Splitting. ACS Energy Letters, 2018, 3, 760-766.	8.8	89
4619	Improving Solar Cell Performance Using Quantum Dot Triad Charge-Separation Engines. Journal of Physical Chemistry C, 2018, 122, 5924-5934.	1.5	10
4620	Lead-Free Perovskite Nanocrystals for Light-Emitting Devices. Journal of Physical Chemistry Letters, 2018, 9, 1573-1583.	2.1	167
4621	Plasmon-enhanced triplet–triplet annihilation upconversion of post-modified polymeric acceptors. Dalton Transactions, 2018, 47, 8638-8645.	1.6	14
4622	Using lead chalcogenide nanocrystals as spin mixers: a perspective on near-infrared-to-visible upconversion. Dalton Transactions, 2018, 47, 8509-8516.	1.6	65
4623	Figures of Merit Guiding Research on Organic Solar Cells. Journal of Physical Chemistry C, 2018, 122, 5829-5843.	1.5	34
4624	Tuning the singlet fission relevant energetic levels of quinoidal bithiophene compounds by means of backbone modifications and functional group introduction. Physical Chemistry Chemical Physics, 2018, 20, 5795-5802.	1.3	8
4625	Efficient, low-dimensional nanocomposite bilayer CuO/ZnO solar cell at various annealing temperatures. Materials for Renewable and Sustainable Energy, 2018, 7, 1.	1.5	23
4626	Intermediate band formation in a δ-doped like QW superlattices of GaAs/Al x Ga 1â^'x As for solar cell design. Superlattices and Microstructures, 2018, 115, 191-196.	1.4	1
4627	Building a Six-Junction Inverted Metamorphic Concentrator Solar Cell. IEEE Journal of Photovoltaics, 2018, 8, 626-632.	1.5	148
4628	A Hybrid Electric and Thermal Solar Receiver. Joule, 2018, 2, 962-975.	11.7	70
4629	Ultrafast zero-bias photocurrent and terahertz emission in hybrid perovskites. Communications Physics, 2018, 1, .	2.0	32
4630	Flexo-photovoltaic effect. Science, 2018, 360, 904-907.	6.0	262
4631	Impact of Triplet Excited States on the Openâ€Circuit Voltage of Organic Solar Cells. Advanced Energy Materials, 2018, 8, 1800451.	10.2	36
4632	A Review on Eco-Friendly Quantum Dot Solar Cells: Materials and Manufacturing Processes. International Journal of Precision Engineering and Manufacturing - Green Technology, 2018, 5, 349-358.	2.7	36
4633	Direct solution deposition of device quality Sb2S3-xSex films for high efficiency solar cells. Solar Energy Materials and Solar Cells, 2018, 183, 52-58.	3.0	72

#	Article	IF	CITATIONS
4634	Improving the Efficiency of the Mn <sup>2+/3+</sup> Couple in Quantum Dot Solar Cells: The Role of Spin Crossover. Journal of Physical Chemistry C, 2018, 122, 14135-14149.	1.5	6
4635	Efficiency enhancement of single-junction GaAs solar cells coated with europium-doped silicate-phosphor luminescent-down-shifting layer. Thin Solid Films, 2018, 660, 651-656.	0.8	7
4636	Vectorial method used to monitor an evolving system: Titanium oxide thin films under UV illumination. Applied Surface Science, 2018, 447, 528-534.	3.1	1
4637	Charge Transfer and Collection in Dilute Organic Donor–Acceptor Heterojunction Blends. Nano Letters, 2018, 18, 3180-3184.	4.5	26
4638	Recent progress in lead-free perovskite (-like) solar cells. Materials Today Energy, 2018, 8, 157-165.	2.5	60
4639	Sustainable luminescent solar concentrators based on organic–inorganic hybrids modified with chlorophyll. Journal of Materials Chemistry A, 2018, 6, 8712-8723.	5.2	38
4640	Ab Initio Methods. , 2018, , 7-197.		2
4641	Material challenges for solar cells in the twenty-first century: directions in emerging technologies. Science and Technology of Advanced Materials, 2018, 19, 336-369.	2.8	162
4642	Pressure-induced changes of the structure and properties of monoclinic α -chalcocite Cu2S. Physical Review B, 2018, 97, .	1.1	9
4643	Optimized flexible cover films for improved conversion efficiency in thin film flexible solar cells. Optical Materials, 2018, 79, 243-246.	1.7	5
4644	Expanded Theory of H- and J-Molecular Aggregates: The Effects of Vibronic Coupling and Intermolecular Charge Transfer. Chemical Reviews, 2018, 118, 7069-7163.	23.0	1,033
4645	Improving the stability and decreasing the trap state density of mixed-cation perovskite solar cells through compositional engineering. Sustainable Energy and Fuels, 2018, 2, 1332-1341.	2.5	36
4646	Aggregation-free sensitizer dispersion in rigid ionic crystals for efficient solid-state photon upconversion and demonstration of defect effects. Journal of Materials Chemistry C, 2018, 6, 5609-5615.	2.7	19
4647	Properties of In <sub>2</sub> S <sub>3</sub> â€Based <i>pin</i> â€Heterojunctions. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700827.	0.8	3
4648	Semiconductor nanostructure quantum ratchet for high efficiency solar cells. Communications Physics, 2018, 1, .	2.0	22
4649	Theoretical Design of the Absorber for Intermediate Band Solar Cells from Groupâ€IV (Si, Ge, and) Tj ETQq1 1 0.7	84314 rgE 0.7	3T <b>/</b> Overlock
4650	Low Work Function Surface Modifiers for Solutionâ€Processed Electronics: A Review. Advanced Materials Interfaces, 2018, 5, 1701404.	1.9	56
4651	Theoretical Determination of Optimal Material Parameters for ZnCdTe/ZnCdSe Quantum Dot Intermediate Band Solar Cells. Journal of Electronic Materials, 2018, 47, 4325-4331.	1.0	5
#		IF	CITATIONS
-----------	--	------	-----------
π 4652	Electronic Structure and Stability of Lead-free Hybrid Halide Perovskites: A Density Functional Theory	0.5	2
1001	Study. Journal of Shanghai Jiaotong University (Science), 2018, 23, 202-208.	010	-
4653	Maximizing the short circuit current of organic solar cells by partial decoupling of electrical and optical properties. Applied Nanoscience (Switzerland), 2018, 8, 339-346.	1.6	7
4654	Response to "Comment on â€~High-performance near-field electroluminescent refrigeration device consisting of a GaAs light emitting diode and a Si photovoltaic cell'―[J. Appl. Phys. 122, 143104 (2017)]. Journal of Applied Physics, 2018, 123, 116102.	1.1	0
4655	Thermodynamic limits of energy harvesting from outgoing thermal radiation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3609-E3615.	3.3	78
4656	Photovoltaic performances of mono- and mixed-halide structures for perovskite solar cell: A review. Renewable and Sustainable Energy Reviews, 2018, 90, 248-274.	8.2	50
4657	Recent advances in synthesis of Cu2FeSnS4 materials for solar cell applications: A review. Solar Energy Materials and Solar Cells, 2018, 182, 204-219.	3.0	75
4658	Band-gap tuning of Cu2ZnSn(S,Se)4 solar cell absorbers via defined incorporation of sulphur based on a post-sulphurization process. Solar Energy Materials and Solar Cells, 2018, 182, 158-165.	3.0	15
4659	Unraveling the Chemical Nature of the 3D "Hollow―Hybrid Halide Perovskites. Journal of the American Chemical Society, 2018, 140, 5728-5742.	6.6	132
4660	Energy Yield Limits for Single-Junction Solar Cells. Joule, 2018, 2, 1160-1170.	11.7	38
4661	Probing the CZTS/CdS heterojunction utilizing photoelectrochemistry and x-ray absorption spectroscopy. Journal of Chemical Physics, 2018, 148, 134702.	1.2	7
4662	Designing High-Efficiency Thin Silicon Solar Cells Using Parabolic-Pore Photonic Crystals. Physical Review Applied, 2018, 9, .	1.5	24
4663	How SnF <sub>2</sub> Impacts the Material Properties of Lead-Free Tin Perovskites. Journal of Physical Chemistry C, 2018, 122, 13926-13936.	1.5	179
4664	Improved photovoltaic performance from inorganic perovskite oxide thin films with mixed crystal phases. Nature Photonics, 2018, 12, 271-276.	15.6	84
4665	Benchmarking triplet–triplet annihilation photon upconversion schemes. Physical Chemistry Chemical Physics, 2018, 20, 12182-12192.	1.3	19
4666	Performance analysis of high efficiency InxGa1â^'xN/GaN intermediate band quantum dot solar cells. Results in Physics, 2018, 9, 432-439.	2.0	11
4667	Impact of sublayer thickness and annealing on silicon nanostructures formation in a-Si:H/a-SiNx:H superlattices for photovoltaics. Vacuum, 2018, 153, 154-161.	1.6	4
4668	Evidence of Enhanced Carrier Collection in Cu(In,Ga)Se <sub>2</sub> Grain Boundaries: Correlation with Microstructure. ACS Applied Materials & Interfaces, 2018, 10, 14759-14766.	4.0	26
4669	Observation of enhanced hot phonon bottleneck effect in 2D perovskites. Applied Physics Letters, 2018, 112, .	1.5	47

#	Article	IF	CITATIONS
4670	Effect of the shell material and confinement type on the conversion efficiency of core/shell quantum dot nanocrystal solar cells. Journal of Physics Condensed Matter, 2018, 30, 205301.	0.7	6
4671	Precision Grinding for Functional Microstructured Surface. Micro/Nano Technologies, 2018, , 1-33.	0.1	0
4672	Hindered Formation of Photoinactive Î'-FAPbI <sub>3</sub> Phase and Hysteresis-Free Mixed-Cation Planar Heterojunction Perovskite Solar Cells with Enhanced Efficiency via Potassium Incorporation. Journal of Physical Chemistry Letters, 2018, 9, 2113-2120.	2.1	72
4673	Sandwich-like transparent ceramic demonstrates ultraviolet and visible broadband downconversion luminescence. RSC Advances, 2018, 8, 13200-13204.	1.7	7
4674	Direct observation of cation-exchange in liquid-to-solid phase transformation in FA <sub>1â°'x</sub> MA <sub>x</sub> PbI <sub>3</sub> based perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 9081-9088.	5.2	35
4675	Theoretical Modeling of Singlet Fission. Chemical Reviews, 2018, 118, 7164-7207.	23.0	338
4676	Synthesis of quaternary chalcogenide CZTS nanoparticles by a hydrothermal route. IOP Conference Series: Materials Science and Engineering, 2018, 338, 012062.	0.3	7
4677	Lead Halide Perovskites in Thin Film Photovoltaics: Background and Perspectives. Bulletin of the Chemical Society of Japan, 2018, 91, 1058-1068.	2.0	84
4678	An Investigation of the Role of Radiative and Nonradiative Recombination Processes in InAs/GaAs \$_{1-x}\$ Sb \$_{x}\$ Quantum Dot Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 487-492.	1.5	0
4679	Electronic structure, defect formation energy, and photovoltaic properties of wurtzite-derived CuGaO2. Journal of Applied Physics, 2018, 123, 161584.	1.1	11
4680	A quantitative and spatially resolved analysis of the performance-bottleneck in high efficiency, planar hybrid perovskite solar cells. Energy and Environmental Science, 2018, 11, 960-969.	15.6	40
4681	Tandem perovskite solar cells. Renewable and Sustainable Energy Reviews, 2018, 84, 89-110.	8.2	93
4682	Past, present and future of the thin film CdTe/CdS solar cells. Solar Energy, 2018, 175, 31-43.	2.9	106
4683	Facile synthesis of Cu2O and CuO nanoparticles and study of their structural, optical and electronic properties. Journal of Alloys and Compounds, 2018, 743, 737-745.	2.8	120
4684	High-efficiency inverted metamorphic 1.7/1.1 eV GalnAsP/GalnAs dual-junction solar cells. Applied Physics Letters, 2018, 112, .	1.5	47
4685	Synthesis of Flowerâ€Like AuPd@SiO <sub>2</sub> Nanoparticles with a Broad Light Extinction for Application to Efficient Dyeâ€Sensitized Solar Cells. Particle and Particle Systems Characterization, 2018, 35, 1700396.	1.2	7
4686	Preparation of Sn loss-free Cu2SnS3 thin films by an oxide route for solar cell. Journal of Alloys and Compounds, 2018, 742, 860-867.	2.8	21
4687	Relations of exciton dynamics in quantum dots to photoluminescence, lasing, and energy harvesting. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2018, 34, 137-151.	5.6	24

#	Article	IF	CITATIONS
4688	Use of ratchet band in a quantum dot embedded intermediate band solar cell to enrich the photo response. Materials Letters, 2018, 218, 139-141.	1.3	13
4689	Plasmonic thin film InP/graphene-based Schottky-junction solar cell using nanorods. Journal of Advanced Research, 2018, 10, 15-20.	4.4	15
4690	Physicochemical characterizations of Cu2Sn0.7Si0.3S3 made from sputtered precursors for thin film solar cell applications. Journal of Alloys and Compounds, 2018, 741, 855-860.	2.8	2
4691	Double-Wall TiO <sub>2</sub> Nanotubes for Dye-Sensitized Solar Cells: A Study of Growth Mechanism. ACS Sustainable Chemistry and Engineering, 2018, 6, 3907-3915.	3.2	29
4692	Non-fullerene acceptors for organic solar cells. Nature Reviews Materials, 2018, 3, .	23.3	2,163
4693	Biomimetic light-harvesting funnels for re-directioning of diffuse light. Nature Communications, 2018, 9, 666.	5.8	30
4694	Dark states and delocalization: Competing effects of quantum coherence on the efficiency of light harvesting systems. Journal of Chemical Physics, 2018, 148, 064304.	1.2	18
4695	Microstructure and Raman Scattering of Cu2ZnSnSe4 Thin Films Deposited onto Flexible Metal Substrates. Semiconductors, 2018, 52, 215-220.	0.2	7
4696	Ternalization Approach for Tuning Light Absorption and Crystalline Structure of Diketopyrrolopyrrole-Based Polymer Using Bisthiadiazole Unit. Journal of the Electrochemical Society, 2018, 165, B3001-B3005.	1.3	1
4697	Coâ€Electrodeposited Cu <sub>2</sub> ZnSnS <sub>4</sub> Thin Film Solar Cell and Cu <sub>2</sub> ZnSnS <sub>4</sub> Solar Cell – BiVO <sub>4</sub> Tandem Device for Unbiased Solar Water Splitting. Solar Rrl, 2018, 2, 1700205.	3.1	19
4698	Fabrication of all-inorganic CsPbBr 3 perovskite nanocubes for enhanced green photoluminescence. Materials Today: Proceedings, 2018, 5, 2234-2240.	0.9	10
4699	Flexible and Micropatternable Triplet–Triplet Annihilation Upconversion Thin Films for Photonic Device Integration and Anticounterfeiting Applications. ACS Applied Materials & Interfaces, 2018, 10, 8985-8992.	4.0	43
4700	Intercalated Chevrel Phase Mo <sub>6</sub> S <sub>8</sub> as a Janus Material for Energy Generation and Storage. ACS Applied Energy Materials, 2018, 1, 440-446.	2.5	17
4701	Synthetic Control of Quinary Nanocrystals of a Photovoltaic Material: The Clear Role of Chalcogen Ratio on Light Absorption and Charge Transport for Cu <sub>2â€"<i>x</i>/i&gt;</sub> Zn <sub>1+<i>x</i>/i&gt;</sub> Sn(S <sub>1â€"<i>y</i>/i&gt;</sub> Se <sub><i>y</i>/i&gt;</sub> ) <sub>ACS Applied Energy Materials 2018 1 1053-1059</sub>	ມ <mark>ີ2:5</mark> 4 <td>4 &gt;.</td>	4 >.
4702	Natural Intermediate Band in I 2 -II-IV-VI4 Quaternary Chalcogenide Semiconductors. Scientific Reports, 2018, 8, 1604.	1.6	15
4703	Exploring the optical properties of Vernier phase yttrium oxyfluoride thin films grown by pulsed liquid injection MOCVD. Dalton Transactions, 2018, 47, 2655-2661.	1.6	4
4704	Cation Substitution in Earthâ€Abundant Kesterite Photovoltaic Materials. Advanced Science, 2018, 5, 1700744.	5.6	161
4705	Hybrid Perovskites: Prospects for Concentrator Solar Cells. Advanced Science, 2018, 5, 1700792.	5.6	76

#	Article	IF	CITATIONS
4706	Decay of the Lowest Triplet State in Singlet-Fission Molecular Materials: A Case Study on Quinoidal Bithiophenes. Journal of Physical Chemistry C, 2018, 122, 3748-3755.	1.5	6
4707	Group III Elemental Composition Dependence of RbF Postdeposition Treatment Effects on Cu(In,Ga)Se <sub>2</sub> Thin Films and Solar Cells. Journal of Physical Chemistry C, 2018, 122, 3809-3817.	1.5	86
4708	Intramolecular singlet fission in a face-to-face stacked tetracene trimer. Physical Chemistry Chemical Physics, 2018, 20, 6330-6336.	1.3	19
4709	Excitons in Single-Walled Carbon Nanotubes and Their Dynamics. Annual Review of Physical Chemistry, 2018, 69, 81-99.	4.8	43
4710	Variation in the Photocurrent Response Due to Different Emissive States in Methylammonium Lead Bromide Perovskites. Journal of Physical Chemistry C, 2018, 122, 3818-3823.	1.5	11
4711	Improved Responsivity Drop From 250 to 200 nm in Sputtered Gallium Oxide Photodetectors by Incorporating Trace Aluminum. IEEE Electron Device Letters, 2018, 39, 220-223.	2.2	46
4712	Research progress on organic–inorganic halide perovskite materials and solar cells. Journal Physics D: Applied Physics, 2018, 51, 093001.	1.3	56
4713	Performance Evaluation of Passivated Silicon Carrier-Selective Contact Solar Cell. IEEE Transactions on Electron Devices, 2018, 65, 176-183.	1.6	15
4714	Highâ€ŧhroughput method to deposit continuous composition spread Sb <sub>2</sub> (Se <sub>x</sub> S <sub>1Ââ~`Âx</sub> ) <sub>3</sub> thin film for photovoltaic application. Progress in Photovoltaics: Research and Applications, 2018, 26, 281-290.	4.4	57
4715	Advances in Silicon Solar Cells. , 2018, , .		4
4716			
	Limitations of Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> as Lead-Free Photovoltaic Absorber Materials. ACS Applied Materials & Interfaces, 2018, 10, 35000-35007.	4.0	133
4717	Limitations of Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> as Lead-Free Photovoltaic Absorber Materials. ACS Applied Materials & amp; Interfaces, 2018, 10, 35000-35007.	4.0 1.6	133 15
4717 4718	Limitations of Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> as Lead-Free Photovoltaic Absorber Materials. ACS Applied Materials & amp; Interfaces, 2018, 10, 35000-35007. Increasing conversion efficiency of two-step photon up-conversion solar cell with a voltage booster hetero-interface. Scientific Reports, 2018, 8, 872. Predicted Lead-Free Perovskites for Solar Cells. Chemistry of Materials, 2018, 30, 718-728.	4.0 1.6 3.2	133 15 102
4717 4718 4719	Limitations of Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> as Lead-Free Photovoltaic Absorber         Materials. ACS Applied Materials & amp; Interfaces, 2018, 10, 35000-35007.         Increasing conversion efficiency of two-step photon up-conversion solar cell with a voltage booster         hetero-interface. Scientific Reports, 2018, 8, 872.         Predicted Lead-Free Perovskites for Solar Cells. Chemistry of Materials, 2018, 30, 718-728.         Why Does CuFeS <sub>2</sub> Resemble Gold?. Journal of Physical Chemistry Letters, 2018, 9, 696-701.	<ul><li>4.0</li><li>1.6</li><li>3.2</li><li>2.1</li></ul>	133 15 102 31
4717 4718 4719 4720	Limitations of Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> as Lead-Free Photovoltaic Absorber Materials. ACS Applied Materials & amp; Interfaces, 2018, 10, 35000-35007.Increasing conversion efficiency of two-step photon up-conversion solar cell with a voltage booster hetero-interface. Scientific Reports, 2018, 8, 872.Predicted Lead-Free Perovskites for Solar Cells. Chemistry of Materials, 2018, 30, 718-728.Why Does CuFeS <sub>2</sub> Resemble Gold?. Journal of Physical Chemistry Letters, 2018, 9, 696-701.Practical Efficiency Limit of Methylammonium Lead Iodide Perovskite (CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> ) Solar Cells. Journal of Physical Chemistry Letters, 2018, 9, 426-434.	<ul> <li>4.0</li> <li>1.6</li> <li>3.2</li> <li>2.1</li> <li>2.1</li> </ul>	<ul> <li>133</li> <li>15</li> <li>102</li> <li>31</li> <li>68</li> </ul>
4717 4718 4719 4720 4721	Limitations of Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> as Lead-Free Photovoltaic Absorber Materials. ACS Applied Materials & amp; Interfaces, 2018, 10, 35000-35007.Increasing conversion efficiency of two-step photon up-conversion solar cell with a voltage booster hetero-interface. Scientific Reports, 2018, 8, 872.Predicted Lead-Free Perovskites for Solar Cells. Chemistry of Materials, 2018, 30, 718-728.Why Does CuFeS <sub>2</sub> Resemble Gold?. Journal of Physical Chemistry Letters, 2018, 9, 696-701.Practical Efficiency Limit of Methylammonium Lead Iodide Perovskite (CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> ) Solar Cells. Journal of Physical Chemistry Letters, 2018, 9, 426-434.Stability and Performance of CsPbl <sub>2</sub> Br Thin Films and Solar Cell Devices. ACS Applied Materials & amp; Interfaces, 2018, 10, 3750-3760.	<ul> <li>4.0</li> <li>1.6</li> <li>3.2</li> <li>2.1</li> <li>2.1</li> <li>4.0</li> </ul>	<ul> <li>133</li> <li>15</li> <li>102</li> <li>31</li> <li>68</li> <li>123</li> </ul>
4717 4718 4719 4720 4721 4722	Limitations of Cs <sub>3</sub> Bi <sub>2</sub> As Lead-Free Photovoltaic Absorber         Materials. ACS Applied Materials & amp; Interfaces, 2018, 10, 35000-35007.         Increasing conversion efficiency of two-step photon up-conversion solar cell with a voltage booster         hetero-interface. Scientific Reports, 2018, 8, 872.         Predicted Lead-Free Perovskites for Solar Cells. Chemistry of Materials, 2018, 30, 718-728.         Why Does CuFeS <sub>2</sub> Resemble Gold?. Journal of Physical Chemistry Letters, 2018, 9, 696-701.         Practical Efficiency Limit of Methylammonium Lead Iodide Perovskite (CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> ) Solar Cells. Journal of Physical Chemistry Letters, 2018, 9, 426-434.         Stability and Performance of CsPbl <sub>2</sub> Br Thin Films and Solar Cell Devices. ACS Applied Materials & amp; Interfaces, 2018, 10, 3750-3760.         Nanophotonic design of perovskite/silicon tandem solar cells. Journal of Materials Chemistry A, 2018, 6, 3625-3633.	<ul> <li>4.0</li> <li>1.6</li> <li>3.2</li> <li>2.1</li> <li>2.1</li> <li>4.0</li> <li>5.2</li> </ul>	<ol> <li>133</li> <li>15</li> <li>102</li> <li>31</li> <li>68</li> <li>123</li> <li>53</li> </ol>

#	Article	IF	CITATIONS
4724	Combining Photon Recycling and Concentrated Illumination in a GaAs Heterojunction Solar Cell. IEEE Journal of Photovoltaics, 2018, 8, 348-354.	1.5	31
4725	Design Principles for the Atomic and Electronic Structure of Halide Perovskite Photovoltaic Materials: Insights from Computation. Chemistry - A European Journal, 2018, 24, 8708-8716.	1.7	26
4726	Eco-friendly synthesis of SnSe nanoparticles: effect of reducing agents on the reactivity of a Se-precursor and phase formation of SnSe NPs. New Journal of Chemistry, 2018, 42, 4843-4853.	1.4	33
4727	Effect of capping procedure on quantum dot morphology: Implications on optical properties and efficiency of InAs/GaAs quantum dot solar cells. Solar Energy Materials and Solar Cells, 2018, 178, 240-248.	3.0	26
4728	Effect of inversion layer at iron pyrite surface on photovoltaic device. Japanese Journal of Applied Physics, 2018, 57, 032301.	0.8	9
4729	Metal Oxides in Photovoltaics: All-Oxide, Ferroic, and Perovskite Solar Cells. , 2018, , 267-356.		34
4730	Two-Dimensional Spectroscopy Is Being Used to Address Core Scientific Questions in Biology and Materials Science. Journal of Physical Chemistry B, 2018, 122, 1771-1780.	1.2	65
4731	Compositional Engineering for Efficient Wide Band Gap Perovskites with Improved Stability to Photoinduced Phase Segregation. ACS Energy Letters, 2018, 3, 428-435.	8.8	344
4732	Electronic structure and optical properties of Ag-MoS <sub>2</sub> composite systems. Journal Physics D: Applied Physics, 2018, 51, 085303.	1.3	16
4733	Enhanced solar cell performance by optimization of spray coated CZTS thin film using Taguchi and response surface method. Journal of Materials Science: Materials in Electronics, 2018, 29, 5613-5623.	1.1	23
4734	Bimolecular recombination in methylammonium lead triiodide perovskite is an inverse absorption process. Nature Communications, 2018, 9, 293.	5.8	243
4735	Reduction in interface defect density in p-BaSi <sub>2</sub> /n-Si heterojunction solar cells by a modified pretreatment of the Si substrate. Japanese Journal of Applied Physics, 2018, 57, 025501.	0.8	11
4736	High-Efficiency Ill–V Multijunction Solar Cells. , 2018, , 439-472.		29
4737	Structural characterization of off-stoichiometric kesterite-type Cu <sub>2</sub> ZnGeSe <sub>4</sub> compound semiconductors: from cation distribution to intrinsic point defect density. CrystEngComm, 2018, 20, 1491-1498.	1.3	30
4738	Organic solar cells based on non-fullerene acceptors. Nature Materials, 2018, 17, 119-128.	13.3	2,315
4739	Controlling Blend Morphology for Ultrahigh Current Density in Nonfullerene Acceptor-Based Organic Solar Cells. ACS Energy Letters, 2018, 3, 669-676.	8.8	242
4740	Thermal sulfurization effect on sprayed CZTS thin filmsproperties and CZTS/CdS solar cells performances. Materials Research Express, 2018, 5, 015511.	0.8	15
4741	Nongeminate Recombination in Organic Solar Cells. Advanced Electronic Materials, 2018, 4, 1700505.	2.6	60

#	Article	IF	CITATIONS
4742	Identification of Killer Defects in Kesterite Thin-Film Solar Cells. ACS Energy Letters, 2018, 3, 496-500.	8.8	130
4743	Band-Gap Tuning in Ferroelectric Bi <sub>2</sub> FeCrO <sub>6</sub> Double Perovskite Thin Films. Journal of Physical Chemistry C, 2018, 122, 1070-1077.	1.5	34
4744	Earth-Abundant Nontoxic Titanium(IV)-based Vacancy-Ordered Double Perovskite Halides with Tunable 1.0 to 1.8 eV Bandgaps for Photovoltaic Applications. ACS Energy Letters, 2018, 3, 297-304.	8.8	314
4745	α-SnSe thin film solar cells produced by selenization of magnetron sputtered tin precursors. Solar Energy Materials and Solar Cells, 2018, 176, 251-258.	3.0	27
4746	Computational analysis of hybrid perovskite on silicon 2-T tandem solar cells based on a Si tunnel junction. Optical and Quantum Electronics, 2018, 50, 1.	1.5	26
4747	Global Prediction of Photovoltaic Field Performance Differences Using Open-Source Satellite Data. Joule, 2018, 2, 307-322.	11.7	40
4748	Elucidation of Excitation Energy Dependent Correlated Triplet Pair Formation Pathways in an Endothermic Singlet Fission System. Journal of the American Chemical Society, 2018, 140, 4613-4622.	6.6	32
4749	Water Splitting by Using Electrochemical Properties of Material. Energy, Environment, and Sustainability, 2018, , 135-153.	0.6	5
4750	Sensitization of Nd3+ near infrared emission in Ca2PO4Cl host. Journal of Luminescence, 2018, 197, 1-6.	1.5	22
4751	Influence of silver incorporation on CZTSSe solar cells grown by spray pyrolysis. Materials Science in Semiconductor Processing, 2018, 76, 31-36.	1.9	27
4752	Photovoltaic Performance of Vapor-Assisted Solution-Processed Layer Polymorph of Cs <sub>3</sub> Sb <sub>2</sub> I <sub>9</sub> . ACS Applied Materials & Interfaces, 2018, 10, 2566-2573.	4.0	137
4753	The effects of SnS <sub>2</sub> secondary phases on Cu <sub>2</sub> ZnSnS <sub>4</sub> solar cells: a promising mechanical exfoliation method for its removal. Journal of Materials Chemistry A, 2018, 6, 2995-3004.	5.2	58
4754	Fabrication and characterization of multi-layer InAs/InGaAs quantum dot p-i-n GaAs solar cells grown on silicon substrates. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	4
4755	Electric field effects on the electronic and optical properties in C2N/Sb van der Waals heterostructure. Carbon, 2018, 129, 738-744.	5.4	47
4756	ZnO/GaAs heterojunction solar cells fabricated by the ALD method. Optik, 2018, 157, 743-749.	1.4	14
4757	The Narrowest Band Gap Ever Observed in Molecular Ferroelectrics: Hexaneâ€1,6â€diammonium Pentaiodobismuth(III). Angewandte Chemie, 2018, 130, 535-539.	1.6	72
4758	Synthesis of Cu <sub>2</sub> (Zn <sub>1â^'x</sub> Co <sub>x</sub> )SnS <sub>4</sub> nanocrystals and formation of polycrystalline thin films from their aqueous dispersions. Journal of Materials Chemistry A, 2018, 6, 999-1008.	5.2	36
4759	Effect of guanidinium on the optical properties and structure of the methylammonium lead halide perovskite. Journal of Alloys and Compounds, 2018, 739, 1059-1064.	2.8	25

#	Article	IF	CITATIONS
4760	NIR emitting phosphors based on PbMoO4 for modification of solar spectrum. Journal of Luminescence, 2018, 196, 259-263.	1.5	11
4761	Significantly enhanced coupling to half-space irradiation using a partially capped nanowire for solar cells. Nano Energy, 2018, 45, 61-67.	8.2	8
4762	Control of Electrical Potential Distribution for High-Performance Perovskite Solar Cells. Joule, 2018, 2, 296-306.	11.7	138
4763	Metal halide perovskite: a game-changer for photovoltaics and solar devices via a tandem design. Science and Technology of Advanced Materials, 2018, 19, 53-75.	2.8	28
4764	Multiple exciton generation in quantum dot-based solar cells. Nanophotonics, 2018, 7, 111-126.	2.9	58
4765	Light intensity dependent characteristics of micro-textured Si/PEDOT:PSS heterojunction solar cell. Journal of Materials Science: Materials in Electronics, 2018, 29, 5087-5097.	1.1	18
4766	Theoretical Studies of Singlet Fission: Searching for Materials and Exploring Mechanisms. ChemPlusChem, 2018, 83, 146-182.	1.3	85
4767	Tuning the Carrier Confinement in GeS/Phosphorene van der Waals Heterostructures. Small, 2018, 14, 1703536.	5.2	48
4768	Silicon Nanowire Solar Cells. , 2018, , 269-298.		5
4769	Recent Advances in the Use of Silicon-Based Photocathodes for Solar Fuel Production. , 2018, , 229-267.		4
4771	Photovoltaic conversion efficiency of InN/In x Ga 1-x N quantum dot intermediate band solar cells. Physica B: Condensed Matter, 2018, 534, 10-16.	1.3	16
4772	Direct Observation of Correlated Triplet Pair Dynamics during Singlet Fission Using Ultrafast Mid-IR Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 2012-2022.	1.5	62
4773	Editorial—Focus on inorganic semiconductor nanowires for device applications. Nanotechnology, 2018, 29, 030201.	1.3	4
4774	Highly Efficient Inverted Structural Quantum Dot Solar Cells. Advanced Materials, 2018, 30, 1704882.	11.1	88
4775	Infrared Solutionâ€Processed Quantum Dot Solar Cells Reaching External Quantum Efficiency of 80% at 1.35 µm and <i>J</i> <sub>sc</sub> in Excess of 34 mA cm <sup>â~2</sup> . Advanced Materials, 2018, 30, 1704928.	11.1	92
4776	Design of donor–acceptor copolymers for organic photovoltaic materials: a computational study. Physical Chemistry Chemical Physics, 2018, 20, 3581-3591.	1.3	42
4777	A coherent description of thermal radiative devices and its application on the near-field negative electroluminescent cooling. Energy, 2018, 147, 177-186.	4.5	13
4778	A fully transient novel thermal model for in-field photovoltaic modules using developed explicit and implicit finite difference schemes. Journal of Computational Science, 2018, 27, 357-369.	1.5	13

#	Article	IF	CITATIONS
4779	Pentacene Dimers as a Critical Tool for the Investigation of Intramolecular Singlet Fission. Chemistry - A European Journal, 2018, 24, 8245-8257.	1.7	120
4780	Efficient Down- and Up-Conversion Luminescence in Er <sup>3+</sup> –Yb <sup>3+</sup> Co-doped Y <sub>7</sub> O <sub>6</sub> F <sub>9</sub> for Photovoltaics. ACS Applied Energy Materials, 2018, 1, 447-454.	2.5	42
4781	A detailed study on loss processes in solar cells. Energy, 2018, 144, 490-500.	4.5	39
4782	Improved quantum efficiency models of CZTSe: GE nanolayer solar cells with a linear electric field. Nanoscale, 2018, 10, 2990-2997.	2.8	14
4783	Hot kinetic model as a guide to improve organic photovoltaic materials. Physical Chemistry Chemical Physics, 2018, 20, 3658-3671.	1.3	15
4784	Four-Terminal All-Perovskite Tandem Solar Cells Achieving Power Conversion Efficiencies Exceeding 23%. ACS Energy Letters, 2018, 3, 305-306.	8.8	219
4785	Field Performance versus Standard Test Condition Efficiency of Tandem Solar Cells and the Singular Case of Perovskites/Silicon Devices. Journal of Physical Chemistry Letters, 2018, 9, 446-458.	2.1	69
4786	Semiconducting silicon-tin alloy nanocrystals with direct bandgap behavior for photovoltaic devices. Materials Today Energy, 2018, 7, 87-97.	2.5	15
4787	Triphenylamine 3,6-carbazole derivative as hole-transporting material for mixed cation perovskite solar cells. Chemical Papers, 2018, 72, 1779-1787.	1.0	15
4788	Second- and third-order elastic constants of kesterite CZTS and its electronic and optical properties under various strain rates. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2018, 40, 977-986.	1.2	2
4789	Effect of electron-donating and -withdrawing substitutions in naphthoquinone sensitizers: The structure engineering of dyes for DSSCs. Journal of Molecular Structure, 2018, 1167, 274-279.	1.8	18
4790	Review—Power Sources for the Internet of Things. Journal of the Electrochemical Society, 2018, 165, B3130-B3136.	1.3	126
4791	From Ultrafast to Ultraslow: Charge-Carrier Dynamics of Perovskite Solar Cells. Joule, 2018, 2, 879-901.	11.7	190
4792	Generic and Scalable Method for the Preparation of Monodispersed Metal Sulfide Nanocrystals with Tunable Optical Properties. Langmuir, 2018, 34, 5788-5797.	1.6	12
4793	Enhanced Crystallization by Methanol Additive in Antisolvent for Achieving Highâ€Quality MAPbI <sub>3</sub> Perovskite Films in Humid Atmosphere. ChemSusChem, 2018, 11, 2348-2357.	3.6	70
4794	Tailoring UV-blue sensitization effect in enhancing near infrared emission in X, Yb 3+ : CaGa 2 O 4 (X = 0,) Tj 192-201.	ETQq1 1 2.7	0.784314 23
4795	Electroluminescent refrigeration by ultra-efficient GaAs light-emitting diodes. Journal of Applied Physics, 2018, 123, 173104.	1.1	41
4796	Enhancement of the conversion efficiency of thin film kesterite solar cell. Journal of Renewable and Sustainable Energy, 2018, 10, .	0.8	50

CITATION REPORT ARTICLE IF CITATIONS Representative Atmospheric Parameters in Multijunction Solar Cell Design. IEEE Journal of 1.5 2 Photovoltaics, 2018, 8, 895-902. Thermodynamic assessment of solar photon-enhanced thermionic conversion. Applied Energy, 2018, 5.1 19 223, 134-145. Metal replacement in perovskite solar cell materials: chemical bonding effects and optoelectronic 2.578 properties. Sustainable Energy and Fuels, 2018, 2, 1430-1445. Stable and efficient CdS/Sb2Se3 solar cells prepared by scalable close space sublimation. Nano Energy, 4800 130 2018, 49, 346-353. Nanomaterials for Environmental Solar Energy Technologies: Applications & amp; Limitations. KONA 0.9 10 Powder and Particle Journal, 2018, 35, 14-31. NIR emitting K2SrCl4:Eu2+, Nd3+ phosphor as a spectral converter for CIGS solar cell. Optical 1.7 Materials, 2018, 79, 470-474. A review of optical concentrators for portable solar photovoltaic systems for developing countries. 4803 8.2 28 Renewable and Sustainable Energy Reviews, 2018, 90, 957-968. Cation-Dependent Light-Induced Halide Demixing in Hybrid Organic–Inorganic Perovskites. Nano 4.5 Letters, 2018, 18, 3473-3480. Hybrid perovskite films approaching the radiative limit with over 90% photoluminescence quantum 15.6 408 efficiency. Nature Photonics, 2018, 12, 355-361. New perspectives for tripletâ€"triplet annihilation based photon upconversion using all-organic energy 2.2 49 donor & amp; acceptor chromophores. Chemical Communications, 2018, 54, 5809-5818. Endoreversible model of thermal to radiative energy converters. Journal of Applied Physics, 2018, 123, . 1.1 14 The ground state of two-dimensional silicon. 2D Materials, 2018, 5, 035010. 4808 Design and optimization of ARC less InGaP/GaAs single-/multi-junction solar cells with tunnel junction 1.4 20 and back surface field layers. Superlattices and Microstructures, 2018, 119, 25-39. Ill–V-on-silicon solar cells reaching 33% photoconversion efficiency in two-terminal configuration. 19.8 244 Nature Energy, 2018, 3, 326-333. Investigation of the open-circuit voltage in wide-bandgap InGaP-host InP quantum dot 2 0.8 intermediate-band solar cells. Japanese Journal of Applied Physics, 2018, 57, 04FS04. Recombination Losses Above and Below the Transport Percolation Threshold in Bulk Heterojunction Organic Solar Cells. Advanced Energy Materials, 2018, 8, 1703339. What Makes a Good Solar Cell?. Advanced Energy Materials, 2018, 8, 1703385. 10.2 167

4814	Efficient Planar Perovskite Solar Cells with Improved Fill Factor via Interface Engineering with Graphene. Nano Letters, 2018, 18, 2442-2449.	4.5	195
------	---	-----	-----

4797

4798

4799

4801

4802

4804

4805

4807

4809

4810

4811

4812

#	Article	IF	CITATIONS
4815	Single Semiconductor Nanostructure Extinction Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 16443-16463.	1.5	15
4816	Suppression of Auger Recombination in Nanocrystals via Ligand-Assisted Wave Function Engineering in Reciprocal Space. Journal of Physical Chemistry Letters, 2018, 9, 2098-2104.	2.1	15
4817	Impact ionization processes in the steady state of a driven Mott-insulating layer coupled to metallic leads. Physical Review B, 2018, 97, .	1.1	21
4818	Radiative heat transfer enhancement using geometric and spectral control for achieving high-efficiency solar-thermophotovoltaic systems. Japanese Journal of Applied Physics, 2018, 57, 040312.	0.8	11
4819	Energy Levels of Defects Created in Silicon Supersaturated with Transition Metals. Journal of Electronic Materials, 2018, 47, 4993-4997.	1.0	2
4820	Potential Fluctuations and Localization Effects in CZTS Single Crystals, as Revealed by Optical Spectroscopy. Journal of Electronic Materials, 2018, 47, 4282-4288.	1.0	9
4821	Nonfullerene Acceptor Molecules for Bulk Heterojunction Organic Solar Cells. Chemical Reviews, 2018, 118, 3447-3507.	23.0	1,371
4822	Control of the energy transfer between Tm3+ and Yb3+ ions in Tm,Yb-codoped ZnO grown by sputtering-assisted metalorganic chemical vapor deposition. Journal of Applied Physics, 2018, 123, 161409.	1.1	6
4823	Ideal Efficiencies. , 2018, , 59-71.		0
4824	Minimizing the energy loss of perovskite solar cells with Cu+ doped NiOx processed at room temperature. Solar Energy Materials and Solar Cells, 2018, 182, 128-135.	3.0	28
4825	Assessing high-temperature photovoltaic performance for solar hybrid power plants. Solar Energy Materials and Solar Cells, 2018, 182, 61-67.	3.0	26
4826	Structure and dynamics of triplet-exciton pairs generated from singlet fission studied via magnetic field effects. Communications Chemistry, 2018, 1, .	2.0	26
4827	Cascade sensitization of triplet–triplet annihilation based photon upconversion at sub-solar irradiance. Physical Chemistry Chemical Physics, 2018, 20, 9745-9750.	1.3	17
4828	Luminescent layers based on rare earth elements for thin-film flexible solar cells applications. Optik, 2018, 165, 200-209.	1.4	16
4829	Preparation and characterization of the Si:Co layer for intermediate band solar cell applications. Optical Materials, 2018, 77, 34-38.	1.7	9
4830	Design and modeling of a spectrum-splitting hybrid CSP-CPV parabolic trough using two-stage high concentration optics and dual junction InGaP/GaAs solar cells. Solar Energy, 2018, 165, 75-84.	2.9	24
4831	Enhanced performance of a graphene/GaAs self-driven near-infrared photodetector with upconversion nanoparticles. Nanoscale, 2018, 10, 8023-8030.	2.8	84
4832	Role of copper and silver modified titania photoanode on performance engineering of dye sensitized solar cells. Materials Letters, 2018, 221, 313-317.	1.3	4

#	Article	IF	CITATIONS
4833	Optical nanostructures design, fabrication, and applications for solar/thermal energy conversion. Solar Energy, 2018, 165, 100-114.	2.9	43
4834	Spectral Response of CuGaSe2/Cu(In,Ga)Se2 Monolithic Tandem Solar Cell With Open-Circuit Voltage Over 1 V. IEEE Journal of Photovoltaics, 2018, , 1-9.	1.5	5
4835	Fabrication of CdSnP <sub>2</sub> Thin Films by Phosphidation for Photovoltaic Application. ACS Applied Energy Materials, 2018, 1, 1635-1640.	2.5	3
4836	Analyzing the efficiency, stability and cost potential for fullerene-free organic photovoltaics in one figure of merit. Energy and Environmental Science, 2018, 11, 1355-1361.	15.6	157
4837	Study and Simulation of a New Structures Containing GaInAsSb/GaInSb for Photovoltaic. Lecture Notes in Networks and Systems, 2018, , 519-527.	0.5	0
4838	Structure, optical and electrical properties of (Cu1-xAgx)2ZnSn(S,Se)4 alloy thin films for photovoltaic application. Materials Science in Semiconductor Processing, 2018, 81, 54-59.	1.9	17
4839	Single-graded CIGS with narrow bandgap for tandem solar cells. Science and Technology of Advanced Materials, 2018, 19, 263-270.	2.8	51
4840	Effects of tin-doping on cadmium sulfide (CdS:Sn) thin-films grown by light-assisted chemical bath deposition process for solar photovoltaic cell. Thin Solid Films, 2018, 653, 341-349.	0.8	22
4841	Mechanochemical approach to a Cu2ZnSnS4 solar cell absorber via a "micro-nano―route. Journal of Materials Science, 2018, 53, 13617-13630.	1.7	15
4842	Photovoltaic conversion and quantum efficiency in perovskite multiferroic ceramics. Acta Materialia, 2018, 149, 248-255.	3.8	21
4843	KCl.SrCl2:Eu2+,Nd3+ phosphor for possible application in solar photovoltaics. Journal of Luminescence, 2018, 199, 78-81.	1.5	9
4844	Enhanced light absorption of silicon solar cells with dielectric nanostructured back reflector. Optics Communications, 2018, 417, 110-114.	1.0	16
4845	Tackling Energy Loss for Highâ€Efficiency Organic Solar Cells with Integrated Multiple Strategies. Advanced Materials, 2018, 30, e1706816.	11.1	92
4846	A review on electrical characterization techniques performed to study the device performance of quantum dot sensitized solar cells. Solar Energy, 2018, 159, 682-696.	2.9	36
4847	Improvements in external quantum efficiency of electrochemically constructed n-ZnO/p-Cu2O photovoltaic devices by rapid thermal annealing. Thin Solid Films, 2018, 653, 158-164.	0.8	14
4848	Fundamental Efficiency Limit of Lead Iodide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2018, 9, 1703-1711.	2.1	203
4849	Perovskite/Colloidal Quantum Dot Tandem Solar Cells: Theoretical Modeling and Monolithic Structure. ACS Energy Letters, 2018, 3, 869-874.	8.8	77
4850	Tunable cathodoluminescence over the entire visible window from all-inorganic perovskite CsPbX <sub>3</sub> 1D architecture. Journal of Materials Chemistry C, 2018, 6, 3322-3333.	2.7	70

#	Article	IF	CITATIONS
4851	First-principles insights into tin-based two-dimensional hybrid halide perovskites for photovoltaics. Journal of Materials Chemistry A, 2018, 6, 5652-5660.	5.2	71
4852	Recent advances in energy materials by electrospinning. Renewable and Sustainable Energy Reviews, 2018, 81, 1825-1858.	8.2	212
4853	Perowskitâ€Solarzellen: atomare Ebene, Schichtqualitäund Leistungsfäigkeit der Zellen. Angewandte Chemie, 2018, 130, 2582-2598.	1.6	37
4854	Perovskite Solar Cells: From the Atomic Level to Film Quality and Device Performance. Angewandte Chemie - International Edition, 2018, 57, 2554-2569.	7.2	413
4855	Synthesis of in-gap band CuGaS2:Cr absorbers and numerical assessment of their performance in solar cells. Solar Energy Materials and Solar Cells, 2018, 180, 322-327.	3.0	20
4856	Innovative understanding of the duality confusion, the photovoltaic and magnetocaloric effects. Ain Shams Engineering Journal, 2018, 9, 2283-2289.	3.5	6
4857	GaAsP/Si tandem solar cells: Realistic prediction of efficiency gain by applying strain-balanced multiple quantum wells. Solar Energy Materials and Solar Cells, 2018, 180, 303-310.	3.0	19
4858	Simulation study on improving efficiencies of perovskite solar cell: Introducing nano textures on it. Optics Communications, 2018, 410, 117-122.	1.0	24
4859	Understanding Energy Loss in Organic Solar Cells: Toward a New Efficiency Regime. Joule, 2018, 2, 25-35.	11.7	440
4860	Competing effects of sensitization and energy dissipation by Ni2+ incorporation in La(Ga0.5Sc0.5)O3:Er,Ni,Nb upconverters. Journal of Luminescence, 2018, 194, 778-784.	1.5	5
4861	Interpretation and evolution of open-circuit voltage, recombination, ideality factor and subgap defect states during reversible light-soaking and irreversible degradation of perovskite solar cells. Energy and Environmental Science, 2018, 11, 151-165.	15.6	586
4862	Path towards high-efficient kesterite solar cells. Journal of Energy Chemistry, 2018, 27, 1040-1053.	7.1	68
4863	Development of antimony sulfide–selenide Sb2(S, Se)3-based solar cells. Journal of Energy Chemistry, 2018, 27, 713-721.	7.1	166
4864	Substrate Temperature-Assisted Preparation of CZTSSe Thin Films by a Single Quinary Target. Journal of Electronic Materials, 2018, 47, 873-878.	1.0	5
4865	Blue to NIR down-conversion in Tm3+/Yb3+-codoped fluorozirconate glasses compared to Pr3+/Yb3+ ion-pair. Journal of Luminescence, 2018, 193, 22-28.	1.5	14
4866	Advances and challenges to the commercialization of organic–inorganic halide perovskite solar cell technology. Materials Today Energy, 2018, 7, 169-189.	2.5	231
4867	Review—Light Emission from Thin Film Solar Cell Materials: An Emerging Infrared and Visible Light Emitter. ECS Journal of Solid State Science and Technology, 2018, 7, R3102-R3110.	0.9	12
4868	Improved performance of sputtered Cu2(Sn,Ge)S3 thin film for photovoltaic application via controlled Ge doping. Materials Letters, 2018, 211, 130-132.	1.3	12

#	ARTICLE Structures of a Complex Hydrazinium Lead Iodide, (N <sub>2</sub> H <sub>5</sub> ) <sub>15</sub> Pb <sub>3</sub> I <sub>21</sub> , Possessing	IF	CITATIONS
4869	[Pb <sub>2</sub> 1 <sub>9</sub> ] <sup>5â<sup>^</sup></sup> , [Pbl <sub>6</sub> ] <sup>4â<sup>^</sup></sup> , and l <sup>â<sup>^</sup></sup> lons and α―and β―(N <sub>2</sub> H <sub>5</sub> )Pbl <sub>3</sub> . Chemistry - A European Journal, 2018, 222-229.	1.7 24,	19
4870	Structural, optical, electrical properties and energy band diagram of Cu2ZnSiS4 thin films. Solar Energy Materials and Solar Cells, 2018, 174, 577-583.	3.0	13
4871	pâ€Type Cul Islands on TiO <sub>2</sub> Electron Transport Layer for a Highly Efficient Planarâ€Perovskite Solar Cell with Negligible Hysteresis. Advanced Energy Materials, 2018, 8, 1702235.	10.2	117
4872	Recent theoretical progress in the development of perovskite photovoltaic materials. Journal of Energy Chemistry, 2018, 27, 637-649.	7.1	48
4873	Photosynthesis versus photovoltaics. Journal of Computational Electronics, 2018, 17, 313-318.	1.3	3
4874	ZnSnP2 solar cell with (Cd,Zn)S buffer layer: Analysis of recombination rates. Solar Energy Materials and Solar Cells, 2018, 174, 412-417.	3.0	18
4875	Bipolar Devices. , 2018, , 545-599.		0
4876	Recombination Suppression in PbS Quantum Dot Heterojunction Solar Cells by Energy-Level Alignment in the Quantum Dot Active Layers. ACS Applied Materials & amp; Interfaces, 2018, 10, 26142-26152.	4.0	24
4877	Hybrid Solar Cells: Effects of the Incorporation of Inorganic Nanoparticles into Bulk Heterojunction Organic Solar Cells. , 2018, , 1-68.		3
4878	The effect of Zn incorporation on the optical band gap of CuGaS2: Ti thin films. Materials Letters, 2018, 210, 70-72.	1.3	4
4879	Electrical characterization and comparison of CIGS solar cells made with different structures and fabrication techniques. Solar Energy Materials and Solar Cells, 2018, 174, 77-83.	3.0	41
4880	Multimolecular assemblies on high surface area metal oxides and their role in interfacial energy and electron transfer. Chemical Society Reviews, 2018, 47, 104-148.	18.7	78
4881	Chargeâ€Transfer Character in a Covalent Diketopyrrolopyrrole Dimer: Implications for Singlet Fission. ChemPhotoChem, 2018, 2, 223-233.	1.5	37
4882	The effect of oxygen molecule adsorption on lead iodide perovskite surface by first-principles calculation. Applied Surface Science, 2018, 428, 140-147.	3.1	39
4883	Application of mixed-organic-cation for high performance hole-conductor-free perovskite solar cells. Journal of Colloid and Interface Science, 2018, 510, 118-126.	5.0	11
4884	Quantifying energy losses in planar perovskite solar cells. Solar Energy Materials and Solar Cells, 2018, 174, 206-213.	3.0	76
4885	Benford's law: A "sleeping beauty―sleeping in the dirty pages of logarithmic tables. Journal of the Association for Information Science and Technology, 2018, 69, 349-358.	1.5	16
4886	NIR emitting phosphors based on sensitization by molybdate anion. Journal of Luminescence, 2018, 194, 656-660.	1.5	14

#	Article	IF	CITATIONS
4887	High-Efficiency Solar Cells. Green Energy and Technology, 2018, , 19-31.	0.4	1
4888	Excitonic and Bandâ€ŧoâ€Band Transitions in Temperatureâ€Dependent Optical Absorption Spectra of Cu <sub>2</sub> SnS <sub>3</sub> Thin Films. Physica Status Solidi (B): Basic Research, 2018, 255, 1700304.	0.7	14
4889	Design and performance analysis of a 500-W heat source for radioisotope thermophotovoltaic converters. International Journal of Energy Research, 2018, 42, 817-829.	2.2	14
4890	Concentrating Photovoltaics (CPV): The Path Ahead. Green Energy and Technology, 2018, , .	0.4	8
4892	Formation of crystalline silicon-germanium thin films on silicon substrates by solid phase crystallization. Thin Solid Films, 2018, 645, 203-208.	0.8	5
4893	A brief review on the lead element substitution in perovskite solar cells. Journal of Energy Chemistry, 2018, 27, 1054-1066.	7.1	38
4894	Geometric structure and photovoltaic properties of mixed halide germanium perovskites from theoretical view. Organic Electronics, 2018, 53, 50-56.	1.4	74
4895	Strategies to improve the performance of metal-free dye-sensitized solar cells. Dyes and Pigments, 2018, 149, 707-718.	2.0	69
4896	Efficient near-infrared down conversion in Nd 3+ -Yb 3+ co-doped transparent nanostructured glass ceramics for photovoltaic application. Journal of Luminescence, 2018, 195, 102-108.	1.5	32
4897	Broadband down-conversion of near-infrared emission in Bi3+-Yb3+ co-doped Y3Al5O12 phosphors. Optik, 2018, 157, 492-496.	1.4	4
4898	The Narrowest Band Gap Ever Observed in Molecular Ferroelectrics: Hexaneâ€1,6â€diammonium Pentaiodobismuth(III). Angewandte Chemie - International Edition, 2018, 57, 526-530.	7.2	85
4899	Phase Diagrams and Stability of Lead-Free Halide Double Perovskites Cs <sub>2</sub> BB′X <sub>6</sub> : B = Sb and Bi, B′ = Cu, Ag, and Au, and X = Cl, Br, and I. Journal of Physical Chemistry C, 2018, 122, 158-170.	1.5	114
4900	Organic semiconductor crystals. Chemical Society Reviews, 2018, 47, 422-500.	18.7	623
4901	Fullerenes – how 25 years of charge transfer chemistry have shaped our understanding of (interfacial) interactions. Chemical Society Reviews, 2018, 47, 702-714.	18.7	101
4902	A comparative study of one-step and two-step approaches for MAPbI3 perovskite layer and its influence on the performance of mesoscopic perovskite solar cell. Chemical Physics Letters, 2018, 692, 44-49.	1.2	40
4903	Delocalization of π electrons and trapping action of ZnO nanoparticles in PPY matrix for hybrid solar cell application. Journal of Molecular Structure, 2018, 1156, 633-644.	1.8	23
4904	Emergent Electronic and Dielectric Properties of Interacting Nanoparticles at Finite Temperature. Nano Letters, 2018, 18, 255-261.	4.5	5
4905	Prospects for efficient solar energy upconversion using metalloporphyrins as dual absorber-upconverters. Dalton Transactions, 2018, 47, 8517-8525.	1.6	16

#	Article	IF	CITATIONS
4906	Potential Semiconducting and Superconducting Metastable Si <sub>3</sub> C Structures under Pressure. Chemistry of Materials, 2018, 30, 421-427.	3.2	5
4907	Singlet Fission Involves an Interplay between Energetic Driving Force and Electronic Coupling in Perylenediimide Films. Journal of the American Chemical Society, 2018, 140, 814-826.	6.6	167
4908	Inhomogeneities in Cu(In,Ga)Se <sub>2</sub> Thin Films for Solar Cells: Bandâ€Gap Versus Potential Fluctuations. Solar Rrl, 2018, 2, 1700199.	3.1	25
4909	Automated design of multi junction solar cells by genetic approach: keaching the <mmi:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0047.gif" overflow="scroll"&gt;<mmi:mrow><mmi:mo stretchy="false"&gt;&gt;<mmi:mn>50</mmi:mn><mmi:mo>%</mmi:mo></mmi:mo </mmi:mrow></mmi:math 	3.0	11
4910	Integrating Down-Shifting and Down-Conversion into Metal–Organic Frameworks to Enhance the Spectral Conversion for Solar Cells. Journal of Physical Chemistry C, 2018, 122, 96-104.	1.5	12
4911	Effects of surface nanostructuring and impurity doping on ultrafast carrier dynamics of silicon photovoltaic cells: a pump-probe study. Journal Physics D: Applied Physics, 2018, 51, 024004.	1.3	1
4912	The mixing effect of organic cations on the structural, electronic and optical properties of FA <sub>x</sub> MA <sub>1â^'x</sub> PbI <sub>3</sub> perovskites. Physical Chemistry Chemical Physics, 2018, 20, 941-950.	1.3	24
4913	Quantifying Efficiency Loss of Perovskite Solar Cells by a Modified Detailed Balance Model. Advanced Energy Materials, 2018, 8, 1701586.	10.2	82
4914	Bandgap Optimization of Perovskite Semiconductors for Photovoltaic Applications. Chemistry - A European Journal, 2018, 24, 2305-2316.	1.7	103
4915	Optimized efficiency in InP nanowire solar cells with accurate 1D analysis. Nanotechnology, 2018, 29, 045401.	1.3	14
4916	Revealing the Chemistry between Band Gap and Binding Energy for Leadâ€∤Tinâ€Based Trihalide Perovskite Solar Cell Semiconductors. ChemSusChem, 2018, 11, 449-463.	3.6	27
4917	Zinc molarity effect on Cu2ZnSnS4 thin film properties prepared by spray pyrolysis. Journal of Materials Science: Materials in Electronics, 2018, 29, 4089-4095.	1.1	22
4918	Polyelectrolyte layer-by- layer spin assembly of aqueous CdTe quantum dot multilayered thin films. Journal of Alloys and Compounds, 2018, 735, 2558-2566.	2.8	4
4919	Design and modeling of an SJ infrared solar cell approaching upper limit of theoretical efficiency. International Journal of Modern Physics B, 2018, 32, 1850014.	1.0	9
4920	A comparative study of the effect of transparent conducting oxides on the performance of \$\$hbox {Cu}_{2}hbox {ZnSnS}_{4}\$\$ Cu 2 ZnSnS 4 thin film solar cell. Journal of Computational Electronics, 2018, 17, 361-372.	1.3	9
4921	Modification of back electrode with WO3 layer and its effect on Cu2ZnSn(S,Se)4-based solar cells. Superlattices and Microstructures, 2018, 113, 328-336.	1.4	7
4922	Quantitative structureâ€property relationship modeling of small organic molecules for solar cells applications. Journal of Chemometrics, 2018, 32, e2957.	0.7	5
4923	Theoretical analysis of improved efficiency of silicon-wafer solar cells with textured nanotriangular grating structure. Optics Communications, 2018, 410, 369-375.	1.0	9

#	Article	IF	CITATIONS
4924	Effects of Na2SO4 on the optical and structural properties of Cu2ZnSnS4 thin films synthesized using co-electrodeposition technique. Optical Materials, 2018, 75, 471-482.	1.7	18
4925	Defect properties of Sn- and Ge-doped ZnTe: suitability for intermediate-band solar cells. Semiconductor Science and Technology, 2018, 33, 015004.	1.0	11
4926	Optical absorption enhancement in NH <sub>2</sub> CH=NH <sub>2</sub> PbI <sub>3</sub> lead halide perovskite solar cells with nanotextures. Semiconductor Science and Technology, 2018, 33, 015011.	1.0	3
4927	Emerging Postsynthetic Improvements of BiVO <sub>4</sub> Photoanodes for Solar Water Splitting. ACS Energy Letters, 2018, 3, 112-124.	8.8	97
4928	The Influence of Conduction Band Offset on CdTe Solar Cells. Journal of Electronic Materials, 2018, 47, 1201-1207.	1.0	21
4929	InGaN-based solar cells: a wide solar spectrum harvesting technology for twenty-first century. CSI Transactions on ICT, 2018, 6, 83-96.	0.7	21
4930	Tailoring microstructure and photovoltaic effect in multiferroic Nd-substituted BiFeO3 ceramics by processing atmosphere modification. Journal of the European Ceramic Society, 2018, 38, 1389-1398.	2.8	22
4931	Size-tunable band alignment and optoelectronic properties of transition metal dichalcogenide van der Waals heterostructures. Journal Physics D: Applied Physics, 2018, 51, 015111.	1.3	9
4932	The maximum theoretical performance of unconcentrated solar photovoltaic and thermoelectric generator systems. Energy Conversion and Management, 2018, 156, 264-268.	4.4	60
4933	Conversion of Visible Light into Ionic Power Using Photoacid-Dye-Sensitized Bipolar Ion-Exchange Membranes. Joule, 2018, 2, 94-109.	11.7	55
4934	Photoluminescence properties of Mn2+/Yb3+ co-doped oxyfluoride glasses for solar cells application. Optical Materials, 2018, 75, 465-470.	1.7	11
4935	Concentrating photovoltaic thermal (CPVT) collectors and systems: Theory, performance assessment and applications. Renewable and Sustainable Energy Reviews, 2018, 81, 473-492.	8.2	140
4936	Spectroscopic evidence of photogenerated carrier separation by built-in electric field in Sb-doped n-BaSi <sub>2</sub> /B-doped p-BaSi <sub>2</sub> homojunction diodes. Japanese Journal of Applied Physics, 2018, 57, 050310.	0.8	26
4937	First principles study of the influence of metallic-doping on crystalline ZnS: From efficiency aspects for use in a ZnS based dye sensitized solar cell (DSSC). Integrated Ferroelectrics, 2018, 194, 96-103.	0.3	1
4938	Impact of substrate thickness on the surface passivation in high performance n-type solar cells. , 2018, , .		7
4939	Rapid, Chemical-Free Generation of Optically Scattering Structures in Poly(ethylene terephthalate) Using a CO2 Laser for Lightweight and Flexible Photovoltaic Applications. International Journal of Photoenergy, 2018, 2018, 1-10.	1.4	0
4940	Density functional theory study of defects in cadmium telluride: a PBC and QM/MM comparison. Journal of Physics: Conference Series, 2018, 1043, 012043.	0.3	0
4941	Effect of Process Variables on Deposited Cupric Oxide Thin Film by Sol-Gel Spin Coating Technique. IOP Conference Series: Materials Science and Engineering, 0, 438, 012001.	0.3	1

ARTICLE IF CITATIONS # Influence of barrier layer's height on the performance of Si quantum dot solar cells. Japanese Journal 4942 0.8 3 of Applied Physics, 2018, 57, 08RF08. Optical and Electrical Properties of α-MnTe Thin Films Deposited Using RF Magnetron Sputtering. 4943 0.4 Materials Transactions, 2018, 59, 1506-1512. New Microscopic Methods for the Functional Imaging of Energy Materials at the Nanoscale. 4944 0.2 0 Microscopy and Microanalysis, 2018, 24, 1950-1951. Selenium and Sulphur replacement dynamics in CZTSSe and CZGSSe kesterite materials. , 2018, , . 4945 A solar cell enabling heat recovery without fast carrier extraction., 2018,,. 2 4946 Simulation and optimization of GaAs<inf>1-x</inf>Bi<inf>x</inf>/GaAs Quantum Dot for Solar Cell 4947 Applications., 2018,,. Detailed Balance Efficiency of Single Junction Perovskite Solar Cell., 2018,,. 4948 0 Deposition and Characterization of Si Quantum Dot Multilayers Prepared by Plasma Enhanced Chemical Vapor Deposition using SiH<inf&gt;4&lt;/inf&gt; and CO&lt;inf&gt;2&lt;/inf&gt; Gases. , 2018, 4949 The Analysis of Recombination Process for Multiple Exaction Generation Solar Cell from Single 4950 0 Junction to Multijunction., 2018,,. Influence of the Substrate Type on the Surface Morphology of Cu2ZnSnSe4 Thin Films. Journal of 0.1 Surface Investigation, 2018, 12, 1077-1081. Atomistic Insights of Multiple Stacking Faults in CdTe Thin-Film Photovoltaics: A DFT Study., 2018,,. 4952 4 Time-Resolved EPR Study on Singlet-Fission Induced Quintet Generation and Subsequent Triplet Dissociation in TIPS-Phenyl-Tetracene Aggregates. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2018, 31, 163-167. 0.1 Precision Grinding for Functional Microstructured Surface. Micro/Nano Technologies, 2018, , 1-31. 4954 0.1 0 Investigation of antimonide-based semiconductors for high-efficiency multi-junction solar cells., 2018, , . Broadband Reflectance Reduction for Wafer Bonded III-V//Si tandem Cell Using Polydimethylsiloxane 4956 0 -Replicated Surface Texturing., 2018,,. Efficient CdTe photovoltaics by co-passivating grain boundaries., 2018,,. Coupled double triplet state in singlet fission. Physical Chemistry Chemical Physics, 2018, 20, 4958 1.380 30083-30094. Size Dependent Intermediate Band Energy Levels and Absorption of Bound States in Box Shaped 4959 Quantum Dots., 2018,,.

#	ARTICLE	IF	CITATIONS
4960	Automated design of multijunction solar cells by genetic approach: reaching the > 50% efficiency target. , 2018, , .		0
4961	Dynamical stabilization in delafossite nitrides for solar energy conversion. Journal of Materials Chemistry A, 2018, 6, 20852-20860.	5.2	19
4962	Effects of Sub-gap Absorption on Photovoltaic Performance. , 2018, , .		1
4963	Double-excitation manifold's effect on exciton transfer dynamics and the efficiency of coherent light harvesting. Physical Chemistry Chemical Physics, 2018, 20, 30032-30040.	1.3	13
4964	An unusual cuprous iodide polymer incorporating I <sup>â^'</sup> , I <sub>2</sub> and I <sub>3</sub> <sup>â^'</sup> structural units. Dalton Transactions, 2018, 47, 17216-17220.	1.6	12
4965	Multicell Design for Concentrated Photovoltaic (CPV) Module. , 0, , .		1
4966	Wurtzite CoO: a direct band gap oxide suitable for a photovoltaic absorber. Chemical Communications, 2018, 54, 13949-13952.	2.2	21
4967	Cathodoluminescence Characterization of Semiconductor Doping at the Nanoscale. , 2018, , .		0
4968	Recent Challenges of Solar Cell Technologies; A Critical Analysis. , 2018, , .		2
4969	PbSe Nanorods for Hybrid Solar Cells: Optimization of Synthesis Protocols and Investigation of Surface Stability. , 2018, , .		0
4970	Opto-electrical Properties of GaN/Si Nanoheterostructure Array Device. , 2018, , .		0
4971	In <inf>x</inf> Ga <inf>1-x</inf> As/InyGa <inf>1-y</inf> P Multiple Quantum Wells for Multijunction Solar Cells. , 2018, , .		0
4972	Light intensity and spectral dependence characteristics of silicon nanowire/PEDOT:PSS heterojunctions solar cells. Materials Today: Proceedings, 2018, 5, 23302-23310.	0.9	0
4973	Photo characteristics of Electrodeposited CZT(S,Se) Thin Films on Different Substrates. Materials Today: Proceedings, 2018, 5, 22791-22797.	0.9	1
4974	Opportunities for Increased Efficiency in Monochromatic Photovoltaic Light Conversion. , 2018, , .		4
4975	Comparison of Effective Carrier Mobility between Wire on Well and Multiple Quantum Well by Time of Flight Measurement. , 2018, , .		1
4977	Recent Advances in and New Perspectives on Crystalline Silicon Solar Cells with Carrier-Selective Passivation Contacts. Crystals, 2018, 8, 430.	1.0	52
4978	Performance loss analysis and design space optimization of perovskite solar cells. Journal of Applied Physics, 2018, 124, .	1.1	21

#	Article	IF	CITATIONS
4979	Electro-Optical Analysis and Numerical Modeling of Cu <inf>2</inf> O as the Absorber Layer in Advanced Solar Cells. , 2018, , .		2
4980	Wavelength-selective thermal extraction for higher efficiency and power density thermophotovoltaics. Journal of Applied Physics, 2018, 124, 183105.	1.1	6
4982	Disentangling the Electron and Hole Dynamics in Janus CdSe/PbSe Nanocrystals through Variable Pump Transient Absorption Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 29075-29079.	1.5	4
4983	BODIPYâ€Based Semiconducting Materials for Organic Bulk Heterojunction Photovoltaics and Thinâ€Film Transistors. ChemPlusChem, 2019, 84, 18-37.	1.3	95
4984	Tandems in the thick of it. Nature Energy, 2018, 3, 1027-1028.	19.8	0
4985	All-Perovskite Tandem Solar Cell Showing Unprecedentedly High Open-Circuit Voltage. Joule, 2018, 2, 2206-2207.	11.7	4
4986	Copper—antimony and copper—bismuth chalcogenides—Research opportunities and review for solar photovoltaics. MRS Energy & Sustainability, 2018, 5, 1.	1.3	44
4987	Diphenylisobenzofuran Bound to Nanocrystalline Metal Oxides: Excimer Formation, Singlet Fission, Electron Injection, and Low Energy Sensitization. Journal of Physical Chemistry C, 2018, 122, 28478-28490.	1.5	18
4988	Metalorganic vapor phase epitaxy of III–V-on-silicon: Experiment and theory. Progress in Crystal Growth and Characterization of Materials, 2018, 64, 103-132.	1.8	48
4989	Can a sand storm in Arabia cause a dip in the yield of your photovoltaic plant?. AIP Conference Proceedings, 2018, , .	0.3	0
4990	Improvement of Short-Circuit Current Density in GalnP Solar Cells Grown by Dynamic Hydride Vapor Phase Epitaxy. IEEE Journal of Photovoltaics, 2018, 8, 1616-1620.	1.5	8
4991	A theoretical and experimental formalism of electronic structure of BFO:Cr thin films and modulation of their electrical properties upon visible light illumination. Journal of Applied Physics, 2018, 124, 155304.	1.1	9
4992	Theoretical Investigation of the Influence of Defect States on the Power Conversion Efficiency of CZTSSe Solar Cells. , 2018, , .		0
4993	High-efficiency perovskite–polymer bulk heterostructure light-emitting diodes. Nature Photonics, 2018, 12, 783-789.	15.6	715
4994	High-Temperature Refractory Metasurfaces for Solar Thermophotovoltaic Energy Harvesting. Nano Letters, 2018, 18, 7665-7673.	4.5	140
4995	General rules of the sub-band gaps in group-IV (Si, Ge, and Sn)-doped I-III-VI2-type chalcopyrite compounds for intermediate band solar cell: A first-principles study. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2018, 236-237, 147-152.	1.7	17
4996	Optical bandgap tuning of ferroelectric semiconducting BiFeO3-based oxide perovskites via chemical substitution for photovoltaics. AIP Advances, 2018, 8, .	0.6	18
4997	Active learning for accelerated design of layered materials. Npj Computational Materials, 2018, 4, .	3.5	107

#	Article	IF	Citations
4998	Upconversion of low-energy photons in semiconductor nanostructures for solar energy harvesting. MRS Energy & Sustainability, 2018, 5, 1.	1.3	16
4999	Cu2ZnSn(S,Se)4 and Related Materials. Springer Series in Optical Sciences, 2018, , 333-355.	0.5	1
5000	Crystalline Silicon Solar Cells. Springer Series in Optical Sciences, 2018, , 201-225.	0.5	4
5001	The Spectral Conversion Layer Incorporated with Species of LDS and UC Phosphors on Single-Junction GaAs Solar Cells to Enhance Photovoltaic Performance. , 2018, , .		0
5002	Beneficial impact of a thin tunnel barrier in quantum well intermediate-band solar cell. EPJ Photovoltaics, 2018, 9, 11.	0.8	2
5003	Evaluation of polymer based zinc oxide nanoparticle layers for down-conversion application in thin-film photovoltaic structures. , 2018, , .		1
5004	Hybrid Density Functional Study of Au2Cs2I6, Ag2GeBaS4, Ag2ZnSnS4, and AgCuPO4 for the Intermediate Band Solar Cells. Energies, 2018, 11, 3457.	1.6	5
5005	Efficiency Limit of Lead Halide Perovskite Photovoltaics. , 2018, , .		0
5006	Shockley-Queisser Triangle: An Elegant Analytical Tool for Predicting the Thermodynamic Efficiency Limits of Multi-junction Tandem and Bifacial Cells with Arbitrary Concentration and Series Resistance. , 2018, , .		1
5007	Thin-film solar cells exceeding 22% solar cell efficiency: An overview on CdTe-, Cu(In,Ga)Se2-, and perovskite-based materials. Applied Physics Reviews, 2018, 5, .	5.5	175
5008	Photocorrosion-Limited Maximum Efficiency of Solar Photoelectrochemical Water Splitting. Physical Review Applied, 2018, 10, .	1.5	44
5009	Role of Doping Dependent Radiative and Non-radiative Recombination in Determining the Limiting Efficiencies of Silicon Solar Cells. , 2018, , .		2
5010	Metal Oxide Thin-Film Heterojunctions for Photovoltaic Applications. Materials, 2018, 11, 2593.	1.3	21
5011	Advanced Light Trapping for Hot-Carrier Solar Cells. , 2018, , .		3
5012	Comparison of possible realizations of quantum ratchet intermediate band solar cells. , 2018, , .		3
5013	Solid-state infrared-to-visible upconversion for sub-bandgap sensitization of photovoltaics. , 2018, , .		5
5014	Visible and near-infrared photoluminescence enhanced by Ag nanoparticles in Sm3+-doped aluminoborate glass. Optical Materials, 2018, 86, 611-616.	1.7	15
5015	Tailoring properties of hybrid perovskites by domain-width engineering with charged walls. Npj Computational Materials, 2018, 4, .	3.5	15

		15	
#	ARTICLE	IF	CITATIONS
5016	Sulfosalts. Journal of the American Chemical Society, 2018, 140, 18058-18065.	6.6	69
5017	Solution processed CZTSSe thin film solar cell absorber: Ink formulation and characterization. , 2018, , $\cdot$		0
5018	External Quantum Efficiency of Electrochemically Prepared and Annealed Directly Stacked SLG/GZO/Cu <sub>2</sub> O/CuO Photoactive Layer. Journal of Physics: Conference Series, 2018, 1083, 012030.	0.3	3
5019	The Spectral Conversion Layer Incorporated with Species of LDS and UC Phosphors on Single-Junction GaAs Solar Cells to Enhance Photovoltaic Performance. , 2018, , .		0
5022	Size Dependence and Role of Decoherence in Hot Electron Relaxation within Fluorinated Silicon Quantum Dots: A First-Principles Study. Journal of Physical Chemistry C, 2018, 122, 29526-29536.	1.5	20
5023	Epitaxial ferroelectric oxide thin films for optical applications. Applied Physics Reviews, 2018, 5, 041108.	5.5	46
5024	Experimental analysis of open-circuit voltage drop in quantum-dot solar cells via absolute electroluminescence measurement. , 2018, , .		1
5026	Recent Progress in Epitaxial Lift-Off Solar Cells. , 2018, , .		17
5027	Enhanced Upconversion Performance in Alloyed CdSe(Te)/CdS <sub>1–x</sub> Se <sub>x</sub> /CdSe Core/Rod/Emitter Nanostructures. , 2018, , .		0
5028	Thermoelectric properties of four typical silicon allotropes. Modelling and Simulation in Materials Science and Engineering, 2018, 26, 085006.	0.8	7
5029	Al- & Al-Ca-doped ZnO Thin Films by Sol-Gel Method for Solar Cell Application. IOP Conference Series: Materials Science and Engineering, 2018, 438, 012033.	0.3	1
5030	Progress of Graphene–Silicon Heterojunction Photovoltaic Devices. Advanced Materials Interfaces, 2018, 5, 1801520.	1.9	22
5031	Shape-modulated multiple exciton generation and optoelectronic properties in PbSe nanostructures. Journal of Applied Physics, 2018, 124, 184302.	1.1	3
5032	Exact Solution, Endoreversible Thermodynamics, and Kinetics of the Generalized Shockley-Queisser Model. Physical Review Applied, 2018, 10, .	1.5	11
5033	Microscopic materials properties of a high-efficiency Cu(In,Ga)Se2 solar cell - a case study. , 2018, , .		0
5034	Fluctuations in net doping and lifetime in Cu(In,Ga)Se2 solar cells. , 2018, , .		1
5035	Large Area 3D Elemental Mapping of a MgZnO/CdTe Solar Cell with Correlative EBSD Measurements. , 2018, , .		2
5036	Optical and structural properties of d0 ion-doped silicate glasses for photovoltaic applications. Journal of Commonwealth Law and Legal Education, 2018, 59, 193-202.	0.2	8

		CITATION REPORT		
#	Article		IF	Citations
5037	Major Impediment to Highly Efficient, Stable and Low-Cost Perovskite Solar Cells. Metals	, 2018, 8, 964.	1.0	26
5039	Dual-Gated WTe <sub>2</sub> /MoSe <sub>2</sub> van der Waals Tandem Solar Cells. Jo Physical Chemistry C, 2018, 122, 28545-28549.	ournal of	1.5	13
5040	Computational screening of methylammonium based halide perovskites with bandgaps s perovskite-perovskite tandem solar cells. Journal of Chemical Physics, 2018, 149, 214701	uitable for	1.2	14
5043	First principles investigation of electronic and optical properties of AgAlO2. Chinese Journ Physics, 2018, 56, 2186-2190.	nal of	2.0	8
5044	Metal–Organic Framework Thin Film-Based Dye Sensitized Solar Cells with Enhanced P Materials, 2018, 11, 1868.	hotocurrent.	1.3	19
5045	Modelling of Intrinsic Loss Processes in the Intermediate Band Solar Cells. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2018, 74, 51-58.		0.7	4
5046	Revealing Solar-Cell Photovoltage Dynamics at the Picosecond Time Scale with Time-Reso Photoemission Spectroscopy. Physical Review Applied, 2018, 10, .	olved	1.5	6
5047	Roles of SnX <sub>2</sub> (X = F, Cl, Br) Additives in Tin-Based Halide Perovskites towar Efficient and Stable Lead-Free Perovskite Solar Cells. Journal of Physical Chemistry Letters 6024-6031.	d Highly 5, 2018, 9,	2.1	121
5048	Intramolecular Singlet Fission: Insights from Quantum Dynamical Simulations. Journal of Chemistry Letters, 2018, 9, 5979-5986.	Physical	2.1	31
5049	Nanoscale investigation of a radial p–n junction in self-catalyzed GaAs nanowires grow Nanoscale, 2018, 10, 20207-20217.	n on Si (111).	2.8	10
5050	Submonolayer Quantum Dots for Optoelectronic Devices. Journal of the Korean Physical 2018, 73, 833-840.	Society,	0.3	18
5051	Fundamental efficiency limit of lead iodide perovskite solar cells. , 2018, , .			0
5052	Broadband near-infrared quantum cutting by Ce–Yb codoped YAG transparent glass ce silicon solar cells. RSC Advances, 2018, 8, 23268-23273.	ramics for	1.7	9
5053	Thermally enhanced photoelectric emission from GaAs photocathode. Solar Energy, 2018	3, 174, 352-358.	2.9	6
5054	Low-Lying Excited States in Thiophene-Based Cyclic Molecule Suitable for Optoelectronic Matrix Renormalization Group Study. ACS Omega, 2018, 3, 12253-12259.	s: A Density	1.6	2
5055	The effect of solution process control on the formation of the α-FAPbI3 perovskite: FAPb MAPbI3 solar cells. Solar Energy, 2018, 174, 780-785.	13 versus	2.9	19
5056	Multibandgap quantum dot ensembles for solar-matched infrared energy harvesting. Nat Communications, 2018, 9, 4003.	ure	5.8	56
5057	Magnetic fields: a tool for the study of organic solar cells. European Physical Journal: Spece 2018, 227, 259-268.	cial Topics,	1.2	6

#	Article	IF	CITATIONS
5058	Thermodynamic Assessment of the Ag-Se System Aided by First-Principles Calculations. Journal of Phase Equilibria and Diffusion, 2018, 39, 870-881.	0.5	2
5059	Tuning optical and electronic properties in novel carbazole photosensitizers for p-type dye-sensitized solar cells. Electrochimica Acta, 2018, 292, 805-816.	2.6	67
5060	Electric transport in organic system with planar DBP/F16ZnPc junction on the basis of direct current and small signal admittance spectra analysis. Synthetic Metals, 2018, 245, 245-250.	2.1	2
5061	Photoluminescence characterization of Cu2Sn1- <i>x</i> Ge <i>x</i> S3 bulk single crystals. AIP Advances, 2018, 8, .	0.6	6
5062	Numerical Modelling of Kesterite CZTS Solar Cells for Different Transparent Conductive Oxide (TCOs) With SnS as Potential BSF Layer. , 2018, , .		2
5063	Effect of Iodine Incorporation on Characteristic Properties of Cadmium Telluride Deposited in Aqueous Solution. Journal of Electronic Materials, 2018, 47, 6909-6917.	1.0	0
5064	Benchmarking the Electronic Processes at the Planar Organic Heterojunction Solar Cells. Journal of Physical Chemistry C, 2018, 122, 23271-23279.	1.5	6
5065	Perovskite Quantum Dot Photovoltaic Materials beyond the Reach of Thin Films: Full-Range Tuning of A-Site Cation Composition. ACS Nano, 2018, 12, 10327-10337.	7.3	186
5066	Critical Size for Carrier Delocalization in Doped Silicon Nanocrystals: A Study by Ultrafast Spectroscopy. ACS Photonics, 2018, 5, 4037-4045.	3.2	8
5067	The researcher's guide to solid-state dye-sensitized solar cells. Journal of Materials Chemistry C, 2018, 6, 11903-11942.	2.7	87
5069	The Potential of Singlet Fission Photon Multipliers as an Alternative to Silicon-Based Tandem Solar Cells. ACS Energy Letters, 2018, 3, 2587-2592.	8.8	61
5070	Solvent Engineering Improves Efficiency of Lead-Free Tin-Based Hybrid Perovskite Solar Cells beyond 9%. ACS Energy Letters, 2018, 3, 2701-2707.	8.8	176
5071	The Use of Rutile―and Anataseâ€Titania Layers towards Back Light Scattering in Dyeâ€Sensitized Solar Cells. ChemistrySelect, 2018, 3, 10475-10482.	0.7	3
5072	Time-Domain ab Initio Analysis Rationalizes the Unusual Temperature Dependence of Charge Carrier Relaxation in Lead Halide Perovskite. ACS Energy Letters, 2018, 3, 2713-2720.	8.8	68
5073	Efficient carrier multiplication in CsPbI3 perovskite nanocrystals. Nature Communications, 2018, 9, 4199.	5.8	101
5074	Devitrification Behavior of Sol-Gel Derived ZrO2-SiO2 Rare-Earth Doped Glasses: Correlation between Structural and Optical Properties. Ceramics, 2018, 1, 274-286.	1.0	6
5075	Suppression of Recombination Energy Losses by Decreasing the Energetic Offsets in Perylene Diimide-Based Nonfullerene Organic Solar Cells. ACS Energy Letters, 2018, 3, 2729-2735.	8.8	50
5076	Plasmonically Enhanced Spectral Upconversion for Improved Performance of GaAs Solar Cells under Nonconcentrated Solar Illumination. ACS Photonics, 2018, 5, 4289-4295.	3.2	16

#	Article	IF	CITATIONS
5077	Methylammonium-free, high-performance, and stable perovskite solar cells on a planar architecture. Science, 2018, 362, 449-453.	6.0	816
5078	Control of Charge Recombination in Perovskites by Oxidation State of Halide Vacancy. Journal of the American Chemical Society, 2018, 140, 15753-15763.	6.6	129
5079	A novel model of mono-crystalline silicon p-n homojunction. EPJ Applied Physics, 2018, 82, 10101.	0.3	0
5080	Perovskites – Some Snapshots of Recent Developments. Science Progress, 2018, 101, 384-396.	1.0	1
5081	Morphology of Passivating Organic Ligands around a Nanocrystal. Journal of Physical Chemistry C, 2018, 122, 26267-26274.	1.5	34
5082	A NANOSTRUCTURE-BASED HIGH-TEMPERATURE SELECTIVE ABSORBER-EMITTER PAIR FOR A SOLAR THERMOPHOTOVOLTAIC SYSTEM WITH NARROWBAND THERMAL EMISSION. Progress in Electromagnetics Research, 2018, 162, 95-108.	1.6	11
5083	Properties of Novel Non-Silicon Materials for Photovoltaic Applications: A First-Principle Insight. Materials, 2018, 11, 2006.	1.3	11
5084	Computational Prediction to Two-Dimensional SnAs. Chinese Physics Letters, 2018, 35, 107101.	1.3	5
5085	Grain-Resolved Ultrafast Photophysics in Cu <sub>2</sub> BaSnS <sub>4–<i>x</i></sub> Se <sub><i>x</i></sub> Semiconductors Using Pump–Probe Diffuse Reflectance Spectroscopy and Microscopy. ACS Applied Materials & amp; Interfaces, 2018, 10, 39615-39623.	4.0	13
5086	Stability and electronic properties of planar defects in quaternary I2-II-IV-VI4 semiconductors. Journal of Applied Physics, 2018, 124, 165705.	1.1	5
5087	Improved Light Efficiency in Si Solar Cells by Coating Mesoporous TiO <sub>2</sub> and Cuâ€Modified Mesoporous TiO <sub>2</sub> . Solar Rrl, 2018, 2, 1800214.	3.1	6
5088	Exciton Transport in Singlet Fission Materials: A New Hare and Tortoise Story. Journal of Physical Chemistry Letters, 2018, 9, 6502-6510.	2.1	32
5089	Atomistic consideration of earth-abundant chalcogenide materials for photovoltaics: Kesterite and beyond. Journal of Materials Research, 2018, 33, 3986-3998.	1.2	7
5090	Identifying triplet pathways in dilute pentacene films. Nature Communications, 2018, 9, 4222.	5.8	71
5091	Research on Near Space Solar Cells Acquisition and Test System. , 2018, , .		0
5092	Research Progress on Photosensitizers for DSSC. Frontiers in Chemistry, 2018, 6, 481.	1.8	202
5093	Fullerene C60 doped polymeric nanocomposite coatings: moving solar spectra from ultraviolet to the deep red. Journal of Materials Science: Materials in Electronics, 2018, 29, 19652-19662.	1.1	3
5094	Solution Processed Antimony Sulfide-Selenide [Sb <inf>2</inf> (S,Se) <inf>3</inf> ] for High Efficiency Solar Cells. , 2018, , .		1

#	Article	IF	CITATIONS
5095	From Laboratory to Production: Learning Models of Efficiency and Manufacturing Cost of Industrial Crystalline Silicon and Thin-Film Photovoltaic Technologies. IEEE Journal of Photovoltaics, 2018, 8, 1531-1538.	1.5	51
5096	Highâ€Efficiency (Li <i><sub>x</sub></i> Cu <sub>1â^²</sub> <i><sub>x</sub></i> ) <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Kesterite Solar Cells with Lithium Alloying. Advanced Energy Materials, 2018, 8, 1801191.	10.2	87
5097	The characteristic of Cu2ZnSnS4 thin film solar cells prepared by sputtering CuSn and CuZn alloy targets. Current Applied Physics, 2018, 18, 1571-1576.	1.1	8
5098	Energy level tuned indium arsenide colloidal quantum dot films for efficient photovoltaics. Nature Communications, 2018, 9, 4267.	5.8	67
5099	Physical Properties and Photovoltaic Application of Semiconducting Pd2Se3 Monolayer. Nanomaterials, 2018, 8, 832.	1.9	16
5100	Synthesis and Properties of Single-Crystalline Na <sub>4</sub> Si <sub>24</sub> . Crystal Growth and Design, 2018, 18, 7410-7418.	1.4	9
5101	Novel Solar Cell Materials: Insights from First-Principles. Journal of Physical Chemistry C, 2018, 122, 27107-27126.	1.5	20
5102	Singlet Fission in Perylenediimide Dimers. Journal of Physical Chemistry C, 2018, 122, 25753-25763.	1.5	64
5103	Nonequilibrium Theory of the Conversion Efficiency Limit of Solar Cells Including Thermalization and Extraction of Carriers. Physical Review Applied, 2018, 10, .	1.5	12
5104	Singlet Fission in 9,10-Bis(phenylethynyl)anthracene Thin Films. Journal of the American Chemical Society, 2018, 140, 15140-15144.	6.6	84
5105	Data on safe hydrogen production from the solar photovoltaic solar panel through alkaline electrolyser under Algerian climate. Data in Brief, 2018, 21, 1051-1060.	0.5	6
5106	Multiscale in modelling and validation for solar photovoltaics. EPJ Photovoltaics, 2018, 9, 10.	0.8	6
5107	Lead Vacancy Can Explain the Suppressed Nonradiative Electron–Hole Recombination in FAPbI <sub>3</sub> Perovskite under Iodine-Rich Conditions: A Time-Domain Ab Initio Study. Journal of Physical Chemistry Letters, 2018, 9, 6489-6495.	2.1	29
5108	An in-depth investigation on the grain growth and the formation of secondary phases of ultrasonic-sprayed Cu2ZnSnS4 based thin films assisted by Na crystallization catalyst. Solar Energy, 2018, 176, 277-286.	2.9	8
5109	Conjugated Oligomers with Stable Radical Substituents: Synthesis, Single Crystal Structures, Electronic Structure, and Excited State Dynamics. Chemistry of Materials, 2018, 30, 7840-7851.	3.2	16
5110	Thermally enhanced photoluminescence for energy harvesting: from fundamentals to engineering optimization. Journal of Optics (United Kingdom), 2018, 20, 054002.	1.0	1
5111	Comparative Study of the Temperature Effects on n-type and p-type Silicon Solar Cells by Numerical Simulation. , 2018, , .		1
5112	Performance analysis of enhanced radiative cooling of solar cells based on a commercial silicon photovoltaic module. Solar Energy, 2018, 176, 248-255.	2.9	85

#	Article	IF	CITATIONS
5113	Rational Design of High-Efficiency Organic Dyes in Dye-Sensitized Solar Cells by Multiscale Simulations. Journal of Physical Chemistry C, 2018, 122, 25219-25228.	1.5	32
5114	Quantitative monitoring of the internal field in the depletion layer of a GaAs-based solar cell with terahertz radiation. Applied Physics Letters, 2018, 113, 163501.	1.5	3
5115	Research Update: Recombination and open-circuit voltage in lead-halide perovskites. APL Materials, 2018, 6, .	2.2	56
5116	Study of the Influence of the I-Based Electrolyte Composition on the Photoconversion Properties of p-Type Dye-Sensitized Solar Cells. Journal of the Electrochemical Society, 2018, 165, H889-H896.	1.3	15
5117	About the Implementation of Frequency Conversion Processes in Solar Cell Device Simulations. Micromachines, 2018, 9, 435.	1.4	7
5118	Fine-tuning of the chemical structure of photoactive materials for highly efficient organic photovoltaics. Nature Energy, 2018, 3, 1051-1058.	19.8	281
5119	Intermediate Band Thermoradiative Cells. IEEE Transactions on Electron Devices, 2018, 65, 5428-5433.	1.6	9
5120	Solutionâ€Processable, Solid State Donor–Acceptor Materials for Singlet Fission. Advanced Energy Materials, 2018, 8, 1801720.	10.2	21
5121	Voltage-matched thin film solar cells in 3-terminal configuration. Solar Energy Materials and Solar Cells, 2018, 188, 202-209.	3.0	2
5122	Building bridges between halide perovskite nanocrystals and thin-film solar cells. Sustainable Energy and Fuels, 2018, 2, 2381-2397.	2.5	37
5123	Effect of BaSi <sub>2</sub> template growth duration on the generation of defects and performance of p-BaSi <sub>2</sub> /n-Si heterojunction solar cells. Japanese Journal of Applied Physics, 2018, 57, 042301.	0.8	8
5124	Design and characterization of InGaP-based InP quantum dot solar cells. Japanese Journal of Applied Physics, 2018, 57, 08RF04.	0.8	5
5125	Atomic-Resolution Study of Grain Boundaries in CdTe Using Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 102-103.	0.2	2
5126	Luminescence and Stimulated Emission of Polycrystalline Cu(In,Ga)Se2 Films Deposited by Magnetron-Assisted Sputtering. Semiconductors, 2018, 52, 1238-1243.	0.2	0
5127	Recent Progress on Black Phosphorusâ€Based Materials for Photocatalytic Water Splitting. Small Methods, 2018, 2, 1800212.	4.6	50
5128	Nearâ€infrared emitting Ca <sub>5</sub> (PO <sub>4</sub> ) <sub>3</sub> Cl:Eu <sup>2+</sup> ,Nd <sup>3+</sup> phosphor for modification of the solar spectrum. Luminescence, 2018, 33, 1288-1293.	1.5	10
5129	Influence of stacking order and intermediate phase at low temperature on Cu2ZnSnS4 thin film formation for solar cell. Journal of Materials Science: Materials in Electronics, 2018, 29, 18397-18403.	1.1	4
5130	Pressures Tuning the Band Gap of Organic–Inorganic Trihalide Perovskites (MAPbBr3): A First-Principles Study. Journal of Electronic Materials, 2018, 47, 7204-7211.	1.0	12

#	Article	IF	CITATIONS
5131	Inorganic Materials as Hole Selective Contacts and Intermediate Tunnel Junction Layer for Monolithic Perovskite IGSe Tandem Solar Cells. Advanced Energy Materials, 2018, 8, 1801692.	10.2	17
5132	Design and optimization of a combined solar thermophotovoltaic power generation and solid oxide electrolyser for hydrogen production. Energy Conversion and Management, 2018, 176, 274-286.	4.4	57
5133	Plasmon-Enhanced Thin-Film Perovskite Solar Cells. Journal of Physical Chemistry C, 2018, 122, 23691-23697.	1.5	25
5134	Singlet-Fission-Born Quintet State: Sublevel Selections and Trapping by Multiexciton Thermodynamics. Journal of Physical Chemistry Letters, 2018, 9, 5855-5861.	2.1	55
5135	Molecular Photon Upconversion Solar Cells Using Multilayer Assemblies: Progress and Prospects. Journal of Physical Chemistry Letters, 2018, 9, 5810-5821.	2.1	76
5136	Radiative Heat Transfer. ACS Photonics, 2018, 5, 3896-3915.	3.2	163
5137	Numerical Analysis of PbSe/GaAs Quantum Dot Intermediate Band Solar Cell (QDIBSC). , 2018, , .		4
5138	Challenges for commercializing perovskite solar cells. Science, 2018, 361, .	6.0	1,327
5139	Fundamentals of the nanowire solar cell: Optimization of the open circuit voltage. Applied Physics Reviews, 2018, 5, 031106.	5.5	71
5140	Reduction in connecting resistivity and optical reflection loss at intermediate layer for mechanically stacked multijunction solar cells. Japanese Journal of Applied Physics, 2018, 57, 102301.	0.8	0
5141	Promising Sb <sub>2</sub> (S,Se) <sub>3</sub> Solar Cells with High Open Voltage by Application of a TiO <sub>2</sub> /CdS Double Buffer Layer. Solar Rrl, 2018, 2, 1800208.	3.1	83
5142	Effect of substrate temperature on the structural and optical properties of radio frequency sputtered tin sulfide thin films for solar cell application. Thin Solid Films, 2018, 666, 34-39.	0.8	16
5143	Experimental study of the optical properties of Cu <sub>2</sub> ZnSnS <sub>4</sub> thin film absorber layer for solar cell application. Journal of Physics: Conference Series, 2018, 1086, 012010.	0.3	4
5144	GaP/Si-Based Photovoltaic Devices Grown by Molecular Beam Epitaxy. , 2018, , 637-648.		5
5147	Enhancing concentrator monocrystalline Si solar cells by down conversion Ce3+-Yb3+ co-doped YAG phosphors. Applied Physics Letters, 2018, 113, .	1.5	4
5148	Dynamics of Charge Transfer and Multiple Exciton Generation in the Doped Silicon Quantum Dot–Carbon Nanotube System: Density Functional Theory-Based Computation. Journal of Physical Chemistry Letters, 2018, 9, 5759-5764.	2.1	9
5149	Nonradiative Energy Losses in Bulk-Heterojunction Organic Photovoltaics. Physical Review X, 2018, 8, .	2.8	52
5150	An Electronic Ratchet Is Required in Nanostructured Intermediate-Band Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1553-1559.	1.5	6

	CITATION RE	CITATION REPORT	
#	Article	IF	CITATIONS
5151	GaAs Nanowires Grown by Catalyst Epitaxy for High Performance Photovoltaics. Crystals, 2018, 8, 347.	1.0	8
5152	Perovskite Solar Cells: The Challenging Issues for Stable Power Conversion Efficiency. , 2018, , .		3
5153	Crystalline silicon photovoltaic cells used for power transmission from solar-pumped lasers: I. Light trapping concepts. Japanese Journal of Applied Physics, 2018, 57, 08RF05.	0.8	1
5154	Optimizing co-operative multi-environment dynamics in a dark-state-enhanced photosynthetic heat engine. Journal of Chemical Physics, 2018, 149, 084112.	1.2	31
5155	Pressure-induced structural and electronic transitions in kesterite-type Cu2ZnSnS4. Journal of Applied Physics, 2018, 124, 085905.	1.1	7
5156	Effects of longitudinal optical phonon lifetimes on hot-carrier solar cells: a theoretical study. Materials Research Express, 2018, 5, 116206.	0.8	4
5157	Numerical simulation of ultra-thin CdTe solar cells with a buffer layer of MoOx in the backwall configuration. Chinese Journal of Physics, 2018, 56, 1826-1833.	2.0	10
5158	Loss Mechanisms in Fullerene-Based Low-Donor Content Organic Solar Cells. Journal of Physical Chemistry C, 2018, 122, 20611-20618.	1.5	9
5159	Integrating Ultrathin Bulkâ€Heterojunction Organic Semiconductor Intermediary for Highâ€Performance Lowâ€Bandgap Perovskite Solar Cells with Low Energy Loss. Advanced Functional Materials, 2018, 28, 1804427.	7.8	111
5160	A Stepâ€by‣tep Optimization of the c‣i Bottom Cell in Monolithic Perovskite/c‣i Tandem Devices. Solar Rrl, 2018, 2, 1800193.	3.1	10
5161	Band Gap Tailoring and Structure-Composition Relationship within the Alloyed Semiconductor Cu <sub>2</sub> BaGe <sub>1–<i>x</i></sub> Sn <sub><i>x</i></sub> Se <sub>4</sub> . Chemistry of Materials, 2018, 30, 6566-6574.	3.2	25
5162	Boosting the performance and stability of quasi-two-dimensional tin-based perovskite solar cells using the formamidinium thiocyanate additive. Journal of Materials Chemistry A, 2018, 6, 18173-18182.	5.2	149
5163	Ultra-thin Cadmium Sulfide Electron-transporting Layer for Planar Perovskite Solar Cell. Chemistry Letters, 2018, 47, 1350-1353.	0.7	3
5164	Impact of Substrate Temperature on Vibrational and Chemical Properties of Cu <sub>2</sub> ZnSn <sub>0.6</sub> Ge <sub>0.4</sub> S Thin Films. , 2018, , .		0
5165	Highâ€performance low bandgap thin film solar cells for tandem applications. Progress in Photovoltaics: Research and Applications, 2018, 26, 437-442.	4.4	35
5166	Harmonious Compatibility Dominates Influence of Sideâ€Chain Engineering on Morphology and Performance of Ternary Solar Cells. Advanced Energy Materials, 2018, 8, 1800616.	10.2	45
5167	Solar driven concentrated photovoltaic-thermoelectric hybrid system: Numerical analysis and optimization. Energy Conversion and Management, 2018, 170, 34-49.	4.4	72
5168	Spectroscopic Limited Practical Efficiency (SLPE) model for organometal halide perovskites solar cells evaluation. Organic Electronics, 2018, 59, 389-398.	1.4	6

#	Article	IF	CITATIONS
5169	Photovoltaics and Nanotechnology as Alternative Energy. Environmental Chemistry for A Sustainable World, 2018, , 211-241.	0.3	1
5170	Optimization of process parameters for RF sputter deposition of tin-nitride thin-films. AIP Conference Proceedings, 2018, , .	0.3	0
5171	Synthesis and characterizations of Cu2ZnSnS4 nanoparticles/carbon nanotube composite as an efficient absorber material for solar cell application. AIP Conference Proceedings, 2018, , .	0.3	3
5172	Key Tradeoffs Limiting the Performance of Organic Photovoltaics. Advanced Energy Materials, 2018, 8, 1703551.	10.2	71
5173	Theoretical model and simulation of carrier heating with effects of nonequilibrium hot phonons in semiconductor photovoltaic devices. Progress in Photovoltaics: Research and Applications, 2018, 26, 808-824.	4.4	20
5174	Wave Function Engineering in CdSe/PbS Core/Shell Quantum Dots. ACS Nano, 2018, 12, 5539-5550.	7.3	5
5175	CdCl2 passivation of polycrystalline CdMgTe and CdZnTe absorbers for tandem photovoltaic cells. Journal of Applied Physics, 2018, 123, .	1.1	26
5176	Efficient charge carrier separation and excellent visible light photoresponse in Cu2O nanowires. Nano Energy, 2018, 50, 118-125.	8.2	166
5177	Design of a novel and highly stable lead-free Cs <sub>2</sub> NaBil <sub>6</sub> double perovskite for photovoltaic application. Sustainable Energy and Fuels, 2018, 2, 2419-2428.	2.5	121
5178	Identifying "hot papers―and papers with "delayed recognition―in large-scale datasets by using dynamically normalized citation impact scores. Scientometrics, 2018, 116, 655-674.	1.6	18
5179	Increased performance of thin-film GaAs solar cells by rear contact/mirror patterning. Thin Solid Films, 2018, 660, 10-18.	0.8	30
5180	On the possibility of singlet fission in crystalline quaterrylene. Journal of Chemical Physics, 2018, 148, 184101.	1.2	21
5181	Non-fullerene acceptors end-capped with an extended conjugation group for efficient polymer solar cells. Organic Electronics, 2018, 59, 366-373.	1.4	8
5182	Efficiency evaluation for triple-junction solar cells in five tandem configurations. Renewable Energy, 2018, 129, 317-327.	4.3	12
5183	Optical management for efficiency enhancement in hybrid organic-inorganic lead halide perovskite solar cells. Science and Technology of Advanced Materials, 2018, 19, 411-424.	2.8	62
5184	Effect of CdTe Back Surface Field on the Efficiency Enhancement of a CGS Based Thin Film Solar Cell. Journal of Electronic Materials, 2018, 47, 5183-5190.	1.0	13
5185	The Role of Hydrogen from ALDâ€Al <sub>2</sub> O <sub>3</sub> in Kesterite Cu <sub>2</sub> ZnSnS <sub>4</sub> Solar Cells: Grain Surface Passivation. Advanced Energy Materials, 2018, 8, 1701940.	10.2	68
5186	Separating the Heat from the Gap. Joule, 2018, 2, 822-824.	11.7	0

ARTICLE IF CITATIONS 5187 Solar Energy Conversion., 2018, , 881-918. 7 Sustainable p-type copper selenide solar material with ultra-large absorption coefficient. Chemical Science, 2018, 9, 5405-5414. 3.7 Upconversion and Downconversion Processes for Photovoltaics., 2018, , 279-298. 3 5189 Synthesis and investigation of environmental protection and earth-abundant kesterite Cu2MgxZn1-xSn(S,Se)4 thin films for solar cells. Ceramics International, 2018, 44, 15249-15255. Recent progress in silicon-based solid-state solar cells. International Journal of Electronics, 2018, 5191 0.9 13 105, 1568-1582. 5192 Optical Inâ€Coupling in Organic Solar Cells. Small Methods, 2018, 2, 1800123. 4.6 Beyond Photovoltaic Lab Efficiency. Joule, 2018, 2, 1032-1034. 5193 11.7 2 Effect of Cu2O hole transport layer and improved minority carrier life time on the efficiency enhancement of Cu2NiSnS4 based experimental solar cell. Journal of Renewable and Sustainable 5194 0.8 Energy, 2018, 10, . Electrically Benign Defect Behavior in Zinc Tin Nitride Revealed from First Principles. Physical Review 5195 1.5 34 Applied, 2018, 10, . Projecting solar photovoltaic efficiencies from lab to market., 2018,,. Photon upconversion promoted by defects in low-dimensional semiconductor nanostructures. , 2018, 5197 1 , 189-210. Planar FAPbBr<sub>3</sub> Solar Cells with Power Conversion Efficiency above 10%. ACS Energy 5198 8.8 Letters, 2018, 3, 1808-1814. Research Direction toward Theoretical Efficiency in Perovskite Solar Cells. ACS Photonics, 2018, 5, 5199 3.2 129 2970-2977. Impacts of Mn ion in ZnSe passivation on electronic band structure for high efficiency CdS/CdSe 5200 1.6 quantum dot solar cells. Dalton Transactions, 2018, 47, 9634-9642. Carbene derived diradicaloids – building blocks for singlet fission?. Chemical Science, 2018, 9, 5201 3.7 66 6107-6117. Progress in Poly (3â€Hexylthiophene) Organic Solar Cells and the Influence of Its Molecular Weight on 95 Device Performance. Advanced Energy Materials, 2018, 8, 1801001. Photovoltaic–Thermoelectric–ThermodynamicÂCo-Generation. Springer Series in Materials Science, 5203 0.4 0 2018, , 117-136. Quasiparticle bands and optical properties of SnSe from an ab initio approach. Computational 5204 1.4 Materials Science, 2018, 152, 107-112.

	CITATION	REPORT	
#	Article	IF	Citations
5205	Use of Graphene for Solar Cells. Journal of the Korean Physical Society, 2018, 72, 1442-1453.	0.3	21
5206	Efficient Perovskite Solar Cells with Reduced Photocurrent Hysteresis through Tuned Crystallinity of Hybrid Perovskite Thin Films. ACS Omega, 2018, 3, 7069-7076.	1.6	8
5207	First Evidence of Electrode Reconstruction in Mesoporous NiO After Operation as Photocathode of Dye ensitized Solar Cells. ChemistrySelect, 2018, 3, 6729-6736.	0.7	8
5208	Recent advances in copper complexes for electrical/light energy conversion. Coordination Chemistry Reviews, 2018, 375, 514-557.	9.5	159
5209	Optical thin films containing quantum dots. , 2018, , 487-513.		1
5210	Innovative approaches in thin-film photovoltaic cells. , 2018, , 595-632.		0
5211	Conjugated Polymer-Based Solar Cells. , 2018, , 256-269.		2
5212	Ion Migration in Hybrid Perovskites. , 2018, , 163-196.		10
5213	Fabrication and Life Time of Perovskite Solar Cells. , 2018, , 231-287.		7
5214	Analysis of interfaces in Bornite (Cu 5 FeS 4 ) fabricated Schottky diode using impedance spectroscopy method and its photosensitive behavior. Materials Research Bulletin, 2018, 106, 337-345.	2.7	53
5215	Beneficial effect of reducing symmetry on the enhancement of optical absorption of nanohole arrays. Optics Communications, 2018, 427, 90-94.	1.0	2
5216	Improving the efficiency of solar cells by upconverting sunlight using field enhancement from optimized nano structures. Optical Materials, 2018, 83, 279-289.	1.7	21
5217	Dramatic Enhancement of Quantum Cutting in Lanthanide-Doped Nanocrystals Photosensitized with an Aggregation-Induced Enhanced Emission Dye. Nano Letters, 2018, 18, 4922-4926.	4.5	37
5218	Organic Photovoltaics over Three Decades. Advanced Materials, 2018, 30, e1800388.	11.1	540
5219	Lanthanide-Doped Tellurite Glasses for Solar Energy Harvesting. , 2018, , 249-273.		1
5220	Quantum Nanostructures (QDs): An Overview. , 2018, , 59-88.		56
5221	Fabrication of high band gap kesterite solar cell absorber materials for tandem applications. Thin Solid Films, 2018, 660, 247-252.	0.8	13
5222	Developing design criteria for organic solar cells using well-absorbing non-fullerene acceptors. Communications Physics, 2018, 1, .	2.0	23

#	Article	IF	CITATIONS
5223	Large area efficient interface layer free monolithic perovskite/homo-junction-silicon tandem solar cell with over 20% efficiency. Energy and Environmental Science, 2018, 11, 2432-2443.	15.6	172
5224	Magnesium-Doped MAPbI <sub>3</sub> Perovskite Layers for Enhanced Photovoltaic Performance in Humid Air Atmosphere. ACS Applied Materials & Interfaces, 2018, 10, 24543-24548.	4.0	79
5225	Photochemical upconversion is suppressed by high concentrations of molecular sensitizers. Physical Chemistry Chemical Physics, 2018, 20, 19500-19506.	1.3	31
5226	Band alignment of Al <i>x</i> Ga1– <i>x</i> N/Cu2O heterojunctions in dependence on alloy composition <i>x</i> and its effect on the photovoltaic properties. Journal of Applied Physics, 2018, 123, .	1.1	2
5227	Defects in one-dimensional nanowires. , 2018, , 63-85.		1
5228	Achieving over 11% power conversion efficiency in PffBT4T-2OD-based ternary polymer solar cells with enhanced open-circuit-voltage and suppressed charge recombination. Nano Energy, 2018, 44, 155-163.	8.2	94
5229	Scalable Triple Cation Mixed Halide Perovskite–BiVO <sub>4</sub> Tandems for Biasâ€Free Water Splitting. Advanced Energy Materials, 2018, 8, 1801403.	10.2	128
5230	2.5 PV Materials. , 2018, , 117-149.		2
5231	Enhancement of dye sensitized solar cell efficiency through introducing concurrent upconversion/downconversion core/shell nanoparticles as spectral converters. Electrochimica Acta, 2018, 282, 743-749.	2.6	24
5232	Photovoltaic development in Romania. Reviewing what has been done. Renewable and Sustainable Energy Reviews, 2018, 94, 523-535.	8.2	26
5233	Approaching Perfect Light Incoupling in Perovskite and Silicon Thin Film Solar Cells by Moth Eye Surface Textures. Advanced Theory and Simulations, 2018, 1, 1800030.	1.3	38
5234	Efficiency enhancement of novel CNTS/ZnS/Zn (O, S) thin film solar cell. Optik, 2018, 171, 453-462.	1.4	17
5235	A comprehensively theoretical and experimental study of carrier generation and transport for achieving high performance ternary blend organic solar cells. Nano Energy, 2018, 51, 206-215.	8.2	14
5236	Transport mechanisms in silicon heterojunction solar cells with molybdenum oxide as a hole transport layer. Solar Energy Materials and Solar Cells, 2018, 185, 61-65.	3.0	41
5237	Improved Efficiency of Polymer Solar Cells by Modifying the Side Chain of Wide-Band Gap Conjugated Polymers Containing Pyrrolo[3,4- <i>f</i> ]benzotriazole-5,7(6 <i>H</i> )-dione Moiety. ACS Applied Materials & Interfaces, 2018, 10, 22495-22503.	4.0	22
5238	Point defect engineering in thin-film solar cells. Nature Reviews Materials, 2018, 3, 194-210.	23.3	275
5239	Multiple Exciton Generation in Nanostructures for Advanced Photovoltaic Cells. Journal of Nanotechnology, 2018, 2018, 1-12.	1.5	9
5240	Solid-State Photon Upconversion Materials: Structural Integrity and Triplet–Singlet Dual Energy Migration. Journal of Physical Chemistry Letters, 2018, 9, 4613-4624.	2.1	64

# 5241	ARTICLE Visualization and suppression of interfacial recombination for high-efficiency large-area pin perovskite solar cells. Nature Energy, 2018, 3, 847-854.	IF 19.8	CITATIONS
5242	Performance assessment and optimization of a hot carrier solar cell with double energy selective contacts. Physica Scripta, 2018, 93, 095002.	1.2	3
5243	Exceeding the Shockley–Queisser Limit Within the Detailed Balance Framework. , 2018, , 177-184.		16
5244	Efficiency Limits of Solar Energy Harvesting via Internal Photoemission in Carbon Materials. Photonics, 2018, 5, 4.	0.9	3
5245	Nanotechnology Pathways to Next-Generation Photovoltaics. Nanostructure Science and Technology, 2018, , 1-36.	0.1	1
5246	A theoretical model for calculating the effects of carrier heating with nonequilibrium hot phonons on semiconductor devices and the current-voltage relations. Microelectronics Reliability, 2018, 91, 335-343.	0.9	2
5247	Bulk heterojunction polymer solar cell and perovskite solar cell: Concepts, materials, current status, and opto-electronic properties. Solar Energy, 2018, 173, 407-424.	2.9	56
5248	2D perovskite stabilized phase-pure formamidinium perovskite solar cells. Nature Communications, 2018, 9, 3021.	5.8	575
5249	Novel sol–gel fabrication of Yb3+/Tm3+ co-doped β-NaYF4 thin films and investigation of their upconversion properties. Photochemical and Photobiological Sciences, 2018, 17, 1239-1246.	1.6	17
5250	Enhanced upconversion in one-dimensional photonic crystals: a simulation-based assessment within realistic material and fabrication constraints. Optics Express, 2018, 26, 7537.	1.7	17
5251	Wavelength-selective mid-infrared metamaterial absorbers with multiple tungsten cross resonators. Optics Express, 2018, 26, 5616.	1.7	81
5252	Efficient full-spectrum utilization, reception and conversion of solar energy by broad-band nanospiral antenna. Optics Express, 2018, 26, A178.	1.7	13
5253	Specular side reflectors for high efficiency thermal-to-optical energy conversion. Optics Express, 2018, 26, A462.	1.7	8
5254	Infrared photocurrent management in monolithic perovskite/silicon heterojunction tandem solar cells by using a nanocrystalline silicon oxide interlayer. Optics Express, 2018, 26, A487.	1.7	48
5255	Allâ€Inorganic CsPb <sub>1â^'<i>x</i></sub> Ge <sub><i>x</i></sub> I <sub>2</sub> Br Perovskite with Enhanced Phase Stability and Photovoltaic Performance. Angewandte Chemie, 2018, 130, 12927-12931.	1.6	31
5256	Improving Performance of Leadâ€Free Formamidinium Tin Triiodide Perovskite Solar Cells by Tin Source Purification. Solar Rrl, 2018, 2, 1800136.	3.1	180
5257	Nanoparticles for Luminescent Solar Concentrators - A review. Optical Materials, 2018, 84, 636-645.	1.7	112
5258	Piperazine Suppresses Self-Doping in CsSnl <sub>3</sub> Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 4221-4226.	2.5	99

#	Article	IF	CITATIONS
5259	Initiation and future prospects of colloidal metal halide double-perovskite nanocrystals: Cs <sub>2</sub> AgBiX <sub>6</sub> (X = Cl, Br, I). Journal of Materials Chemistry A, 2018, 6, 21666-21675.	5.2	77
5260	Intrinsic and extrinsic drops in open-circuit voltage and conversion efficiency in solar cells with quantum dots embedded in host materials. Scientific Reports, 2018, 8, 11704.	1.6	15
5261	Lewisâ€Adduct Mediated Grainâ€Boundary Functionalization for Efficient Idealâ€Bandgap Perovskite Solar Cells with Superior Stability. Advanced Energy Materials, 2018, 8, 1800997.	10.2	93
5262	Influence of working pressure on the structural, optical, and electrical properties of RF-sputtered SnS thin films. Superlattices and Microstructures, 2018, 122, 253-261.	1.4	23
5263	Scaling limits to large area perovskite solar cell efficiency. Progress in Photovoltaics: Research and Applications, 2018, 26, 659-674.	4.4	31
5264	First-principle study on phase stability of kesterite Cu2ZnSnS4 for thin film solar cells with off-stoichiometric composition. Journal of Alloys and Compounds, 2018, 768, 644-651.	2.8	4
5265	Enhanced photocatalytic dye degradation and hydrogen production ability of Bi25FeO40-rGO nanocomposite and mechanism insight. Scientific Reports, 2018, 8, 11090.	1.6	84
5266	Isothermal pressure-derived metastable states in 2D hybrid perovskites showing enduring bandgap narrowing. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8076-8081.	3.3	137
5267	Interdot spacing dependence of electronic structure and properties of multistacked InGaAs quantum dots fabricated without strain compensation technique. Japanese Journal of Applied Physics, 2018, 57, 06HE08.	0.8	5
5268	A promising high-efficiency photovoltaic alternative non-silicon material: A first-principle investigation. Scripta Materialia, 2018, 156, 134-137.	2.6	2
5269	Analysis of the behaviour of cadmium telluride and crystalline silicon photovoltaic modules deployed outdoor under humid continental climate conditions. Solar Energy, 2018, 171, 681-691.	2.9	29
5270	Two-step photon absorption in InP/InGaP quantum dot solar cells. Applied Physics Letters, 2018, 113, .	1.5	10
5271	Engineered Nanomaterial in Electronics and Electrical Industries. , 2018, , 324-364.		13
5272	Engineered Nanomaterials in Energy Production Industry. , 2018, , 713-723.		8
5273	Nanophotonic control of thermal radiation for energy applications [Invited]. Optics Express, 2018, 26, 15995.	1.7	248
5274	2D Materials Beyond Graphene for Metal Halide Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800339.	1.9	32
5275	Study of sputtered Cu2ZnSnS4 thin films on Si. Applied Surface Science, 2018, 459, 700-706.	3.1	26
5276	Optical absorption coefficient red shift effect of iodine vacancy in MAPbI3. Computational Materials Science, 2018, 154, 138-142.	1.4	0

#	Article	IF	CITATIONS
5277	Efficient Hot Electron Transfer in Quantum Dot-Sensitized Mesoporous Oxides at Room Temperature. Nano Letters, 2018, 18, 5111-5115.	4.5	21
5278	Hot-carrier generation in a solar cell containing InAs/GaAs quantum-dot superlattices as a light absorber. Applied Physics Express, 2018, 11, 082303.	1.1	5
5279	Aqueousâ€Solutionâ€Based Approach Towards Carbonâ€Free Sb <sub>2</sub> S <sub>3</sub> Films for High Efficiency Solar Cells. ChemSusChem, 2018, 11, 3208-3214.	3.6	15
5284	Allâ€Inorganic CsPb <sub>1â^'<i>x</i></sub> Ge <sub><i>x</i></sub> I <sub>2</sub> Br Perovskite with Enhanced Phase Stability and Photovoltaic Performance. Angewandte Chemie - International Edition, 2018, 57, 12745-12749.	7.2	157
5286	Semiconductor Nanotechnology. Nanostructure Science and Technology, 2018, , .	0.1	7
5287	Perovskite/Perovskite/Silicon Monolithic Triple-Junction Solar Cells with a Fully Textured Design. ACS Energy Letters, 2018, 3, 2052-2058.	8.8	87
5288	Performance bounds and perspective for hybrid solar photovoltaic/thermal electricity-generation strategies. Sustainable Energy and Fuels, 2018, 2, 2060-2067.	2.5	26
5289	Dynamically tunable and active hyperbolic metamaterials. Advances in Optics and Photonics, 2018, 10, 354.	12.1	34
5290	Temperature-dependent Raman spectroscopy of Cu2Sn1â^' x Ge x S3 thin films. Japanese Journal of Applied Physics, 2018, 57, 08RC12.	0.8	3
5291	Nanostructured Semiconductor Composites for Solar Cells. , 2018, , 353-412.		1
5292	Photon Upconversion in Crystalline Rubrene: Resonant Enhancement by an Interband State. Journal of Physical Chemistry C, 2018, 122, 17632-17642.	1.5	14
5293	Analysing the Prospects of Perovskite Solar Cells within the Purview of Recent Scientific Advancements. Crystals, 2018, 8, 242.	1.0	13
5294	Investigation of the Strongly Correlated Two-Hole State of Copper in Resonant Photoemission States of Chalcogenide Materials for Photovoltaics. Physics of Metals and Metallography, 2018, 119, 520-522.	0.3	3
5297	Thermoplasmonic and Photothermal Metamaterials for Solar Energy Applications. Advanced Optical Materials, 2018, 6, 1800317.	3.6	48
5298	Crystallization, Properties, and Challenges of Lowâ€Bandgap Sn–Pb Binary Perovskites. Solar Rrl, 2018, 2, 1800146.	3.1	43
5299	Opportunities and challenges for tandem solar cells using metal halide perovskite semiconductors. Nature Energy, 2018, 3, 828-838.	19.8	716
5300	Vibronic exciton theory of singlet fission. III. How vibronic coupling and thermodynamics promote rapid triplet generation in pentacene crystals. Journal of Chemical Physics, 2018, 148, 244701.	1.2	67
5301	The Impact of Graphene on the Fabrication of Thin Film Solar Cells: Current Status and Future Prospects. Materials, 2018, 11, 36.	1.3	36

#	Article	IF	CITATIONS
5302	Interface Passivation Effects on the Photovoltaic Performance of Quantum Dot Sensitized Inverse Opal TiO2 Solar Cells. Nanomaterials, 2018, 8, 460.	1.9	20
5303	Pareto Optimal Spectrally Selective Emitters for Thermophotovoltaics via Weak Absorber Critical Coupling. Advanced Energy Materials, 2018, 8, 1801035.	10.2	24
5304	Pressureâ€Induced Emission Enhancement, Bandâ€Gap Narrowing, and Metallization of Halide Perovskite Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> . Angewandte Chemie, 2018, 130, 11383-11387.	1.6	14
5305	Pressureâ€Induced Emission Enhancement, Bandâ€Gap Narrowing, and Metallization of Halide Perovskite Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> . Angewandte Chemie - International Edition, 2018, 57, 11213-11217.	7.2	170
5306	Investigation of electrically-active defects in Sb2Se3 thin-film solar cells with up to 5.91% efficiency via admittance spectroscopy. Solar Energy Materials and Solar Cells, 2018, 186, 324-329.	3.0	63
5307	Development of CdCl2 Activation to Minimize Zn Loss from Sputtered Cd1-xZnxTe Thin Films for Use in Tandem Solar Cells. MRS Advances, 2018, 3, 3129-3134.	0.5	7
5308	Ruthenium Complexes as Sensitizers in Dye-Sensitized Solar Cells. Inorganics, 2018, 6, 52.	1.2	98
5309	Limiting efficiency factors and their consequences on quantum dot sensitized solar cells: a detailed balance study. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	3
5310	Optimal Bandgap in a 2D Ruddlesden–Popper Perovskite Chalcogenide for Single-Junction Solar Cells. Chemistry of Materials, 2018, 30, 4882-4886.	3.2	49
5311	Taking Control of Ion Transport in Halide Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 1983-1990.	8.8	158
5312	Precision Grinding for Functional Microstructured Surface. Micro/Nano Technologies, 2018, , 301-331.	0.1	1
5313	Examining the role of acceptor molecule structure in self-assembled bilayers: surface loading, stability, energy transfer, and upconverted emission. Physical Chemistry Chemical Physics, 2018, 20, 20513-20524.	1.3	24
5314	Enhancing the Performance of the Half Tin and Half Lead Perovskite Solar Cells by Suppression of the Bulk and Interfacial Charge Recombination. Advanced Materials, 2018, 30, e1803703.	11.1	65
5315	Design of an efficient double-junction CGS/CIGS solar cell. Optik, 2018, 172, 271-277.	1.4	9
5316	Rapid Thermal Treatment of Reactive Sputtering Grown Nanocrystalline Co <sub>3</sub> O <sub>4</sub> for Enhanced All-Oxide Photovoltaics. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800216.	0.8	16
5317	Hot Charge Carrier Extraction from Semiconductor Quantum Dots. Journal of Physical Chemistry C, 2018, 122, 17586-17600.	1.5	33
5318	Ab initio calculation of electronic transport properties between PbSe quantum dots facets with halide ligands (Cl, Br, I). Japanese Journal of Applied Physics, 2018, 57, 08RF01.	0.8	2
5319	Modeling Multijunction Solar Cells by Nonlocal Tunneling and Subcell Analysis. IEEE Journal of Photovoltaics, 2018, 8, 1363-1369.	1.5	23
#	Article	IF	CITATIONS
------	---	-----	-----------
5320	Long-Lived, Non-Geminate, Radiative Recombination of Photogenerated Charges in a Polymer/Small-Molecule Acceptor Photovoltaic Blend. Journal of the American Chemical Society, 2018, 140, 9996-10008.	6.6	73
5321	Enhanced collection efficiencies and performance of interband cascade structures for narrow bandgap semiconductor thermophotovoltaic devices. Journal of Applied Physics, 2018, 124, .	1.1	17
5322	Testing new chromophores for singlet fission: A computational protocol applied to 2,3-diamino-1,4-benzoquinone. Chemical Physics, 2018, 515, 635-642.	0.9	5
5323	MAPbI3 and FAPbI3 perovskites as solar cells: Case study on structural, electrical and optical properties. Results in Physics, 2018, 10, 616-627.	2.0	124
5324	fvs-Si48: a direct bandgap silicon allotrope. Physical Chemistry Chemical Physics, 2018, 20, 26091-26097.	1.3	11
5325	Cu2O/ZnO heterojunction thin-film solar cells: the effect of electrodeposition condition and thickness of Cu2O. Thin Solid Films, 2018, 661, 132-136.	0.8	41
5326	Detection of local vibrational modes induced by intrinsic defects in undoped BaSi2 light absorber layers using Raman spectroscopy. Journal of Applied Physics, 2018, 124, 025301.	1.1	20
5327	Theoretical study of intramolecular singlet fission in xanthene-bonded pentacene dimers. Chemical Physics, 2018, 515, 628-634.	0.9	3
5328	Rational design of metal-free organic D-ï€-A dyes in dye-sensitized solar cells: Insight from density functional theory (DFT) and time-dependent DFT (TD-DFT) investigations. Organic Electronics, 2018, 59, 131-139.	1.4	28
5329	Linking structural properties with functionality in solar cell materials – the effective mass and effective density of states. Sustainable Energy and Fuels, 2018, 2, 1550-1560.	2.5	15
5330	Design issues for optimum solar cell configuration. AIP Conference Proceedings, 2018, , .	0.3	8
5331	Modified structure and optical band-gap in perovskite ferroelectric (1-x)KNbO3-xBaCo1/3Nb2/3O3 ceramics. Ceramics International, 2018, 44, 14638-14644.	2.3	16
5332	Evaluation of multiple cation/anion perovskite solar cells through life cycle assessment. Sustainable Energy and Fuels, 2018, 2, 1600-1609.	2.5	23
5333	Evidence for Charge-Transfer Mediation in the Primary Events of Singlet Fission in a Weakly Coupled Pentacene Dimer. CheM, 2018, 4, 1092-1111.	5.8	105
5334	Sodium doping mechanism on sol-gel processed kesterite Cu2ZnSnS4 thin films. Superlattices and Microstructures, 2018, 120, 747-752.	1.4	18
5335	Role of electron-phonon coupling and thermal expansion on band gaps, carrier mobility, and interfacial offsets in kesterite thin-film solar cells. Applied Physics Letters, 2018, 112, .	1.5	19
5336	The ultrafast dynamics and conductivity of photoexcited graphene at different Fermi energies. Science Advances, 2018, 4, eaar5313.	4.7	95
5337	Modulating the band structure and sub-bandgap absorption of Co-hyperdoped silicon by co-doping with shallow-level elements. Applied Physics Express, 2018, 11, 061301.	1.1	1

#	Article	IF	CITATIONS
5338	Largeâ€Area Tunable Visibleâ€ŧoâ€Nearâ€Infrared Luminescent Solar Concentrators. Advanced Sustainable Systems, 2018, 2, 1800002.	2.7	32
5339	Effects of aromatic substituents on the electronic structure and excited state energy levels of diketopyrrolopyrrole derivatives for singlet fission. Physical Chemistry Chemical Physics, 2018, 20, 22997-23006.	1.3	24
5340	Maximum efficiency and parametric optimum selection of a concentrated solar spectrum splitting photovoltaic cell-thermoelectric generator system. Energy Conversion and Management, 2018, 174, 65-71.	4.4	52
5341	Large process-dependent variations in band alignment and interface band gaps of Cu2ZnSnS4/CdS solar cells. Solar Energy Materials and Solar Cells, 2018, 187, 233-240.	3.0	27
5342	Hot carrier impact on photovoltage formation in solar cells. Applied Physics Letters, 2018, 113, .	1.5	13
5343	Design Criteria for Micro-Optical Tandem Luminescent Solar Concentrators. IEEE Journal of Photovoltaics, 2018, 8, 1560-1567.	1.5	35
5344	Spin-coated planar Sb <sub>2</sub> S <sub>3</sub> hybrid solar cells approaching 5% efficiency. Beilstein Journal of Nanotechnology, 2018, 9, 2114-2124.	1.5	27
5345	Tungsten–Carbon Nanotube Composite Photonic Crystals as Thermally Stable Spectral‣elective Absorbers and Emitters for Thermophotovoltaics. Advanced Energy Materials, 2018, 8, 1801471.	10.2	57
5346	Anomalous enhancement of the absorption coefficient of GaAs in a p-n junction. Superlattices and Microstructures, 2018, 122, 80-84.	1.4	6
5347	Very high open-circuit voltage in dual-gate graphene/silicon heterojunction solar cells. Nano Energy, 2018, 53, 398-404.	8.2	11
5348	Tunability of electronic and optical properties of the Ba–Zr–S system via dimensional reduction. European Physical Journal B, 2018, 91, 1.	0.6	16
5349	Ultrafast Singlet Exciton Fission Dynamics in 9,10-Bis(phenylethynyl)anthracene Nanoaggregates and Thin Films. Journal of Physical Chemistry C, 2018, 122, 21047-21055.	1.5	50
5350	Accelerated discovery of stable lead-free hybrid organic-inorganic perovskites via machine learning. Nature Communications, 2018, 9, 3405.	5.8	442
5351	Cs <sub>0.15</sub> FA <sub>0.85</sub> PbI <sub>3</sub> perovskite solar cells for concentrator photovoltaic applications. Journal of Materials Chemistry A, 2018, 6, 21913-21917.	5.2	31
5352	Rigorous wave-optical treatment of photon recycling in thermodynamics of photovoltaics: Perovskite thin-film solar cells. Physical Review B, 2018, 98, .	1.1	31
5353	Influence of pre-annealing Cu-Sn on the structural properties of CZTSe thin films grown by a two-stage process. Materials Science in Semiconductor Processing, 2018, 88, 234-238.	1.9	9
5354	Study of the effect of V-doping on the opto-electrical properties of spray-pyrolized SnS thin films. Thin Solid Films, 2018, 664, 60-65.	0.8	8
5355	A versatile open-source analysis of the limiting efficiency of photo electrochemical water-splitting. Scientific Reports, 2018, 8, 12807.	1.6	10

#	Article	IF	CITATIONS
5356	Extending the Spectral Responsivity of MoS <sub>2</sub> Phototransistors by Incorporating Upâ€Conversion Microcrystals. Advanced Optical Materials, 2018, 6, 1800660.	3.6	25
5357	Simultaneously high electron and hole mobilities in cubic boron-V compounds: BP, BAs, and BSb. Physical Review B, 2018, 98, .	1.1	55
5358	Experimental Determination of Power Losses and Heat Generation in Solar Cells for Photovoltaic-Thermal Applications. Journal of Materials Engineering and Performance, 2018, 27, 6291-6298.	1.2	9
5359	Electron-Selective Epitaxial/Amorphous Germanium Stack Contact for Organic-Crystalline Silicon Hybrid Solar Cells. ACS Applied Energy Materials, 2018, 1, 4899-4905.	2.5	0
5360	Thermodynamically Stable Orthorhombic γ-CsPbI <sub>3</sub> Thin Films for High-Performance Photovoltaics. Journal of the American Chemical Society, 2018, 140, 11716-11725.	6.6	308
5361	Growth of <mml:math <br="" altimg="si0020.gif" xmlns:mml="http://www.w3.org/1998/Math/MathML">overflow="scroll"&gt;<mml:mrow><mml:msub><mml:mrow><mml:mi>Sb</mml:mi></mml:mrow><mml:mrow><m thin films by selenization of RF sputtered binary precursors. Solar Energy Materials and Solar Cells, 2018. 187. 219-226.</m </mml:mrow></mml:msub></mml:mrow></mml:math>	ml:mn>2<	/mml:mn><
5362	Improving the efficiency of Sb2Se3 thin-film solar cells by post annealing treatment in vacuum condition. Solar Energy Materials and Solar Cells, 2018, 187, 170-175.	3.0	69
5363	Lithium/Silver-Doped Cu 2 ZnSnS 4 with Tunable Band Gaps and Phase Structures: a First-Principles Study. Chinese Physics Letters, 2018, 35, 083101.	1.3	6
5364	Photophysics of metal halide perovskites: From materials to devices. Japanese Journal of Applied Physics, 2018, 57, 090101.	0.8	59
5365	Nature of Hexagonal Silicon Forming via High-Pressure Synthesis: Nanostructured Hexagonal 4H Polytype. Nano Letters, 2018, 18, 5989-5995.	4.5	43
5366	Smallâ€Bandâ€Gap Halide Double Perovskites. Angewandte Chemie, 2018, 130, 12947-12952.	1.6	19
5367	Control of Crystal Structures and Optical Properties with Hybrid Formamidinium and 2-Hydroxyethylammonium Cations for Mesoscopic Carbon-Electrode Tin-Based Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 2077-2085.	8.8	59
5368	Smallâ€Bandâ€Gap Halide Double Perovskites. Angewandte Chemie - International Edition, 2018, 57, 12765-12770.	7.2	136
5369	Organic and solution-processed tandem solar cells with 17.3% efficiency. Science, 2018, 361, 1094-1098.	6.0	2,262
5370	Photoactive Core–Shell Nanorods as Bifunctional Electrodes for Boosting the Performance of Quantum Dot Sensitized Solar Cells and Photoelectrochemical Cells. Chemistry of Materials, 2018, 30, 6071-6081.	3.2	39
5371	Two-Dimensional Perovskite Solar Cells with 14.1% Power Conversion Efficiency and 0.68% External Radiative Efficiency. ACS Energy Letters, 2018, 3, 2086-2093.	8.8	224
5372	Synthesis of CZTS QDs decorated reduced graphene oxide nanocomposite as possible absorber for solar cell. Materials Letters, 2018, 232, 232-236.	1.3	11
5373	Lead sulfide quantum dots inside ferritin: synthesis and application to photovoltaics. Applied Nanoscience (Switzerland), 2018, 8, 1687-1699.	1.6	4

#	Article	IF	CITATIONS
5374	Ultrafast Intraband Spectroscopy of Hot-Carrier Cooling in Lead-Halide Perovskites. ACS Energy Letters, 2018, 3, 2199-2205.	8.8	119
5375	Crystalline silicon solar cells with tetracene interlayers: the path to silicon-singlet fission heterojunction devices. Materials Horizons, 2018, 5, 1065-1075.	6.4	92
5376	Energy-Band Alignment of BiVO <sub>4</sub> from Photoelectron Spectroscopy of Solid-State Interfaces. Journal of Physical Chemistry C, 2018, 122, 20861-20870.	1.5	38
5377	CdSe(Te)/CdS/CdSe Rods Versus CdTe/CdS/CdSe Spheres: Morphology-Dependent Carrier Dynamics for Photon Upconversion. IEEE Journal of Photovoltaics, 2018, , 1-6.	1.5	5
5378	Singlet Fission for Photovoltaics with 130 % Injection Efficiency. Angewandte Chemie - International Edition, 2018, 57, 10742-10747.	7.2	52
5379	Optimization of sol–gel spin-coated Cu2ZnSnS4 (CZTS) thin-film control parameters by RSM method to enhance the solar cell performance. Journal of Materials Science, 2018, 53, 12203-12213.	1.7	15
5380	Structural, electronic and optical properties of bandgap-tunable Cu 2 ZnSi x Sn 1â´´ x Se 4 alloys. Chemical Physics Letters, 2018, 705, 92-96.	1.2	4
5381	Optimisation of pH of the CdCl2 + Ga2(SO4)3 activation step of CdS/CdTe based Thin-Film solar cells. Solar Energy, 2018, 170, 398-405.	2.9	6
5382	Insights on the Synthesis, Crystal and Electronic Structures, and Optical and Thermoelectric Properties of Sr <sub>1–<i>x</i></sub> Sb <sub><i>x</i></sub> HfSe <sub>3</sub> Orthorhombic Perovskite. Inorganic Chemistry, 2018, 57, 7402-7411.	1.9	20
5383	Tin and germanium based two-dimensional Ruddlesden–Popper hybrid perovskites for potential lead-free photovoltaic and photoelectronic applications. Nanoscale, 2018, 10, 11314-11319.	2.8	73
5384	Design and exploration of semiconductors from first principles: A review of recent advances. Applied Physics Express, 2018, 11, 060101.	1.1	109
5385	Low temperature synthesis of iron pyrite (FeS2) nanospheres as a strong solar absorber material. Materials Letters, 2018, 228, 129-132.	1.3	17
5386	Face-on orientation of fluorinated polymers conveyed by long alkyl chains: a prerequisite for high photovoltaic performances. Journal of Materials Chemistry A, 2018, 6, 12038-12045.	5.2	32
5387	Importance of CdS buffer layer thickness on Cu <sub>2</sub> ZnSnS <sub>4</sub> -based solar cell efficiency. Journal Physics D: Applied Physics, 2018, 51, 275501.	1.3	26
5388	Electrothermal Feedback and Absorption-Induced Open-Circuit-Voltage Turnover in Solar Cells. Physical Review Applied, 2018, 9, .	1.5	13
5389	Photoluminescence and Photoconductivity to Assess Maximum Open-Circuit Voltage and Carrier Transport in Hybrid Perovskites and Other Photovoltaic Materials. Journal of Physical Chemistry Letters, 2018, 9, 3779-3792.	2.1	17
5390	Singulettspaltung für Photovoltaikanwendungen mit Injektionseffizienzen von bis zu 130 %. Angewandte Chemie, 2018, 130, 10902-10907.	1.6	6
5391	Analytical optimization of intermediate band systems: Achieving the best of two worlds. Progress in Photovoltaics: Research and Applications, 2018, 26, 800-807.	4.4	6

ARTICLE IF CITATIONS Geometrical concentration for enhanced up-conversion: A review of recent results in energy and 5392 1.7 12 biomedical applications. Optical Materials, 2018, 83, 47-54. Efficiency enhancement through flat intermediate band in Quantum dot solar cell. Results in Physics, 2018, 10, 241-247. Residual strain measurement of Cu2ZnSnS4 thin film using X-ray line broadening. Molecular Crystals 5394 2 0.4 and Liquid Crystals, 2018, 663, 21-27. Multijunction Ga<sub>0.5</sub>In<sub>0.5</sub>P/GaAs solar cells grown by dynamic hydride vapor 4.4 phase epitaxy. Progress in Photovoltaics: Research and Applications, 2018, 26, 887-893. Building-Integrated Photovoltaic System., 2018, , 325-346. 5396 0 Extreme IR absorption in group IV-SiGeSn core-shell nanowires. Journal of Applied Physics, 2018, 123, . 1.1 Thermodynamic Limit of Solar to Fuel Conversion for Generalized Photovoltaic–Electrochemical 5398 1.56 Systems. IEEE Journal of Photovoltaics, 2018, 8, 1082-1089. Deep level emission in polycrystalline CuGaSe<sub>2</sub> thin-films observed by 5399 0.8 micro-photoluminescence. Japanese Journal of Applied Physics, 2018, 57, 08RC02. Broadband-sensitive upconversion emission of Er.Ni.Nb-codoped 5400 Gd<sub>3</sub>Ga<sub>5</sub>O<sub>12</sub>garnet. Japanese Journal of Applied Physics, 2018, 57, 0.8 6 08RF02. Status review and the future prospects of CZTS based solar cell – A novel approach on the device 5401 structure and material modeling for CZTS based photovoltaic device. Renewable and Sustainable 8.2 Energy Reviews, 2018, 94, 317-329. 5402 2.4 Thin Films. , 2018, , 88-116. 6 4.15 Solar Cells., 2018, , 637-658. 5403 Absorption Coefficient of a Semiconductor Thin Film from Photoluminescence. Physical Review 5404 1.5 28 Applied, 2018, 9, . Band bending near grain boundaries of Cu2ZnSn(S,Se)4 thin films and its effect on photovoltaic 5405 8.2 performance. Nano Energy, 2018, 51, 37-44. Layered Hexagonal Oxycarbides, Mn+1AO2Xn (M = Sc, Y, La, Cr, and Mo; A = Ca; X = C): Unexpected Photovoltaic Ceramics. Journal of Physical Chemistry C, 2018, 122, 14240-14247. 5406 1.5 3 Tailoring the Open-Circuit Voltage Deficit of Wide-Band-Gap Perovskite Solar Cells Using Alkyl 5407 Chain-Substituted Fullerene Derivatives. ACS Applied Materials & amp; Interfaces, 2018, 10, 22074-22082. Enhanced Photovoltaic Performance of FASnI<sub>-3</sub>-Based Perovskite Solar Cells with 5408 8.8 187 Hydrazinium Chloride Coadditive. ACS Energy Letters, 2018, 3, 1584-1589. Giant optical pathlength enhancement in plasmonic thin film solar cells using core-shell 5409 1.3 nanoparticles. Journal Physics D: Applied Physics, 2018, 51, 295106.

		15	0
#		IF	CITATIONS
5410	of the National Academy of Sciences of the United States of America, 2018, 115, 6566-6571.	3.3	40
5411	Relaxation of photoexcitations in polaron-induced magnetic microstructures. Physical Review B, 2018, 97, .	1.1	6
5412	Fabrication of SnS solar cells via facile nanoparticle synthesis based on non-toxic solvents. Thin Solid Films, 2018, 660, 294-300.	0.8	7
5413	NIR Downconversion and Energy Transfer Mechanisms in Tb <sup>3+</sup> /Yb <sup>3+</sup> Codoped Na <sub>5</sub> Lu <sub>9</sub> F <sub>32</sub> Single Crystals. Inorganic Chemistry, 2018, 57, 7792-7796.	1.9	26
5414	Tuning photovoltaic response in Bi <sub>2</sub> FeCrO <sub>6</sub> films by ferroelectric poling. Nanoscale, 2018, 10, 13761-13766.	2.8	33
5415	A review on morphology engineering for highly efficient and stable hybrid perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 12842-12875.	5.2	168
5416	The effect of double doped nc-Si:H tunnel recombination junction in a-Si:H/c-Si tandem solar cells. Semiconductor Science and Technology, 2018, 33, 075017.	1.0	2
5417	Si nanocrystals-based multilayers for luminescent and photovoltaic device applications. Journal of Semiconductors, 2018, 39, 061007.	2.0	5
5418	Effective MgO-doped TiO <sub>2</sub> nanoaerogel coating for crystalline silicon solar cells improvement. International Journal of Energy Research, 2018, 42, 3915-3927.	2.2	10
5419	The influence of ZnS crystallinity on all-electroplated ZnS/CdS/CdTe graded bandgap device properties. Journal of Materials Science: Materials in Electronics, 2018, 29, 13631-13642.	1.1	6
5420	All-Oxide Solar Cells. , 2018, , 439-480.		10
5421	Progress in Scalable Coating and Rollâ€toâ€Roll Compatible Printing Processes of Perovskite Solar Cells toward Realization of Commercialization. Advanced Optical Materials, 2018, 6, 1701182.	3.6	52
5422	Solution-processed all-oxide solar cell based on electrodeposited Cu2O and ZnMgO by spray pyrolysis. Journal of Materials Science, 2018, 53, 12231-12243.	1.7	28
5423	Energy harvesting from lukewarm photons. Nature Nanotechnology, 2018, 13, 772-773.	15.6	2
5424	V oc transient in silicon heterojunction solar cells with µc-SiOx:H window layers. Journal Physics D: Applied Physics, 2018, 51, 305501.	1.3	1
5425	Nahinfrarotaktive Bleichalkogenidâ€Quantenpunkte: Herstellung, postsynthetischer Ligandenaustausch und Anwendungen in Solarzellen. Angewandte Chemie, 2019, 131, 5256-5279.	1.6	4
5426	Nearâ€Infrared Active Lead Chalcogenide Quantum Dots: Preparation, Postâ€5ynthesis Ligand Exchange, and Applications in Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 5202-5224.	7.2	86
5427	Influence of CZTS Layer Parameters on Cell Performance of Kesterite Thin-Film Solar Cells. Lecture Notes in Electrical Engineering, 2019, , 640-646.	0.3	3

#	Article	IF	CITATIONS
5428	The hierarchical and perturbative forms of stochastic Schrödinger equations and their applications to carrier dynamics in organic materials. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2019, 9, e1375.	6.2	23
5429	Improving spectral modification for applications in solar cells: A review. Renewable Energy, 2019, 132, 186-205.	4.3	159
5430	High openâ€circuit voltage CuSbS <sub>2</sub> solar cells achieved through the formation of epitaxial growth of CdS/CuSbS <sub>2</sub> heteroâ€interface by postâ€annealing treatment. Progress in Photovoltaics: Research and Applications, 2019, 27, 37-43.	4.4	26
5431	Introduction to Photovoltaics. , 2019, , 1-15.		0
5432	Solar Cell Fabrication and Characterisation. , 2019, , 185-241.		0
5433	Numerical investigation on the effect of different parameters in enhancing heat transfer performance of photovoltaic thermal systems. Renewable Energy, 2019, 132, 284-295.	4.3	59
5434	Correlating Chargeâ€Carrier Dynamics with Efficiency in Quantumâ€Dot Solar Cells: Can Excitonics Lead to Highly Efficient Devices?. Chemistry - A European Journal, 2019, 25, 692-702.	1.7	15
5435	Using Nanoparticles as a Bottom-up Approach to Increase Solar Cell Efficiency. KONA Powder and Particle Journal, 2019, 36, 72-87.	0.9	15
5436	Relaxational kinetics of photoemission from Cs/GaAs and GaAs(Cs,O) surfaces at elevated temperatures. Journal of Physics: Conference Series, 2019, 1199, 012011.	0.3	2
5437	Postâ€Deposition Vapor Annealing Enables Fabrication of 1 cm 2 Leadâ€Free Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900245.	3.1	23
5438	An Oligothiophene–Fullerene Molecule with a Balanced Donor–Acceptor Backbone for Highâ€Performance Singleâ€Component Organic Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 14556-14561.	7.2	62
5439	Competition between Singlet Fission and Spinâ€Orbitâ€Induced Intersystem Crossing in Anthanthrene and Anthanthrone Derivatives. ChemPlusChem, 2019, 84, 1432-1438.	1.3	12
5440	Efficiency simulations on perovskite solar cells only using experimentally determined reflectance and transmittance data. Solar Energy Materials and Solar Cells, 2019, 201, 110039.	3.0	6
5441	Nonlinear Band Gap Tunability in Selenium–Tellurium Alloys and Its Utilization in Solar Cells. ACS Energy Letters, 2019, 4, 2137-2143.	8.8	49
5442	A theoretical and experimental study of the valence-band electronic structure and optical constants of quaternary copper mercury tin sulfide, Cu2HgSnS4, a potential material for optoelectronics and solar cells. Optical Materials, 2019, 96, 109296.	1.7	41
5443	Optimization of (Zn,Sn)O buffer layer in Cu(In,Ga)Se2 based solar cells. Solar Energy, 2019, 189, 464-470.	2.9	25
5444	Enhancing the energy conversion efficiency of low mobility solar cells by a 3D device architecture. Journal of Materials Chemistry C, 2019, 7, 10289-10296.	2.7	10
5445	Development of SnSe thin films through selenization of sputtered Sn-metal films. Journal of Materials Science: Materials in Electronics, 2019, 30, 15980-15988.	1.1	16

#	Article	IF	CITATIONS
5446	Preparation and redox properties of fluorinated 1,3-diphenylisobenzofurans. Electrochimica Acta, 2019, 321, 134659.	2.6	4
5447	Optimal arrangements of 1,3-diphenylisobenzofuran molecule pairs for fast singlet fission. Photochemical and Photobiological Sciences, 2019, 18, 2112-2124.	1.6	14
5448	Colloidal quantum dots for infrared detection beyond silicon. Journal of Chemical Physics, 2019, 151, .	1.2	63
5449	S-Shaped Current–Voltage Characteristics in Solar Cells: A Review. IEEE Journal of Photovoltaics, 2019, 9, 1477-1484.	1.5	66
5450	An Oligothiophene–Fullerene Molecule with a Balanced Donor–Acceptor Backbone for Highâ€Performance Singleâ€Component Organic Solar Cells. Angewandte Chemie, 2019, 131, 14698-14703.	1.6	6
5451	Optical Applications of Nanomaterials. Advanced Structured Materials, 2019, , 1-29.	0.3	5
5452	Rational Integration of Photovoltaics for Solar Hydrogen Generation. ACS Applied Energy Materials, 2019, 2, 6395-6403.	2.5	13
5453	Six new silicon phases with direct band gaps. Physical Chemistry Chemical Physics, 2019, 21, 19963-19968.	1.3	16
5454	Photochemical Upconversion Theory: Importance of Triplet Energy Levels and Triplet Quenching. Physical Review Applied, 2019, 12, .	1.5	5
5455	Spectral Splitting for Parallel Junction Solar Cells. , 2019, , .		0
5456	Analytic Modeling of the of <i>J–V</i> Characteristics of Quantum Dot-Based Photovoltaic Cells. International Journal of Nanoscience, 2019, 18, 1940083.	0.4	0
5457	Detailed Balance Analysis of Photovoltaic Windows. ACS Energy Letters, 2019, 4, 2130-2136.	8.8	22
5458	A Marcus-Hush perspective on adiabatic singlet fission. Journal of Chemical Physics, 2019, 151, .	1.2	7
5459	Photophysics of lead-free tin halide perovskite films and solar cells. APL Materials, 2019, 7, .	2.2	32
5460	Strong light-matter coupling for reduced photon energy losses in organic photovoltaics. Nature Communications, 2019, 10, 3706.	5.8	72
5461	Bandgap Engineering Enhances the Performance of Mixed ation Perovskite Materials for Indoor Photovoltaic Applications. Advanced Energy Materials, 2019, 9, 1901863.	10.2	78
5462	Thermoradiative Cells Based on a p-type Cu3SbSe4 Semiconductor: Application of a Detailed Balance Model. Journal of Electronic Materials, 2019, 48, 6777-6785.	1.0	4
5463	Suppression of Charge Carrier Recombination in Lead-Free Tin Halide Perovskite via Lewis Base Post-treatment. Journal of Physical Chemistry Letters, 2019, 10, 5277-5283.	2.1	196

#	Article	IF	Citations
5464	Butyldithiocarbamate acid solution processing: its fundamentals and applications in chalcogenide thin film solar cells. Journal of Materials Chemistry C, 2019, 7, 11068-11084.	2.7	31
5465	Photoelectrochemical-voltaic cells consisting of particulate Zn <sub>x</sub> Cd <sub>1â<sup>~</sup>x</sub> Se photoanodes with photovoltages exceeding 1.23 V. Sustainable Energy and Fuels, 2019, 3, 2733-2741.	2.5	2
5466	Guide for the perplexed to the Shockley–Queisser model for solar cells. Nature Photonics, 2019, 13, 501-505.	15.6	153
5467	Relationship between residual strain and band gap of Cu <sub>2</sub> ZnSnS <sub>4</sub> thin films grown by pre-sulfurized precursor. Molecular Crystals and Liquid Crystals, 2019, 678, 70-76.	0.4	0
5469	Numerical analysis of a novel <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">altimg="si21.svg"&gt;<mml:mtext>C</mml:mtext><mml:mtext>N</mml:mtext><mml:mtext>T</mml:mtext><mml: Optik, 2019, 197, 163107.</mml: </mml:math>	m <b>o.</b> #/ <td>nl:2290&gt;<mml:< td=""></mml:<></td>	nl:2290> <mml:< td=""></mml:<>
5470	Exploiting Excited-State Aromaticity To Design Highly Stable Singlet Fission Materials. Journal of the American Chemical Society, 2019, 141, 13867-13876.	6.6	104
5471	A 19.9%-efficient ultrathin solar cell based on a 205-nm-thick GaAs absorber and a silver nanostructured back mirror. Nature Energy, 2019, 4, 761-767.	19.8	136
5472	Optimal Semiconductors for 3H and 63Ni Betavoltaics. Scientific Reports, 2019, 9, 10892.	1.6	35
5473	Reduced Nonradiative Energy Loss Caused by Aggregation of Nonfullerene Acceptor in Organic Solar Cells. Advanced Energy Materials, 2019, 9, 1901823.	10.2	72
5474	Rare-Earth Doped Forsterite: Anti-reflection Coating with Upconversion Properties as Solar Capture Solution. Engineering Materials, 2019, , 103-130.	0.3	2
5475	Efficiency and power enhancement of solar cells by dark states. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 125857.	0.9	2
5476	Synthesis and Applications of III–V Nanowires. Chemical Reviews, 2019, 119, 9170-9220.	23.0	208
5477	Microsecond Carrier Lifetimes, Controlled p-Doping, and Enhanced Air Stability in Low-Bandgap Metal Halide Perovskites. ACS Energy Letters, 2019, 4, 2301-2307.	8.8	46
5478	Mutual Insight on Ferroelectrics and Hybrid Halide Perovskites: A Platform for Future Multifunctional Energy Conversion. Advanced Materials, 2019, 31, e1807376.	11.1	91
5479	Earth-abundant nontoxic direct band gap semiconductors for photovoltaic applications by ab-initio simulations. Solar Energy, 2019, 190, 350-360.	2.9	11
5480	Anomalous Temperature-Dependent Charge Recombination in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite: Key Roles of Charge Localization and Thermal Effect. ACS Applied Materials & Interfaces, 2019, 11, 32069-32075.	4.0	22
5481	Identifying the Ground-State NP Sheet through a Global Structure Search in Two-Dimensional Space and Its Promising High-Efficiency Photovoltaic Properties. , 2019, 1, 375-382.		26
5482	Efficiency enhancement of Cu2ZnSnS4 thin film solar cells by chromium doping. Solar Energy Materials and Solar Cells, 2019, 201, 110057.	3.0	18

#	Article	IF	CITATIONS
5483	Highâ€Pressure Bandâ€Gap Engineering and Metallization in the Perovskite Derivative Cs <sub>3</sub> Sb <sub>2</sub> I <sub>9</sub> . ChemSusChem, 2019, 12, 3971-3976.	3.6	28
5484	Accelerated Discovery of Efficient Solar Cell Materials Using Quantum and Machine-Learning Methods. Chemistry of Materials, 2019, 31, 5900-5908.	3.2	87
5485	Strain Relaxation and Light Management in Tin–Lead Perovskite Solar Cells to Achieve High Efficiencies. ACS Energy Letters, 2019, 4, 1991-1998.	8.8	114
5486	Use of Bimetallic Plasmonic Nanoparticle Complexes for Enhancing Thin-Film Solar Cell Efficiency. , 2019, , .		5
5487	Perovskite/Silicon Tandem Solar Cells: From Detailed Balance Limit Calculations to Photon Management. Nano-Micro Letters, 2019, 11, 58.	14.4	115
5488	Effect of sulfurization temperature on the efficiency of SnS solar cells fabricated by sulfurization of sputtered tin precursor layers using effusion cell evaporation. Journal of Alloys and Compounds, 2019, 806, 410-417.	2.8	18
5489	Electronic Properties and Photovoltaic Functionality of Zn-Doped Orthorhombic CH3NH3PbI3: A GGA+vdW Study. Journal of Electronic Materials, 2019, 48, 6327-6334.	1.0	2
5490	Towards integrated tunable all-silicon free-electron light sources. Nature Communications, 2019, 10, 3176.	5.8	55
5491	Growth temperature influenced electrical properties of copper-oxide thin films. AIP Conference Proceedings, 2019, , .	0.3	2
5492	Harvesting the Electromagnetic Energy Confined Close to a Hot Body. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2019, 74, 689-696.	0.7	7
5494	On the origin of open-circuit voltage losses in flexible <i>n-i-p</i> perovskite solar cells. Science and Technology of Advanced Materials, 2019, 20, 786-795.	2.8	15
5495	Metal Cations in Efficient Perovskite Solar Cells: Progress and Perspective. Advanced Materials, 2019, 31, e1902037.	11.1	71
5496	Device Physics of the Carrier Transporting Layer in Planar Perovskite Solar Cells. Advanced Optical Materials, 2019, 7, 1900407.	3.6	34
5497	Improved efficiency of GaSb solar cells using an Al0.50Ga0.50As0.04Sb0.96 window layer. Solar Energy Materials and Solar Cells, 2019, 200, 110042.	3.0	14
5498	Ultraâ€Thin Perovskite Solar Cells Analytical Model Involving Radiative and Nonradiative Carrier Recombination Mechanisms. Physica Status Solidi (B): Basic Research, 2019, 256, 1900340.	0.7	2
5499	Enhanced Open-Circuit Voltage of Wide-Bandgap Perovskite Photovoltaics by Using Alloyed (FA <sub>1–<i>x</i></sub> Cs <sub><i>x</i></sub> )Pb(l <sub>1–<i>x</i></sub> Br <sub><i>x</i></sub> ) <sub> Quantum Dots. ACS Energy Letters, 2019, 4, 1954-1960.</sub>	> <b>8</b> :≰sub>	73
5500	Probing the effect of selenium substitution in kesterite-Cu2ZnSnS4 nanocrystals prepared by hot injection method. Journal of Materials Science: Materials in Electronics, 2019, 30, 14781-14790.	1,1	8
5501	Yb-doped double tungstates for down-conversion applications. Optical Materials, 2019, 94, 415-422.	1.7	14

#	Article	IF	CITATIONS
5502	Experimental assessment of Poly C-Si, CIGS and CdTe Photovoltaic technologies under real working conditions. , 2019, , .		2
5503	Luminescence properties of Yb <sup>3+</sup> -doped SrTiO <sub>3</sub> : the significance of the oxygen–titanium charge transfer state on photon downshifting. Dalton Transactions, 2019, 48, 11889-11896.	1.6	10
5504	The impact of energy alignment and interfacial recombination on the internal and external open-circuit voltage of perovskite solar cells. Energy and Environmental Science, 2019, 12, 2778-2788.	15.6	570
5505	Unravelling the practical solar charging performance limits of redox flow batteries based on a single photon device system. Sustainable Energy and Fuels, 2019, 3, 2399-2408.	2.5	15
5506	Exergonic Intramolecular Singlet Fission of an Adamantane-Linked Tetracene Dyad via Twin Quintet Multiexcitons. Journal of Physical Chemistry C, 2019, 123, 18813-18823.	1.5	39
5507	Heterogeneity at multiple length scales in halide perovskite semiconductors. Nature Reviews Materials, 2019, 4, 573-587.	23.3	200
5508	High open-circuit voltages in lead-halide perovskite solar cells: experiment, theory and open questions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180286.	1.6	28
5509	Doping and Anisotropy–Dependent Electronic Transport in Chalcogenide Perovskite CaZrSe <sub>3</sub> for High Thermoelectric Efficiency. Advanced Theory and Simulations, 2019, 2, 1900060.	1.3	14
5510	Liquid Crystallinity as a Selfâ€Assembly Motif for Highâ€Efficiency, Solutionâ€Processed, Solidâ€State Singlet Fission Materials. Advanced Energy Materials, 2019, 9, 1901069.	10.2	11
5511	Functional Oxides for Photoneuromorphic Engineering: Toward a Solar Brain. Advanced Materials Interfaces, 2019, 6, 1900471.	1.9	31
5512	Recent progress in fundamental understanding of halide perovskite semiconductors. Progress in Materials Science, 2019, 106, 100580.	16.0	95
5513	Hot-carrier generation and extraction in InAs/GaAs quantum dot superlattice solar cells. Semiconductor Science and Technology, 2019, 34, 094003.	1.0	13
5514	Engineering Molecular Ligand Shells on Quantum Dots for Quantitative Harvesting of Triplet Excitons Generated by Singlet Fission. Journal of the American Chemical Society, 2019, 141, 12907-12915.	6.6	48
5515	Effect of linear side-chain length on the photovoltaic performance of benzodithiophene- <i>alt</i> dicarboxylic ester terthiophene polymers. New Journal of Chemistry, 2019, 43, 12950-12956.	1.4	9
5516	Highly Efficient Semitransparent Solar Cells with Selective Absorption and Tandem Architecture. Advanced Materials, 2019, 31, e1901683.	11.1	89
5517	Chromophore Multiplication To Enable Exciton Delocalization and Triplet Diffusion Following Singlet Fission in Tetrameric Pentacene. Angewandte Chemie - International Edition, 2019, 58, 15263-15267.	7.2	26
5518	< 50-μm thin crystalline silicon heterojunction solar cells with dopant-free carrier-selective contacts. Nano Energy, 2019, 64, 103930.	8.2	18
5519	Ultraefficient thermophotovoltaic power conversion by band-edge spectral filtering. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15356-15361.	3.3	150

#	Article	IF	CITATIONS
5520	On the Relation between the Open ircuit Voltage and Quasiâ€Fermi Level Splitting in Efficient Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1901631.	10.2	275
5521	Improvement of polycrystalline InN thin films properties by localized ion source under low RF plasma ambient. Journal of Materials Science: Materials in Electronics, 2019, 30, 15534-15543.	1.1	3
5522	Photoinduced formation of Cu@Cu <sub>2</sub> O@C plasmonic nanostructures with efficient interfacial charge transfer for hydrogen evolution. Journal of Materials Chemistry A, 2019, 7, 19324-19331.	5.2	15
5523	Sensitivity analysis of the theoretical performance of semiconductor upconversion nanostructures. Journal of Applied Physics, 2019, 126, .	1.1	1
5524	Tuning electronic and optical properties of CsPbI3 by applying strain: A first-principles theoretical study. Chemical Physics Letters, 2019, 732, 136642.	1.2	40
5525	Light trapping nano structures with over 30% enhancement in perovskite solar cells. Organic Electronics, 2019, 75, 105385.	1.4	14
5526	Charge Carrier Transport, Trapping, and Recombination in PEDOT:PSS/n-Si Solar Cells. ACS Applied Energy Materials, 2019, 2, 5983-5991.	2.5	9
5527	Efficient triplet pair separation from intramolecular singlet fission in dibenzopentalene derivatives. Science China Chemistry, 2019, 62, 1037-1043.	4.2	5
5528	Chromophore Multiplication To Enable Exciton Delocalization and Triplet Diffusion Following Singlet Fission in Tetrameric Pentacene. Angewandte Chemie, 2019, 131, 15407-15411.	1.6	7
5529	Enhanced stability in cesium assisted hybrid 2D/3D-perovskite thin films and solar cells prepared in ambient humidity. Solar Energy, 2019, 189, 325-332.	2.9	29
5530	Rare-earth doped/codoped CaMoO4 phosphors: A candidate for solar spectrum conversion. Solid State Sciences, 2019, 96, 105945.	1.5	20
5531	Ultrathin Janus WSSe buffer layer for W(S/Se)2 absorber based solar cells: A hybrid, DFT and macroscopic, simulation studies. Solar Energy Materials and Solar Cells, 2019, 201, 110076.	3.0	46
5532	Light coupling to quasi-guided modes in nanoimprinted perovskite solar cells. Solar Energy Materials and Solar Cells, 2019, 201, 110080.	3.0	29
5533	Quantum dynamical simulation of intramolecular singlet fission in covalently coupled pentacene dimers. Journal of Chemical Physics, 2019, 151, 044307.	1.2	14
5534	Editors' Choice—Stability of Unstable Perovskites: Recent Strategies for Making Stable Perovskite Solar Cells. ECS Journal of Solid State Science and Technology, 2019, 8, Q111-Q117.	0.9	12
5535	Polarization-modulated photovoltaic conversion in polycrystalline bismuth ferrite. Acta Materialia, 2019, 176, 1-10.	3.8	27
5536	A pn-junction between chalcopyrite phosphide semiconductors for photovoltaic application. Japanese Journal of Applied Physics, 2019, 58, 075508.	0.8	1
5537	Light Harvesting with Guide-Slide Superabsorbing Condensed-Matter Nanostructures. Journal of Physical Chemistry Letters, 2019, 10, 4323-4329.	2.1	19

	Сітатіс	CITATION REPORT		
#	Article	IF	CITATIONS	
5538	Novel NIR LaGaO <sub>3</sub> :Cr <sup>3+</sup> ,Ln <sup>3+</sup> (Ln = Yb, Nd, Er) phosphors <i>via</i> energy transfer for C–Si-based solar cells. Dalton Transactions, 2019, 48, 11460-11468.	1.6	36	
5539	Roadmap on metasurfaces. Journal of Optics (United Kingdom), 2019, 21, 073002.	1.0	146	
5540	lodine-rich mixed composition perovskites optimised for tin( <scp>iv</scp> ) oxide transport layers: the influence of halide ion ratio, annealing time, and ambient air aging on solar cell performance. Journal of Materials Chemistry A, 2019, 7, 16947-16953.	5.2	32	
5541	Sensitization of silicon by singlet exciton fission in tetracene. Nature, 2019, 571, 90-94.	13.7	221	
5542	InAs/AlGaAs quantum dots grown by a novel molecular beam epitaxy multistep design for intermediate band solar cells: physical insight into the structure, composition, strain and optical properties. CrystEngComm, 2019, 21, 4644-4652.	1.3	1	
5545	Synthesis and evaluation of the structural, optical, and antibacterial properties of copper oxide nanoparticles. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	1.1	49	
5546	Integrated Photon Upconversion Dye-Sensitized Solar Cell by Co-adsorption with Derivative of Pt–Porphyrin and Anthracene on Mesoporous TiO <sub>2</sub> . ACS Omega, 2019, 4, 11271-11275.	1.6	14	
5547	Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS. Joule, 2019, 3, 1734-1745.	11.7	227	
5548	Effect of selenium and chlorine co-passivation in polycrystalline CdSeTe devices. Applied Physics Letters, 2019, 115, .	1.5	33	
5549	Analytical Form of Sputtering in Relation to Surface Binding Energy for Different Types of Perovskites. Journal of Physics: Conference Series, 2019, 1299, 012022.	0.3	4	
5550	Synthesis of new Si9 material with a direct bandgap and its unique physical properties. Materials Research Express, 2019, 6, 105905.	0.8	1	
5551	Accelerated Discovery of Two-Dimensional Optoelectronic Octahedral Oxyhalides via High-Throughput <i>Ab Initio</i> Calculations and Machine Learning. Journal of Physical Chemistry Letters, 2019, 10, 6734-6740.	2.1	40	
5552	Efficient, 23%, Solution-Processed Perovskite Tandem Cells. Joule, 2019, 3, 2069-2070.	11.7	4	
5553	Enhance short-wavelength response of CIGS solar cell by CdSe quantum disks as luminescent down-shifting material. Solar Energy, 2019, 193, 303-308.	2.9	14	
5554	Diagnosis of Perovskite Solar Cells Through Absolute Electroluminescence-Efficiency Measurements. Frontiers in Physics, 2019, 7, .	1.0	1	

5555	Review on Recent Progress of Allâ€Inorganic Metal Halide Perovskites and Solar Cells. Advanced Materials, 2019, 31, e1902851.	11.1	309
5556	Optimal Arrangements of Tetracene Molecule Pairs for Fast Singlet Fission. Bulletin of the Chemical Society of Japan, 2019, 92, 1960-1971.	2.0	13
5557	26â€ <sup>–</sup> mAâ€ <sup>–</sup> cmâ~'2 JSC achieved in the integrated solar cells. Science Bulletin, 2019, 64, 1747-1749.	4.3	27

#	Article	IF	CITATIONS
5558	A multiscale materials-to-systems modeling of polycrystalline PbSe photodetectors. Journal of Applied Physics, 2019, 126, .	1.1	15
5559	First-Principle Calculation of High Absorption-TlGaTe2 for Photovoltaic Application. Materials, 2019, 12, 2667.	1.3	1
5560	Nanostructured Perovskite Solar Cells. Nanomaterials, 2019, 9, 1481.	1.9	19
5561	Large-Area 23%-Efficient Monolithic Perovskite/Homojunction-Silicon Tandem Solar Cell with Enhanced UV Stability Using Down-Shifting Material. ACS Energy Letters, 2019, 4, 2623-2631.	8.8	88
5562	Atomic-Level Microstructure of Efficient Formamidinium-Based Perovskite Solar Cells Stabilized by 5-Ammonium Valeric Acid Iodide Revealed by Multinuclear and Two-Dimensional Solid-State NMR. Journal of the American Chemical Society, 2019, 141, 17659-17669.	6.6	104
5563	Quantum control of excitons for reversible heat transfer. Communications Physics, 2019, 2, .	2.0	5
5564	Effect of impact ionization on the performance of quantum ratchet embedded intermediate band solar cell: An extensive simulation study. Optik, 2019, 199, 163382.	1.4	5
5565	Importance of interfacial crystallinity to reduce open-circuit voltage loss in organic solar cells. Applied Physics Letters, 2019, 115, .	1.5	18
5566	Transparent All-Oxide Photovoltaics and Invisible Photodetectors. ECS Transactions, 2019, 92, 25-32.	0.3	0
5567	Detailed balance analysis of plasmonic metamaterial perovskite solar cells. Optics Express, 2019, 27, A1241.	1.7	31
5568	Glass engineering to enhance Si solar cells: A case study of Pr3+â^'Yb3+ codoped tellurite-tungstate as spectral converter. Journal of Non-Crystalline Solids, 2019, 526, 119717.	1.5	8
5569	Investigation into the current loss in InAs/GaAs quantum dot solar cells with Si-doped quantum dots. Journal Physics D: Applied Physics, 2019, 52, 505108.	1.3	0
5570	Effect of spray volume on the properties of Cu <sub>2</sub> ZnSnS <sub>4</sub> absorber thin film fabricated through nebulizer assisted spray pyrolysis technique. Materials Research Express, 2019, 6, 106434.	0.8	6
5571	Influence of TiO2 layer on ultimate efficiencies for planar and nano-textured CH3NH3PbI3 solar cells. Materials Research Express, 2019, 6, 115516.	0.8	2
5572	Tin fluoride assisted growth of air stable perovskite derivative Cs <sub>2</sub> SnI <sub>6</sub> thin film as a hole transport layer. Materials Research Express, 2019, 6, 116442.	0.8	5
5573	Charge Carrier Collection and Contact Selectivity in Solar Cells. Advanced Materials Interfaces, 2019, 6, 1900252.	1.9	39
5574	Simulation and partial prototyping of an eightâ€junction holographic spectrumâ€splitting photovoltaic module. Energy Science and Engineering, 2019, 7, 2572-2584.	1.9	7
5575	Boosting the ultra-stable unencapsulated perovskite solar cells by using montmorillonite/CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> nanocomposite as photoactive layer. Energy and Environmental Science, 2019, 12, 1265-1273.	15.6	53

#	Article	IF	CITATIONS
5576	Ca <sub>3</sub> La <sub>2</sub> Te <sub>2</sub> O <sub>12</sub> :Mn <sup>4+</sup> ,Nd <sup>3+</sup> ,Yb <su an efficient thermally-stable UV/visible–far red/NIR broadband spectral converter for c-Si solar cells and plant-growth LEDs. Materials Chemistry Frontiers, 2019, 3, 403-413.</su 	1p>3+3.2	p>: 26
5577	An emerging solar-thermal-electric conversion system based on highly-efficient photothermal nanoabsorber layer. Materials Research Express, 2019, 6, 115531.	0.8	3
5578	The impact of surface finish conditions of silicon bricks on the mechanical strength of diamond-wire-sawn thin wafers (120â€Âµm). AIP Conference Proceedings, 2019, , .	0.3	2
5579	Valence-State Controllable Fabrication of Cu <sub>2–<i>x</i></sub> O/Si Type-II Heterojunction for High-Performance Photodetectors. ACS Applied Materials & Interfaces, 2019, 11, 43376-43382.	4.0	20
5580	Scientific complications and controversies noted in the field of CdS/CdTe thin film solar cells and the way forward for further development. Journal of Materials Science: Materials in Electronics, 2019, 30, 20330-20344.	1.1	29
5581	Vibrational probe of the origin of singlet exciton fission in TIPS-pentacene solutions. Journal of Chemical Physics, 2019, 151, 154701.	1.2	18
5582	Enhancing the Performance of Textured Silicon Solar Cells by Combining Up-Conversion with Plasmonic Scattering. Energies, 2019, 12, 4119.	1.6	2
5583	Engineering of effective back-contact barrier of CZTSe: Nanoscale Ge solar cells – MoSe2 defects implication. Solar Energy, 2019, 194, 114-120.	2.9	18
5584	Can Thermodynamics Guide Us to Make Better Solar Cells?. IEEE Journal of Photovoltaics, 2019, 9, 1614-1624.	1.5	6
5585	Ferroelectric Polarization Suppresses Nonradiative Electron–Hole Recombination in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskites: A Time-Domain ab Initio Study. Journal of Physical Chemistry Letters, 2019, 10, 7237-7244.	2.1	17
5586	Advancing photovoltaics and thermophotovoltaics with supradegeneracy. Sustainable Energy Technologies and Assessments, 2019, 36, 100539.	1.7	1
5587	Towards the maximum efficiency design of a perovskite solar cell by material properties tuning: A multidimensional approach. Solar Energy, 2019, 194, 499-509.	2.9	1
5588	Oxygen-catalysed sequential singlet fission. Nature Communications, 2019, 10, 5202.	5.8	15
5590	A review on computational modelling of individual device components and interfaces of perovskite solar cells using DFT. AIP Conference Proceedings, 2019, , .	0.3	5
5591	Multidimensional Spectroscopy on the Microscale: Development of a Multimodal Imaging System Incorporating 2D White-Light Spectroscopy, Broadband Transient Absorption, and Atomic Force Microscopy. Journal of Physical Chemistry A, 2019, 123, 10824-10836.	1.1	23
5592	Machine Learning for Accelerated Discovery of Solar Photocatalysts. ACS Catalysis, 2019, 9, 11774-11787.	5.5	100
5593	Improved optoelectronic properties in CdSexTe1â^'x through controlled composition and short-range order. Solar Energy, 2019, 194, 742-750.	2.9	19
5594	Back contact effect on electrodeposited CZTS kesterite thin films experimental and numerical investigation. Solar Energy, 2019, 194, 932-938.	2.9	23

		CITATION RE	PORT	
#	Article		IF	CITATIONS
5595	Interface Engineering in Tin Perovskite Solar Cells. Advanced Materials Interfaces, 2019	), 6, 1901322.	1.9	32
5596	Theoretical analysis of solar thermophotovoltaic energy conversion with selective meta cavity reflector. Solar Energy, 2019, 191, 623-628.	afilm and	2.9	30
5597	Anharmonicity Extends Carrier Lifetimes in Lead Halide Perovskites at Elevated Temper of Physical Chemistry Letters, 2019, 10, 6219-6226.	atures. Journal	2.1	66
5598	Weakly coupled triplet pair states probed by quantum beating in delayed fluorescence crystals. Journal of Chemical Physics, 2019, 151, 134309.	in tetracene	1.2	10
5599	New strategies for colloidal-quantum-dot-based intermediate-band solar cells. Journal o Physics, 2019, 151, 154101.	of Chemical	1.2	3
5600	Enhanced quantum yields and efficiency in a quantum dot photocell modeled by a mul New Journal of Physics, 2019, 21, 103015.	ti-level system.	1.2	12
5601	Crystal structure of ajacisine D monohydrate, C30H44N2O9. Zeitschrift Fur Kristallogra Crystal Structures, 2019, 234, 527-529.	aphie - New	0.1	0
5602	Theoretical Study of Ternary CoSP Semiconductor: A Candidate for Photovoltaic Applic Advanced Theory and Simulations, 2019, 2, 1900111.	ations.	1.3	1
5603	Morphology independent triplet formation in pentalene films: Singlet fission as the trip mechanism. Journal of Chemical Physics, 2019, 151, 124701.	let formation	1.2	17
5604	Theoretical study on electronic and optical properties of mixed valence perovskite Cs <sub>2</sub> Au <sub>2</sub> <i>X</i> <sub>6</sub> ( <i>X</i> = Cl, Br, I). Japanes Physics, 2019, 58, 111002.	se Journal of Applied	0.8	4
5605	Mixed Lead Halide Passivation of Quantum Dots. Advanced Materials, 2019, 31, e1904	1304.	11.1	81
5606	Enhance root-bleeding sap flow and root lodging resistance of maize under a combinat nitrogen strategies and farming practices. Agricultural Water Management, 2019, 224	ion of , 105742.	2.4	17
5607	Nitrogen-Doped Cu2O Thin Films for Photovoltaic Applications. Materials, 2019, 12, 30	)38.	1.3	18
5608	Photonic enhancement of parallel homo-tandem solar cells through the central electro Energy Materials and Solar Cells, 2019, 193, 73-79.	de. Solar	3.0	7
5609	Impact of deposition pressure and two-step growth technique on the photoresponsivit of polycrystalline BaSi <sub>2</sub> films formed by sputtering. Applied Physics Expres 021004.	y enhancement ss, 2019, 12,	1.1	11
5610	Pathways of carrier recombination in Si/SiO2 nanocrystal superlattices. Journal of Appli 2019, 126, 163101.	ed Physics,	1.1	4
5611	Substrate independent oriented 2D growth of SnS thin films from sputtering. Materials Express, 2019, 6, 116427.	s Research	0.8	6
5612	Enhancing Thermophotovoltaic Performance Using Graphene-BN- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"&gt;<mml:mrow> <mml:mi>In</mml:mi><mml:mi>Sb</mml:mi>Near-Field Heterostructures. Physical Review Applied. 2019. 12</mml:mrow></mml:math 	irow>	1.5	26

#	Article	IF	CITATIONS
5613	Hund excitations and the efficiency of Mott solar cells. Physical Review B, 2019, 100, .	1.1	16
5614	SDR: A Novel Similarity Measure Using Curve Fitting Method for Time Series Data Clustering. , 2019, , .		0
5615	Radiative cooling of solar cells: opto-electro-thermal physics and modeling. Nanoscale, 2019, 11, 17073-17083.	2.8	66
5616	Study of Effects of Cl and Se in CdSeTe Solar Cells Using Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2019, 25, 2150-2151.	0.2	5
5617	Lead-Free Antimony-Based Light-Emitting Diodes through the Vapor–Anion-Exchange Method. ACS Applied Materials & Interfaces, 2019, 11, 35088-35094.	4.0	74
5618	Limiting factors and efficiencies of narrow bandgap single-absorber and multi-stage interband cascade thermophotovoltaic cells under monochromatic light illumination. Journal of Applied Physics, 2019, 126, .	1.1	10
5619	Beyond 30% Conversion Efficiency in Silicon Solar Cells: A Numerical Demonstration. Scientific Reports, 2019, 9, 12482.	1.6	109
5620	Synergy effect of intraband transition and impact-Auger in optical hot-carrier solar cells. Journal of Applied Physics, 2019, 126, 074501.	1.1	4
5621	Review of CdTe1â <sup>~</sup> 'xSex Thin Films in Solar Cell Applications. Coatings, 2019, 9, 520.	1.2	25
5622	Photovoltaic effect in <i>m</i> -plane orientated ZnOS epitaxial thin films. Applied Physics Letters, 2019, 115, .	1.5	8
5623	Design of hexameric flower shaped nanoantenna for energy harvesting. AIP Conference Proceedings, 2019, , .	0.3	0
5624	Performance Enhancement of Solar Cell by Incorporating Bilayer RGOâ€ITO Smart Conducting Antireflection Coating. Global Challenges, 2019, 3, 1800109.	1.8	3
5625	In situ interface engineering for probing the limit of quantum dot photovoltaic devices. Nature Nanotechnology, 2019, 14, 950-956.	15.6	30
5626	High-resolution Scanning Transmission EBIC Analysis of Misfit Dislocations at Perovskite pn-Heterojunctions. Journal of Physics: Conference Series, 2019, 1190, 012009.	0.3	4
5627	Analytical-Numerical Modeling of Thermalization Loss in the InGaAs Quantum Wire Solar Cells. , 2019, , .		2
5628	Maximum Efficiencies and Performance-Limiting Factors of Inorganic and Hybrid Perovskite Solar Cells. Physical Review Applied, 2019, 12, .	1.5	19
5629	Limiting Efficiency of Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 1590-1595.	1.5	4
5630	Thermal Design and Performance of a Luminescent Solar Concentrator for Space Power Generation. Journal of Spacecraft and Rockets, 2019, 56, 1831-1837.	1.3	4

	CITATION REL	PORT	
#	ARTICLE	IF	CITATIONS
0001			0
5632	Bulk Photovoltaic Effect in a Pair of Chiral–Polar Layered Perovskite-Type Lead lodides Altered by Chirality of Organic Cations. Journal of the American Chemical Society, 2019, 141, 14520-14523.	6.6	113
5633	Photoactive organic material discovery with combinatorial supramolecular assembly. Nanoscale Advances, 2019, 1, 3858-3869.	2.2	10
5634	NaSbSe2 as a promising light-absorber semiconductor in solar cells: First-principles insights. APL Materials, 2019, 7, 081122.	2.2	11
5635	Extensive analysis of band alignment engineering on the open circuit voltage performance of a GaAs/GaSb hetero structure solar cell. , 2019, , .		0
5636	MoS2 triboelectric nanogenerators based on depletion layers. Nano Energy, 2019, 65, 104079.	8.2	35
5637	A perspective on triplet fusion upconversion: triplet sensitizers beyond quantum dots. MRS Communications, 2019, 9, 924-935.	0.8	13
5638	Novel Intense Emission-Tunable Li <sub>1.5</sub> La <sub>1.5</sub> WO <sub>6</sub> :Mn <sup>4+</sup> ,Nd <sup>3+</sup> ,Yb <sup>3+</sup> Material with Good Luminescence Thermal Stability for Potential Applications in c-Si Solar Cells and Plant-Cultivation Far-Red-NIR LEDs. ACS Sustainable Chemistry and Engineering, 2019, 7, 16284-16294.	3.2	33
5639	Evaluating and optimizing intermediate band solar cells. , 2019, , .		0
5640	2D-3D heterostructure enables scalable coating of efficient low-bandgap Sn–Pb mixed perovskite solar cells. Nano Energy, 2019, 66, 104099.	8.2	63
5641	Surface Pb-Dimer Passivated by Molecule Oxygen Notably Suppresses Charge Recombination in CsPbBr <sub>3</sub> Perovskites: Time-Domain Ab Initio Analysis. Journal of Physical Chemistry Letters, 2019, 10, 5499-5506.	2.1	22
5642	Inorganic perovskite solar cells: an emerging member of the photovoltaic community. Journal of Materials Chemistry A, 2019, 7, 21036-21068.	5.2	137
5643	Solar thermophotovoltaics: Progress, challenges, and opportunities. APL Materials, 2019, 7, .	2.2	61
5644	Photovoltaic effect in the single-junction DBP/PTCBI organic system under low intensity of monochromatic light. Current Applied Physics, 2019, 19, 1271-1275.	1.1	7
5645	Enhancing the intermolecular singlet fission efficiency by controlling the self-assembly of amphipathic tetracene derivatives in aqueous solution. Journal of Materials Chemistry C, 2019, 7, 11090-11098.	2.7	12
5646	Electronic Structure and Optical Properties of Gallium-Doped Hybrid Organic–Inorganic Lead Perovskites from First-Principles Calculations and Spectroscopic Limited Maximum Efficiencies. Journal of Physical Chemistry C, 2019, 123, 23323-23333.	1.5	15
5647	Charge-transfer electronic states inÂorganic solar cells. Nature Reviews Materials, 2019, 4, 689-707.	23.3	229
5648	Carrier recombination and transport dynamics in superstrate solar cells analyzed by modeling the intensity modulated photoresponses. Physical Chemistry Chemical Physics, 2019, 21, 20360-20371.	1.3	8

#	ARTICLE Stacking induced indirect-to-direct handgan transition in layered group-IV monochalcogenides for	IF	Citations
5649	ideal optoelectronics. Journal of Materials Chemistry C, 2019, 7, 11858-11867.	2.7	10
5650	The Way to Pursue Truly High-Performance Perovskite Solar Cells. Nanomaterials, 2019, 9, 1269.	1.9	10
5651	Singlet Fission Rate: Optimized Packing of a Molecular Pair. Ethylene as a Model. Journal of the American Chemical Society, 2019, 141, 17729-17743.	6.6	38
5652	An exciting boost for solar cells. Nature, 2019, 571, 38-39.	13.7	17
5653	Enhancing PbS Colloidal Quantum Dot Tandem Solar Cell Performance by Graded Band Alignment. Journal of Physical Chemistry Letters, 2019, 10, 5729-5734.	2.1	32
5654	Metabolic signal curbs cancer-cell migration. Nature, 2019, 571, 39-40.	13.7	16
5655	Theoretical limits of multiple exciton generation and singlet fission tandem devices for solar water splitting. Journal of Chemical Physics, 2019, 151, 114111.	1.2	13
5656	Substrate temperature dependent physical properties of SnS1â^'xSex thin films. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	1.1	11
5657	Photon Management in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2019, 10, 5892-5896.	2.1	14
5658	Minimizing Voltage Loss in Efficient All-Inorganic CsPbl <sub>2</sub> Br Perovskite Solar Cells through Energy Level Alignment. ACS Energy Letters, 2019, 4, 2491-2499.	8.8	68
5659	An approach towards the promotion of Kesterite solar cell efficiency: The use of nanostructures. Applied Physics Letters, 2019, 115, .	1.5	25
5660	High power direct energy conversion by nuclear batteries. Applied Physics Reviews, 2019, 6, 031305.	5.5	57
5661	Long Term Electrical Rating of Concentrated Photovoltaic (CPV) Systems in Singapore. Energy Procedia, 2019, 158, 73-78.	1.8	5
5662	Phases formation of Cu2ZnSnS4 thin films by sulfurizing stacked precursors by sputtering from Cu Zn and Cu Sn targets. Thin Solid Films, 2019, 690, 137561.	0.8	3
5663	Two-Dimensional Heterojunction Photovoltaic Cells with Low Spontaneous-Radiation Loss and High Efficiency Limit. Physical Review Applied, 2019, 12, .	1.5	10
5664	Wurtzite InGaN/GaN Quantum Dots for Intermediate Band Solar Cells. , 2019, , .		1
5665	Two-Dimensional Model for Perovskite Nanorod Solar Cells: A Dark Case Study. IEEE Journal of Photovoltaics, 2019, 9, 1668-1677.	1.5	2
5666	Poroelastic Analytical Solution for the Nonlinear Productivity Index of Wells in Stress-Sensitive Reservoir Rocks. , 2019, , .		0

#	Article	IF	CITATIONS
5667	Advances in solar photovoltaics: Technology review and patent trends. Renewable and Sustainable Energy Reviews, 2019, 115, 109383.	8.2	126
5668	Application of Al-Doped (Zn, Mg)O on pure-sulfide Cu(In, Ga)S2 solar cells for enhancement of open-circuit voltage. Solar Energy Materials and Solar Cells, 2019, 202, 110157.	3.0	19
5669	Band gap determination in multi-band-gap CuFeO2 delafossite epitaxial thin film by photoconductivity. SN Applied Sciences, 2019, 1, 1.	1.5	10
5670	Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. Nature Communications, 2019, 10, 4498.	5.8	234
5671	Monolayer HfTeSe <sub>4</sub> : A Promising Two-Dimensional Photovoltaic Material for Solar Cells with High Efficiency. ACS Applied Materials & amp; Interfaces, 2019, 11, 37901-37907.	4.0	34
5672	Binary ionic liquid electrolytes for copper indium sulfide quantum dot sensitized-TiO2 solar cell to achieve long-term durability. Journal of Electroanalytical Chemistry, 2019, 851, 113387.	1.9	4
5673	Thermo-photoelectric coupled effect induced electricity in N-type SnSe:Br single crystals for enhanced self-powered photodetectors. Nano Energy, 2019, 66, 104111.	8.2	42
5674	Observation of a phonon bottleneck in copper-doped colloidal quantum dots. Nature Communications, 2019, 10, 4532.	5.8	52
5675	Conversion efficiency of strained type-II core/shell quantum dot solar cell. Optoelectronics Letters, 2019, 15, 343-346.	0.4	2
5676	Effects of La3+ on the enhancement NIR quantum cutting and UC emissions in Nd3+–Yb3+ co-doped transparent silicate glass-ceramics for solar cells. Optical Materials, 2019, 95, 109229.	1.7	11
5677	A new uniformity coefficient parameter for the quantitative characterization of a textured wafer surface and its relationship with the photovoltaic conversion efficiency of monocrystalline silicon cells. Solar Energy, 2019, 191, 210-218.	2.9	8
5678	Optimization of back ITO layer as the sandwiched reflector for exploiting longer wavelength lights in thin and flexible (30â€Âµm) single junction c-Si solar cells. Solar Energy, 2019, 193, 293-302.	2.9	16
5679	Ideal p–n Diodes from Single-Walled Carbon Nanotubes for Use in Solar Cells: Beating the Detailed Balance Limit of Efficiency. ACS Applied Nano Materials, 2019, 2, 7496-7502.	2.4	0
5680	Experimental investigation of phase equilibria around a ternary compound semiconductor Mg(Mg) Tj ETQq1 1 0.74 120983.	84314 rgE 1.4	3T /Overlock 2
5681	Photovoltaic panel integrated with phase change materials (PV-PCM): technology overview and materials selection. Renewable and Sustainable Energy Reviews, 2019, 116, 109406.	8.2	106
5682	Effect of cation replacement on the phase stability of formamidinium lead iodide perovskite. Journal of Chemical Physics, 2019, 151, 134104.	1.2	11
5683	InAs/GaAs quantum dot solar cells with quantum dots in the base region. IET Optoelectronics, 2019, 13, 215-217.	1.8	9
5684	Advanced metallization with low silver consumption for silicon heterojunction solar cells. AIP Conference Proceedings, 2019, , .	0.3	8

#	Article	IF	CITATIONS
5685	Calculations of theoretical efficiencies for electrochemically-mediated tandem solar water splitting as a function of bandgap energies and redox shuttle potential. Energy and Environmental Science, 2019, 12, 261-272.	15.6	18
5686	Atomistic insights into the order–disorder transition in Cu <sub>2</sub> ZnSnS <sub>4</sub> solar cells from Monte Carlo simulations. Journal of Materials Chemistry A, 2019, 7, 312-321.	5.2	23
5687	Improved model on fluorescence decay in singlet fission materials. Physical Chemistry Chemical Physics, 2019, 21, 2153-2165.	1.3	2
5688	Highly efficient prismatic perovskite solar cells. Energy and Environmental Science, 2019, 12, 929-937.	15.6	54
5689	Lone-pair effect on carrier capture in Cu <sub>2</sub> ZnSnS <sub>4</sub> solar cells. Journal of Materials Chemistry A, 2019, 7, 2686-2693.	5.2	55
5690	Selenization of CuInS <sub>2</sub> by rapid thermal processing – an alternative approach to induce a band gap grading in chalcopyrite thin-film solar cell absorbers?. Journal of Materials Chemistry A, 2019, 7, 2087-2094.	5.2	5
5691	Thermodynamic limits to energy conversion in solar thermal fuels. Journal of Physics Condensed Matter, 2019, 31, 034002.	0.7	11
5692	Absorption of light in a single vertical nanowire and a nanowire array. Nanotechnology, 2019, 30, 104004.	1.3	19
5693	Growth of Cu <sub>2</sub> ZnSnS <sub>4</sub> (CZTS) thin films using short sulfurization periods. Materials Research Express, 2019, 6, 056401.	0.8	23
5694	Organicâ€Inorganic Hybrid Perovskite Single Crystals: Crystallization, Molecular Structures, and Bandgap Engineering. ChemNanoMat, 2019, 5, 278-289.	1.5	29
5695	A parametrical study on photo-electro-thermal performance of an integrated thermoelectric-photovoltaic cell. Renewable Energy, 2019, 138, 542-550.	4.3	26
5696	Bio-Integrated Wearable Systems: A Comprehensive Review. Chemical Reviews, 2019, 119, 5461-5533.	23.0	822
5697	Density functional theory study explaining the underperformance of copper oxides as photovoltaic absorbers. Physical Review B, 2019, 99, .	1.1	40
5698	Metamaterial route to direct photoelectric conversion. Materials Today, 2019, 23, 37-44.	8.3	14
5699	Excitonic Properties of Low-Band-Gap Lead–Tin Halide Perovskites. ACS Energy Letters, 2019, 4, 615-621.	8.8	51
5700	High performance printable perovskite solar cells based on Cs0.1FA0.9PbI3 in mesoporous scaffolds. Journal of Power Sources, 2019, 415, 105-111.	4.0	34
5701	Perovskite—a Perfect Top Cell for Tandem Devices to Break the S–Q Limit. Advanced Science, 2019, 6, 1801704.	5.6	80
5702	Molecular engineering of central fused-ring cores of non-fullerene acceptors for high-efficiency organic solar cells. Journal of Materials Chemistry A, 2019, 7, 4313-4333.	5.2	122

#	Article	IF	CITATIONS
5703	Enhanced upconversion via plasmonic near-field effects: role of the particle shape. Journal of Optics (United Kingdom), 2019, 21, 035004.	1.0	8
5704	Structure–Function Relationship of Organic Semiconductors: Detailed Insights From Time-Resolved EPR Spectroscopy. Frontiers in Chemistry, 2019, 7, 10.	1.8	46
5705	Dynamic Screening and Slow Cooling of Hot Carriers in Lead Halide Perovskites. Advanced Materials, 2019, 31, e1803054.	11.1	86
5706	Combined theoretical and experimental characterizations of semiconductors for photoelectrocatalytic applications. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2019, 40, 212-233.	5.6	29
5707	Graphene-Induced Improvements of Perovskite Solar Cell Stability: Effects on Hot-Carriers. Nano Letters, 2019, 19, 684-691.	4.5	72
5708	Cross-conjugated poly(selenylene vinylene)s. Polymer Chemistry, 2019, 10, 1018-1025.	1.9	7
5709	Effects of energetics with {001} facet-dominant anatase TiO2 scaffold on electron transport in CH3NH3PbI3 perovskite solar cells. Electrochimica Acta, 2019, 300, 445-454.	2.6	16
5710	First-Principles Modeling of Lead-Free Perovskites for Photovoltaic Applications. Journal of Physical Chemistry C, 2019, 123, 3795-3800.	1.5	18
5711	Improving CdTe QDSSC's performance by Cannula synthesis method of CdTe QD. Materials Science in Semiconductor Processing, 2019, 93, 304-316.	1.9	8
5712	Pressure-induced effects in the inorganic halide perovskite CsGel <sub>3</sub> . RSC Advances, 2019, 9, 3279-3284.	1.7	73
5713	The Role of Nano-crystallites on Conduction Mechanisms of Current Through Ag Gridlines of Si Solar Cells. MRS Advances, 2019, 4, 311-318.	0.5	3
5714	III-V-Based Optoelectronics with Low-Cost Dynamic Hydride Vapor Phase Epitaxy. Crystals, 2019, 9, 3.	1.0	42
5715	Photovoltage Decay Measurements by Photo-Assisted Kelvin Probe Force Microscopy on Cu(In,Ga)Se2 Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 483-491.	1.5	3
5716	Enabling low voltage losses and high photocurrent in fullerene-free organic photovoltaics. Nature Communications, 2019, 10, 570.	5.8	377
5717	Theoretical and experimental performance of a two-stage (50X) hybrid spectrum splitting solar collector tested to 600â€Â°C. Applied Energy, 2019, 239, 514-525.	5.1	41
5718	Triplet Pair States in Singlet Fission. Chemical Reviews, 2019, 119, 4261-4292.	23.0	282
5719	Improved power conversion efficiency of silicon nanowire solar cells based on transition metal oxides. Solar Energy Materials and Solar Cells, 2019, 193, 163-168.	3.0	33
5720	Rational design of nanowire solar cells: from single nanowire to nanowire arrays. Nanotechnology, 2019, 30, 194002.	1.3	29

#	Article	IF	CITATIONS
5721	GaxSe10-x based solar cells: Some alternatives for the improvement in their performance parameters. Solar Energy Materials and Solar Cells, 2019, 193, 141-148.	3.0	7
5722	Nonadiabatic dynamics simulations of singlet fission in 2,5-bis(fluorene-9-ylidene)-2,5-dihydrothiophene crystals. Physical Chemistry Chemical Physics, 2019, 21, 692-701.	1.3	9
5723	First-principles theoretical designing of planar non-fullerene small molecular acceptors for organic solar cells: manipulation of noncovalent interactions. Physical Chemistry Chemical Physics, 2019, 21, 2128-2139.	1.3	82
5724	Enhancement in lifespan of halide perovskite solar cells. Energy and Environmental Science, 2019, 12, 865-886.	15.6	143
5725	Theoretical efficiency limits of ideal coloured opaque photovoltaics. Energy and Environmental Science, 2019, 12, 1274-1285.	15.6	59
5726	Doping strategies for small molecule organic hole-transport materials: impacts on perovskite solar cell performance and stability. Chemical Science, 2019, 10, 1904-1935.	3.7	279
5727	Probing the growth window of LaVO3 perovskites thin films elaborated using magnetron co-sputtering. Ceramics International, 2019, 45, 16658-16665.	2.3	11
5728	High-Throughput Screening Delafossite CuMO <sub>2</sub> (M = IIIA, 3d, 4d, 5d, and RE) Optoelectronic Functional Materials Based on First-Principles Calculations. Journal of Physical Chemistry C, 2019, 123, 14292-14302.	1.5	27
5729	Simulations on photovoltaic conversion in perovskite solar cells by solving hierarchical equations of motion. AIP Advances, 2019, 9, .	0.6	2
5730	A hot-carrier assisted InAs/AlGaAs quantum-dot intermediate-band solar cell. Semiconductor Science and Technology, 2019, 34, 084001.	1.0	4
5731	Building Solar Cells from Nanocrystal Inks. Applied Sciences (Switzerland), 2019, 9, 1885.	1.3	5
5732	Large Band Gap Narrowing and Prolonged Carrier Lifetime of (C <sub>4</sub> H <sub>9</sub> NH <sub>3</sub> ) <sub>2</sub> PbI <sub>4</sub> under High Pressure. Advanced Science, 2019, 6, 1900240.	5.6	47
5733	Characteristics of kesterite CZTS thin films deposited by dip-coating technique for solar cells applications. Journal of Materials Science: Materials in Electronics, 2019, 30, 13134-13143.	1.1	23
5734	Wide band gap kesterite absorbers for thin film solar cells: potential and challenges for their deployment in tandem devices. Sustainable Energy and Fuels, 2019, 3, 2246-2259.	2.5	19
5735	Exchange current density model for the contact-determined current-voltage behavior of solar cells. Journal of Applied Physics, 2019, 125, .	1.1	13
5736	Study of fabrication of fully aqueous solution processed SnS quantum dot-sensitized solar cell. Green Processing and Synthesis, 2019, 8, 443-450.	1.3	2
5737	Leadâ€Free Tinâ€Based Perovskite Solar Cells: Strategies Toward High Performance. Solar Rrl, 2019, 3, 1900213.	3.1	44
5738	Influence of Defects on Excited-State Dynamics in Lead Halide Perovskites: Time-Domain ab Initio Studies. Journal of Physical Chemistry Letters, 2019, 10, 3788-3804.	2.1	66

#	Article	IF	CITATIONS
5739	A Silicon-Based Heterojunction Integrated with a Molecular Excited State in a Water-Splitting Tandem Cell. Journal of the American Chemical Society, 2019, 141, 10390-10398.	6.6	34
5740	Metal halide perovskites under compression. Journal of Materials Chemistry A, 2019, 7, 16089-16108.	5.2	42
5741	Efficient Light Management in a Monolithic Tandem Perovskite/Silicon Solar Cell by Using a Hybrid Metasurface. Nanomaterials, 2019, 9, 791.	1.9	16
5742	Efficient DPP Donor and Nonfullerene Acceptor Organic Solar Cells with High Photonâ€ŧo urrent Ratio and Low Energetic Loss. Advanced Functional Materials, 2019, 29, 1902441.	7.8	43
5743	Triplet Sensitization by Lead Halide Perovskite Thin Films for Efficient Solid-State Photon Upconversion at Subsolar Fluxes. Matter, 2019, 1, 705-719.	5.0	84
5744	Pushing to the Limit: Radiative Efficiencies of Recent Mainstream and Emerging Solar Cells. ACS Energy Letters, 2019, 4, 1639-1644.	8.8	93
5745	Carrier heating and its effects on the current-voltage relations of conventional and hot-carrier solar cells: A physical model incorporating energy transfer between carriers, photons, and phonons. Solar Energy, 2019, 188, 450-463.	2.9	6
5746	Influence of Triplet Diffusion on Lead Halide Perovskite-Sensitized Solid-State Upconversion. Journal of Physical Chemistry Letters, 2019, 10, 3806-3811.	2.1	51
5747	Fundamentals of solar cells. , 2019, , 3-33.		5
5748	Perovskite solar cells. , 2019, , 417-446.		9
5748 5749	Perovskite solar cells. , 2019, , 417-446. Metal nanostructures for solar cells. , 2019, , 447-511.		9
5748 5749 5750	Perovskite solar cells. , 2019, , 417-446.         Metal nanostructures for solar cells. , 2019, , 447-511.         Electrolyte for dye-sensitized, quantum dots, and perovskite solar cells. , 2019, , 513-555.		9 2 1
5748 5749 5750 5751	Perovskite solar cells., 2019, , 417-446.         Metal nanostructures for solar cells., 2019, , 447-511.         Electrolyte for dye-sensitized, quantum dots, and perovskite solar cells., 2019, , 513-555.         Quantum master equation approach to singlet fission dynamics in pentacene ring-shaped aggregate models. Journal of Chemical Physics, 2019, 150, 234305.	1.2	9 2 1 13
5748 5749 5750 5751 5752	Perovskite solar cells. , 2019, , 417-446.         Metal nanostructures for solar cells. , 2019, , 447-511.         Electrolyte for dye-sensitized, quantum dots, and perovskite solar cells. , 2019, , 513-555.         Quantum master equation approach to singlet fission dynamics in pentacene ring-shaped aggregate models. Journal of Chemical Physics, 2019, 150, 234305.         Meniscus fabrication of halide perovskite thin films at high throughput for large area and low-cost solar panels. International Journal of Extreme Manufacturing, 2019, 1, 022004.	1.2	9 2 1 13 50
5748 5749 5750 5751 5752	Perovskite solar cells. , 2019, , 417-446.         Metal nanostructures for solar cells. , 2019, , 447-511.         Electrolyte for dye-sensitized, quantum dots, and perovskite solar cells. , 2019, , 513-555.         Quantum master equation approach to singlet fission dynamics in pentacene ring-shaped aggregate models. Journal of Chemical Physics, 2019, 150, 234305.         Meniscus fabrication of halide perovskite thin films at high throughput for large area and low-cost solar panels. International Journal of Extreme Manufacturing, 2019, 1, 022004.         Leadã&Free Perovskites: Metals Substitution towards Environmentally Benign Solar Cell Fabrication. ChemSusChem, 2019, 12, 4116-4139.	1.2 6.3 3.6	9 2 1 13 50 36
5748 5749 5750 5751 5752 5753	Perovskite solar cells. , 2019, , 417-446.         Metal nanostructures for solar cells. , 2019, , 447-511.         Electrolyte for dye-sensitized, quantum dots, and perovskite solar cells. , 2019, , 513-555.         Quantum master equation approach to singlet fission dynamics in pentacene ring-shaped aggregate models. Journal of Chemical Physics, 2019, 150, 234305.         Meniscus fabrication of halide perovskite thin films at high throughput for large area and low-cost solar panels. International Journal of Extreme Manufacturing, 2019, 1, 022004.         Leadâ€Free Perovskites: Metals Substitution towards Environmentally Benign Solar Cell Fabrication. ChemSusChem, 2019, 12, 4116-4139.         Maximum efficiencies and parametric optimum designs of concentrating photovoltaic cell/heat engine systems with threeåCband spectrum split. International Journal of Large area, 2019, 43, 5526-5534.	1.2 6.3 3.6 2.2	9 2 1 1 3 3 6 4
5748 5749 5750 5751 5752 5753 5754	Perovskite solar cells., 2019,, 417-446.         Metal nanostructures for solar cells., 2019,, 447-511.         Electrolyte for dye-sensitized, quantum dots, and perovskite solar cells., 2019,, 513-555.         Quantum master equation approach to singlet fission dynamics in pentacene ring-shaped aggregate models. Journal of Chemical Physics, 2019, 150, 234305.         Meniscus fabrication of halide perovskite thin films at high throughput for large area and low-cost solar panels. International Journal of Extreme Manufacturing, 2019, 1, 022004.         Leadâ&Free Perovskites: Metals Substitution towards Environmentally Benign Solar Cell Fabrication. ChemSusChem, 2019, 12, 4116-4139.         Maximum efficiencies and parametric optimum designs of concentrating photovoltaic cell/heat engine systems with threeâ&band spectrum split. International Journal of Energy Research, 2019, 43, 5526-5534.         CZTSe Kesterite as an Alternative Hole Transport Layer for MASnI3 Perovskite Solar Cells. Journal of Electronic Materials, 2019, 48, 5723-5733.	1.2 6.3 3.6 2.2 1.0	<ul> <li>9</li> <li>2</li> <li>1</li> <li>13</li> <li>50</li> <li>36</li> <li>6</li> <li>62</li> </ul>

#	Article	IF	CITATIONS
5757	Stable Dynamics Performance and High Efficiency of ABX <sub>3</sub> â€Type Superâ€Alkali Perovskites First Obtained by Introducing H <sub>5</sub> O <sub>2</sub> Cation. Advanced Energy Materials, 2019, 9, 1900664.	10.2	113
5758	Rapid Discovery of Ferroelectric Photovoltaic Perovskites and Material Descriptors via Machine Learning. Small Methods, 2019, 3, 1900360.	4.6	76
5759	Excited-State Dynamics in Fully Conjugated 2D Covalent Organic Frameworks. Journal of the American Chemical Society, 2019, 141, 11565-11571.	6.6	89
5760	Ab-initio calculation of APbI3 (A=Li, Na, K, Rb and Cs) perovskite crystal and their lattice constants optimization using density functional theory. Journal of Physics: Conference Series, 2019, 1170, 012023.	0.3	3
5761	Electrophoretically Deposited Y <sub>2</sub> O <sub>3</sub> :Bi <sup>3+</sup> ,Yb <sup>3+</sup> Nanosheet Films as Spectral Converters for Crystalline Silicon Solar Devices. ACS Applied Nano Materials, 2019, 2, 4009-4017.	2.4	5
5762	Recent advances on state-of-the-art copper (I/II) oxide as photoelectrode for solar green fuel generation: Challenges and mitigation strategies. Applied Catalysis A: General, 2019, 582, 117104.	2.2	19
5763	Perovskite solar cell towards lower toxicity: a theoretical study of physical lead reduction strategy. Science Bulletin, 2019, 64, 1255-1261.	4.3	54
5764	Self-Powered Photodetectors Based on Core–Shell ZnO–Co <sub>3</sub> O <sub>4</sub> Nanowire Heterojunctions. ACS Applied Materials & Interfaces, 2019, 11, 23454-23462.	4.0	71
5765	Over 16% efficiency organic photovoltaic cells enabled by a chlorinated acceptor with increased open-circuit voltages. Nature Communications, 2019, 10, 2515.	5.8	1,431
5766	Recent progress of inorganic perovskite solar cells. Energy and Environmental Science, 2019, 12, 2375-2405.	15.6	405
5767	Adiabatic two-step photoexcitation effects in intermediate-band solar cells with quantum dot-in-well structure. Scientific Reports, 2019, 9, 7859.	1.6	12
5768	Industrial Opportunities and Challenges for Perovskite Photovoltaic Technology. Solar Rrl, 2019, 3, 1900144.	3.1	52
5769	Effects of Cu(In,Ga)3Se5 defect phase layer in Cu(In,Ga)Se2 thin film solar cells. Journal of Alloys and Compounds, 2019, 800, 305-313.	2.8	12
5770	Quantitative phase analysis on Cs- and Rb-doped FAPbI3 and corresponding solar cell efficiency simulations. Solar Energy, 2019, 188, 224-229.	2.9	9
5771	On understanding bandgap bowing and optoelectronic quality in Pb–Sn alloy hybrid perovskites. Journal of Materials Chemistry A, 2019, 7, 16285-16293.	5.2	64
5772	Wide-bandgap, low-bandgap, and tandem perovskite solar cells. Semiconductor Science and Technology, 2019, 34, 093001.	1.0	89
5773	Characterization of Cuprous Oxide Thin Films for Application in Solar Cells. , 2019, 22, 65-73.		1
5776	Controlling aggregation using self-assembled axially coordinated pyridine-based ligands on porphyrin analogues for dye-sensitized solar cells. Chemical Physics Letters, 2019, 730, 407-410.	1.2	5

#	Article	IF	CITATIONS
5777	A wide energy range ab initio modeling of the electronic structure of valence states in Cu(In,Ga)Se2: Comparison with photoelectron spectra. Journal of Alloys and Compounds, 2019, 802, 19-24.	2.8	1
5778	Could Nanocomposites Continue the Success of Halide Perovskites?. ACS Energy Letters, 2019, 4, 1446-1454.	8.8	9
5779	Life Cycle Assessment of tandem LSC-Si devices. Energy, 2019, 181, 1-10.	4.5	9
5780	Epitaxial Cu(In,Ga)Se <sub>2</sub> Thin Films on Mo Back Contact for Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900164.	0.8	9
5781	Genetic algorithm designed high efficiency laser power converters based on the vertical epitaxial heterostructure architecture. Solar Energy Materials and Solar Cells, 2019, 200, 109878.	3.0	10
5782	Detailed-balance analysis of Yb <sup>3+</sup> :CsPb(Cl <sub>1â^'x</sub> Br <sub>x</sub> ) <sub>3</sub> quantum-cutting layers for high-efficiency photovoltaics under real-world conditions. Energy and Environmental Science, 2019, 12, 2486-2495.	15.6	39
5783	Solutionâ€Processed Semitransparent Organic Photovoltaics: From Molecular Design to Device Performance. Advanced Materials, 2019, 31, e1900904.	11.1	168
5784	Twoâ€Terminal Perovskites Tandem Solar Cells: Recent Advances and Perspectives. Solar Rrl, 2019, 3, 1900080.	3.1	55
5785	Experimental evaluation of thermoelectric generators for nanosatellites application. Acta Astronautica, 2019, 162, 32-40.	1.7	13
5786	Designing of AlxGa1-xAs/CIGS tandem solar cell by analytical model. Solar Energy, 2019, 188, 1-9.	2.9	38
5787	Bandgap Engineering of Bilayer Ge/CdS Thin Films via Interlayer Diffusion under Different Annealing Temperatures. Journal of Nanomaterials, 2019, 2019, 1-10.	1.5	0
5788	First-principles studies of structural, elastic, electronic, optical and lattice dynamical properties of XSnP2 (X = Zn, Cd and Hg) compounds. Journal of Physics and Chemistry of Solids, 2019, 134, 157-164.	1.9	15
5789	A review on binary metal sulfide heterojunction solar cells. Solar Energy Materials and Solar Cells, 2019, 200, 109963.	3.0	82
5790	Fundamental Understanding of Solar Cells. , 2019, , 1-17.		3
5791	Thin-Film Colloidal Quantum Dot Solar Cells. , 2019, , 35-52.		1
5792	New Directions for Organic Thin-Film Solar Cells: Stability and Performance. , 2019, , 195-244.		3
5793	Origin of Photocurrent and Voltage Losses in Organic Solar Cells. Advanced Theory and Simulations, 2019, 2, 1900067.	1.3	46
5794	Development of fullerene free acceptors molecules for organic solar cells: A step way forward toward efficient organic solar cells. Computational and Theoretical Chemistry, 2019, 1161, 26,38	1.1	65 _

#	Article	IF	CITATIONS
5795	Doping-Induced Rapid Decoherence Suppresses Charge Recombination in Mono/Divalent Cation Mixed Perovskites from Nonadiabatic Molecular Dynamics Simulation. Journal of Physical Chemistry Letters, 2019, 10, 3433-3439.	2.1	24
5796	Detailed balance calculations for hot-carrier solar cells: coupling high absorptivity with low thermalization through light trapping. EPJ Photovoltaics, 2019, 10, 1.	0.8	4
5797	Polarized Ferroelectric Polymers for Highâ€Performance Perovskite Solar Cells. Advanced Materials, 2019, 31, e1902222.	11.1	109
5798	Efficiency improvement of Si solar cells by down-shifting Ce3+-doped and down-conversion Ce3+-Yb3+ co-doped YAG phosphors. Solar Energy, 2019, 188, 45-50.	2.9	28
5799	Singlet Sensitization-Enhanced Upconversion Solar Cells via Self-Assembled Trilayers. ACS Energy Letters, 2019, 4, 1458-1463.	8.8	48
5800	The Role of Bulk and Interface Recombination in Highâ€Efficiency Lowâ€Dimensional Perovskite Solar Cells. Advanced Materials, 2019, 31, e1901090.	11.1	59
5801	Preparation of Methylammonium Tin Iodide (CH <sub>3</sub> NH <sub>3</sub> SnI <sub>3</sub> ) Perovskite Thin Films via Flash Evaporation. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900209.	0.8	8
5802	Breakdown of the Perturbative Approach to Molecular Packing Dependence of Singlet Fission Rates in Pentacene Dimer Models: A Systematic Comparison with the Quantum Master Equation Approach. Journal of Physical Chemistry C, 2019, 123, 15403-15411.	1.5	8
5803	Chemical diversity in molecular orbital energy predictions with kernel ridge regression. Journal of Chemical Physics, 2019, 150, 204121.	1.2	59
5804	Progress in Development of CZTS for Solar Photovoltaics Applications. , 2019, , .		0
5804 5805	Progress in Development of CZTS for Solar Photovoltaics Applications. , 2019, , . On the prospect of CZTSSe-based thin film solar cells for indoor photovoltaic applications: A simulation study. AIP Advances, 2019, 9, 055326.	0.6	0
5804 5805 5806	Progress in Development of CZTS for Solar Photovoltaics Applications. , 2019, , .         On the prospect of CZTSSe-based thin film solar cells for indoor photovoltaic applications: A simulation study. AIP Advances, 2019, 9, 055326.         Growth temperature influenced electrical properties of copper-oxide thin films. AIP Conference Proceedings, 2019, , .	0.6	0 10 0
5804 5805 5806 5807	Progress in Development of CZTS for Solar Photovoltaics Applications. , 2019, , .         On the prospect of CZTSSe-based thin film solar cells for indoor photovoltaic applications: A simulation study. AIP Advances, 2019, 9, 055326.         Growth temperature influenced electrical properties of copper-oxide thin films. AIP Conference Proceedings, 2019, , .         Imperfections and their passivation in halide perovskite solar cells. Chemical Society Reviews, 2019, 48, 3842-3867.	0.6 0.3 18.7	0 10 0 1,257
5804 5805 5806 5807	Progress in Development of CZTS for Solar Photovoltaics Applications. , 2019, , .         On the prospect of CZTSSe-based thin film solar cells for indoor photovoltaic applications: A simulation study. AIP Advances, 2019, 9, 055326.         Growth temperature influenced electrical properties of copper-oxide thin films. AIP Conference Proceedings, 2019, , .         Imperfections and their passivation in halide perovskite solar cells. Chemical Society Reviews, 2019, 48, 3842-3867.         A new MaterialGo database and its comparison with other high-throughput electronic structure databases for their predicted energy band gaps. Science China Technological Sciences, 2019, 62, 1423-1430.	0.6 0.3 18.7 2.0	0 10 0 1,257 29
5804 5805 5806 5807 5808	Progress in Development of CZTS for Solar Photovoltaics Applications. , 2019, , .         On the prospect of CZTSSe-based thin film solar cells for indoor photovoltaic applications: A simulation study. AIP Advances, 2019, 9, 055326.         Growth temperature influenced electrical properties of copper-oxide thin films. AIP Conference Proceedings, 2019, , .         Imperfections and their passivation in halide perovskite solar cells. Chemical Society Reviews, 2019, 48, 3842-3867.         A new MaterialGo database and its comparison with other high-throughput electronic structure databases for their predicted energy band gaps. Science China Technological Sciences, 2019, 62, 1423-1430.         Density functional theory study of the structure and properties of C-doped pyrite. Physica B: Condensed Matter, 2019, 572, 168-174.	0.6 0.3 18.7 2.0	0 10 0 1,257 29 13
5804 5805 5806 5807 5808 5809	Progress in Development of CZTS for Solar Photovoltaics Applications. , 2019, , .         On the prospect of CZTSSe-based thin film solar cells for indoor photovoltaic applications: A simulation study. AIP Advances, 2019, 9, 055326.         Growth temperature influenced electrical properties of copper-oxide thin films. AIP Conference Proceedings, 2019, , .         Imperfections and their passivation in halide perovskite solar cells. Chemical Society Reviews, 2019, 48, 3842-3867.         A new MaterialCo database and its comparison with other high-throughput electronic structure databases for their predicted energy band gaps. Science China Technological Sciences, 2019, 62, 1423-1430.         Density functional theory study of the structure and properties of C-doped pyrite. Physica B: Condensed Matter, 2019, 572, 168-174.         Dependence of ITOã€Coated Flexible Substrates in the Performance and Bending Durability of Perovskite Solar Cells. Advanced Engineering Materials, 2019, 21, 1900288.	0.6 0.3 18.7 2.0 1.3	0 10 0 1,257 29 13
<ul> <li>5804</li> <li>5805</li> <li>5806</li> <li>5807</li> <li>5808</li> <li>5809</li> <li>5810</li> <li>5811</li> </ul>	Progress in Development of CZTS for Solar Photovoltaics Applications. , 2019, , .         On the prospect of CZTSSe-based thin film solar cells for indoor photovoltaic applications: A simulation study. AIP Advances, 2019, 9, 055326.         Growth temperature influenced electrical properties of copper-oxide thin films. AIP Conference Proceedings, 2019, , .         Imperfections and their passivation in halide perovskite solar cells. Chemical Society Reviews, 2019, 48, 3842-3867.         A new MaterialCo database and its comparison with other high-throughput electronic structure databases for their predicted energy band gaps. Science China Technological Sciences, 2019, 62, 1423-1430.         Density functional theory study of the structure and properties of C-doped pyrite. Physica B: Condensed Matter, 2019, 572, 168-174.         Dependence of ITOÃCCoated Flexible Substrates in the Performance and Bending Durability of Perovskite Solar Cells. Advanced Engineering Materials, 2019, 21, 1900288.         Improved photovoltaic performance of monocrystalline silicon solar cell through luminescent downafeconverting Gd(sub)22/sub>C/sub>S:Tb(sup)3+         Improved photovoltaic performance of monocrystalline silicon solar cell through luminescent downafeconverting Gd(sub)22/sub>C/sub>S:Tb(sup)3+	0.6 0.3 18.7 2.0 1.3 1.6	0 10 0 1,257 29 13 13 22

ARTICLE IF CITATIONS # High-throughput computational design of organic–inorganic hybrid halide semiconductors beyond 5813 15.6 82 perovskites for optoelectronics. Energy and Environmental Science, 2019, 12, 2233-2243. Self-sustaining thermophotonic circuits. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11596-11601. 5814 3.3 Enhanced Photoelectrochemical Properties of Znâ<sup>-</sup>'Agâ<sup>-</sup>'Inâ<sup>-</sup>'Te Nanocrystals with High Energy Photon 5815 1.5 5 Excitation. ChemNanoMat, 2019, 5, 1028-1035. Solution-Processed Bismuth Halide Perovskite Thin Films: Influence of Deposition Conditions and A-Site Alloying on Morphology and Optical Properties. Journal of Physical Chemistry Letters, 2019, 10, 5816 3134-3139. A Heterogeneous Kinetics Model for Triplet Exciton Transfer in Solid-State Upconversion. Journal of 5817 2.1 24 Physical Chemistry Letters, 2019, 10, 3147-3152. Interfacial interaction and effects of GaAs/Graphene hetero-structures studied by First-principle calculations. Journal of Alloys and Compounds, 2019, 795, 351-360. 2.8 Combined photoanodes of TiO<sub>2</sub> nanoparticles and {001}-faceted TiO<sub>2</sub> 5819 1.4 5 nanosheets for quantum dot-sensitized solar cells. New Journal of Chemistry, 2019, 43, 8551-8556. Defect characterisation in Cu<sub>2</sub>ZnSnSe<sub>4</sub>kesterites<i>via</i>i>resonance Raman spectroscopy and the impact on optoelectronic solar cell properties. Journal of Materials Chemistry 5.2 63 Á, 2019, 7, 13293-13304. Lead-free double perovskites Cs<sub>2</sub>InCuCl<sub>6</sub> and 5821 (CH<sub>3</sub>NH<sub>3</sub>)<sub>2</sub>InCuCl<sub>6</sub>: electronic, optical, and 2.8 35 electrical properties. Nanoscale, 2019, 11, 11173-11182. xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mi>V</mml:mi><mml:mi>OC</mml:mi></mml:msub></mml:math> of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Cu</mml:mi><mml:mo

## # ARTICLE

IF CITATIONS

5832 First principles prediction of the solar cell efficiency of chalcopyrite materials AgMX2 (M=In, Al; X=S,) Tj ETQq0 0 0 ggBT /Overlock 10 Tf

5833	Tunable electronic structures and high efficiency obtained by introducing superalkali and superhalogen into AMX3-type perovskites. Journal of Power Sources, 2019, 429, 120-126.	4.0	43
5834	Optimizing concurrent extension of near-infrared and ultraviolet light harvesting of dye sensitized solar cells by introducing sandwich-nanostructured upconversion-core/inert-shell/ downconversion-shell nanoparticles. Journal of Power Sources, 2019, 430, 43-50.	4.0	12
5835	Direct triplet sensitization of oligothiophene by quantum dots. Chemical Science, 2019, 10, 6120-6124.	3.7	23
5836	Recent progress in inkjet-printed solar cells. Journal of Materials Chemistry A, 2019, 7, 13873-13902.	5.2	102
5837	Effect of manganese dopants on defects, nano-strain, and photovoltaic performance of Mn–CdS/CdSe nanocomposite-sensitized ZnO nanowire solar cells. Composites Science and Technology, 2019, 179, 79-87.	3.8	13
5838	Advances in high efficiency crystalline silicon homo junction solar cell technology. AIP Conference Proceedings, 2019, , .	0.3	7
5839	A Thermodynamically Favored Crystal Orientation in Mixed Formamidinium/Methylammonium Perovskite for Efficient Solar Cells. Advanced Materials, 2019, 31, e1900390.	11.1	101
5840	NIR-to-visible upconversion in quantum dots <i>via</i> a ligand induced charge transfer state. RSC Advances, 2019, 9, 12153-12161.	1.7	8
5841	Nanowire photodetectors based on wurtzite semiconductor heterostructures. Semiconductor Science and Technology, 2019, 34, 053002.	1.0	24
5842	The versatility of copper tin sulfide. Journal of Materials Chemistry A, 2019, 7, 17118-17182.	5.2	42
5843	Achieving a high open-circuit voltage in inverted wide-bandgap perovskite solar cells with a graded perovskite homojunction. Nano Energy, 2019, 61, 141-147.	8.2	152
5844	Postdeposition Processing of SnS Thin Films and Solar Cells: Prospective Strategy To Obtain Large, Sintered, and Doped SnS Grains by Recrystallization in the Presence of a Metal Halide Flux. ACS Applied Materials & Interfaces, 2019, 11, 17539-17554.	4.0	61
5845	Spanning solar spectrum: A combined photochemical and thermochemical process for solar energy storage. Applied Energy, 2019, 247, 116-126.	5.1	32
5846	Towards Oxide Electronics: a Roadmap. Applied Surface Science, 2019, 482, 1-93.	3.1	236
5847	Goldschmidt-rule-deviated perovskite CsPbIBr2by barium substitution for efficient solar cells. Nano Energy, 2019, 61, 165-172.	8.2	93
5848	Transport Evidence for Sulfur Vacancies as the Origin of Unintentional n-Type Doping in Pyrite FeS <sub>2</sub> . ACS Applied Materials & Interfaces, 2019, 11, 15552-15563.	4.0	35
5849	Glow discharge optical emission spectrometry for quantitative depth profiling of CIGS thin-films. Journal of Analytical Atomic Spectrometry, 2019, 34, 1233-1241.	1.6	32

#	Article	IF	CITATIONS
5850	Present Research Progress of Sn Halide Perovskite Solar Cells. IOP Conference Series: Earth and Environmental Science, 2019, 242, 022038.	0.2	2
5851	Effect of deposition pressure on the properties of magnetron sputtering-deposited Sb2Se3 thin-film solar cells. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	1.1	15
5852	On the absence of a phonon bottleneck in strongly confined CsPbBr <sub>3</sub> perovskite nanocrystals. Chemical Science, 2019, 10, 5983-5989.	3.7	71
5853	Thermoelectrics versus thermophotovoltaics: two approaches to convert heat fluxes into electricity. Journal Physics D: Applied Physics, 2019, 52, 275501.	1.3	9
5854	Numerical integration of solar, electrical and thermal exergies of photovoltaic module: A novel thermophotovoltaic model. Solar Energy, 2019, 185, 298-306.	2.9	22
5855	Performance characterization of planar silicon solar cells using NIR up-conversion layer comprising YF3:Yb3+/Er3+ phosphors. Vacuum, 2019, 166, 1-5.	1.6	10
5856	Applications of Photoswitches in the Storage of Solar Energy. ChemPhotoChem, 2019, 3, 268-283.	1.5	94
5857	Computationally Driven Design Principles for Singlet Fission in Organic Chromophores. Journal of Physical Chemistry C, 2019, 123, 19257-19268.	1.5	22
5858	Nanocomposites of Nickel Oxide and Zirconia for the Preparation of Photocathodes with Improved Performance in <i>p</i> -Type Dye-Sensitized Solar Cells. Journal of the Electrochemical Society, 2019, 166, D290-D300.	1.3	10
5859	Photovoltaic Performance of Lead-Less Hybrid Perovskites from Theoretical Study. Journal of Physical Chemistry C, 2019, 123, 12638-12646.	1.5	39
5860	A Multiparticle Drift-Diffusion Model and its Application to Organic and Inorganic Electronic Device Simulation. IEEE Transactions on Electron Devices, 2019, 66, 2715-2722.	1.6	11
5861	Diabatization by Localization in the Framework of Configuration Interaction Based on Floating Occupation Molecular Orbitals (FOMOâ`'CI). ChemPhotoChem, 2019, 3, 933-944.	1.5	19
5862	Highly bright Li(Gd,Y)F4:Yb,Er upconverting nanocrystals incorporated hole transport layer for efficient perovskite solar cells. Applied Surface Science, 2019, 485, 332-341.	3.1	31
5863	A thermally synergistic photo-electrochemical hydrogen generator operating under concentrated solar irradiation. Nature Energy, 2019, 4, 399-407.	19.8	141
5864	Abâ€Initio Investigation of the Band Alignment Between Cu 2 ZnSnS 4 and Different Buffer Materials (Al) Tj ETQq	0 0 0 rgBT 1.2	Qverlock I
5865	Hydrogen Passivated Silicon Grain Boundaries Greatly Reduce Charge Recombination for Improved Silicon/Perovskite Tandem Solar Cell Performance: Time Domain Ab Initio Analysis. Journal of Physical Chemistry Letters, 2019, 10, 2445-2452.	2.1	14
5866	A promising concept to push efficiency of pn-junction photovoltaic solar cell beyond Shockley and Queisser limit based on impact ionization due to high electric field. Optik, 2019, 187, 39-48.	1.4	3

Machine learning for renewable energy materials. Journal of Materials Chemistry A, 2019, 7, 17096-17117.

#	Article	IF	CITATIONS
5868	Tailored emission to boost open-circuit voltage in solar cells. Journal of Physics Communications, 2019, 3, 055009.	0.5	4
5869	Light Emission by a Thermalized Ensemble of Emitters Coupled to a Resonant Structure. Advanced Optical Materials, 2019, 7, 1801697.	3.6	13
5870	Applications of solar and wind renewable energy in agriculture: A review. Science Progress, 2019, 102, 127-140.	1.0	50
5871	Recent Progress in Molecular Design of Fused Ring Electron Acceptors for Organic Solar Cells. Small, 2019, 15, e1900134.	5.2	126
5872	Classification of MAOX phases and semiconductor screening for next-generation energy conversion ceramic materials. Journal of Materials Chemistry C, 2019, 7, 6895-6899.	2.7	1
5873	The physical properties of bismuth replacement in lead halogen perovskite solar cells: CH3NH3Pb1â^Bi I3 compounds by ab-initio calculations. Results in Physics, 2019, 13, 102278.	2.0	14
5874	Fundamentals of Solar Cells and Light-Emitting Diodes. , 2019, , 1-35.		4
5875	Solar Cells Based on Hot Carriers and Quantum Dots. , 2019, , 175-213.		2
5876	Experimental demonstration of energy harvesting from the sky using the negative illumination effect of a semiconductor photodiode. Applied Physics Letters, 2019, 114, .	1.5	37
5877	Improved photoluminescence and monodisperse performance of colloidal CdTe quantum dots with Cannula method. Korean Journal of Chemical Engineering, 2019, 36, 625-634.	1.2	8
5878	A Study of Doping Profile for the Site Selectively Znâ€Doped <i>p</i> â€ŧype Cu(In,Ga)Se <sub>2</sub> Thin Film for Solar Cell. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800890.	0.8	1
5879	Quasiparticle <i>GW</i> Calculations on Lead-Free Hybrid Germanium Iodide Perovskite CH <sub>3</sub> NH <sub>3</sub> Gel <sub>3</sub> for Photovoltaic Applications. ACS Omega, 2019, 4, 5661-5669.	1.6	24
5880	Optics of Perovskite Solar Cell Front Contacts. ACS Applied Materials & Interfaces, 2019, 11, 14693-14701.	4.0	32
5881	Triplet-Sensitization by Lead Halide Perovskite Thin Films for Near-Infrared-to-Visible Upconversion. ACS Energy Letters, 2019, 4, 888-895.	8.8	117
5882	How far does the defect tolerance of lead-halide perovskites range? The example of Bi impurities introducing efficient recombination centers. Journal of Materials Chemistry A, 2019, 7, 23838-23853.	5.2	57
5883	Alloy-induced phase transition and enhanced photovoltaic performance: the case of Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9â^²x</sub> Br <sub>x</sub> perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 8818-8825.	5.2	87
5884	Tuning Optical and Electronic Properties in Low-Toxicity Organic–Inorganic Hybrid (CH <sub>3</sub> NH <sub>3</sub> ) <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> under High Pressure. Journal of Physical Chemistry Letters, 2019, 10, 1676-1683.	2.1	35
5885	Effect of Br content on phase stability and performance of H <sub>2</sub> N=CHNH <sub>2</sub> Pb(l <sub>1â^'<i>x</i> </sub> Br <i> <sub>x</sub> </i> ) <sub>3</sub> perovskite thin films. Nanotechnology, 2019, 30, 165402.	1.3	11

#	Article	IF	CITATIONS
5886	Machine Learning Augmented Discovery of Chalcogenide Double Perovskites for Photovoltaics. Advanced Theory and Simulations, 2019, 2, 1800173.	1.3	54
5887	Quantum cutting using organic molecules. Physical Chemistry Chemical Physics, 2019, 21, 7814-7821.	1.3	1
5888	Molecular Packing and Singlet Fission: The Parent and Three Fluorinated 1,3-Diphenylisobenzofurans. Journal of Physical Chemistry Letters, 2019, 10, 1947-1953.	2.1	25
5889	Enhanced near IR downconversion luminescence in Eu3+-Yb3+ co-doped V activated ZnO host: An effort towards efficiency enhancement in Si-Solar cells. Materials Letters, 2019, 249, 9-12.	1.3	21
5890	Effects of selenization conditions on microstructure evolution in solution processed Cu2ZnSn(S,Se)4 solar cells. Solar Energy Materials and Solar Cells, 2019, 195, 274-279.	3.0	33
5891	Optimization of device design for low cost and high efficiency planar monolithic perovskite/silicon tandem solar cells. Nano Energy, 2019, 60, 213-221.	8.2	79
5892	Factors Controlling Open-Circuit Voltage Losses in Organic Solar Cells. Trends in Chemistry, 2019, 1, 49-62.	4.4	117
5893	Diagnosis of GaAs solar-cell resistance via absolute electroluminescence imaging and distributed circuit modeling. Energy, 2019, 174, 85-90.	4.5	9
5894	New insights on the nature of impurity levels in V-doped In <sub>2</sub> S <sub>3</sub> : why is it impossible to obtain a metallic intermediate band?. Journal of Materials Chemistry A, 2019, 7, 7745-7751.	5.2	12
5895	Larger photovoltaic effect and hysteretic photocarrier dynamics in Pb[(Mg <sub>1/3</sub> Nb <sub>2/3</sub> ) <sub>0.70</sub> Ti <sub>0.30</sub> ]O <sub>3</sub> crystal. Materials Research Express, 2019, 6, 066313.	0.8	5
5896	Heteroatom-mediated performance of dye-sensitized solar cells based on T-shaped molecules. Dyes and Pigments, 2019, 166, 15-31.	2.0	22
5897	Temperature Dependence of the Urbach Energy in Lead Iodide Perovskites. Journal of Physical Chemistry Letters, 2019, 10, 1368-1373.	2.1	191
5898	Davydov splitting and singlet fission in excitonically coupled pentacene dimers. Chemical Science, 2019, 10, 3854-3863.	3.7	60
5899	Sliding Mode Controllers for Standalone PV Systems: Modeling and Approach of Control. International Journal of Photoenergy, 2019, 2019, 1-12.	1.4	29
5900	Hot Charge Carriers in Quantum Dots: Generation, Relaxation, Extraction, and Applications. ChemNanoMat, 2019, 5, 985-999.	1.5	11
5901	First principles study for band engineering of KNbO <sub>3</sub> with 3d transition metal substitution. RSC Advances, 2019, 9, 7551-7559.	1.7	33
5902	Pressure engineering of photovoltaic perovskites. Materials Today, 2019, 27, 91-106.	8.3	79
5903	Controlling the Efficiency of Singlet Fission in TIPS-Pentacene/Polymer Composite Nanoparticles. Journal of Physical Chemistry C, 2019, 123, 5813-5825.	1.5	24

#	Article	IF	CITATIONS
5904	Phenylated Acene Derivatives as Candidates for Intermolecular Singlet Fission. Journal of Physical Chemistry C, 2019, 123, 5890-5899.	1.5	20
5905	Highly-efficient heterojunction solar cells based on two-dimensional tellurene and transition metal dichalcogenides. Journal of Materials Chemistry A, 2019, 7, 7430-7436.	5.2	90
5906	Colossal mid-infrared bulk photovoltaic effect in a type-I Weyl semimetal. Nature Materials, 2019, 18, 471-475.	13.3	253
5907	Relating Carrier Dynamics and Photovoltaic Device Performance of Single-Crystalline <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"&gt;<mml:msub><mml:mi>Cu</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi>ZnPhysical Review Applied, 2019, 11</mml:mi></mml:math 	ıi <sup>‡.5</sup> mml:n	ni <sup>11</sup> 5n
5908	Improving the optoelectrical properties of Cu2ZnSnS4 using gold and graphene nano-fillers. Journal of Materials Science: Materials in Electronics, 2019, 30, 8546-8554.	1.1	3
5909	Impact of heavy hole levels on the photovoltaic conversion efficiency of In Ga1â^'N/InN quantum dot intermediate band solar cells. Superlattices and Microstructures, 2019, 129, 202-211.	1.4	8
5910	Boron-Doped Molecules for Optoelectronics. Trends in Chemistry, 2019, 1, 77-89.	4.4	152
5911	Identifying Pb-free perovskites for solar cells by machine learning. Npj Computational Materials, 2019, 5, .	3.5	129
5912	Sodium bismuth dichalcogenides: candidates for ferroelectric high-mobility semiconductors for multifunctional applications. Physical Chemistry Chemical Physics, 2019, 21, 8553-8558.	1.3	21
5913	Recent progress in quantum dot sensitized solar cells: an inclusive review of photoanode, sensitizer, electrolyte, and the counter electrode. Journal of Materials Chemistry C, 2019, 7, 4911-4933.	2.7	93
5914	An investigation on photoconductivity of non-stoichiometric CuZnSn(S, Se)4 thin films for photovoltaic applications. Physica Scripta, 2019, 94, 085807.	1.2	4
5915	Biomimetic Membranes with Transmembrane Proteins: State-of-the-Art in Transmembrane Protein Applications. International Journal of Molecular Sciences, 2019, 20, 1437.	1.8	24
5916	Intermediateâ€band effect in hotâ€carrier solar cells. Progress in Photovoltaics: Research and Applications, 2019, 27, 528-539.	4.4	7
5917	Photovoltaic solar cell technologies: analysing the state of the art. Nature Reviews Materials, 2019, 4, 269-285.	23.3	727
5918	BX <sub>1</sub> –BX <sub>2</sub> (X <sub>1</sub> , X <sub>2</sub> = P, As, Sb) lateral heterostructure: novel and efficient two-dimensional photovoltaic materials with ultra-high carrier mobilities. Journal of Materials Chemistry A, 2019, 7, 10684-10695.	5.2	30
5919	Analytical Expressions for the Efficiency Limits of Radiatively Coupled Tandem Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 679-687.	1.5	19
5920	Tensor network simulation of multi-environmental open quantum dynamics via machine learning and entanglement renormalisation. Nature Communications, 2019, 10, 1062.	5.8	74
5921	Stable and Reproducible 2D/3D Formamidinium–Lead–Iodide Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 2486-2493.	2.5	64

#	Article	IF	CITATIONS
5922	Operation of BaSi <sub>2</sub> homojunction solar cells on p <sup>+</sup> -Si(111) substrates and the effect of structure parameters on their performance. Applied Physics Express, 2019, 12, 041005.	1.1	47
5923	Establishment of a novel functional group passivation system for the surface engineering of c-Si solar cells. Solar Energy Materials and Solar Cells, 2019, 195, 99-105.	3.0	16
5924	Varying the Interpentacene Electronic Coupling to Tune Singlet Fission. Journal of the American Chemical Society, 2019, 141, 6191-6203.	6.6	66
5925	In search of a true hot carrier solar cell. Semiconductor Science and Technology, 2019, 34, 044001.	1.0	26
5926	Materials Design of Solar Cell Absorbers Beyond Perovskites and Conventional Semiconductors via Combining Tetrahedral and Octahedral Coordination. Advanced Materials, 2019, 31, e1806593.	11.1	48
5927	Effects of front InGaP layer thickness on solar cell characteristics in InP/InGaP quantum dot solar cells. Japanese Journal of Applied Physics, 2019, 58, SBBF09.	0.8	2
5928	Materials Discovery of Stable and Nontoxic Halide Perovskite Materials for Highâ€Efficiency Solar Cells. Advanced Functional Materials, 2019, 29, 1804354.	7.8	61
5929	Solutionâ€Processable Perovskite Solar Cells toward Commercialization: Progress and Challenges. Advanced Functional Materials, 2019, 29, 1807661.	7.8	149
5930	Unraveling the Modified PEDOT:PSS Thin Films Based Nearâ€Infrared Solarâ€Heat Shields by Using Broadband Transmittance and Raman Scattering Spectrometers. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900025.	0.8	3
5931	Planar Perovskite Solar Cells with High Efficiency and Fill Factor Obtained Using Two-Step Growth Process. ACS Applied Materials & Interfaces, 2019, 11, 15680-15687.	4.0	18
5932	Quantitative optical assessment of photonic and electronic properties in halide perovskite. Nature Communications, 2019, 10, 1586.	5.8	40
5933	Dilute nitrides-based nanowires—a promising platform for nanoscale photonics and energy technology. Nanotechnology, 2019, 30, 292002.	1.3	13
5934	Rapid Growth of Halide Perovskite Single Crystals: From Methods to Optimization Control. Chinese Journal of Chemistry, 2019, 37, 616-629.	2.6	24
5935	Twoâ€Photon Photoemission Spectroscopy for Studying Energetics and Electron Dynamics at Semiconductor Interfaces. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800738.	0.8	5
5936	Negative photoconductivity in sulfur-hyperdoped silicon film. Materials Science in Semiconductor Processing, 2019, 98, 106-112.	1.9	12
5937	Structure and Charge Carrier Dynamics in Colloidal PbS Quantum Dot Solids. Journal of Physical Chemistry Letters, 2019, 10, 2058-2065.	2.1	34
5938	Efficient air-stable perovskite solar cells with a (FAI) <sub>0.46</sub> (MAI) <sub>0.40</sub> (MABr) <sub>0.14</sub> (PbI <sub>2</sub> ) <sub>0.86</sub> (PbBi active layer fabricated <i>via</i> a vacuum flash-assisted method under RH > 50%. RSC Advances, 2019, 9, 10148-10154.	<sub>2<!--</td--><td>sub&gt;)<sub>0 16</sub></td></sub>	sub>) <sub>0 16</sub>
5939	Novel semiconductors for sustainable solar energy technologies. Journal of Physics: Conference Series, 2019, 1173, 012001.	0.3	2

#	Article	IF	CITATIONS
5940	Vacuum deposition of CsPbI <sub>3</sub> layers on textured Si for Perovskite/Si tandem solar cells. Japanese Journal of Applied Physics, 2019, 58, SBBF06.	0.8	24
5941	Overview of Computational Simulations in Quantum Dots. Israel Journal of Chemistry, 2019, 59, 661-672.	1.0	12
5942	Exciton–Phonon Interaction Model for Singlet Fission in Prototypical Molecular Crystals. Journal of Chemical Theory and Computation, 2019, 15, 3721-3729.	2.3	31
5943	Improved device performance of Si-based heterojunction solar cells by using phosphorus doped Si nanocrystals embedded in SiC host matrix. AIP Advances, 2019, 9, .	0.6	5
5944	Three-terminal heterojunction bipolar transistor solar cells with non-ideal effects: Efficiency limit and parametric optimum selection. Energy Conversion and Management, 2019, 188, 112-119.	4.4	11
5945	The design, construction and experimental characterization of a novel concentrating photovoltaic/daylighting window for green building roof. Energy, 2019, 175, 1138-1152.	4.5	18
5946	Influence of defect states on the performances of planar tin halide perovskite solar cells. Journal of Semiconductors, 2019, 40, 032201.	2.0	20
5947	Effect of Charge-Transfer State Energy on Charge Generation Efficiency via Singlet Fission in Pentacene–Fullerene Solar Cells. Journal of Physical Chemistry C, 2019, 123, 10253-10261.	1.5	15
5948	Triplet–Triplet Annihilation Upconversion in Broadly Absorbing Layered Film Systems for Sub-Bandgap Photocatalysis. ACS Applied Materials & Interfaces, 2019, 11, 13304-13318.	4.0	29
5949	Ultrathin Ta <sub>2</sub> O <sub>5</sub> electron-selective contacts for high efficiency InP solar cells. Nanoscale, 2019, 11, 7497-7505.	2.8	38
5950	Synthesis, physico-chemical characterization and structure of the elusive hydroxylammonium lead iodide perovskite NH <sub>3</sub> OHPbI <sub>3</sub> . Dalton Transactions, 2019, 48, 5397-5407.	1.6	12
5951	Impact of various dopant elements on the properties of kesterite compounds for solar cell applications: a status review. Sustainable Energy and Fuels, 2019, 3, 1365-1383.	2.5	57
5952	Inverse Optical Cavity Design for Ultrabroadband Light Absorption Beyond the Conventional Limit in Lowâ€Bandgap Nonfullerene Acceptor–Based Solar Cells. Advanced Energy Materials, 2019, 9, 1900463.	10.2	24
5953	Mechanistic aspects of preheating effects of precursors on characteristics of Cu2ZnSnS4 (CZTS) thin films and solar cells. Materials Research Bulletin, 2019, 115, 182-190.	2.7	14
5954	Experimental Characterisation of Photovoltaic Modules with Cells Connected in Different Configurations to Address Nonuniform Illumination Effect. Journal of Renewable Energy, 2019, 2019, 1-15.	2.1	6
5955	Intermediate band insertion by group-IIIA elements alloying in a low cost solar cell absorber CuYSe2: A first-principles study. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1972-1976.	0.9	6
5956	Optoelectronic Structure and Photocatalytic Applications of Na(Bi,La)S2 Solid Solutions with Tunable Band Gaps. Chemistry of Materials, 2019, 31, 3211-3220.	3.2	13
5957	Tuning Spin Dynamics in Crystalline Tetracene. Journal of Physical Chemistry Letters, 2019, 10, 1908-1913.	2.1	15

		REPORT	
#	Article	IF	CITATIONS
5958	Towards the Organic Double Heterojunction Solar Cell. Chemical Record, 2019, 19, 1131-1141.	2.9	7
5959	Sulfur vs. tellurium: the heteroatom effects on the nonfullerene acceptors. Science China Chemistry, 2019, 62, 897-903.	4.2	10
5960	Theoretical analysis of electronic, optical, photovoltaic and thermoelectric properties of AgBiS2. Physica B: Condensed Matter, 2019, 564, 114-124.	1.3	17
5961	Current challenges and future prospects for a highly efficient (>20%) kesterite CZTS solar cell: A review. Solar Energy Materials and Solar Cells, 2019, 196, 138-156.	3.0	180
5962	The progression of silicon technology acting as substratum for the betterment of future photovoltaics. International Journal of Energy Research, 2019, 43, 3959-3980.	2.2	11
5963	Band Gaps and Stability of CsSiX <sub>3</sub> Halides. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800962.	0.8	5
5964	Interface modification in type-II ZnCdSe/Zn(Cd)Te QDs for high efficiency intermediate band solar cells. Journal of Crystal Growth, 2019, 512, 203-207.	0.7	3
5965	Transparent all-oxide photovoltaics and broadband high-speed energy-efficient optoelectronics. Solar Energy Materials and Solar Cells, 2019, 194, 148-158.	3.0	25
5966	Black body-like radiative cooling for flexible thin-film solar cells. Solar Energy Materials and Solar Cells, 2019, 194, 222-228.	3.0	56
5967	Vertical valence ionization potential benchmarks from equation-of-motion coupled cluster theory and QTP functionals. Journal of Chemical Physics, 2019, 150, 074108.	1.2	46
5968	From Lead Halide Perovskites to Leadâ€Free Metal Halide Perovskites and Perovskite Derivatives. Advanced Materials, 2019, 31, e1803792.	11,1	621
5969	Lowâ€Bandgap Mixed Tinâ€Lead Perovskites and Their Applications in Allâ€Perovskite Tandem Solar Cells. Advanced Functional Materials, 2019, 29, 1808801.	7.8	133
5970	Optoelectronic properties of Cu3N thin films deposited by reactive magnetron sputtering and its diode rectification characteristics. Journal of Alloys and Compounds, 2019, 789, 428-434.	2.8	29
5971	Candidate Inorganic Photovoltaic Materials from Electronic Structure-Based Optical Absorption and Charge Transport Proxies. Chemistry of Materials, 2019, 31, 1561-1574.	3.2	40
5973	The effects of intraband and interband carrierâ€carrier scattering on hotâ€carrier solar cells: A theoretical study of spectral hole burning, electronâ€hole energy transfer, Auger recombination, and impact ionization generation. Progress in Photovoltaics: Research and Applications, 2019, 27, 433-452.	4.4	14
5974	Hot carrier solar cells and the potential of perovskites for breaking the Shockley–Queisser limit. Journal of Materials Chemistry C, 2019, 7, 2471-2486.	2.7	124
5975	Organic photovoltaics (OPVs): Device physics. , 2019, , 665-693.		8
5976	Formamidinium Incorporation into Compact Lead Iodide for Low Band Gap Perovskite Solar Cells with Open-Circuit Voltage Approaching the Radiative Limit. ACS Applied Materials & amp; Interfaces, 2019, 11, 9083-9092.	4.0	9
#	Article	IF	CITATIONS
------	--	------	-----------
5977	Dual-band dielectric light-harvesting nanoantennae made by nature. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	1.1	3
5978	Deep elastic strain engineering of bandgap through machine learning. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4117-4122.	3.3	70
5979	Influence of oxygen flow rate and substrate positions on properties of Cu-oxide thin films fabricated by radio frequency magnetron sputtering using pure Cu target. Thin Solid Films, 2019, 675, 59-65.	0.8	15
5980	Assessment of Artificial Photosynthetic Systems for Integrated Carbon Capture and Conversion. ACS Sustainable Chemistry and Engineering, 2019, 7, 5993-6003.	3.2	25
5981	A review of non-fullerene polymer solar cells: from device physics to morphology control. Reports on Progress in Physics, 2019, 82, 036601.	8.1	184
5982	Hydrogen Production Through Solar-Driven Water Splitting: Cu(l) Oxide-Based Semiconductor Nanoparticles as the Next-Generation Photocatalysts. Environmental Chemistry for A Sustainable World, 2019, , 189-222.	0.3	0
5983	Nitrogen Soaking Promotes Lattice Recovery inÂPolycrystalline Hybrid Perovskites. Advanced Energy Materials, 2019, 9, 1803450.	10.2	46
5984	Nanostructured Materials for Energy Related Applications. Environmental Chemistry for A Sustainable World, 2019, , .	0.3	5
5985	Control of simultaneous effects of the temperature, indium composition and the impact ionization process on the performance of the InN/InxGa1-xN quantum dot solar cells. Opto-electronics Review, 2019, 27, 25-31.	2.4	6
5986	Novel heterojunction bipolar transistor architectures for the practical implementation of high-efficiency three-terminal solar cells. Solar Energy Materials and Solar Cells, 2019, 194, 54-61.	3.0	12
5987	Series Resistance Measurements of Perovskite Solar Cells Using <i>J<sub>sc</sub></i> – <i>V<sub>oc</sub></i> Measurements. Solar Rrl, 2019, 3, 1800378.	3.1	61
5988	Modern Processing and Insights on Selenium Solar Cells: The World's First Photovoltaic Device. Advanced Energy Materials, 2019, 9, 1802766.	10.2	53
5989	Sensitizing Singlet Fission with Perovskite Nanocrystals. Journal of the American Chemical Society, 2019, 141, 4919-4927.	6.6	83
5990	Thermal artefacts in two-photon solar cell experiments. Nature Communications, 2019, 10, 957.	5.8	4
5991	Room-Temperature Cubic Perovskite Thin Films by Three-Step All-Vapor Conversion from PbSe to MAPbI <sub>3</sub> . Crystal Growth and Design, 2019, 19, 2001-2009.	1.4	12
5992	Slow Carrier Cooling in Hybrid Pb–Sn Halide Perovskites. ACS Energy Letters, 2019, 4, 736-740.	8.8	36
5993	Molecular beam epitaxial growth of interdigitated quantum dots for heterojunction solar cells. Journal of Crystal Growth, 2019, 512, 159-163.	0.7	7
5994	Efficient conversion of broad UV–visible light to near-infrared emission in Mn4+/Yb3+ co-doped CaGdAlO4 phosphors. Journal of Luminescence, 2019, 210, 189-201.	1.5	13

	Сітаті	CITATION REPORT	
# 5995	ARTICLE Influence of A-site cations on the open-circuit voltage of efficient perovskite solar cells: a case of rubidium and guanidinium additives. Journal of Materials Chemistry A, 2019, 7, 8218-8225.	IF 5.2	Citations 43
5996	Enhanced spectral response of CIGS solar cells with anti-reflective subwavelength structures and quantum dots. Solar Energy Materials and Solar Cells, 2019, 194, 177-183.	3.0	24
5997	Effect of InAs quantum dots capped with GaAs on atomic-scale ordering in Ga0.5In0.5P. Journal of Applied Physics, 2019, 125, 053104.	1.1	2
5998	Nanostructured photovoltaics. Nano Futures, 2019, 3, 012002.	1.0	9
5999	Progress and Perspectives of Thin Film Kesterite Photovoltaic Technology: A Critical Review. Advanced Materials, 2019, 31, e1806692.	11.1	333
6000	Sb <sub>2</sub> (Se <sub>1â€x</sub> S <sub>x</sub> ) <sub>3</sub> Thinâ€Film Solar Cells Fabricated by Singleâ€Source Vapor Transport Deposition. Solar Rrl, 2019, 3, 1800280.	3.1	48
6001	Functionalized reduced graphene oxide with tunable band gap and good solubility in organic solvents. Carbon, 2019, 146, 491-502.	5.4	58
6002	Electroplated CdTe Solar Technology At Reel Solar. , 2019, , .		0
6003	Hot Carrier Solar Cells based on Inter-Valley Phonon Scattering: A New Approach towards a Practical Solution. , 2019, , .		0
6004	The Societal Effects of Solar-Driven Energy. ACS Symposium Series, 2019, , 89-97.	0.5	0
6005	Switch for the Optimization of Module Power by Reconfiguration of All Strings (SOMBRA): An Insulated Integrated Switch for a Reconfigurable Solar Panel. Energies, 2019, 12, 4179.	1.6	0
6007	Combining SentiStrength and Multilayer Perceptron in Twitter Sentiment Classification. , 2019, , .		3
6008	Investigation on Temperature Coefficients of Crystalline Silicon Solar Modules before and after Potential-induced Degradation. , 2019, , .		0
6009	Predicted Performance of High-Efficiency Photovoltaics with Energy-Selective Front Reflectors for Photon Recycling Enhancements. , 2019, , .		0
6010	Comprehensive Evaluation of the Effectiveness of Complex Systems. , 2019, , .		0
6011	Study of Se and Cl segregation in poly-crystalline CdSeTe. , 2019, , .		0
6012	Growth Evolution of Polycrystalline CdTe/CdS with Atomic Scale Resolution via Molecular Dynamics. , 2019, , .		2
6013	Performance Analysis of Various SDN Controllers in Mininet Emulator. , 2019, , .		12

#	Article	IF	CITATIONS
6014	Effects of high photon gas density and radiative efficiency on upper bounds of energy conversion efficiency in single-crystal solar cells. , 2019, , .		2
6015	A Linear Relation behind Outstanding Crystalline Silicon Solar Cells. , 2019, , .		0
6016	Optimal Evolutionary Optimization Hyper-parameters to Mimic Human User Behavior. , 2019, , .		0
6017	The Research Assistant and Al in eScience. , 2019, , .		0
6018	Predicting Open-Circuit Voltages in Atomically-Thin Monolayer Transition Metal Dichalcogenides-Based Solar Cells. , 2019, , .		0
6019	Is the South African Electrical Infrastructure Ready for Electric Vehicles?. , 2019, , .		3
6020	Optimizing Device Characteristics for VLS-Grown InP Heterojunction Solar Cells. , 2019, , .		0
6021	A Spatial-Temporal Optimization Approach to Navigating the Autonomous Underwater Vehicles. , 2019, , .		0
6023	Syntax-aware Transformer Encoder for Neural Machine Translation. , 2019, , .		11
6025	Design of the admittance detecting circuit for silicon waveguides using the capacitor-integration method. , 2019, , .		0
6026	Opportunities for High Efficiency Monochromatic Photovoltaic Power Conversion at 1310 nm. , 2019, , .		4
6027	GLRT Detectors for Airborne Radar Based on Knowledge-Aided and Compressive Sensing. , 2019, , .		3
6028	Absorption Enhancement of GaAs Slab with Geometrically Varying Periodic Array of SiO2 Nanostructures. , 2019, , .		0
6029	Challenges of Ship Focusing with Long Coherence Processing Interval. , 2019, , .		1
6030	Hot-Carrier Extraction in InAs/GaAs Quantum Dot Superlattice Solar Cells. , 2019, , .		1
6031	Composite-Cell Current Matching in High Efficiency Multijunction Solar Cells. , 2019, , .		1
6032	Structural and Optical Properties of Two-Stage CulnSe2 Thin Films Studied by Real Time Spectroscopic Ellipsometry. , 2019, , .		3
6033	Simulation of the absorber layer thickness effect on the performance of CuInSe2 solar cells. , 2019, , .		1

	СІТА	tion Report	
# 6034	ARTICLE The Evolution of Biomarkers of Magnetic Resonance Enterography to Quantify Inflammation in Crohn's Disease. , 2019, , .	IF (	Citations 0
6035	Solar Energy Production for a Decarbonization Scenario in Spain. Sustainability, 2019, 11, 7112.	1.6	5
6036	Fabrication of Si1-xSnx Layer on Si Substrate by Screen-Printing of Al-Sn Paste. ECS Transactions, 2019, 93, 61-62.	0.3 (	0
6037	Green building technology. , 2019, , 271-290.		0
6038	Optimizing the role of impact ionization in conventional insulators. Scientific Reports, 2019, 9, 20395.	1.6 8	8
6039	Detecting Gait Anomalies Based on the Analysis of Foot Pressures. , 2019, , .		0
6040	Comparative Study of Different Passivity-Based Non-linear Control of DC-DC Boost Converter. , 2019, ,	:	1
6041	Research on Capability Characteristics Modeling and Cooperative Fire Strike Planning for Unmanned Ground Vehicles. , 2019, , .		5
6042	Tracking control of an articulated intervention AUV in 6DOF using the generalized super-twisting algorithm. , 2019, , .	·	7
6043	Phosphorene-based van der Waals heterojunction for solar water splitting. Chinese Journal of Chemical Physics, 2019, 32, 431-436.	0.6	2
6044	Recent advances in solar energy harvesting materials with particular emphasis on photovoltaic materials. , 2019, , .	ł	5
6045	Output Power of the Carbon Nanotube-based Rectenna. , 2019, , .		0
6047	High Gain Slot Antenna Array for Millimeter-Wave Anti-Collision Radar Application. , 2019, , .		1
6048	Modified Cluster Based Certificate Blocking of Misbehaving Node In Manets. , 2019, , .		2

Automation of Microservices Application Deployment Made Easy By Rundeck and Kubernetes., 2019,,.

4

0

6050  $\,$  A Probabilistic Approach For Power Network Stability in Smart Grids. , 2019, , .

Improved Reversible Data Hiding Schemes Based On Invariant Image Classification. , 2019, , . 6051

Quantum-Dot Intermediate-band Solar Cell used as Bottom Cell. , 2019, , .

#	Article	IF	CITATIONS
6053	Brain-inspired Co-design of Algorithm/Architecture for CNN Accelerators. , 2019, , .		2
6054	Opportunities, Challenges and Countermeasures of Modernization of Social Governance in Big Data Era. , 2019, , .		0
6055	Analytical Expressions for Radiative Losses in Solar Cells. , 2019, , .		0
6056	InGaN Quantum Dots for Intermediate Band Solar Cells. , 2019, , .		1
6057	ZnTe Back Buffer Layer to Enhance the Efficiency of CdS/CdTe Solar Cells. , 2019, , .		5
6058	Current and future trends in photovoltaic technology. , 2019, , .		0
6059	Ways of Producing Perovskite Light Absorbing Layer on Periodically Patterned Silicon Texture and Evaluating Method. , 2019, , .		0
6060	Potential of the three-terminal heterojunction bipolar transistor solar cell for space applications. , 2019, , .		2
6061	Analysis and Evaluation of Individual Performance in Team Task. , 2019, , .		0
6062	30ÂGb/s integrated receiver array for parallel optical interconnects. Journal of Engineering, 2019, 2019, 5375-5378.	0.6	0
6063	Controlling Silicon Bottom Cell Lifetime Variance in II-VI/Si Tandems. , 2019, , .		2
6064	Intermediate Band Challenge in InAs/GaAs Quantum Dot Solar Cell at Cryogenic Temperatures. , 2019, , .		0
6065	A summary of expressions for central performance parameters of high efficiency solar cell concepts. , 2019, , .		1
6066	First- and Second-Order Piezoresistive Coefficients of CMOS FETs From Strong Into Weak Inversion. IEEE Sensors Journal, 2019, 19, 11309-11317.	2.4	1
6067	Design of Multi-Staged Power Electronic Interface for Stand-alone Application Powered by Photovoltaic Module. , 2019, , .		1
6068	Statistical Power Analysis for IoT Device Oriented Encryption with Glitch Canceller. , 2019, , .		2
6069	Dispersive Optical Systems for Highly-Concentrated Solar Spectrum Splitting: Concept, Design, and Performance Analyses. Energies, 2019, 12, 4719.	1.6	4
6070	Design Optimization of Self-Driven Boost Converter for CZTSSe Indoor Photovoltaic Device based Low-Power Electronic. , 2019, , .		0

#	Article	IF	CITATIONS
6071	Shockley–Queisser triangle predicts the thermodynamic efficiency limits of arbitrarily complex multijunction bifacial solar cells. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23966-23971.	3.3	15
6072	Device Modeling for High Efficiency Lead Free Perovskite Solar Cell with Cu <sub>2</sub> O as Hole Transport Material. , 2019, , .		7
6073	A density functional theory study on multiple exciton generation in lead chalcogenides. Molecular Crystals and Liquid Crystals, 2019, 693, 57-65.	0.4	2
6074	Structure and photophysics of indigoids for singlet fission: Cibalackrot. Journal of Chemical Physics, 2019, 151, 184903.	1.2	40
6075	Hot carrier extraction in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> unveiled by pump-push-probe spectroscopy. Science Advances, 2019, 5, eaax3620.	4.7	56
6076	Molybdenum incorporated Cu1.69ZnSnS4 kesterite photovoltaic devices with bilayer microstructure and tunable optical-electronic properties. Solar Energy, 2019, 194, 777-787.	2.9	7
6077	Cost benefit modeling of AB <sub>2</sub> X <sub>4</sub> (A=Cd; B=Ga; X=S, Se) solar photovoltaic (PV) materials. IOP Conference Series: Materials Science and Engineering, 2019, 594, 012030.	0.3	2
6078	Enhancing Photovoltaic Performance of GaAs Single-Junction Solar Cells by Applying a Spectral Conversion Layer Containing Eu-Doped and Yb/Er-Doped Phosphors. Nanomaterials, 2019, 9, 1518.	1.9	10
6079	Stabilizing lead halide perovskites with quaternary ammonium cations: the case of tetramethylammonium lead iodide. Physical Chemistry Chemical Physics, 2019, 21, 24768-24777.	1.3	20
6080	Determination of optimum optoelectronic properties in vertically stacked MoS <sub>2</sub> /h-BN/WSe <sub>2</sub> van der Waals heterostructures. Physical Chemistry Chemical Physics, 2019, 21, 23179-23186.	1.3	19
6081	Assessing the energy offset at the electron donor/acceptor interface in organic solar cells through radiative efficiency measurements. Energy and Environmental Science, 2019, 12, 3556-3566.	15.6	69
6082	Light-harvesting porphyrazines to enable intramolecular singlet fission. Nanoscale, 2019, 11, 22286-22292.	2.8	14
6083	Beyond 10% efficiency Cu <sub>2</sub> ZnSnS <sub>4</sub> solar cells enabled by modifying the heterojunction interface chemistry. Journal of Materials Chemistry A, 2019, 7, 27289-27296.	5.2	46
6084	Comprehensive Study of Multiple Exciton Generation in Chiral Carbon Nanotubes Using Many-Body Perturbation Theory Based on Density Functional Theory Simulations. ACS Symposium Series, 2019, , 157-179.	0.5	0
6085	A zwitterionic polymer as an interfacial layer for efficient and stable perovskite solar cells. RSC Advances, 2019, 9, 30317-30324.	1.7	13
6086	Multijunction solar cells concept based on GaP/Si nanostructures. Materials Today: Proceedings, 2019, 19, 47-52.	0.9	3
6087	Transition Energy Calculations of Type II In(As)P/InGaP Quantum Dots for Intermediate Band Solar Cells. , 2019, , .		2
6088	Study on the Influence of the Luminescence Coupling in Dual Junction Solar Cells. , 2019, , .		0

ARTICLE IF CITATIONS Strong bulk photovoltaic effect in chiral crystals in the visible spectrum. Physical Review B, 2019, 100, 6089 1.1 18 Flexible CuOâ€"ZnO nano-bulk junction with photovoltaic response. Materials Research Express, 2019, 6, 6090 0.8 1250d9. Advanced material system for the design of an intermediate band solar cell: Type-II CdTe quantum dots 6091 2 1.1 in a ZnCdSe matrix. Journal of Applied Physics, 2019, 126, 235302. Suppressing the carrier concentration of zinc tin nitride thin films by excess zinc content and low 6092 temperature growth. Applied Physics Letters, 2019, 115, . High-performance conjugated polymer donor materials for polymer solar cells with narrow-bandgap 6093 15.6 236 nonfullerene acceptors. Energy and Environmental Science, 2019, 12, 3225-3246. Sb<sub>2</sub>S<sub>3</sub> solar cells: functional layer preparation and device performance. Inorganic Chemistry Frontiers, 2019, 6, 3381-3397. 6094 3.0 Solution-processed perovskite-colloidal quantum dot tandem solar cells for photon collection 6095 5.2 44 beyond 1000 nm. Journal of Materials Chemistry A, 2019, 7, 26020-26028. Photo-sensitizing thin-film ferroelectric oxides using materials databases and high-throughput 6096 5.2 calculations. Journal of Materials Chemistry A, 2019, 7, 27323-27333. Energy level modulation of donor–acceptor alternating random conjugated copolymers for 6097 2.7 7 achieving high-performance polymer solar cells. Journal of Materials Chemistry C, 2019, 7, 15335-15343. Highly efficient hot electron harvesting from graphene before electron-hole thermalization. Science 6098 79 Advances, 2019, 5, eaax9958. Detailed Balance Efficiency of 1310 nm Multijunction Photonic Power Converters., 2019,,. 6099 0 Absolute Quantification of Photo-/Electroluminescence Imaging for Solar Cells: Definition and 2.0 Application to Organic and Perovskite Devices. ACS Applied Electronic Materials, 2019, 1, 2489-2501. Thickness-dependent photoelectric properties of MoS2/Si heterostructure solar cells. Scientific 6101 1.6 33 Reports, 2019, 9, 17381. Singlet Fission in Tetraaza-TIPS-Pentacene Oligomers: From fs Excitation to μs Triplet Decay via the 1.2 24 Biexcitonic State. Journal of Physical Chemistry B, 2019, 123, 10780-10793. Optimization bandgap gradation structure simulation of Cu2Sn1â^'xGexS3 solar cells by SCAPS. Solar 6103 2.9 17 Energy, 2019, 194, 986-994. Efficient and Stable Low-Bandgap Perovskite Solar Cells Enabled by a CsPbBr<sub>3</sub>-Cluster Assisted Bottom-up Crystallization Approach. Journal of the American Chemical Society, 2019, 141, 6104 79 20537-20546. The Frontiers of Nanomaterials (SnS, PbS and CuS) for Dye-Sensitized Solar Cell Applications: An 6105 1.7 17 Exciting New Infrared Material. Molecules, 2019, 24, 4223. All-Inorganic Perovskite Solar Cells Based on CsPbIBr2 and Metal Oxide Transport Layers with Improved Stability. Nanomaterials, 2019, 9, 1666.

CITATION REPORT

#	Article	IF	CITATIONS
6107	Thickness Dependence and Strain Effects in Ferroelectric Bi <sub>2</sub> FeCrO <sub>6</sub> Thin Films. ACS Applied Energy Materials, 2019, 2, 8550-8559.	2.5	15
6108	Carrier multiplication in van der Waals layered transition metal dichalcogenides. Nature Communications, 2019, 10, 5488.	5.8	41
6110	Electronic energy band parameters of CuInSe2 : Landau levels in magnetotransmission spectra. Physical Review B, 2019, 100, .	1.1	1
6111	Effect of Solar Concentration on Performance of Perovskite Solar Cell: A detailed balance study. , 2019, , .		0
6112	An Efficient CZTS Solar Cell from Numerical Analysis. , 2019, , .		1
6113	J–V Characteristic of p–n Structure Formed on n-GaAs Surface by Ar+ Ion Beam. Semiconductors, 2019, 53, 1922-1925.	0.2	4
6114	Fluctuating exchange interactions enable quintet multiexciton formation in singlet fission. Journal of Chemical Physics, 2019, 151, 164104.	1.2	33
6115	Multi-bandgap Solar Energy Conversion via Combination of Microalgal Photosynthesis and Spectrally Selective Photovoltaic Cell. Scientific Reports, 2019, 9, 18999.	1.6	19
6116	High-Efficiency GaAs Solar Cell Optimization by Theoretical Simulation. , 2019, , .		0
6117	Interface Structure and Band Alignment of CZTS/CdS Heterojunction: An Experimental and First-Principles DFT Investigation. Materials, 2019, 12, 4040.	1.3	10
6118	Heat-Recovery Solar Cell. Physical Review Applied, 2019, 12, .	1.5	3
6119	Bound-to-continuum intraband transition properties in InAs/GaAs quantum dot superlattice solar cells. Applied Physics Express, 2019, 12, 125008.	1.1	2
6120	Postâ€Deposition Vapor Annealing Enables Fabrication of 1 cm <sup>2</sup> Leadâ€Free Perovskite Solar Cells. Solar Rrl, 2019, 3, 1970114.	3.1	1
6121	Advances and challenges in commercializing radiative cooling. Materials Today Physics, 2019, 11, 100161.	2.9	68
6122	A review on quantum dot solar cells: properties, materials, synthesis and devices. , 2019, , .		1
6123	Determination of Technological Features of a Solar Photovoltaic Cell Made of Monocrystalline Silicon P <sup>+</sup> PNN <sup>+</sup> . International Journal of Photoenergy, 2019, 2019, 1-14.	1.4	1
6124	Lateral InSe p–n Junction Formed by Partial Doping for Use in Ultrathin Flexible Solar Cells. Journal of Physical Chemistry Letters, 2019, 10, 7712-7718.	2.1	20
6125	The phase optimization, optical and electrical properties of kesterite Cu <sub>2</sub> ZnSnS <sub>4</sub> thin film prepared by single target RF magnetron sputtering technique for solar cell application. Materials Research Express, 2019, 6, 126457.	0.8	7

# 6126	ARTICLE Optimum Band Gap Energy of ((Ag),Cu)(InGa)Se2 Materials for Combination with NiMo–NiO Catalysts for Thermally Integrated Solar-Driven Water Splitting Applications. Energies, 2019, 12, 4064.	IF 1.6	CITATIONS 9
6127	Influence of the heavy-atom effect on singlet fission: a study of platinum-bridged pentacene dimers. Chemical Science, 2019, 10, 11130-11140.	3.7	25
6128	Three-step growth of highly photoresponsive BaSi2 light absorbing layers with uniform Ba to Si atomic ratios. Journal of Applied Physics, 2019, 126, .	1.1	16
6129	Applications of Carbon Nanotubes in Solar Cells. Nanostructure Science and Technology, 2019, , 497-536.	0.1	11
6130	Review on the Role of Polymers in Luminescent Solar Concentrators. Journal of Polymer Science Part A, 2019, 57, 201-215.	2.5	83
6131	Quantum Master Equation Approach to Singlet Fission Dynamics in Pentacene Linear Aggregate Models: Size Dependences of Excitonic Coupling Effects. Journal of Computational Chemistry, 2019, 40, 89-104.	1.5	21
6132	Light absorption optimizing in (La0.25Bi0.75)2FeCrO6 active layers: GGA + U study. Indian Journal of Physics, 2019, 93, 327-333.	0.9	0
6133	A facile method to synthesize CZTS quantum dots for solar cell applications. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 105, 19-24.	1.3	16
6134	Nanostructuring Solar Cells Using Metallic Nanoparticles. , 2019, , 197-221.		8
6135	Singleâ€Walled Carbon Nanotubes in Emerging Solar Cells: Synthesis and Electrode Applications. Advanced Energy Materials, 2019, 9, 1801312.	10.2	86
6136	Advances in Solutionâ€Processed Multijunction Organic Solar Cells. Advanced Materials, 2019, 31, e1806499.	11.1	146
6137	Structurally Reconstructed CsPbI <sub>2</sub> Br Perovskite for Highly Stable and Squareâ€Centimeter Allâ€Inorganic Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803572.	10.2	192
6138	Recent Progress in Piezoâ€₽hototronic Effect Enhanced Solar Cells. Advanced Functional Materials, 2019, 29, 1808214.	7.8	57
6139	Over 6% Certified Sb <sub>2</sub> (S,Se) <sub>3</sub> Solar Cells Fabricated via In Situ Hydrothermal Growth and Postselenization. Advanced Electronic Materials, 2019, 5, 1800683.	2.6	78
6140	Steuerung des GrenzflĤhenâ€Ladungstransfers und des Fillâ€Factors in CuOâ€basierten GrĤzelâ€Tandemzellen. Angewandte Chemie, 2019, 131, 4097-4102.	1.6	8
6141	Controlling Interfacial Charge Transfer and Fill Factors in CuOâ€based Tandem Dyeâ€Sensitized Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 4056-4060.	7.2	32
6142	Local Structure of High Performance TiO <i><sub>x</sub></i> Electronâ€Selective Contact Revealed by Electron Energy Loss Spectroscopy. Advanced Materials Interfaces, 2019, 6, 1801645.	1.9	15
6143	Theoretical Insights into Heterogeneous (Photo)electrochemical CO <sub>2</sub> Reduction. Chemical Reviews, 2019, 119, 6631-6669.	23.0	431

#	Article	IF	CITATIONS
6144	Optimization of sulfurization time and temperature for fabrication of Cu2ZnSnS4 (CZTS) thin films. Superlattices and Microstructures, 2019, 126, 32-41.	1.4	48
6145	Radiative cooling: A review of fundamentals, materials, applications, and prospects. Applied Energy, 2019, 236, 489-513.	5.1	474
6146	Understanding macroscale functionality of metal halide perovskites in terms of nanoscale heterogeneities. JPhys Energy, 2019, 1, 011002.	2.3	3
6147	In situ Photoluminescence Study of Plasma Effects on Passivation of Crystalline Silicon Coated with Aluminum Oxide. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800612.	0.8	1
6148	Tuning Bandgap of Mixedâ€Halide Perovskite for Improved Photovoltaic Performance Under Monochromaticâ€Light Illumination. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800727.	0.8	8
6149	Cs/MAPbI3 composite formation and its influence on optical properties. Journal of Alloys and Compounds, 2019, 783, 935-942.	2.8	15
6150	Singlet Fission in Combinatorial Diketopyrrolopyrrole–Rylene Supramolecular Films. Journal of Physical Chemistry C, 2019, 123, 1587-1595.	1.5	23
6151	Interfacial Engineering by Indium-Doped CdS for High Efficiency Solution Processed Sb <sub>2</sub> (S <sub>1–<i>x</i></sub> Se <sub><i>x</i></sub> ) <sub>3</sub> Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 3207-3213.	4.0	59
6152	Silicon solar cells: toward the efficiency limits. Advances in Physics: X, 2019, 4, 1548305.	1.5	188
6153	Towards 30% Power Conversion Efficiency in Thin-Silicon Photonic-Crystal Solar Cells. Physical Review Applied, 2019, 11, .	1.5	30
6154	Ideal performance of a self-cooling greenhouse. Applied Thermal Engineering, 2019, 149, 502-511.	3.0	17
6155	Efficient Visible-to-NIR Spectral Conversion for Polycrystalline Si Solar Cells and Revisiting the		10
	Lu <sub>3</sub> Al <sub>5</sub> O <sub>12</sub> Host. Inorganic Chemistry, 2019, 58, 234-242.	1.9	10
6156	Lu <sub>3</sub> Al <sub>5</sub> O <sub>12</sub> Host. Inorganic Chemistry, 2019, 58, 234-242.         Ideal half-filled intermediate band position in CuGaS <sub>2</sub> generated by Sb-related defect complex: a first-principles study. Applied Physics Express, 2019, 12, 021002.	1.9	3
6156 6157	Energy Transfer Mechanism from Cecsup>3+ to Yb <sup>3+</sup> in         Lu <sub>3</sub> Al <sub>5</sub> O <sub>12</sub> Host. Inorganic Chemistry, 2019, 58, 234-242.         Ideal half-filled intermediate band position in CuGaS <sub>2</sub> generated by Sb-related defect complex: a first-principles study. Applied Physics Express, 2019, 12, 021002.         Ti-MOF derived TixFe1â^2xOy shells boost Fe2O3 nanorod cores for enhanced photoelectrochemical water oxidation. Chemical Engineering Journal, 2019, 361, 660-670.	1.9 1.1 6.6	3
6156 6157 6158	Energy Transfer Mechanism from Cecsup>3+ to Yb <sup>3+</sup> in         Lu <sub>3</sub> Al <sub>5</sub> O <sub>12</sub> Host. Inorganic Chemistry, 2019, 58, 234-242.         Ideal half-filled intermediate band position in CuGaS <sub>2</sub> generated by Sb-related defect complex: a first-principles study. Applied Physics Express, 2019, 12, 021002.         Ti-MOF derived TixFe1â <sup>o</sup> xOy shells boost Fe2O3 nanorod cores for enhanced photoelectrochemical water oxidation. Chemical Engineering Journal, 2019, 361, 660-670.         Advances in Solar Energy: Solar Cells and Their Applications. Energy, Environment, and Sustainability, 2019, , 75-127.	1.9 1.1 6.6 0.6	10 3 42 1
6156 6157 6158 6159	Energy Transfer Mechanism from Ce(sup) 3+(sup) to Yb(sup) 3+(sup) in         Lu(sub) 3 (sub) Al(sub) 5 (sub) O(sub) 12 (sub) Host. Inorganic Chemistry, 2019, 58, 234-242.         Ideal half-filled intermediate band position in CuGaS(sub) 2 (sub) generated by Sb-related defect complex: a first-principles study. Applied Physics Express, 2019, 12, 021002.         Ti-MOF derived TixFe1â^'xOy shells boost Fe2O3 nanorod cores for enhanced photoelectrochemical water oxidation. Chemical Engineering Journal, 2019, 361, 660-670.         Advances in Solar Energy: Solar Cells and Their Applications. Energy, Environment, and Sustainability, 2019, 75-127.         Strategic advantages of reactive polyiodide melts for scalable perovskite photovoltaics. Nature Nanotechnology, 2019, 14, 57-63.	1.9 1.1 6.6 0.6 15.6	10 3 42 1 75
6156 6157 6158 6159 6160	<ul> <li>Energy Transfer Mechanism from Cecsup 344 (Sup &gt; 10 Yocsup &gt; 344 (Sup &gt; 11 Lu &lt; sub &gt; 344 (Sub &gt; 344</li></ul>	1.9 1.1 6.6 0.6 15.6 2.5	10 3 42 1 75 32

#	Article	IF	Citations
6162	Influence of heavy alkali post deposition treatment on wide gap Cu(In,Ga)Se2. Thin Solid Films, 2019, 669, 629-632.	0.8	18
6163	Electronic Traps and Phase Segregation in Lead Mixed-Halide Perovskite. ACS Energy Letters, 2019, 4, 75-84.	8.8	212
6164	A Gradient Heterostructure Based on Tolerance Factor in Highâ€Performance Perovskite Solar Cells with 0.84 Fill Factor. Advanced Materials, 2019, 31, e1804217.	11.1	95
6165	A broadbandâ€sensitive upconverter: Garnetâ€type Ca 3 Ga 2 Ge 3 O 12 codoped with Er 3+ , Y 3+ , Li + , Ni 2+ , and Nb 5+. Journal of the American Ceramic Society, 2019, 102, 3457-3467.	1.9	6
6166	Effect of strain relaxation layer insertion on carrier recombination and escaping processes in superlattice solar cell structures using photoluminescence spectroscopy. Journal Physics D: Applied Physics, 2019, 52, 045104.	1.3	5
6167	Monolithic crystalline silicon solar cells with SiN layers doped with Tb3+ and Yb3+ rare-earth ions. Journal of Rare Earths, 2019, 37, 515-519.	2.5	12
6168	Bandgap of thin film solar cell absorbers: A comparison of various determination methods. Thin Solid Films, 2019, 669, 482-486.	0.8	56
6169	Identifying technological sub-trajectories in patent data: the case of photovoltaics. Economics of Innovation and New Technology, 2019, 28, 407-434.	2.1	11
6170	High-Performance Fullerene-Free Polymer Solar Cells Featuring Efficient Photocurrent Generation from Dual Pathways and Low Nonradiative Recombination Loss. ACS Energy Letters, 2019, 4, 8-16.	8.8	62
6171	Absence of Charge Transfer State Enables Very Low <i>V</i> <sub>OC</sub> Losses in SWCNT:Fullerene Solar Cells. Advanced Energy Materials, 2019, 9, 1801913.	10.2	25
6172	Metal–Organic Frameworks in Dye-Sensitized Solar Cells. Energy, Environment, and Sustainability, 2019, , 175-219.	0.6	8
6173	Optical and photoelectrochemical properties of Cu2SrSnS4 thin film fabricated by a facial ball-milling method. Materials Letters, 2019, 237, 130-133.	1.3	20
6174	Analysis of recombination processes in polytype gallium arsenide nanowires. Nano Energy, 2019, 56, 196-206.	8.2	3
6175	Optical optimization of a multi-layer wideband anti-reflection coating using porous MgF2 for sub-micron-thick CIGS solar cells. Solar Energy, 2019, 177, 59-67.	2.9	28
6176	Enhancing the energy transfer from Mn4+ to Yb3+ via a Nd3+ bridge role in Ca3La2W2O12:Mn4+,Nd3+,Yb3+ phosphors for spectral conversion of c-Si solar cells. Dyes and Pigments, 2019, 162, 990-997.	2.0	31
6177	Rational Design and Construction of Cocatalysts for Semiconductorâ€Based Photoâ€Electrochemical Oxygen Evolution: A Comprehensive Review. Advanced Science, 2019, 6, 1801505.	5.6	120
6178	Integration of silicon nanowires in solar cell structure for efficiency enhancement: A review. Journal of Materiomics, 2019, 5, 34-48.	2.8	60
6179	Press-engineered funnel effect in MoS2 monolayer homojunction. Journal Physics D: Applied Physics, 2019, 52, 055103.	1.3	1

#	Article	IF	CITATIONS
6180	Nanomorphology in A–D–A type small molecular acceptors-based bulk heterojunction polymer solar cells. Journal of Energy Chemistry, 2019, 35, 104-123.	7.1	20
6181	Lead and HTM Free Stable Twoâ€Dimensional Tin Perovskites with Suitable Band Gap for Solar Cell Applications. Angewandte Chemie, 2019, 131, 1084-1088.	1.6	22
6182	Lead and HTM Free Stable Twoâ€Ðimensional Tin Perovskites with Suitable Band Gap for Solar Cell Applications. Angewandte Chemie - International Edition, 2019, 58, 1072-1076.	7.2	96
6183	Infraredâ€toâ€ultraviolet lightâ€absorbing BaTiO <sub>3</sub> â€based ferroelectric photovoltaic materials. Journal of the American Ceramic Society, 2019, 102, 4188-4199.	1.9	23
6184	Enhancement of monolayer SnSe light absorption by strain engineering: A DFT calculation. Chemical Physics, 2019, 521, 5-13.	0.9	54
6185	Photovoltaic Performances of Yb Doped CdTe QDs Sensitized TiO2 Photoanodes for Solar cell Applications. Journal of Inorganic and Organometallic Polymers and Materials, 2019, 29, 859-868.	1.9	22
6186	Study of electrical effect of transition-metal dichalcogenide-MoS2 layer on the performance characteristic of Cu2ZnSnS4 based solar cells using wxAMPS. Optik, 2019, 181, 627-638.	1.4	31
6187	Dual-mode downconversion luminescence with broad near-ultraviolet and blue light excitation in Tm3+/Yb3+ codoped oxy-fluoride glasses for c-Si solar cells. Materials Research Bulletin, 2019, 112, 109-114.	2.7	18
6188	Controlling Band Alignment at the Back Interface of Cadmium Telluride Solar Cells using ZnTe and Te Buffer Layers. MRS Advances, 2019, 4, 913-919.	0.5	15
6189	Solution-Processed All-Perovskite Multi-junction Solar Cells. Joule, 2019, 3, 387-401.	11.7	177
6190	Predicted photovoltaic performance of lead-based hybrid perovskites under the influence of a mixed-cation approach: theoretical insights. Journal of Materials Chemistry C, 2019, 7, 371-379.	2.7	32
6191	Solution-processed intermediate-band solar cells with lead sulfide quantum dots and lead halide perovskites. Nature Communications, 2019, 10, 43.	5.8	70
6192	Transition metal-doped 3C-SiC as a promising material for intermediate band solar cells. Optical and Quantum Electronics, 2019, 51, 1.	1.5	15
6193	Bandgap engineered smart threeâ€ŧerminal solar cell: New perspectives towards very high efficiencies in the silicon world. Progress in Photovoltaics: Research and Applications, 2019, 27, 306-315.	4.4	21
6194	Progress and challenges in perovskite photovoltaics from single- to multi-junction cells. Materials Today Energy, 2019, 12, 70-94.	2.5	67
6195	Coral-like perovskite nanostructures for enhanced light-harvesting and accelerated charge extraction in perovskite solar cells. Nano Energy, 2019, 58, 138-146.	8.2	38
6196	Progress of binary cooperative complementary interfacial nanomaterials. Nano Today, 2019, 24, 48-80.	6.2	14
6197	Unusual pressure-induced electronic structure evolution in organometal halide perovskite predicted from first-principles. Organic Electronics, 2019, 67, 89-94.	1.4	23

#	Article	IF	CITATIONS
6198	Symmetry and thermodynamics of tellurium vacancies in cadmium telluride. Physica B: Condensed Matter, 2019, 568, 81-87.	1.3	1
6199	Effective and Noneffective Recombination Center Defects in Cu <sub>2</sub> ZnSnS <sub>4</sub> : Significant Difference in Carrier Capture Cross Sections. Chemistry of Materials, 2019, 31, 826-833.	3.2	72
6200	A unified figure of merit for interband and intersubband cascade devices. Infrared Physics and Technology, 2019, 96, 298-302.	1.3	26
6201	Are Chalcogenide Perovskites an Emerging Class of Semiconductors for Optoelectronic Properties and Solar Cell?. Chemistry of Materials, 2019, 31, 565-575.	3.2	88
6202	Are Metal Complexes "Organic,―"Inorganic,―"Organometallic,―or "Metal-Organic―Materials? Study for the Use of Trinuclear Coinage Metal Complexes as "Metal-Organic Coatings―for Corrosion Suppression on Aluminum Substrates. Comments on Inorganic Chemistry, 2019, 39, 1-26.	A case 3.0	4
6203	Analysis of Photonic Crystal Diffraction Grating Based Light Trapping Structure for GaAs Solar Cell. IETE Journal of Research, 2021, 67, 714-725.	1.8	6
6204	High stability near-broken gap junction for multijunction photovoltaics. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	3
6205	Structural, morphological and optical properties of sprayed Cu2ZnSnS4 thin films by varying the molar concentration of Zn & Sn. Vacuum, 2019, 159, 341-345.	1.6	14
6206	Influence of substrate temperature on properties of pyrite thin films deposited using a sequential coevaporation technique. Thin Solid Films, 2019, 669, 49-55.	0.8	5
6207	A Condition Change Detection Method for Solar Conversion Efficiency in Solar Cell Manufacturing Processes. IEEE Transactions on Semiconductor Manufacturing, 2019, 32, 82-92.	1.4	5
6208	CZTS layers formed under sulfur-limited conditions at above atmospheric pressure. Materials Science in Semiconductor Processing, 2019, 90, 101-106.	1.9	17
6209	Climate change impact on future photovoltaic resource potential in an orographically complex archipelago, the Canary Islands. Renewable Energy, 2019, 133, 749-759.	4.3	48
6210	Recent progress on non-fullerene acceptors for organic photovoltaics. Materials Today, 2019, 24, 94-118.	8.3	113
6211	Annealing temperature of nanostructured SnS on the role of the absorber layer. Materials Science in Semiconductor Processing, 2019, 90, 120-128.	1.9	35
6212	Surface and Interface Chemistry in Colloidal Quantum Dots for Solar Applications Studied by Xâ€Ray Photoelectron Spectroscopy. Chemical Record, 2019, 19, 1233-1243.	2.9	12
6213	Bandgap tunable Zn3-3Mg3N2 alloy for earth-abundant solar absorber. Materials Letters, 2019, 236, 649-652.	1.3	7
6214	A Magnetoâ€Reflectivity Study of CuGaSe <sub>2</sub> Single Crystals. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800374.	1.2	2
6215	Efficient Use of Low-Bandgap GaAs/GaSb to Convert More than 50% of Solar Radiation into Electrical Energy: A Numerical Approach. Journal of Electronic Materials, 2019, 48, 560-570.	1.0	10

#	Article	IF	CITATIONS
6216	Sustainable phycocyanin production from Arthrospira platensis using solar-control thin film coated photobioreactor. Biochemical Engineering Journal, 2019, 141, 232-238.	1.8	26
6217	Multifunctional Copperâ€Based Quaternary Chalcogenide Semiconductors Toward Stateâ€ofâ€theâ€Art Energy Applications. ChemNanoMat, 2019, 5, 373-402.	1.5	30
6218	Sol–Gel Synthesis of Pd@PdO Core–Shell Nanoparticles and Effect of Precursor Chemistry on Their Structural and Optical Properties. Journal of Inorganic and Organometallic Polymers and Materials, 2019, 29, 316-325.	1.9	31
6219	Do Chalcogenide Double Perovskites Work as Solar Cell Absorbers: A First-Principles Study. Chemistry of Materials, 2019, 31, 244-250.	3.2	33
6220	Energy yield of all thinâ€film perovskite/CIGS tandem solar modules. Progress in Photovoltaics: Research and Applications, 2019, 27, 290-298.	4.4	31
6221	Quantum cutting properties of Tb3+/Yb3+ co-doped ZrO2-SiO2 nano-crystalized glasses synthesized via a sol-gel route. Journal of Alloys and Compounds, 2019, 781, 315-320.	2.8	12
6222	All solution processed superstrate type Cu2ZnSnS4 (CZTS) thin film solar cell: Effect of absorber layer thickness. Journal of Alloys and Compounds, 2019, 781, 280-288.	2.8	51
6223	RbF post deposition treatment for narrow bandgap Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2019, 670, 34-40.	0.8	33
6224	Silver Bismuth Sulfoiodide Solar Cells: Tuning Optoelectronic Properties by Sulfide Modification for Enhanced Photovoltaic Performance. Advanced Energy Materials, 2019, 9, 1803396.	10.2	100
6225	Nonequilibrium electron and phonon dynamics in advanced concept solar cells. Journal Physics D: Applied Physics, 2019, 52, 093001.	1.3	14
6226	Singlet/triplet exciton dissociation and charge recombination in donorâ€acceptor ThQs  60 /PDIxCN 2 complexes. Journal of Computational Chemistry, 2019, 40, 997-1004.	1.5	6
6227	Efficient Tandem Organic Photovoltaics with Tunable Rear Sub-cells. Joule, 2019, 3, 432-442.	11.7	65
6228	Application of bidirectional (up and down)-conversion luminescence material (GdBO3:Yb3+/Tb3+) in CdSe0.4S0.6 quantum dot-sensitized solar cells. Optical Materials, 2019, 88, 80-90.	1.7	20
6229	Physics and design for 20% and 25% efficiency nanowire array solar cells. Nanotechnology, 2019, 30, 074002.	1.3	22
6230	PbS quantum dot enhanced p-CIGS/n-Si heterojunction diode. Journal of Materials Science: Materials in Electronics, 2019, 30, 2127-2135.	1.1	8
6231	Computational screening of bulk materials with intrinsic intermediate band. Computational Materials Science, 2019, 158, 382-388.	1.4	10
6232	Predicted semiconducting beryllium sulfides in 3D and 2D configurations: Insights from first-principles calculations. Journal of Alloys and Compounds, 2019, 781, 371-377.	2.8	8
6233	Sustainable technology for energy and environmental benign building design. Journal of Building Engineering, 2019, 22, 130-139.	1.6	27

#	Article	IF	CITATIONS
6234	Studies on the graded band-gap copper indium di-selenide thin film solar cells prepared by electrochemical route. Applied Surface Science, 2019, 466, 358-366.	3.1	7
6235	An investigation on the relationship between open circuit voltage and grain size for CZTSSe thin film solar cells fabricated by selenization of sputtered precursors. Journal of Alloys and Compounds, 2019, 773, 689-697.	2.8	30
6236	Advanced Building Design. , 2019, , 137-230.		3
6237	Copper-indium-sulfide colloids on quantum dot sensitized TiO2 solar cell: Effects of capping with mercapto-acid linker molecules. Journal of Colloid and Interface Science, 2019, 535, 176-181.	5.0	11
6238	Interfacial engineering for high efficiency solution processed Sb2Se3 solar cells. Solar Energy Materials and Solar Cells, 2019, 189, 5-10.	3.0	85
6239	Lead-free perovskite based bismuth for solar cells absorbers. Journal of Alloys and Compounds, 2019, 773, 796-801.	2.8	29
6240	Ligand exchange on CdSe nanoplatelets for the solar light sensitization of TiO2 and ZnO nanorod arrays. Journal of Photochemistry and Photobiology A: Chemistry, 2019, 368, 182-189.	2.0	9
6241	Valence band states in an InAs/AlAsSb multi-quantum well hot carrier absorber. Semiconductor Science and Technology, 2019, 34, 025005.	1.0	12
6242	A third generation solar cell based on wet-chemically etched Si nanowires and sol-gel derived Cu2ZnSnS4 thin films. Journal of Alloys and Compounds, 2019, 774, 1117-1122.	2.8	20
6243	Efficient near-infrared downconversion and energy transfer mechanism in Pr3+/Yb3+ co-doped Na5Y9F32 single crystals. Journal of Luminescence, 2019, 205, 500-507.	1.5	16
6244	Integrated Perovskite/Bulkâ€Heterojunction Organic Solar Cells. Advanced Materials, 2020, 32, e1805843.	11.1	61
6245	ZrS3/MS2 and ZrS3/MXY (M Mo, W; X, Y S, Se, Te; Xâ€`â‰â€`Y) type-II van der Waals hetero-bilayers: Prospective candidates in 2D excitonic solar cells. Applied Surface Science, 2020, 499, 143894.	<sup>2</sup> 3.1	51
6246	Graphene-based thermionic-thermoradiative solar cells: Concept, efficiency limit, and optimum design. Journal of Cleaner Production, 2020, 242, 118444.	4.6	26
6247	Atomic layer deposition enabling higher efficiency solar cells: A review. Nano Materials Science, 2020, 2, 204-226.	3.9	44
6248	Towards photoferroic materials by design: recent progress and perspectives. JPhys Energy, 2020, 2, 011001.	2.3	13
6249	Metal oxides for energy applications. , 2020, , 471-504.		13
6250	Tin Halide Perovskite (ASnX <sub>3</sub> ) Solar Cells: A Comprehensive Guide toward the Highest Power Conversion Efficiency. Advanced Energy Materials, 2020, 10, 1902467.	10.2	114
6251	A Review on Additives for Halide Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902492.	10.2	240

		CITATION REPORT		
#	Article		IF	Citations
6252	Light Management in Monolithic Perovskite/Silicon Tandem Solar Cells. Solar Rrl, 2020	, 4, 1900206.	3.1	36
6253	Present Status and Research Prospects of Tinâ€based Perovskite Solar Cells. Solar Rrl,	2020, 4, 1900310.	3.1	60
6254	Device characteristics and material developments of indoor photovoltaic devices. Mate and Engineering Reports, 2020, 139, 100517.	erials Science	14.8	108
6255	Broadband-sensitive up-conversion phosphor of Ni2+,Tm3+ co-doped LiGa5O8. Journa 2020, 217, 116795.	l of Luminescence,	1.5	15
6256	New candidate to reach Shockley–Queisser limit: The DFT study of orthorhombic sili Si(oP32). Journal of Physics and Chemistry of Solids, 2020, 137, 109219.	con allotrope	1.9	15
6257	A study of structure and electronic properties of chalcopyrites semiconductor invoking Functional Theory. Materials Chemistry and Physics, 2020, 241, 122346.	g Density	2.0	33
6258	Free Carrier, Exciton, and Phonon Dynamics in Leadâ€Halide Perovskites Studied with Terahertz Spectroscopy. Advanced Optical Materials, 2020, 8, 1900783.	Ultrafast	3.6	39
6259	Ambient atmospheric temperature processed lead halide perovskites. Journal of Therm Calorimetry, 2020, 139, 3073-3078.	al Analysis and	2.0	4
6260	Review on Practical Interface Engineering of Perovskite Solar Cells: From Efficiency to S Rrl, 2020, 4, 1900257.	Stability. Solar	3.1	119
6261	Multiscale prediction of localized hot-spot phenomena in solar cells. Renewable Energy 1292-1300.	ı, 2020, 146,	4.3	11
6262	Co-sputtered Cu2ZnTi(S:Se)4 absorbers for thin film solar cells. Renewable Energy, 202	20, 145, 1672-1676.	4.3	8
6263	Solar cells fabricated by spray pyrolysis deposited Cu2CdSnS4 thin films. Renewable Er 1465-1470.	nergy, 2020, 146,	4.3	25
6264	FAPb 0.5 Sn 0.5 I 3 : A Narrow Bandgap Perovskite Synthesized through Evaporation N Cell Applications. Solar Rrl, 2020, 4, 1900283.	1ethods for Solar	3.1	24
6265	Electronic and optical performance of Ni-doped FeS2 nanocrystals for photovoltaic app Physica E: Low-Dimensional Systems and Nanostructures, 2020, 115, 113688.	plications.	1.3	4
6266	Nanomaterials for Alternative Energy. , 2020, , 606-618.			0
6267	Solar cells' evolution and perspectives: a short review. , 2020, , 1-32.			9
6268	Perovskite solar cells. , 2020, , 163-228.			8
6269	All-oxide solar cells. , 2020, , 229-246.			1

#	Article	IF	CITATIONS
6270	Glass ceramics for frequency conversion. , 2020, , 391-414.		5
6271	Downconversion for 1 $\hat{l}$ <sup>1</sup> /4m luminescence in lanthanide and Yb3+ co-doped phosphors. , 2020, , 415-441.		2
6272	Down-shifting by quantum dots for silicon solar cell applications. , 2020, , 443-477.		8
6273	Stability of all-inorganic perovskite solar cells. Nano Energy, 2020, 67, 104249.	8.2	153
6274	How to Report Record Openâ€Circuit Voltages in Leadâ€Halide Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902573.	10.2	153
6275	Twoâ€ŧerminal Perovskite silicon tandem solar cells with a highâ€Bandgap Perovskite absorber enabling voltages over 1.8ÂV. Progress in Photovoltaics: Research and Applications, 2020, 28, 99-110.	4.4	63
6276	Inverted rear-heterojunction GaInP solar cells using Te memory effect. Solar Energy Materials and Solar Cells, 2020, 205, 110235.	3.0	6
6277	Modeling the effects of defect parameters on the performance of a p-BaSi2/n-Si heterojunction solar cell. Solar Energy Materials and Solar Cells, 2020, 205, 110244.	3.0	7
6278	Near-infrared emissions in host sensitized Ba2YV3O11: RE3+ (RE = Nd, Ho, Yb) down-converting phosphors. Ceramics International, 2020, 46, 5015-5019.	2.3	7
6279	27%â€Efficiency Fourâ€Terminal Perovskite/Silicon Tandem Solar Cells by Sandwiched Gold Nanomesh. Advanced Functional Materials, 2020, 30, 1908298.	7.8	91
6280	Theoretical analysis of band alignment at back junction in Sn–Ge perovskite solar cells with inverted p-i-n structure. Solar Energy Materials and Solar Cells, 2020, 206, 110268.	3.0	66
6281	High quantum yields generated by a multi-band quantum dot photocell. Superlattices and Microstructures, 2020, 137, 106329.	1.4	10
6282	Optimization and maximum efficiency of concentrating photovoltaic cellâ€gas turbine system with spectrum splitting. Environmental Progress and Sustainable Energy, 2020, 39, e13373.	1.3	1
6283	Azaacene Dimers: Acceptor Materials with a Twist. Chemistry - A European Journal, 2020, 26, 412-418.	1.7	18
6284	Tumorâ€Derived Peptidoglycan Recognition Protein 2 Predicts Survival and Antitumor Immune Responses in Hepatocellular Carcinoma. Hepatology, 2020, 71, 1626-1642.	3.6	20
6285	Improved Reproducibility of PbS Colloidal Quantum Dots Solar Cells Using Atomic Layer–Deposited TiO <sub>2</sub> . Energy Technology, 2020, 8, 1900887.	1.8	7
6286	Nonlinear optoelectronic processes in organic optoelectronic devices: Triplet-triplet annihilation and singlet fission. Materials Science and Engineering Reports, 2020, 139, 100519.	14.8	50
6287	Effect of Evanescent Waves on the Dark Current of Thermophotovoltaic Cells. Nanoscale and Microscale Thermophysical Engineering, 2020, 24, 1-19.	1.4	14

#	Article	IF	CITATIONS
6288	Constructing "hillocks―like random-textured absorber for efficient planar perovskite solar cells. Chemical Engineering Journal, 2020, 387, 124091.	6.6	12
6289	Highly efficient all-inorganic perovskite solar cells with suppressed non-radiative recombination by a Lewis base. Nature Communications, 2020, 11, 177.	5.8	360
6290	Analytical framework for the assessment and modelling of multi-junction solar cells in the outdoors. Renewable Energy, 2020, 152, 1367-1379.	4.3	8
6291	Influence of boric acid concentration on the properties of electrodeposited CZTS absorber layers. Physica Scripta, 2020, 95, 054001.	1.2	14
6292	Exploring electronic and optical properties of Ge-based perovskites under strain: Insights from the first-principles calculations. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 229, 118013.	2.0	12
6293	Chemi-Structural Stabilization of Formamidinium Lead Iodide Perovskite by Using Embedded Quantum Dots. ACS Energy Letters, 2020, 5, 418-427.	8.8	87
6294	Band-bending induced passivation: high performance and stable perovskite solar cells using a perhydropoly(silazane) precursor. Energy and Environmental Science, 2020, 13, 1222-1230.	15.6	114
6295	Optical properties of nanocrystal films: blue shifted transitions as signature of strong coupling. Nanoscale Advances, 2020, 2, 384-393.	2.2	5
6296	Increasing efficiency of perovskite solar cells using low concentrating photovoltaic systems. Sustainable Energy and Fuels, 2020, 4, 528-537.	2.5	52
6297	Sub-1.4eV bandgap inorganic perovskite solar cells with long-term stability. Nature Communications, 2020, 11, 151.	5.8	92
6298	A novel strategy to design a multilayer functionalized Cu <sub>2</sub> S thin film counter electrode with enhanced catalytic activity and stability for quantum dot sensitized solar cells. Nanoscale Advances, 2020, 2, 833-843.	2.2	6
6299	Tuning Triplet-Pair Separation versus Relaxation Using a Diamond Anvil Cell. Cell Reports Physical Science, 2020, 1, 100005.	2.8	7
6300	Designing solar-cell absorber materials through computational high-throughput screening*. Chinese Physics B, 2020, 29, 028803.	0.7	6
6301	Optical Properties of Lead-Free Double Perovskites by Ab Initio Excited-State Methods. ACS Energy Letters, 2020, 5, 457-463.	8.8	64
6302	Photoexcited carrier dynamics in colloidal quantum dot solar cells: insights into individual quantum dots, quantum dot solid films and devices. Chemical Society Reviews, 2020, 49, 49-84.	18.7	70
6303	Revealing the origin of voltage loss in mixed-halide perovskite solar cells. Energy and Environmental Science, 2020, 13, 258-267.	15.6	283
6304	GeSe thin-film solar cells. Materials Chemistry Frontiers, 2020, 4, 775-787.	3.2	75
6305	Three-terminal III–V/Si tandem solar cells enabled by a transparent conductive adhesive. Sustainable Energy and Fuels, 2020, 4, 549-558.	2.5	46

#	Article	IF	CITATIONS
6306	Analysis of the power loss and quantification of the energy distribution in PV module. Applied Energy, 2020, 260, 114333.	5.1	36
6307	Correlation between open-circuit voltages and preferential glide planes of misfit dislocations of metamorphic InGaAs single junction solar cells grown on GaAs. Journal of Crystal Growth, 2020, 533, 125432.	0.7	5
6308	Enhanced broadband excitable near-infrared luminescence in Ce3+/Yb3+ codoped oxyapatite based glass ceramics. Physica B: Condensed Matter, 2020, 582, 411898.	1.3	14
6309	Ultrafast and Hot Electron Transfer in CdSe QD–Au Hybrid Nanostructures. Journal of Physical Chemistry C, 2020, 124, 1099-1107.	1.5	22
6310	Free Triplets Versus Bound Triplet–Triplet Biexciton in Intramolecular Singlet Fission Materials: Structure–Property Correlations. Journal of Physical Chemistry C, 2020, 124, 1171-1177.	1.5	6
6311	Organizing Crystalline Functionalized Pentacene Using Periodicity of Poly(Vinyl Alcohol). Journal of Physical Chemistry Letters, 2020, 11, 516-523.	2.1	6
6312	From 33% to 57% – an elevated potential of efficiency limit for indoor photovoltaics. Journal of Materials Chemistry A, 2020, 8, 1717-1723.	5.2	77
6313	Extending Carrier Lifetimes in Lead Halide Perovskites with Alkali Metals by Passivating and Eliminating Halide Interstitial Defects. Angewandte Chemie - International Edition, 2020, 59, 4684-4690.	7.2	78
6314	Photoelectrochemistry of Ferrites: Theoretical Predictions vs. Experimental Results. Zeitschrift Fur Physikalische Chemie, 2020, 234, 719-776.	1.4	24
6315	From Pb to Bi: A Promising Family of Pbâ€Free Optoelectronic Materials and Devices. Advanced Energy Materials, 2020, 10, 1902496.	10.2	108
6315 6316	From Pb to Bi: A Promising Family of Pbâ€Free Optoelectronic Materials and Devices. Advanced Energy Materials, 2020, 10, 1902496. Spatial Collection in Colloidal Quantum Dot Solar Cells. Advanced Functional Materials, 2020, 30, 1908200.	10.2 7.8	108 24
6315 6316 6317	From Pb to Bi: A Promising Family of Pbâ€Free Optoelectronic Materials and Devices. Advanced Energy Materials, 2020, 10, 1902496.         Spatial Collection in Colloidal Quantum Dot Solar Cells. Advanced Functional Materials, 2020, 30, 1908200.         Revealing the Nature of Singlet Fission under the Veil of Internal Conversion. Angewandte Chemie - International Edition, 2020, 59, 2003-2007.	10.2 7.8 7.2	108 24 26
6315 6316 6317 6318	From Pb to Bi: A Promising Family of Pbâ€Free Optoelectronic Materials and Devices. Advanced Energy Materials, 2020, 10, 1902496.         Spatial Collection in Colloidal Quantum Dot Solar Cells. Advanced Functional Materials, 2020, 30, 1908200.         Revealing the Nature of Singlet Fission under the Veil of Internal Conversion. Angewandte Chemie - International Edition, 2020, 59, 2003-2007.         The Study of Latex Sphere Lithography for High Aspect Ratio Dry Silicon Etching. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900535.	10.2 7.8 7.2 0.8	108 24 26 13
6315 6316 6317 6318 6319	From Pb to Bi: A Promising Family of Pbâ&Free Optoelectronic Materials and Devices. Advanced Energy Materials, 2020, 10, 1902496.Spatial Collection in Colloidal Quantum Dot Solar Cells. Advanced Functional Materials, 2020, 30, 1908200.Revealing the Nature of Singlet Fission under the Veil of Internal Conversion. Angewandte Chemie - International Edition, 2020, 59, 2003-2007.The Study of Latex Sphere Lithography for High Aspect Ratio Dry Silicon Etching. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900535.Heavy-Atom-Free Red-to-Yellow Photon Upconversion in a Thiosquaraine Composite. ACS Applied Energy Materials, 2020, 3, 19-28.	<ol> <li>10.2</li> <li>7.8</li> <li>7.2</li> <li>0.8</li> <li>2.5</li> </ol>	108 24 26 13 23
<ul> <li>6315</li> <li>6316</li> <li>6317</li> <li>6318</li> <li>6319</li> <li>6320</li> </ul>	From Pb to Bi: A Promising Family of Pbâ€Free Optoelectronic Materials and Devices. Advanced Energy Materials, 2020, 10, 1902496.         Spatial Collection in Colloidal Quantum Dot Solar Cells. Advanced Functional Materials, 2020, 30, 1908200.         Revealing the Nature of Singlet Fission under the Veil of Internal Conversion. Angewandte Chemie - International Edition, 2020, 59, 2003-2007.         The Study of Latex Sphere Lithography for High Aspect Ratio Dry Silicon Etching. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900535.         Heavy-Atom-Free Red-to-Yellow Photon Upconversion in a Thiosquaraine Composite. ACS Applied Energy Materials, 2020, 3, 19-28.         Effect of band gap on power conversion efficiency of single-junction semiconductor photovoltaic cells under white light phosphor-based LED illumination. Materials Science in Semiconductor Processing, 2020, 107, 104812.	10.2 7.8 7.2 0.8 2.5 1.9	108       24       26       13       23       28
<ul> <li>6315</li> <li>6316</li> <li>6317</li> <li>6318</li> <li>6319</li> <li>6320</li> <li>6321</li> </ul>	From Pb to Bi: A Promising Family of PbâtFree Optoelectronic Materials and Devices. Advanced Energy Materials, 2020, 10, 1902496.         Spatial Collection in Colloidal Quantum Dot Solar Cells. Advanced Functional Materials, 2020, 30, 1908200.         Revealing the Nature of Singlet Fission under the Veil of Internal Conversion. Angewandte Chemie - International Edition, 2020, 59, 2003-2007.         The Study of Latex Sphere Lithography for High Aspect Ratio Dry Silicon Etching. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900535.         Heavy-Atom-Free Red-to-Yellow Photon Upconversion in a Thiosquaraine Composite. ACS Applied Energy Materials, 2020, 3, 19-28.         Effect of band gap on power conversion efficiency of single-junction semiconductor photovoltaic cells under white light phosphor-based LED illumination. Materials Science in Semiconductor Processing, 2020, 107, 104812.         Extending Carrier Lifetimes in Lead Halide Perovskites with Alkali Metals by Passivating and Eliminating Halide Interstitial Defects. Angewandte Chemie, 2020, 132, 4714-4720.	<ol> <li>10.2</li> <li>7.8</li> <li>7.2</li> <li>0.8</li> <li>2.5</li> <li>1.9</li> <li>1.6</li> </ol>	108         24         26         13         23         28         18
<ul> <li>6315</li> <li>6316</li> <li>6317</li> <li>6318</li> <li>6319</li> <li>6320</li> <li>6321</li> <li>6322</li> </ul>	From Pb to Bi: A Promising Family of PbâcFree Optoelectronic Materials and Devices. Advanced Energy Materials, 2020, 10, 1902496.         Spatial Collection in Colloidal Quantum Dot Solar Cells. Advanced Functional Materials, 2020, 30, 1908200.         Revealing the Nature of Singlet Fission under the Veil of Internal Conversion. Angewandte Chemie - International Edition, 2020, 59, 2003-2007.         The Study of Latex Sphere Lithography for High Aspect Ratio Dry Silicon Etching. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900535.         Heavy-Atom-Free Red-to-Yellow Photon Upconversion in a Thiosquaraine Composite. ACS Applied Energy Materials, 2020, 3, 19-28.         Effect of band gap on power conversion efficiency of single-junction semiconductor photovoltaic cells under white light phosphor-based LED illumination. Materials Science in Semiconductor Processing, 2020, 107, 104812.         Extending Carrier Lifetimes in Lead Halide Perovskites with Alkali Metals by Passivating and Eliminating Halide Interstitial Defects. Angewandte Chemie, 2020, 132, 4714-4720.         Power Losses in the Front Transparent Conductive Oxide Layer of Silicon Heterojunction Solar Cells: Design Guide for Single-Junction and Four-Terminal Tandem Applications. IEEE Journal of Photovoltaics, 2020, 10, 326-334.	<ol> <li>10.2</li> <li>7.8</li> <li>7.2</li> <li>0.8</li> <li>2.5</li> <li>1.9</li> <li>1.6</li> <li>1.5</li> </ol>	108         24         26         13         23         28         18         2

#	Article	IF	CITATIONS
6324	Passivating Detrimental DX Centers in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> for Reducing Nonradiative Recombination and Elongating Carrier Lifetime. Advanced Materials, 2020, 32, e1906115.	11.1	53
6325	Physical insights into the effects of quantum dots size and temperature on efficiency of InAs/GaAs quantum dots intermediate band solar cell. Physica A: Statistical Mechanics and Its Applications, 2020, 547, 123786.	1.2	2
6326	A critical review on the efficiency improvement of upconversion assisted solar cells. Journal of Alloys and Compounds, 2020, 821, 153214.	2.8	44
6327	Effect of CZTS/CdS interfaces deposited with sputtering and CBD methods on Voc deficit and efficiency of CZTS solar cells. Journal of Alloys and Compounds, 2020, 817, 153329.	2.8	23
6328	High absorption enhancement of invert funnel and conical nanowire solar cells with forward scattering. Optics Communications, 2020, 459, 125059.	1.0	17
6329	Polycrystalline CuGaSe2 thin film growth and photovoltaic devices fabricated on alkali-free and alkali-containing substrates. Journal of Crystal Growth, 2020, 532, 125407.	0.7	5
6330	Rashba Band Splitting in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> : An Insight from Spin-Polarized Scanning Tunneling Spectroscopy. Nano Letters, 2020, 20, 292-299.	4.5	18
6331	Wideâ€Bandgap Perovskite/Gallium Arsenide Tandem Solar Cells. Advanced Energy Materials, 2020, 10, 1903085.	10.2	49
6332	Photobrightening in Lead Halide Perovskites: Observations, Mechanisms, and Future Potential. Advanced Energy Materials, 2020, 10, 1903109.	10.2	53
6333	Theoretical Efficiency Limits of Photoelectrochemical CO <sub>2</sub> Reduction: A Routeâ€Dependent Thermodynamic Analysis. ChemPhysChem, 2020, 21, 232-239.	1.0	4
6334	Modeling and design for lowâ€cost multijunction solar cell via lightâ€trapping rear texture technique: Applied in InGaP/GaAs/InGaAs triple junction. Progress in Photovoltaics: Research and Applications, 2020, 28, 251-265.	4.4	11
6335	Monolithic thin-film chalcogenide–silicon tandem solar cells enabled by a diffusion barrier. Solar Energy Materials and Solar Cells, 2020, 207, 110334.	3.0	34
6336	Neutral-Colored Transparent Crystalline Silicon Photovoltaics. Joule, 2020, 4, 235-246.	11.7	55
6337	The Cost of Converting Excitons into Free Charge Carriers in Organic Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 129-135.	2.1	36
6338	Effect of Temperature on Limit Photoconversion Efficiency in Silicon Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 63-69.	1.5	16
6339	Metal ion linked multilayers on mesoporous substrates: Energy/electron transfer, photon upconversion, and more. Journal of Photochemistry and Photobiology A: Chemistry, 2020, 390, 112291.	2.0	13
6340	Improvement in the structural and optical properties of Cu2SnS3 (CTS) thin films through soft-annealing treatment. Superlattices and Microstructures, 2020, 138, 106366.	1.4	14
6341	Impact of non-equilibrium molecular packings on singlet fission in microcrystals observed using 2D white-light microscopy. Nature Chemistry, 2020, 12, 40-47.	6.6	42

#		IF	CITATIONS
6342	functional theory. Journal of Physics Condensed Matter, 2020, 32, 125702.	0.7	15
6343	Universal defects elimination for high performance thermally evaporated CsPbBr3 perovskite solar cells. Solar Energy Materials and Solar Cells, 2020, 206, 110317.	3.0	41
6344	Revealing the Nature of Singlet Fission under the Veil of Internal Conversion. Angewandte Chemie, 2020, 132, 2019-2023.	1.6	1
6345	Bandgap tuning and compositional exchange for lead halide perovskite materials. , 2020, , 1-22.		9
6346	Time resolved photo-induced optical spectroscopy. , 2020, , 139-160.		2
6347	Organic-inorganic metal halide perovskite tandem devices. , 2020, , 237-254.		1
6348	Efficient Anti-solvent-free Spin-Coated and Printed Sn-Perovskite Solar Cells with Crystal-Based Precursor Solutions. Matter, 2020, 2, 167-180.	5.0	38
6349	CdSe Quantum Dot Sensitized Molecular Photon Upconversion Solar Cells. ACS Applied Energy Materials, 2020, 3, 29-37.	2.5	27
6350	Realizing High Efficiency over 20% of Lowâ€Bandgap Pb–Snâ€Alloyed Perovskite Solar Cells by In Situ Reduction of Sn <sup>4+</sup> . Solar Rrl, 2020, 4, 1900467.	3.1	65
6351	Electronic States of 2,3-Diamino-1,4-naphthoquinone and Its N-Alkylated Derivatives. Journal of Physical Chemistry C, 2020, 124, 60-69.	1.5	12
6352	Donor Centers Involved into the Quantum Cutting in Ytterbiumâ€Doped Scheeliteâ€Like Crystals. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900659.	0.8	5
6353	The Effect of Adsorbent Layer Thickness and Gallium Concentration on the Efficiency of a Dual-Junction Copper Indium Gallium Diselenide Solar Cell. Journal of Electronic Materials, 2020, 49, 1454-1461.	1.0	16
6354	The Dutch PV portal 2.0: An online photovoltaic performance modeling environment for the Netherlands. Renewable Energy, 2020, 154, 175-186.	4.3	2
6355	Nighttime Photovoltaic Cells: Electrical Power Generation by Optically Coupling with Deep Space. ACS Photonics, 2020, 7, 1-9.	3.2	48
6356	Tailoring the electronic properties of semiconducting nanocrystal-solids. Semiconductor Science and Technology, 2020, 35, 013001.	1.0	5
6357	Improving the Thermal Stability of CIGS Photovoltaic Devices. IEEE Journal of Photovoltaics, 2020, 10, 267-275.	1.5	1
6358	Development and Analysis of Wafer-Bonded Four-Junction Solar Cells Based on Antimonides With 42% Efficiency Under Concentration. IEEE Journal of Photovoltaics, 2020, 10, 495-501.	1.5	9
6359	The Low-Dimensional Three-Dimensional Tin Halide Perovskite: Film Characterization and Device Performance. Energies, 2020, 13, 2.	1.6	44

		CITATION R	EPORT	
#	Article		IF	CITATIONS
6360	Predicted Power Output of Silicon-Based Bifacial Tandem Photovoltaic Systems. Joule, 2	2020, 4, 580-596.	11.7	46
6361	Influence of Ge/(Ge+Sn) composition ratio in Cu2Sn1-xGexS3 thin-film solar cells on the properties and photovoltaic performances. Solar Energy Materials and Solar Cells, 2020	eir physical ), 208, 110382.	3.0	9
6362	Towards the commercialization of colloidal quantum dot solar cells: perspectives on de structures and manufacturing. Energy and Environmental Science, 2020, 13, 404-431.	vice	15.6	68
6363	Size-Dependent and Enhanced Photovoltaic Performance of Solar Cells Based on Si Qua Energies, 2020, 13, 4845.	antum Dots.	1.6	9
6364	Predicting Inorganic Photovoltaic Materials with Efficiencies >26% via Structure-Rele Learning and Density Functional Calculations. Cell Reports Physical Science, 2020, 1, 1	evant Machine 00179.	2.8	20
6365	Indirect-to-direct band gap transition and optical properties of metal alloys of Cs <sub>2</sub> Te <sub>1â°x</sub> Ti <sub>x</sub> I <sub>6</sub> : a theoretical stud 2020, 10, 36734-36740.	y. RSC Advances,	1.7	12
6366	Enhancement of photo-sensing properties of CdS thin films by changing spray solution Sensors and Actuators A: Physical, 2020, 315, 112306.	volume.	2.0	18
6367	16.8% Monolithic all-perovskite triple-junction solar cells via a universal two-step soluti Nature Communications, 2020, 11, 5254.	on process.	5.8	36
6368	Low-bandgap mixed tin–lead iodide perovskites with reduced methylammonium for s enhancement of solar cell efficiency and stability. Nature Energy, 2020, 5, 768-776.	simultaneous	19.8	165
6369	Higher-energy triplet-pair states in polyenes and their role in intramolecular singlet fissi Review B, 2020, 102, .	on. Physical	1.1	13
6370	Reducing Voltage Losses in the A-DA′D-A Acceptor-Based Organic Solar Cells. CheM	, 2020, 6, 2147-2161.	5.8	150
6371	CdS-derived CdS1â^'xSex nanocrystals within TiO2 films for quantum dot-sensitized sol prepared through hydrothermal anion exchange reaction. Electrochimica Acta, 2020, 3	ar cells 56, 136845.	2.6	15
6372	An optimized efficient double junction CGS / CIGS solar cell with improved performance 222, 165461.	e. Optik, 2020,	1.4	4
6373	A theoretical approach of star-shaped molecules with triphenylamine core as sensitizer potential application in dye sensitized solar cells. Journal of Molecular Graphics and Mo 101, 107704.	for their delling, 2020,	1.3	4
6374	Cu2ZnSn(S, Se)4 solar cell with slight band tailing states achieves 11.83% efficiency by sputtered Cu–Zn–Sn–S precursor. Journal of Power Sources, 2020, 479, 228747	/ selenizing '.	4.0	13
6375	Inorganic narrow bandgap CsPb0.4Sn0.6I2.4Br0.6 perovskite solar cells with exception Nano Energy, 2020, 77, 105309.	al efficiency.	8.2	25
6376	Thin film solar cell efficiency enhancement using a gradient doping absorbent layer. Op Materials, 2020, 108, 110443.	tical	1.7	6
6377	Ultrahigh conversion efficiency of betavoltaic cell using diamond pn junction. Applied P Letters, 2020, 117, .	hysics	1.5	19

ARTICLE IF CITATIONS Minimized surface deficiency on wide-bandgap perovskite for efficient indoor photovoltaics. Nano 6378 8.2 68 Energy, 2020, 78, 105377. First principles study of the electronic structure and photovoltaic properties of Î<sup>2</sup>-CuGaO2 with MBJ + 6379 U approach. Journal of Semiconductors, 2020, 41, 102102. Design Strategy of Quantum Dot Thinâ€Film Solar Cells. Small, 2020, 16, e2002460. 5.26380 27  $\label{eq:listical_states} Electronic properties of type-II $$hbox {GaAs}_{1-x} hbox {Sb}_{x}$$/GaAs quantum rings for applications in intermediate band solar cells. Optical and Quantum Electronics, 2020, 52, 1. }$ 6381 Selenium Heterocyclic Electron Acceptor with Small Urbach Energy for As-Cast High-Performance 6382 288 6.6 Organic Solar Cells. Journal of the American Chemical Society, 2020, 142, 18741-18745. Indole-based Aâ $\in$  DAâ $\in$ Daâ $\in$ A type acceptor-based organic solar cells achieve efficiency over 15 % with low energy loss. Sustainable Energy and Fuels, 2020, 4, 6203-6211. 2.5 Heterotwin Zn<sub>3</sub>P<sub>2</sub>superlattice nanowires: the role of indium insertion in the 6384 2.8 7 superlattice formation mechanism and their optical properties. Nanoscale, 2020, 12, 22534-22540. Intermediate band solar cells: Present and future. Progress in Photovoltaics: Research and 6385 4.4 38 Applications, 2021, 29, 705-713. Analysis of CIGS-based thin film tandem solar cell with ZnS buffer layers. Optical and Quantum 6386 1.5 4 Electronics, 2020, 52, 1. Ultrafast Triplet Pair Separation and Triplet Trapping following Singlet Fission in Amorphous 1.5 Pentacene Films. Journal of Physical Chemistry C, 2020, 124, 23567-23578. Recent Progress of Inverted Perovskite Solar Cells with a Modified PEDOT:PSS Hole Transport Layer. 6388 4.088 ACS Applied Materials & amp; Interfaces, 2020, 12, 49297-49322. Protecting hot carriers by tuning hybrid perovskite structures with alkali cations. Science Advances, 6389 4.7 54 2020, 6, . Inâ€Depth Analysis of the Internal Energy Conversion of Nuclear Batteries and Radiation Degradation of 6390 1.8 8 Key Materials. Energy Technology, 2020, 8, 2000667. Impact of sulfurization parameters on properties of CZTS thin films grown using quaternary target. Journal of Materials Science: Materials in Electronics, 2020, 31, 20620-20631. 1.1 Tellurium complex polyhalides: narrow bandgap photoactive materials for electronic applications. 6392 5.28 Journal of Materials Chemistry A, 2020, 8, 21988-21992. An efficient Li<sup>+</sup>-doping strategy to optimize the band alignment of a Cu<sub>2</sub>ZnSn(S,Se)<sub>4</sub>/CdS interface by a Se&amp;LiF co-selenization process. Journal 6393 5.2 of Materials Chemistry A, 2020, 8, 22065-22074. Long periodic ripple in a 2D hybrid halide perovskite structure using branched organic spacers. 6394 3.7 22 Chemical Science, 2020, 11, 12139-12148. Synthesis and Dispersion of Ni-Doped Cu<sub&gt;2&lt;/sub&gt;ZnSnS&lt;sub&gt;4&lt;/sub&gt;. Key 0.4 Engineering Materials, 0, 860, 42-50.

CITATION REPORT

		CITATION REPOR	Т	
#	Article	IF		Citations
6396	Recent Progress of Organic Solar Cells with Insulating Polymers. Solar Rrl, 2020, 4, 2000539.	3.1		24
6397	Excitons in bent black phosphorus nanoribbons: multiple excitonic funnels. Materials Today Advances, 2020, 7, 100096.	2.5		6
6398	ABX <sub>3</sub> -type lead-free perovskites using superatom ions with tunable photovoltaic performances. Journal of Materials Chemistry A, 2020, 8, 21993-22000.	5.2	<u>'</u>	8
6399	Probing the trap states in N–i–P Sb2(S,Se)3 solar cells by deep-level transient spectroscopy. Jou Chemical Physics, 2020, 153, 124703.	urnal of 1.2		16
6400	New synthesis route to kesterite Cu2ZnSnS4 semiconductor nanocrystalline powders utilizing copp alloys and a high energy ball milling-assisted process. Journal of Materials Research and Technology, 2020, 9, 13320-13331.	)er 2.6	; ;	10
6401	A Two-Step, All Solution Process for Conversion of Lead Sulfide to Methylammonium Lead Iodide Perovskite Thin Films. Thin Solid Films, 2020, 714, 138367.	0.8	3	4
6402	Highly Efficient Multiple Exciton Generation and Harvesting in Few-Layer Black Phosphorus and Heterostructure. Nano Letters, 2020, 20, 8212-8219.	4.5	i	11
6403	Toward mixed-halide perovskites: insight into photo-induced anion phase segregation. Journal of Materials Chemistry C, 2020, 8, 14626-14644.	2.7		11
6404	Inverted metamorphic AlGaInAs/GaInAs tandem thermophotovoltaic cell designed for thermal energ grid storage application. Journal of Applied Physics, 2020, 128, .	;y 1.1		10
6405	Detrimental copper-selenide bulk precipitation in CuIn1-xGaxSe2 thin-film solar cells. A possible reas for the limited performance at large x?. Thin Solid Films, 2020, 712, 138297.	son O.8	3	5
6406	Recent advances in non-fullerene organic solar cells: from lab to fab. Chemical Communications, 2020, 56, 14337-14352.	2.2	<u>,</u>	75
6407	Survey of energy-autonomous solar cell receivers for satellite–air–ground–ocean optical wire communication. Progress in Quantum Electronics, 2020, 74, 100300.	less 3.5		32
6408	Half-filled intermediate bands in doped inorganic perovskites for solar cells. Physical Chemistry Chemical Physics, 2020, 22, 23804-23809.	1.3	i	9
6409	Comparative <i>ab initio</i> study of the structural, electronic, dynamical, and optical properties of group-I based CuMO2 (M = H, Li, Na, K, Rb). Journal of Applied Physics, 2020, 128, .	: 1.1		3
6410	Solventâ€Dependent Singlet Fission in Diketopyrrolopyrrole Dimers: A Mediating Charge Transfer v a Trapping Symmetryâ€Breaking Charge Separation. Advanced Energy Materials, 2020, 10, 200149	ersus 10. /6.	.2	40
6411	Fabrication Strategy for Efficient 2D/3D Perovskite Solar Cells Enabled by Diffusion Passivation and Strain Compensation. Advanced Energy Materials, 2020, 10, 2002004.	10	.2	97
6412	Insight into the Origins of Figures of Merit and Design Strategies for Organic/Inorganic Leadâ€Halic Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000452.	e 3.1		14
6413	The environmental opportunity cost of using renewable energy for carbon capture and utilization for methanol production. Applied Energy, 2020, 279, 115770.	5.1		52

#	Article	IF	CITATIONS
6414	Quantum efficiency improvement depending on the oxygen doping density, temperature, and layer thicknesses of an intermediate band solar cell based on ZnTe:O: Numerical analysis. Optik, 2020, 224, 165432.	1.4	7
6415	Role of the substrates in the ribbon orientation of Sb2Se3 films grown by Low-Temperature Pulsed Electron Deposition. Solar Energy Materials and Solar Cells, 2020, 218, 110724.	3.0	50
6416	Phonon, thermal, and thermo-optical properties of halide perovskites. Physical Chemistry Chemical Physics, 2020, 22, 26069-26087.	1.3	23
6417	Vibronic coupling density analysis and quantum dynamics simulation for singlet fission in pentacene and its halogenated derivatives. Journal of Chemical Physics, 2020, 153, 134302.	1.2	8
6418	Hydrothermal deposition of antimony selenosulfide thin films enables solar cells with 10% efficiency. Nature Energy, 2020, 5, 587-595.	19.8	338
6419	<mml:math <br="" display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML">overflow="scroll"&gt;<mml:mi>Cu</mml:mi><mml:mo stretchy="false"&gt;(<mml:mi>In</mml:mi><mml:mo>,</mml:mo><mml:mi>Ga</mml:mi><mml:mo) e<="" td="" tj=""><td>ET&amp;q1 1 0.</td><td>784314 rg8</td></mml:mo)></mml:mo </mml:math>	ET&q1 1 0.	784314 rg8
6420	Solar Cells. Physical Review Applied, 2020, 14, . Ultrathin Perovskite Monocrystals Boost the Solar Cell Performance. Advanced Energy Materials, 2020, 10, 2000453.	10.2	42
6421	Possible top cells for next-generation Si-based tandem solar cells. Frontiers of Optoelectronics, 2020, 13, 246-255.	1.9	29
6422	Luminescent Solar Power—PV/Thermal Hybrid Electricity Generation for Cost-Effective Dispatchable Solar Energy. ACS Applied Materials & Interfaces, 2020, 12, 36040-36045.	4.0	7
6423	Widegap CH3NH3PbBr3 solar cells for optical wireless power transmission application. Applied Physics Letters, 2020, 117, .	1.5	13
6424	Halide Pb-Free Double–Perovskites: Ternary vs. Quaternary Stoichiometry. Energies, 2020, 13, 3516.	1.6	10
6425	Perovskiteâ€Based Tandem Solar Cells: Get the Most Out of the Sun. Advanced Functional Materials, 2020, 30, 2001904.	7.8	78
6426	Cadmium Selective Etching in CdTe Solar Cells Produces Detrimental Narrow-Gap Te in Grain Boundaries. ACS Applied Energy Materials, 2020, 3, 1749-1758.	2.5	6
6427	Promising photovoltaic efficiency of a layered silicon oxide crystal Si3O. Nanoscale, 2020, 12, 15638-15642.	2.8	1
6428	Unexpected bowing band evolution in an all-inorganic CsSn <sub>1â^'x</sub> Pb <sub>x</sub> Br <sub>3</sub> perovskite. RSC Advances, 2020, 10, 26407-26413.	1.7	4
6429	Quantum dot sensitized solar cell design with surface passivized CdSeTe QDs. Solar Energy, 2020, 206, 741-750.	2.9	4
6430	Efficient Carrier Multiplication in Low Band Gap Mixed Sn/Pb Halide Perovskites. Journal of Physical Chemistry Letters, 2020, 11, 6146-6149.	2.1	9
6431	A Thermostable Protein Matrix for Spectroscopic Analysis of Organic Semiconductors. Journal of the American Chemical Society, 2020, 142, 13898-13907.	6.6	3

#	Article	IF	CITATIONS
6432	Fluorinated interfacial layers in perovskite solar cells: efficient enhancement of the fill factor. Journal of Materials Chemistry A, 2020, 8, 16527-16533.	5.2	17
6433	Temperature-dependent barrier height inhomogeneities in PTB7:PC71BM-based organic solar cells. Chinese Physics B, 2020, 29, 098801.	0.7	7
6434	Subcell Segmentation for Current Matching and Design Flexibility in Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 1329-1339.	1.5	2
6435	Solar Cells and Modules. Springer Series in Materials Science, 2020, , .	0.4	8
6436	Efficient hydrogen production from solar energy and fossil fuel via water-electrolysis and methane-steam-reforming hybridization. Applied Energy, 2020, 276, 115409.	5.1	70
6437	CZTSSe solar cell with an efficiency of 10.19% based on absorbers with homogeneous composition and structure using a novel two-step annealing process. Solar Energy, 2020, 207, 651-658.	2.9	18
6438	Defect/Interface Recombination Limited Quasi-Fermi Level Splitting and Open-Circuit Voltage in Mono- and Triple-Cation Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 37647-37656.	4.0	28
6439	A first-principles study on the optoelectronic properties of mixed-halide double perovskites Cs <sub>2</sub> Til <sub>6â^'x</sub> Br <sub>x</sub> . New Journal of Chemistry, 2020, 44, 13613-13618.	1.4	29
6440	Experimental demonstration of broadband solar absorption beyond the lambertian limit in certain thin silicon photonic crystals. Scientific Reports, 2020, 10, 11857.	1.6	18
6441	Mechanical properties and field performance of hydrophobic antireflective sol-gel coatings on the cover glass of photovoltaic modules. Solar Energy Materials and Solar Cells, 2020, 216, 110694.	3.0	23
6442	Gradient band structure: high performance perovskite solar cells using poly(bisphenol A) Tj ETQq0 0 0 rgBT /Ove	rloçk 10 T	f 50 342 Td (a
6443	Theoretical study on photoelectric properties of FAPbI <sub>3</sub> doped with Ge. Materials Research Express, 2020, 7, 116201.	0.8	10
6444	Photon Upconverting Solid Films with Improved Efficiency for Endowing Perovskite Solar Cells with Nearâ€Infrared Sensitivity. ChemPhotoChem, 2020, 4, 5271-5278.	1.5	26
6445	Controlling Singlet Fission with Coordination Chemistry-Induced Assembly of Dipyridyl Pyrrole Bipentacenes. ACS Central Science, 2020, 6, 2088-2096.	5.3	13
6446	Overlap-Driven Splitting of Triplet Pairs in Singlet Fission. Journal of the American Chemical Society, 2020, 142, 20040-20047.	6.6	26
6447	A band-gap database for semiconducting inorganic materials calculated with hybrid functional. Scientific Data, 2020, 7, 387.	2.4	39
6448	Accelerated design of photovoltaic Ruddlesden–Popper perovskite Ca6Sn4S14â^' <i>x</i> O <i>x</i> using machine learning. APL Materials, 2020, 8, .	2.2	9
6449	Identification of surface and volume hot-carrier thermalization mechanisms in ultrathin GaAs layers. Journal of Applied Physics, 2020, 128, 193102.	1.1	17

#	Article	IF	CITATIONS
6450	Recent Progress on the Stability of Perovskite Solar Cells in a Humid Environment. Journal of Physical Chemistry C, 2020, 124, 27251-27266.	1.5	43
6451	Emergence of new materials for exploiting highly efficient carrier multiplication in photovoltaics. Chemical Physics Reviews, 2020, 1, 011302.	2.6	13
6452	Colour tunability in a bimodal fluorescent hybrid nanostructure UCNPs@AuNPs@QDs. Current Applied Physics, 2020, 20, 1150-1155.	1.1	7
6453	Assessing Zethrene Derivatives as Singlet Fission Candidates Based on Multiple Descriptors. Journal of Physical Chemistry C, 2020, 124, 26134-26143.	1.5	10
6454	Recent Progress in Fabrication of Antimony/Bismuth Chalcohalides for Lead-Free Solar Cell Applications. Nanomaterials, 2020, 10, 2284.	1.9	22
6455	Unraveling the influence of non-fullerene acceptor molecular packing on photovoltaic performance of organic solar cells. Nature Communications, 2020, 11, 6005.	5.8	112
6456	Modeling of CIGS single–junction solar cell using multiple quantum well structure with enhanced efficiency. Optical and Quantum Electronics, 2020, 52, 1.	1.5	3
6457	Perovskite/CIGS Spectral Splitting Double Junction Solar Cell with 28% Power Conversion Efficiency. IScience, 2020, 23, 101817.	1.9	26
6458	First-Principles Study of the Hexagonal T-Phase PdSe <sub>2</sub> Monolayer and Its Application in Solar Cells. Journal of Physical Chemistry C, 2020, 124, 26565-26571.	1.5	28
6459	Optimization of photoelectric parameters of InGaAs metamorphic laser (λ=1064Ânm) power converters with over 50% efficiency. Solar Energy Materials and Solar Cells, 2020, 217, 110710.	3.0	30
6460	Elucidating the Influence of Sulfur Vacancies on Nonradiative Recombination Dynamics in Cu <sub>2</sub> ZnSnS <sub>4</sub> Solar Absorbers. Journal of Physical Chemistry Letters, 2020, 11, 10354-10361.	2.1	13
6461	Tuning cesium–guanidinium in formamidinium tin triiodide perovskites with an ethylenediammonium additive for efficient and stable lead-free perovskite solar cells. Materials Advances, 2020, 1, 3507-3517.	2.6	20
6462	Controlling Möbius-Type Helicity and the Excited-State Properties of Cumulenes with Carbenes. Journal of Physical Chemistry A, 2020, 124, 10100-10110.	1.1	16
6463	Intense Pulse Light Annealing of Perovskite Photovoltaics Using Gradient Flashes. ACS Applied Energy Materials, 2020, 3, 11641-11654.	2.5	14
6464	Highly efficient heterojunction solar cells enabled by edge-modified tellurene nanoribbons. Physical Chemistry Chemical Physics, 2020, 22, 28414-28422.	1.3	8
6465	Photocatalytic CO <sub>2</sub> Reduction: A Review of Ab Initio Mechanism, Kinetics, and Multiscale Modeling Simulations. ACS Catalysis, 2020, 10, 14984-15007.	5.5	199
6466	Covalent incorporation of diphenylanthracene in oxotriphenylhexanoate organogels as a quasi-solid photon upconversion matrix. Journal of Chemical Physics, 2020, 153, 214705.	1.2	11
6467	Semiconducting metal oxides empowered by graphene and its derivatives: Progresses and critical perspective on selected functional applications. Journal of Applied Physics, 2020, 128, .	1.1	18

#	ARTICLE	IF	CITATIONS
6468	Growth and Characterization of CZTS Thin Films Synthetized by Electrodeposition Method for Photovoltaic Applications. IOP Conference Series: Materials Science and Engineering, 2020, 948, 012025.	0.3	13
6469	Regulating Surface Termination for Efficient Inverted Perovskite Solar Cells with Greater Than 23% Efficiency. Journal of the American Chemical Society, 2020, 142, 20134-20142.	6.6	414
6470	Triple-cation low-bandgap perovskite thin-films for high-efficiency four-terminal all-perovskite tandem solar cells. Journal of Materials Chemistry A, 2020, 8, 24608-24619.	5.2	26
6471	An <i>ab initio</i> exciton model for singlet fission. Journal of Chemical Physics, 2020, 153, 184116.	1.2	16
6472	An integrated GaInP/Si dual-junction solar cell with enhanced efficiency using TOPCon technology. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	18
6473	Enhancing luminescent down-shifting of Eu-doped phosphors by incorporating plasmonic silver nanoparticles for silicon solar cells. Applied Surface Science, 2020, 532, 147434.	3.1	23
6474	Synthesis of CZTS without sulfurization process and its performance evaluation on n-Si substrate as ITO-free photovoltaic cell. Materials Science in Semiconductor Processing, 2020, 120, 105318.	1.9	7
6475	Perovskite Tandem Solar Cells: From Fundamentals to Commercial Deployment. Chemical Reviews, 2020, 120, 9835-9950.	23.0	248
6476	Organic Photovoltaic Cells for Indoor Applications: Opportunities and Challenges. ACS Applied Materials & amp; Interfaces, 2020, 12, 38815-38828.	4.0	126
6477	Micelles Embedded in Multiphasic Protein Hydrogel Enable Efficient and Air-Tolerant Triplet Fusion Upconversion with Heavy-Atom and Spin–Orbit Charge-Transfer Sensitizers. ACS Applied Materials & Interfaces, 2020, 12, 39293-39303.	4.0	12
6478	Design and optimization of 26.3% efficient perovskite/FeSi2 monolithic tandem solar cell. Journal of Materials Science: Materials in Electronics, 2020, 31, 15218-15224.	1.1	22
6479	Singlet Heterofission in Tetracene–Pentacene Thinâ€Film Blends. Angewandte Chemie, 2020, 132, 20141-20148.	1.6	1
6480	Underlying mechanism of the efficiency loss in CZTSSe solar cells: Disorder and deep defects. Science China Materials, 2020, 63, 2371-2396.	3.5	37
6481	The choice of Zn or ZnS layer in the stacked precursors for preparation of Cu2ZnSnS4 (CZTS) thin films. Superlattices and Microstructures, 2020, 146, 106669.	1.4	15
6482	Theoretical Study on Singlet Fission Dynamics in Sumanene-Fused Acene Dimers. Journal of Physical Chemistry C, 2020, 124, 19499-19507.	1.5	5
6483	Theoretical efficiency limit of graphene-semiconductor solar cells. Applied Physics Letters, 2020, 117, .	1.5	12
6484	Thin-film (Sb,Bi)2Se3 Semiconducting Layers with Tunable Band Gaps Below 1ÂeV for Photovoltaic Applications. Physical Review Applied, 2020, 14, .	1.5	8
6485	Variation of the Fine-Structure Constant in Model Systems for Singlet Fission. Journal of Physical Chemistry A, 2020, 124, 6682-6687.	1.1	1

#	Article	IF	CITATIONS
6486	The Role of Grown-In Defects in Silicon Minority Carrier Lifetime Degradation During Thermal Treatment in Epitaxial Growth Chambers. IEEE Journal of Photovoltaics, 2020, 10, 1299-1306.	1.5	1
6487	Downshifting of highly energetic photons and energy transfer by Mn-doped perovskite CsPbCl3 nanocrystals in hybrid organic/silicon nanostructured solar cells. Nano Energy, 2020, 77, 105163.	8.2	30
6488	Ti-Alloying of BaZrS <sub>3</sub> Chalcogenide Perovskite for Photovoltaics. ACS Omega, 2020, 5, 18579-18583.	1.6	54
6489	Perovskite Solar Cells with Enhanced Fill Factors Using Polymer-Capped Solvent Annealing. ACS Applied Energy Materials, 2020, 3, 7231-7238.	2.5	19
6490	Efficiency increase in multijunction monochromatic photovoltaic devices due to luminescent coupling. Journal of Applied Physics, 2020, 128, .	1.1	16
6491	Recent progress and prospects of integrated perovskite/organic solar cells. Applied Physics Reviews, 2020, 7, .	5.5	33
6492	A Comparison of the Structure and Properties of Opaque and Semi-Transparent NIP/PIN-Type Scalable Perovskite Solar Cells. Energies, 2020, 13, 3794.	1.6	13
6493	Kinetic modelling of intraband carrier relaxation in bulk and nanocrystalline lead-halide perovskites. Physical Chemistry Chemical Physics, 2020, 22, 17605-17611.	1.3	5
6494	Enhancement of Solar Cell Performance of Electrodeposited Ti/n-Cu2O/p-Cu2O/Au Homojunction Solar Cells by Interface and Surface Modification. Crystals, 2020, 10, 609.	1.0	9
6495	How efficient could photocatalytic CO2 reduction with H2O into solar fuels be?. Energy Conversion and Management, 2020, 222, 113236.	4.4	31
6496	Photoinduced Dynamics of Charge Carriers in Metal Halide Perovskites from an Atomistic Perspective. Journal of Physical Chemistry Letters, 2020, 11, 7066-7082.	2.1	41
6497	Reciprocal Relation Between Intraband Carrier Generation and Interband Recombination at the Heterointerface of Two-Step Photon Up-Conversion Solar Cells. Physical Review Applied, 2020, 14, .	1.5	4
6498	Present Efficiencies and Future Opportunities in Thermophotovoltaics. Joule, 2020, 4, 1660-1680.	11.7	127
6499	Machine learning lattice constants for cubic perovskite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"&gt;<mml:mrow><mml:msub><mml:mi>A</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi compounds. Journal of Solid State Chemistry, 2020, 291, 121558.</mml:mi </mml:mrow></mml:math 	>X <sup>1</sup> 4/mml:ı	ni <sup>33</sup> {mml:m
6500	Recent advances in eco-friendly and cost-effective materials towards sustainable dye-sensitized solar cells. Green Chemistry, 2020, 22, 7168-7218.	4.6	272
6501	Intermediate-band-assisted near-field thermophotovoltaic devices with InAs, GaSb, and Si based absorbers. Journal of Applied Physics, 2020, 128, .	1.1	7
6502	The Bulk Heterojunction in Organic Photovoltaic, Photodetector, and Photocatalytic Applications. Advanced Materials, 2020, 32, e2001763.	11.1	168
6503	Numerical Analysis of Pbâ€Free Perovskite Absorber Materials: Prospects and Challenges. Solar Rrl, 2020, 4, 2000299.	3.1	23

#	Article	IF	CITATIONS
6504	Solution processed copper zinc tin sulfide thin films for thermoelectric device applications. Ceramics International, 2020, 46, 28342-28354.	2.3	7
6505	Improved Cu2ZnSnS4 thin film performance via Pb consumption layer. Optical Materials, 2020, 108, 110217.	1.7	2
6506	Metastable (CuAu-type) CuInS2 Phase: High-Pressure Synthesis and Structure Determination. Inorganic Chemistry, 2020, 59, 11670-11675.	1.9	9
6507	Fermi Level Pinning Controls Band Bending and Photochemical Charge Separation in Particles of n-SrTiO3, n-SrTiO3:Al, and n-GaAs:Te. Journal of Physical Chemistry C, 2020, 124, 18426-18435.	1.5	10
6508	Probing Ultrafast Charge Separation in CZTS/CdS Heterojunctions through Femtosecond Transient Absorption Spectroscopy. Journal of Physical Chemistry C, 2020, 124, 19476-19483.	1.5	25
6509	Improved Quantum Efficiency by Advanced Light Management in Nanotextured Solution-Processed Perovskite Solar Cells. ACS Photonics, 2020, 7, 2589-2600.	3.2	27
6510	Narrow-Bandgap Mixed Lead/Tin-Based 2D Dion–Jacobson Perovskites Boost the Performance of Solar Cells. Journal of the American Chemical Society, 2020, 142, 15049-15057.	6.6	103
6511	Numerical analysis of <scp>dopantâ€free</scp> asymmetric silicon heterostructure solar cell with <scp> SiO <sub>2</sub> </scp> as passivation layer. International Journal of Energy Research, 2020, 44, 10739-10753.	2.2	8
6512	Ï€-Conjugated polymers and molecules enabling small photon energy loss simultaneously with high efficiency in organic photovoltaics. Journal of Materials Chemistry A, 2020, 8, 20213-20237.	5.2	34
6513	First-Principles Study on the Photoelectric Properties of CsGeI3 under Hydrostatic Pressure. Applied Sciences (Switzerland), 2020, 10, 5055.	1.3	19
6514	Singlet Heterofission in Tetracene–Pentacene Thinâ€Film Blends. Angewandte Chemie - International Edition, 2020, 59, 19966-19973.	7.2	8
6515	Engineering of sub-band in CuGaS2 thin films via Mo doping by chemical spray pyrolysis route. Thin Solid Films, 2020, 709, 138252.	0.8	20
6516	Study of Arsenic Doped CdSeTe Solar Cells Using Transmission Electron Microscopy. Microscopy and Microanalysis, 2020, 26, 1232-1234.	0.2	1
6517	Efficient hot-electron extraction in two-dimensional semiconductor heterostructures by ultrafast resonant transfer. Journal of Chemical Physics, 2020, 153, 044705.	1.2	15
6518	Thirdâ€Generation Solar Cells: Toxicity and Risk of Exposure. Helvetica Chimica Acta, 2020, 103, e2000074.	1.0	18
6519	Effect of absorber surface modification on the optoelectronic properties of Cu2CdGeSe4 solar cells Thin Solid Films, 2020, 697, 137822.	0.8	7
6520	Improved power conversion efficiency in n-MoS2/AlN/p-Si (SIS) heterojunction based solar cells. Materials Letters, 2020, 277, 128360.	1.3	14
6521	Photoconductivity Multiplication in Semiconducting Few-Layer MoTe <sub>2</sub> . Nano Letters, 2020, 20, 5807-5813.	4.5	45

#	Article	IF	CITATIONS
6522	Effect of Additives AX (A = FA, MA, Cs, Rb, NH <sub>4</sub> , X = Cl, Br, I) in FAPbI <sub>3Photovoltaic Parameters of Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000331.</sub>	) on 3.1	55
6523	Open-Circuit Photovoltage Exceeding 950 mV with an 840 mV Average at Sb2S3–Thianthrene+/0 Junctions Enabled by Thioperylene Anhydride Back Contacts. ACS Omega, 2020, 5, 16875-16884.	1.6	3
6524	Effect of Naâ€PDT and KFâ€PDT on the photovoltaic performance of wide bandgap Cu (In,Ga)Se2 solar cells. Progress in Photovoltaics: Research and Applications, 2020, 28, 1146-1157.	4.4	12
6525	Preparation and characterization of pulsed laser deposited CdSe window layer for Sb2Se3 thin film solar cell. Journal of Materials Science: Materials in Electronics, 2020, 31, 13947-13956.	1.1	8
6526	Dimensionality engineering of metal halide perovskites. Frontiers of Optoelectronics, 2020, 13, 196-224.	1.9	25
6527	Temperature dependence of CIGS and perovskite solar cell performance: an overview. SN Applied Sciences, 2020, 2, 1.	1.5	26
6528	Promoting charge separation resulting in ternary organic solar cells efficiency over 17.5%. Nano Energy, 2020, 78, 105272.	8.2	132
6529	Electrodeposition of In-doped SnSe nanoparticles films: Correlation of physical characteristics with solar cell performance. Solid State Sciences, 2020, 108, 106388.	1.5	16
6530	Relationship between Fill Factor and Light Intensity in Solar Cells Based on Organic Disordered Semiconductors: The Role of Tail States. Physical Review Applied, 2020, 14, .	1.5	27
6531	Combining Photosynthesis and Photovoltaics: A Hybrid Energy-Harvesting System Using Optical Antennas. ACS Applied Materials & Interfaces, 2020, 12, 40261-40268.	4.0	8
6532	Preferred Growth Direction by PbS Nanoplatelets Preserves Perovskite Infrared Light Harvesting for Stable, Reproducible, and Efficient Solar Cells. Advanced Energy Materials, 2020, 10, 2002422.	10.2	20
6533	Herzberg–Teller Effect on the Vibrationally Resolved Absorption Spectra of Single-Crystalline Pentacene at Finite Temperatures. Journal of Physical Chemistry A, 2020, 124, 9156-9165.	1.1	14
6534	Progress and prospects for ultrathin solar cells. Nature Energy, 2020, 5, 959-972.	19.8	168
6535	Enhanced intersystem crossing of boron dipyrromethene by TEMPO radical. Journal of Chemical Physics, 2020, 153, 154201.	1.2	6
6536	Explore the Intervalley Scattering on Phonon Bottleneck Effect and Its Application on Hot Carrier Solar Cells. , 2020, , .		1
6537	Effect of Confinement Strength on the Conversion Efficiency of Strained Core–Shell Quantum Dot Solar Cell. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 1649-1657.	0.2	2
6538	From energy harvesting to topologically insulating behavior: ABO <sub>3</sub> -type epitaxial thin films and superlattices. Journal of Materials Chemistry C, 2020, 8, 15575-15596.	2.7	22
6539	Tunable phase transitions and high photovoltaic performance of two-dimensional In <sub>2</sub> Ge <sub>2</sub> Te <sub>6</sub> semiconductors. Nanoscale Horizons, 2020, 5, 1566-1573.	4.1	17

#	Article	IF	CITATIONS
6540	Enhancing Open ircuit Voltage in Gradient Organic Solar Cells by Rectifying Thermalization Losses. Solar Rrl, 2020, 4, 2000400.	3.1	7
6541	Application of Metal-Organic Frameworks and Covalent Organic Frameworks as (Photo)Active Material in Hybrid Photovoltaic Technologies. Energies, 2020, 13, 5602.	1.6	19
6542	Effect of energetic distribution of trap states on fill factor in perovskite solar cells. Journal of Power Sources, 2020, 479, 229077.	4.0	10
6543	UV-Curable Polymer–QD Flexible Films as the Downconversion Layer for Improved Performance of Cu(In,Ga)Se <sub>2</sub> Solar Cells. Energy & Fuels, 2020, 34, 14581-14590.	2.5	10
6544	Advances in Singlet Fission Chromophore Design Enabled by Vibrational Spectroscopies. Journal of Physical Chemistry C, 2020, 124, 25163-25174.	1.5	11
6545	Origin of High Nonradiative Recombination and Relevant Optoelectronic Properties of Ba 2 Bi 1+ x Nb 1â <sup>°</sup> x O 6 : Candidate for Photo(electro)catalysis and Photovoltaic Applications?. Advanced Optical Materials, 2020, 8, 2000901.	3.6	3
6546	Calcium-stannous oxide solid solutions for solar devices. Applied Physics Letters, 2020, 117, .	1.5	2
6547	Geometries and Terahertz Motions Driving Quintet Multiexcitons and Ultimate Triplet–Triplet Dissociations via the Intramolecular Singlet Fissions. Journal of Physical Chemistry B, 2020, 124, 9411-9419.	1.2	26
6548	Nearâ€infraredâ€Transparent Perovskite Solar Cells and Perovskiteâ€Based Tandem Photovoltaics. Small Methods, 2020, 4, 2000395.	4.6	63
6549	Carbon Nanotube Electrodeâ€Based Perovskite–Silicon Tandem Solar Cells. Solar Rrl, 2020, 4, 2000353.	3.1	19
6550	Efficiency Enhancement of a Thermophotovoltaic System Integrated With a Back Surface Reflector. IEEE Access, 2020, 8, 153226-153239.	2.6	10
6551	Fermi Energy Limitation at β-CuGaO <sub>2</sub> Interfaces Induced by Electrochemical Oxidation/Reduction of Cu. ACS Applied Energy Materials, 2020, 3, 9117-9125.	2.5	5
6552	Investigation of 1.9Âμm GINA Simulated as Intrinsic Layer in a GaAs Homojunction: From 25% Towards 32.4% Conversion Yield. Journal of Electronic Materials, 2020, 49, 6308-6316.	1.0	4
6553	Effect of the Energy Offset on the Charge Dynamics in Nonfullerene Organic Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 43984-43991.	4.0	19
6554	Evaluation-oriented exploration of photo energy conversion systems: from fundamental optoelectronics and material screening to the combination with data science. Polymer Journal, 2020, 52, 1307-1321.	1.3	43
6555	High-Performance Core/Shell of ZnO/TiO2 Nanowire with AgCl-Doped CdSe Quantum Dots Arrays as Electron Transport Layer for Perovskite Solar Cells. Molecules, 2020, 25, 3969.	1.7	6
6556	Development of highâ€efficiency and lowâ€cost solar cells for PVâ€powered vehicles application. Progress in Photovoltaics: Research and Applications, 2021, 29, 684-693.	4.4	48
6557	Influence of surface passivation on the electrical properties of p–i–n GaAsP nanowires. Applied Physics Letters, 2020, 117, 123104.	1.5	4

#	Article	IF	CITATIONS
6558	Numerical Analysis of the Detailed Balance of Multiple Exciton Generation Solar Cells with Nonradiative Recombination. Applied Sciences (Switzerland), 2020, 10, 5558.	1.3	4
6559	Change in Tetracene Polymorphism Facilitates Triplet Transfer in Singlet Fission-Sensitized Silicon Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 8703-8709.	2.1	19
6560	Stable perovskite solar cells with efficiency exceeding 24.8% and 0.3-V voltage loss. Science, 2020, 369, 1615-1620.	6.0	1,122
6561	Interfacial Structure and Composition Managements for Highâ€Performance Methylammoniumâ€Free Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2005846.	7.8	25
6562	Constraints on the Efficiency of Engineered Electromicrobial Production. Joule, 2020, 4, 2101-2130.	11.7	42
6563	High-Efficiency Silicon Heterojunction Solar Cells: Materials, Devices and Applications. Materials Science and Engineering Reports, 2020, 142, 100579.	14.8	139
6564	Analytical Model for Photocurrent in Organic Solar Cells as a Function of the Charge-Transport Figure of Merit Including Second-Order Recombination. Physical Review Applied, 2020, 14, .	1.5	6
6565	Near infrared electron acceptors with a photoresponse beyond 1000 nm for highly efficient organic solar cells. Journal of Materials Chemistry A, 2020, 8, 18154-18161.	5.2	49
6566	Colloidal Quantum Dot Photovoltaics: Current Progress and Path to Gigawatt Scale Enabled by Smart Manufacturing. ACS Energy Letters, 2020, 5, 3069-3100.	8.8	61
6567	Efficient Vacuum-Deposited Perovskite Solar Cells with Stable Cubic FA <sub>1–<i>x</i></sub> MA <sub><i>x</i></sub> Pbl <sub>3</sub> . ACS Energy Letters, 2020, 5, 3053-3061.	8.8	49
6568	Double-Halide Composition-Engineered SnO <sub>2</sub> -Triple Cation Perovskite Solar Cells Demonstrating Outstanding Performance and Stability. ACS Applied Energy Materials, 2020, 3, 8595-8605.	2.5	17
6569	Untapping solar energy resources. Nature Photonics, 2020, 14, 528-530.	15.6	9
6570	Assessing the Tamm–Dancoff approximation, singlet–singlet, and singlet–triplet excitations with the latest long-range corrected double-hybrid density functionals. Journal of Chemical Physics, 2020, 153, 064106.	1.2	54
6571	Scalable sources. Nature Photonics, 2020, 14, 530-530.	15.6	0
6572	Control of Defect States of Kesterite Solar Cells to Achieve More Than 11% Power Conversion Efficiency. ACS Applied Energy Materials, 2020, 3, 8500-8508.	2.5	22
6573	Encapsulation of Nanostructures in a Dielectric Matrix Providing Optical Enhancement in Ultrathin Solar Cells. Solar Rrl, 2020, 4, 2000310.	3.1	10
6574	Towards intermediate-band photovoltaic absorbers: theoretical insights on the incorporation of Ti and Nb in In2S3. Npj Computational Materials, 2020, 6, .	3.5	10
6575	General Dual-Switched Dynamic Singlet Fission Channels in Solvents Governed Jointly by Chromophore Structural Dynamics and Solvent Impact: Singlet Prefission Energetics Analyses. Journal of the American Chemical Society, 2020, 142, 17469-17479.	6.6	14

#	Article	IF	CITATIONS
6576	Ultrafast Singlet Fission and Intersystem Crossing in Halogenated Tetraazaperopyrenes. Journal of Physical Chemistry A, 2020, 124, 7857-7868.	1.1	7
6577	Interplay between temperature and bandgap energies on the outdoor performance of perovskite/silicon tandem solar cells. Nature Energy, 2020, 5, 851-859.	19.8	177
6578	Diboron- and Diaza-Doped Anthracenes and Phenanthrenes: Their Electronic Structures for Being Singlet Fission Chromophores. Journal of Physical Chemistry A, 2020, 124, 8159-8172.	1.1	24
6579	Efficient Narrow Band Gap Cu(In,Ga)Se2 Solar Cells with Flat Surface. ACS Applied Materials & Interfaces, 2020, 12, 45485-45492.	4.0	15
6580	Room-Temperature Vacuum Deposition of CsPbl <sub>2</sub> Br Perovskite Films from Multiple Sources and Mixed Halide Precursors. Chemistry of Materials, 2020, 32, 8641-8652.	3.2	32
6581	Two-photon photocurrent in InGaN/GaN nanowire intermediate band solar cells. Communications Materials, 2020, 1, .	2.9	18
6582	Effect of TiO2 Photoanodes Morphology and Dye Structure on Dye-Regeneration Kinetics Investigated by Scanning Electrochemical Microscopy. Electrochem, 2020, 1, 329-343.	1.7	1
6583	Why choosing the right partner is important: stabilization of ternary CsyGUAxFA(1â^'yâ^'x)PbI3 perovskites. Physical Chemistry Chemical Physics, 2020, 22, 20880-20890.	1.3	2
6584	Deep‣evel Defect in Quasiâ€Vertically Oriented CuSbS <sub>2</sub> Thin Film. Solar Rrl, 2020, 4, 2000319.	3.1	1
6585	Antiperovskite Oxides as Promising Candidates for High-Performance Ferroelectric Photovoltaics: First-Principles Investigation on Ba <sub>4</sub> As <sub>2</sub> O and Ba <sub>4</sub> Sb <sub>2</sub> O. ACS Applied Materials & Interfaces, 2020, 12, 43798-43804.	4.0	13
6586	Recent Progress in Metal Halide Perovskiteâ€Based Tandem Solar Cells. Advanced Materials, 2020, 32, e2002228.	11.1	39
6587	<i>In silico</i> design of 2D polymers containing truxene-based platforms: insights into their structural and electronic properties. Journal of Materials Chemistry C, 2020, 8, 15416-15425.	2.7	13
6588	Black-Silicon Ultraviolet Photodiodes Achieve External Quantum Efficiency above 130%. Physical Review Letters, 2020, 125, 117702.	2.9	49
6589	Allâ€inorganic Snâ€based Perovskite Solar Cells: Status, Challenges, and Perspectives. ChemSusChem, 2020, 13, 6477-6497.	3.6	35
6590	Tunable Electronic Properties and Potential Applications of BSe/XS <sub>2</sub> (X=Mo, W) van der Waals Heterostructures. Advanced Theory and Simulations, 2020, 3, 2000144.	1.3	7
6591	UVâ€Selective Optically Transparent Zn(O,S)â€Based Solar Cells. Solar Rrl, 2020, 4, 2000470.	3.1	12
6592	Excellent Excitonic Photovoltaic Effect in 2D CsPbBr <sub>3</sub> /CdS Heterostructures. Advanced Functional Materials, 2020, 30, 2006166.	7.8	38
6593	Applications and challenges of thermoplasmonics. Nature Materials, 2020, 19, 946-958.	13.3	277

#	Article	IF	CITATIONS
6594	Chargeâ€Carrier Trapping and Radiative Recombination in Metal Halide Perovskite Semiconductors. Advanced Functional Materials, 2020, 30, 2004312.	7.8	67
6595	Enabling Highâ€Performance Tandem Organic Photovoltaic Cells by Balancing the Front and Rear Subcells. Advanced Materials, 2020, 32, e2002315.	11.1	25
6596	Towards Solar Factories: Prospects of Solarâ€ŧo hemical Energy Conversion using Colloidal Semiconductor Photosynthetic Systems. ChemSusChem, 2020, 13, 4894-4899.	3.6	9
6597	Effect of Fresnel Reflection on Limit Photoconversion Efficiency in Silicon Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 1463-1464.	1.5	4
6598	An Analytic Approach to the Modeling of Multijunction Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 1701-1711.	1.5	6
6599	Versatility of Nanocrystalline Silicon Films: from Thin-Film to Perovskite/c-Si Tandem Solar Cell Applications. Coatings, 2020, 10, 759.	1.2	8
6600	Microscopic origins of performance losses in highly efficient Cu(In,Ga)Se2 thin-film solar cells. Nature Communications, 2020, 11, 4189.	5.8	51
6601	Structural regulation and optical behavior of three-dimensional metal halide perovskites under pressure. Journal of Materials Chemistry C, 2020, 8, 12755-12767.	2.7	20
6602	Synergistic engineering of bromine and cetyltrimethylammonium chloride molecules enabling efficient and stable flexible perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 19425-19433.	5.2	9
6603	Design and Simulation of aâ€5i:H/PbS Colloidal Quantum Dots Monolithic Tandem Solar Cell for 12% Efficiency. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000252.	0.8	29
6604	Sonochemically Synthesized Quantum Nanocrystals of Cubic CuInS <sub>2</sub> : Evidence for Multifractal Surface Morphology, Size-Dependent Structure, and Particle Size Distribution. Journal of Physical Chemistry C, 2020, 124, 20240-20255.	1.5	8
6605	Effectiveness of CuO Nanoparticle-Based p–n Bulk-Heterojunction Electrodes for Photoelectrochemical Hydrogen Generation. ACS Applied Energy Materials, 2020, 3, 8988-9001.	2.5	8
6606	Role of formamidinium in the crystallization of FAxMA1-xPbI3-yCly perovskite via recrystallization-assisted bath-immersion sequential ambient deposition. Journal of Power Sources, 2020, 477, 228736.	4.0	3
6607	Preferred oriented cation configurations in high pressure phases IV and V of methylammonium lead iodide perovskite. Scientific Reports, 2020, 10, 21138.	1.6	5
6608	First-principles study of the structural stability, electronic and optical properties of CH3-F NH3GeI3 (xÂ=Â0, 1, 2, 3) halide perovskites. Chemical Physics Letters, 2020, 761, 138020.	1.2	1
6609	PV cells and modules – State of the art, limits and trends. Heliyon, 2020, 6, e05666.	1.4	73
6610	Dilute nitride III-V nanowires for high-efficiency intermediate-band photovoltaic cells: Materials requirements, self-assembly methods and properties. Progress in Crystal Growth and Characterization of Materials, 2020, 66, 100510.	1.8	15
6611	Characterization of sequential physical vapor deposited methylammonium lead tri-iodide perovskite thin films. Vacuum, 2020, 182, 109727.	1.6	11

#	Article	IF	CITATIONS
6612	Combination of up-conversion and near infrared backward scattering for enhancing performance of planar thin-silicon solar cells. , 2020, , .		0
6613	Two-Dimensional Direct Semiconductor Boron Monochalcogenide Î <sup>3</sup> -BTe: Room-Temperature Single-Bound Exciton and Novel Donor Material in Excitonic Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 58349-58359.	4.0	7
6614	<i>J</i> – <i>V</i> Decoupling: Independent Control over Current and Potential in Electrocatalysis. Journal of Physical Chemistry C, 2020, 124, 28387-28394.	1.5	2
6615	Passivated emitter and rear cell—Devices, technology, and modeling. Applied Physics Reviews, 2020, 7, .	5.5	54
6616	Evolution of the external quantum efficiency of Si-based PV minimodules with encapsulated down-shifters and aged under UV radiation. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2020, 261, 114763.	1.7	5
6617	Solar Thermoradiative-Photovoltaic Energy Conversion. Cell Reports Physical Science, 2020, 1, 100258.	2.8	18
6618	Impact of Al <sub>2</sub> O <sub>3</sub> Passivation on the Photovoltaic Performance of Vertical WSe <sub>2</sub> Schottky Junction Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 57987-57995.	4.0	19
6619	Zero-bias mid-infrared graphene photodetectors with bulk photoresponse and calibration-free polarization detection. Nature Communications, 2020, 11, 6404.	5.8	111
6620	Optimal quantum dot size for photovoltaics with fusion. Nanoscale, 2020, 12, 24362-24367.	2.8	0
6621	Demonstration of a <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline"&gt;<mml:mrow><mml:mtext>G</mml:mtext><mml:mtext>aG</mml:mtext>aG</mml:mrow></mml:math>	ntext> <mr 2.9</mr 	nl:mo>/
6622	Electronic and compositional properties of the rearâ€side of stoichiometric CuInSe 2 absorbers. Progress in Photovoltaics: Research and Applications, 2020, 29, 775.	4.4	2
6623	Singlet Fission Dynamics in Tetracene Single Crystals Probed by Polarization-Dependent Two-Dimensional Electronic Spectroscopy. Journal of Physical Chemistry A, 2020, 124, 10447-10456.	1.1	14
6624	Role of Morphology and Förster Resonance Energy Transfer in Ternary Blend Organic Solar Cells. ACS Applied Energy Materials, 2020, 3, 12025-12036.	2.5	17
6625	Nonlinear optical properties of halide perovskites and their applications. Applied Physics Reviews, 2020, 7, .	5.5	114
6626	High Efficiency (41.85) of Br Perovskites base solar cells with ZnO and TiO2 comparable study as ETM. IOP Conference Series: Materials Science and Engineering, 2020, 928, 072091.	0.3	1
6627	Compression of sodium-filled and empty open-framework <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:msub><mml:mi>Si</mml:mi><mml:mn>24quasihydrostatic and nonhydrostatic conditions. Physical Review B, 2020, 102, .</mml:mn></mml:msub></mml:math 	n <b>ז.</b> ג/mml:	m <b>s</b> ub>
6628	Impact of Cation Multiplicity on Halide Perovskite Defect Densities and Solar Cell Voltages. Journal of Physical Chemistry C, 2020, 124, 27333-27339.	1.5	18
6629	Monolithic perovskite/silicon tandem solar cell with >29% efficiency by enhanced hole extraction. Science, 2020, 370, 1300-1309.	6.0	1,120
#	Article	IF	CITATIONS
------	--	------	-----------
6630	Influence of Hot Carrier and Thermal Components on Photovoltage Formation across the p–n Junction. Applied Sciences (Switzerland), 2020, 10, 7483.	1.3	5
6631	A universal strategy to continuously tune the properties of materials through internal strain. RSC Advances, 2020, 10, 39967-39972.	1.7	0
6632	Different roles of quantum interference in a quantum dot photocell with two intermediate bands. European Physical Journal Plus, 2020, 135, 1.	1.2	2
6633	PbS Colloidal Quantum Dot Inks for Infrared Solar Cells. IScience, 2020, 23, 101753.	1.9	48
6634	Singlet Fission and Electron Injection from the Triplet Excited State in Diphenylisobenzofuran–Semiconductor Assemblies: Effects of Solvent Polarity and Driving Force. Journal of Physical Chemistry C, 2020, 124, 20794-20805.	1.5	11
6635	Antimony Selenide Thin Film Solar Cells with an Electron Transport Layer of Alq <sub>3</sub> *. Chinese Physics Letters, 2020, 37, 108401.	1.3	3
6636	The Cs2AgRhCl6 Halide Double Perovskite: A Dynamically Stable Lead-Free Transition-Metal Driven Semiconducting Material for Optoelectronics. Frontiers in Chemistry, 2020, 8, 796.	1.8	24
6637	Nanostructures for Enhancement of Solar Cells. , 2020, , 245-303.		Ο
6638	Charge-generating mid-gap trap states define the thermodynamic limit of organic photovoltaic devices. Nature Communications, 2020, 11, 5567.	5.8	63
6639	Room-Temperature Hot-Polaron Photovoltaics in the Charge-Ordered State of a Layered Perovskite Oxide Heterojunction. Physical Review Applied, 2020, 14, .	1.5	6
6640	Photovoltaic Concentration: Research and Development. Energies, 2020, 13, 5721.	1.6	15
6641	Long-lived and disorder-free charge transfer states enable endothermic charge separation in efficient non-fullerene organic solar cells. Nature Communications, 2020, 11, 5617.	5.8	73
6642	Directly Determining the Interface Structure and Band Offset of a Large-Lattice-Mismatched CdS/CdTe Heterostructure. Chinese Physics Letters, 2020, 37, 096802.	1.3	5
6643	The Effect of Carbon Defects in the Coal–Pyrite Vacancy on the Electronic Structure and Optical Properties: A DFT + U Study. Minerals (Basel, Switzerland), 2020, 10, 815.	0.8	2
6644	Luminescent, Wide-Band Gap Solar Cells with a Photovoltage up to 1.75 V through a Heterostructured Light-Absorbing Layer. ACS Applied Materials & Interfaces, 2020, 12, 50527-50533.	4.0	6
6645	Trap states in lead chalcogenide colloidal quantum dots—origin, impact, and remedies. Applied Physics Reviews, 2020, 7, .	5.5	23
6646	CuSCN as the Back Contact for Efficient ZMO/CdTe Solar Cells. Materials, 2020, 13, 1991.	1.3	13
6647	Monolithic Perovskite Tandem Solar Cells: A Review of the Present Status and Advanced Characterization Methods Toward 30% Efficiency. Advanced Energy Materials, 2020, 10, 1904102.	10.2	321

ARTICLE IF CITATIONS Investigations on copper zinc tin sulfide thin films grown through nebulizer assisted spray pyrolysis 2.2 10 6648 technique. International Journal of Energy Research, 2020, 44, 7371-7385. Exploring the role of electronic structure on photo-catalytic behavior of carbon-nitride polymorphs. 6649 5.4 19 Carbon, 2020, 168, 125-134. Phonon-Driven Energy Relaxation in PbS/CdS and PbSe/CdSe Core/Shell Quantum Dots. Journal of 6650 2.1 12 Physical Chemistry Letters, 2020, 11, 4269-4278. <i>O</i>-Carboranylene versus Phenylene Backbones in Cyclization Reactions of 1,2 Diketones with 1.1 Hydrosilanes. Organometallics, 2020, 39, 4232-4237. Computational high throughput screening of inorganic cation based halide perovskites for perovskite 6652 19 0.8 only tandem solar cells. Materials Research Express, 2020, 7, 055502. Minimizing Defect States in Lead Halide Perovskite Solar Cell Materials. Applied Sciences 1.3 37 (Switzerland), 2020, 10, 3061. Green-to-Blue Triplet Fusion Upconversion Sensitized by Anisotropic CdSe Nanoplatelets. Chemistry of 6654 3.2 35 Materials, 2020, 32, 4734-4742. Experimental and Theoretical Study into Interface Structure and Band Alignment of the  $\label{eq:cucsub} Cucsub>2</sub>Zn<sub>1a \in </sub>Cd<sub><i>x</i></sub>SnS<sub>4</sub> Heterointerface for Photovoltaic Applications. ACS Applied Energy Materials, 2020, 3, 5153-5162.$ 2.5 Solar Materials Find Their Band Gap. Joule, 2020, 4, 984-985. 22 6656 11.7 Recombination Channels in Cu(In,Ga)Se<sub>2</sub> Thin Films: Impact of the Ga-Profile. Journal of 1.5 Physical Chemistry C, 2020, 124, 12295-12304. On the Mechanistic Understanding of Photovoltage Loss in Iron Pyrite Solar Cells. Advanced 11.1 6658 33 Materials, 2020, 32, e1905653. Efficient and stable perovskite–silicon two-terminal tandem solar cells. Rare Metals, 2020, 39, 745-747. 3.6 Theoretical Study of Non-Markov Effects on Singlet Fission Dynamics of Model Pentacene Dimers 6660 Using the Second-Order Time-Convolutionless Quantum Master Equation Method. Journal of Physical 1.5 1 Chemistry C, 2020, 124, 12220-12229. Current–voltage curves and operational stability in hot-carrier solar cell. Journal of Applied Physics, 2020, 127, 183102. 1.1 Recent progress in the research on using CuSbS2 and its derivative CuPbSbS3 as absorbers in case of 6662 1.9 8 photovoltaic devices. Frontiers of Optoelectronics, 2021, 14, 450-458. Competitive Triplet Formation and Recombination in Crystalline Films of Perylenediimide Derivatives: Implications for Singlet Fission. Journal of Physical Chemistry C, 2020, 124, 11574-11585. Efficient charge generation at low energy losses in organic solar cells: a key issues review. Reports 6664 8.1 43 on Progress in Physics, 2020, 83, 082601. xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Cu</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>In</mml:mi><mml:mo>,</mml:mo><mml:mi>Ga</mml:mi><mml:mo) Tj ETQ31 1 0.784314 rg

CITATION REPORT

Thin-Film Solar Cells. Physical Review Applied, 2020, 13,

#	Article	IF	CITATIONS
6666	Photoluminescenceâ€Based Characterization of Halide Perovskites for Photovoltaics. Advanced Energy Materials, 2020, 10, 1904134.	10.2	299
6667	Gallium–Boron–Phosphide (\$\$hbox {GaBP}_{2}\$): a new III–V semiconductor for photovoltaics. Journal of Materials Science, 2020, 55, 9448-9460.	1.7	5
6668	Toward Efficient Triple-Junction Polymer Solar Cells through Rational Selection of Middle Cells. ACS Energy Letters, 2020, 5, 1771-1779.	8.8	17
6669	Sputtered p-Type Cu <sub><i>x</i></sub> Zn <sub>1–<i>x</i></sub> S Back Contact to CdTe Solar Cells. ACS Applied Energy Materials, 2020, 3, 5427-5438.	2.5	11
6670	Machine-learned impurity level prediction for semiconductors: the example of Cd-based chalcogenides. Npj Computational Materials, 2020, 6, .	3.5	32
6671	Preventing phase segregation in mixed-halide perovskites: a perspective. Energy and Environmental Science, 2020, 13, 2024-2046.	15.6	221
6672	Layered Ruddlesden–Popper Perovskites with Various Thicknesses for Stable Solid-State Solar Cells. Physics of the Solid State, 2020, 62, 529-541.	0.2	0
6673	Anti-correlation between Band gap and Carrier Lifetime in Lead Halide Perovskites under Compression Rationalized by Ab Initio Quantum Dynamics. Chemistry of Materials, 2020, 32, 4707-4715.	3.2	36
6674	Effect of Annealing on the Dark and Illuminated I(V ) Characterization of a ZnO:Ga Cu2O Hetero-Junction Prepared by Ultrasonic Spray System. Semiconductors, 2020, 54, 534-542.	0.2	3
6675	Colloidal AgBiS2 nanocrystals with reduced recombination yield 6.4% power conversion efficiency in solution-processed solar cells. Nano Energy, 2020, 75, 104961.	8.2	41
6676	Organic photovoltaic cells for low light applications offering new scope and orientation. Organic Electronics, 2020, 85, 105798.	1.4	26
6677	Amorphization of Indirect Band Gap Semiconductors To Tune Their Optoelectronic Properties. Journal of Physical Chemistry C, 2020, 124, 14432-14438.	1.5	7
6678	A Realistic Methodology for 30% Efficient Perovskite Solar Cells. CheM, 2020, 6, 1254-1264.	5.8	160
6679	Electronic, optical, and thermoelectric properties of sodium pnictogen chalcogenides: A first principles study. Computational Materials Science, 2020, 183, 109818.	1.4	21
6680	Performance assessment of a V-trough photovoltaic system and prediction of power output with different machine learning algorithms. Journal of Cleaner Production, 2020, 268, 122269.	4.6	57
6681	A nonfullerene acceptor incorporating a dithienopyran fused backbone for organic solar cells with efficiency over 14%. Nano Energy, 2020, 75, 104988.	8.2	27
6682	Close-spaced sublimation of SnS absorber layers and SnS/CdS heterojunction solar cells with Mo and Ti back metal contacts. Thin Solid Films, 2020, 709, 138153.	0.8	13
6683	Nanophotonic Emission Control for Improved Photovoltaic Efficiency. ACS Photonics, 2020, 7, 1589-1602.	3.2	14

#	Article	IF	CITATIONS
6684	Tuning the electron-deficient core of a non-fullerene acceptor to achieve over 17% efficiency in a single-junction organic solar cell. Energy and Environmental Science, 2020, 13, 2459-2466.	15.6	324
6685	Solution processed perovskite incorporated tandem photovoltaics: developments, manufacturing, and challenges. Journal of Materials Chemistry C, 2020, 8, 10641-10675.	2.7	11
6686	Near-infrared absorbing pyrrolopyrrole aza-BODIPY-based donor–acceptor polymers with reasonable photoresponse. Journal of Materials Chemistry C, 2020, 8, 8770-8776.	2.7	19
6687	Interconnection between Trait, Structure, and Composition of Grain Boundaries in Cu(In,Ga)Se <sub>2</sub> Thinâ€Film Solar Cells. Advanced Functional Materials, 2020, 30, 2001046.	7.8	39
6688	A review of flexible halide perovskite solar cells towards scalable manufacturing and environmental sustainability. Journal of Semiconductors, 2020, 41, 041603.	2.0	20
6689	Synergistic Cascade Carrier Extraction via Dual Interfacial Positioning of Ambipolar Black Phosphorene for Highâ€Efficiency Perovskite Solar Cells. Advanced Materials, 2020, 32, e2000999.	11.1	104
6690	Narrowing the Band Gap: The Key to High-Performance Organic Photovoltaics. Accounts of Chemical Research, 2020, 53, 1218-1228.	7.6	171
6691	Sn Substitution by Ge: Strategies to Overcome the Open-Circuit Voltage Deficit of Kesterite Solar Cells. ACS Applied Energy Materials, 2020, 3, 5830-5839.	2.5	32
6692	Stabilization of Black Perovskite Phase in FAPbI <sub>3</sub> and CsPbI <sub>3</sub> . ACS Energy Letters, 2020, 5, 1974-1985.	8.8	203
6693	Current progress and challenges in photoelectrode materials for the production of hydrogen. Chemical Engineering Journal, 2020, 397, 125415.	6.6	55
6694	Structural, electronic, optical and mechanical properties of Zn-doped MAPbI3 perovskites and absorber layer efficiencies: An ab-initio investigation. Materials Today Communications, 2020, 24, 101216.	0.9	20
6695	Finding junction partners for CsPbI3 in a two-terminal tandem solar cell: A theoretical prospect. Nano Energy, 2020, 75, 104866.	8.2	39
6696	Manipulation of [Ga]/([Ga]Â+Â[In]) profile in 1.4-μm-thick Cu(In,Ga)Se2 thin film on flexible stainless steel substrate for enhancing short-circuit current density and conversion efficiency of its solar cell. Solar Energy, 2020, 204, 231-237.	2.9	7
6697	One-step solution synthesis and stability study of inorganic perovskite semiconductor Cs2SnI6. Solar Energy, 2020, 204, 429-439.	2.9	23
6698	Electron extraction from excited quantum dots with higher order coulomb scattering. Journal of Physics Communications, 2020, 4, 035011.	0.5	0
6699	One‣tep Fabrication of Perovskiteâ€Based Upconversion Devices. ChemPhotoChem, 2020, 4, 704-712.	1.5	17
6700	A Practical Guide for Advanced Methods in Solar Photovoltaic Systems. Advanced Structured Materials, 2020, , .	0.3	6
6701	Highly efficient photocatalytic hydrogen evolution driven by adjustable bimetal CuNi derived hexagonal Ni(OH)2. Applied Surface Science, 2020, 524, 146154.	3.1	14

#	Article	IF	CITATIONS
6702	Electronic structure of yttrium-doped zinc ferrite – Insights from experiment and theory. Journal of Alloys and Compounds, 2020, 842, 155704.	2.8	15
6703	Modulation of Defects and Interfaces through Alkylammonium Interlayer for Efficient Inverted Perovskite Solar Cells. Joule, 2020, 4, 1248-1262.	11.7	260
6704	Efficient Perovskite Solar Modules with Minimized Nonradiative Recombination and Local Carrier Transport Losses. Joule, 2020, 4, 1263-1277.	11.7	93
6705	Raman mapping of MoS2 at Cu2ZnSnS4/Mo interface in thin film. Solar Energy, 2020, 205, 154-160.	2.9	25
6706	A ligand-induced homojunction between aluminum-based superatomic clusters. Nanoscale, 2020, 12, 12046-12056.	2.8	8
6707	Sulfur Vacancy Clustering and Its Impact on Electronic Properties in Pyrite FeS <sub>2</sub> . Chemistry of Materials, 2020, 32, 4820-4831.	3.2	21
6708	Singlet Fission in a Pyrrole-Fused Cross-Conjugated Skeleton with Adaptive Aromaticity. Journal of the American Chemical Society, 2020, 142, 10235-10239.	6.6	73
6709	Tunable Wideâ€Bandgap Monohalide Perovskites. Advanced Optical Materials, 2020, 8, 2000423.	3.6	6
6710	Perovskite Solar Cells go Outdoors: Field Testing and Temperature Effects on Energy Yield. Advanced Energy Materials, 2020, 10, 2000454.	10.2	86
6711	Systematic study of optoelectronic and transport properties of cesium lead halide (Cs2PbX6; X=Cl, Br,) Tj ETQq1	1 0.7843	14 <sub>.32</sub> BT /Ove
6712	Strong bandÂfilling induced significant excited state absorption in MAPbI3 under high pump power. Materials Today Physics, 2020, 14, 100228.	2.9	16
6713	The structural effects on performance of a lateral AlGaAs/GaAs quantum well solar cell. Photonics and Nanostructures - Fundamentals and Applications, 2020, 41, 100799.	1.0	0
6714	Strain-enhanced power conversion efficiency of a BP/SnSe van der Waals heterostructure. Physical Chemistry Chemical Physics, 2020, 22, 14787-14795.	1.3	21
6715	Drastic enhancement of photoresponsivity in C-doped BaSi2 films formed by radio-frequency sputtering. Japanese Journal of Applied Physics, 2020, 59, SFFA06.	0.8	6
6716	Luminescent down-shifting natural dyes to enhance photovoltaic efficiency of multicrystalline silicon solar module. Solar Energy, 2020, 206, 353-364.	2.9	13
6717	Origin of Ionic Inhomogeneity in MAPb(I <sub><i>x</i></sub> Br <sub>1–<i>x</i></sub> ) <sub>3</sub> Perovskite Thin Films Revealed by In-Situ Spectroscopy during Spin Coating and Annealing. ACS Applied Materials & Interfaces, 2020, 12, 30343-30352.	4.0	20
6718	Balancing the pre-aggregation and crystallization kinetics enables high efficiency slot-die coated organic solar cells with reduced non-radiative recombination losses. Energy and Environmental Science, 2020, 13, 2467-2479.	15.6	69
6719	xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mml:mi>InSe</mml:mi> <mml:mo>/</mml:mo> <mml:msi and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mi>InSe</mml:mi><mml:mo>/</mml:mo><ml:mi></ml:mi></mml:math </mml:msi 	ub> <mml: 1.1 h<td>mi&gt;MoS25 ni&gt;</td></mml: 	mi>MoS25 ni>

#	Article	IF	CITATIONS
6720	Numerical analysis of high-efficiency lead-free perovskite solar cell with NiO as hole transport material and PCBM as electron transport material. CSI Transactions on ICT, 2020, 8, 111-116.	0.7	14
6721	Performance analysis of solar thermophotovoltaic system with selective absorber/emitter. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 253, 107163.	1.1	23
6722	Structural and optical properties of Si hyperdoped with Te by ion implantation and pulsed laser annealing. Vacuum, 2020, 178, 109434.	1.6	8
6723	CdS/ZnS Bilayer Thin Films Used As Buffer Layer in 10%-Efficient Cu <sub>2</sub> ZnSnSe <sub>4</sub> Solar Cells. ACS Applied Energy Materials, 2020, 3, 6815-6823.	2.5	21
6724	An oxygen heterocycle-fused fluorene based non-fullerene acceptor for high efficiency organic solar cells. Materials Chemistry Frontiers, 2020, 4, 3594-3601.	3.2	15
6725	Experimental investigation of thin-film solar cells as a wearable power source. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 0, , 1-21.	1.2	2
6726	Effect of concentrated sunlight illumination on mobility and concentrator solar cell efficiency. Japanese Journal of Applied Physics, 2020, 59, 071002.	0.8	1
6727	Warm white broadband emission and tunable long lifetimes in Yb3+ doped Gd2O3 nanoparticles. Ceramics International, 2020, 46, 22900-22906.	2.3	4
6728	Voltage preserved GaInP single junction solar cell using type-A InP multiple quantum well structure with enhanced efficiency. Optik, 2020, 220, 165113.	1.4	13
6729	A new model for thin-film solar cells using photon cycling. Results in Physics, 2020, 17, 103024.	2.0	2
6730	Synthesis and Applications of Wide Bandgap 2D Layered Semiconductors Reaching the Green and Blue Wavelengths. ACS Applied Electronic Materials, 2020, 2, 1777-1814.	2.0	50
6731	Collecting up to 115% of Singlet-Fission Products by Single-Walled Carbon Nanotubes. ACS Nano, 2020, 14, 8875-8886.	7.3	7
6732	Interface confinement on the exciton recombination in thin CdS/ZnO shell/core nanowires. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	0
6733	Thermal Annealing of Singlet Fission Microcrystals Reveals the Benefits of Charge Transfer Couplings and Slip-Stacked Packing. Journal of Physical Chemistry C, 2020, 124, 15123-15131.	1.5	12
6734	Structurally Tunable Two-Dimensional Layered Perovskites: From Confinement and Enhanced Charge Transport to Prolonged Hot Carrier Cooling Dynamics. Journal of Physical Chemistry Letters, 2020, 11, 5705-5718.	2.1	53
6735	Understanding the role of Sn substitution and Pb-â-; in enhancing the optical properties and solar cell efficiency of CH(NH <sub>2</sub> ) <sub>2</sub> Pb <sub>1â^'xâ^'y</sub> Sn <sub>x</sub> â-; <sub>y</sub> Br <sub>3</sub> . lournal of Materials Chemistry C. 2020, 8, 10362-10368.	2.7	13
6736	Electrostatic potential fluctuations and lightâ€soaking effects in Cu(In,Ga)Se <sub>2</sub> solar cells. Progress in Photovoltaics: Research and Applications, 2020, 28, 919-934.	4.4	11
6737	Perylene-Monoimides: Singlet Fission Down-Conversion Competes with Up-Conversion by Geminate Triplet–Triplet Recombination. Journal of Physical Chemistry A, 2020, 124, 5727-5736.	1.1	17

#	Article	IF	CITATIONS
6738	Designs of Singlet Fission Chromophores with a Diazadiborinine Framework**. ChemPhotoChem, 2020, 4, 5279-5287.	1.5	12
6739	Fabrication and study of single-phase high-hole-mobility CZTS thin films for PV solar cell applications: Influence of stabilizer and thickness. Journal of Alloys and Compounds, 2020, 842, 155741.	2.8	20
6740	First-principles prediction of structural, mechanical and thermal properties of perovskite BaZrS3. European Physical Journal B, 2020, 93, 1.	0.6	15
6741	A potential alternative deposition technology for CdS buffer layer in kesterite solar cells via intermittent photochemical deposition. Applied Surface Science, 2020, 527, 146911.	3.1	2
6742	A review of thermal load and performance characterisation of a high concentrating photovoltaic (HCPV) solar receiver assembly. Solar Energy, 2020, 206, 35-51.	2.9	30
6743	Understanding the Performance-Limiting Factors of Cs <sub>2</sub> AgBiBr <sub>6</sub> Double-Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2200-2207.	8.8	161
6744	Thickness Optimization of ZnO/CdS/CdTe Solar Cell by Numerical Simulation. Transactions on Electrical and Electronic Materials, 2020, 21, 587-593.	1.0	12
6745	Good or evil: what is the role of water in crystallization of organometal halide perovskites?. Nanoscale Horizons, 2020, 5, 1147-1154.	4.1	11
6746	Intermarriage of Halide Perovskites and Metalâ€Organic Framework Crystals. Angewandte Chemie - International Edition, 2020, 59, 19434-19449.	7.2	73
6747	Hot-injection synthesis of ultrasmall CuIn3Se5 quantum dots and production of ink-coated films. Journal of Physics and Chemistry of Solids, 2020, 146, 109610.	1.9	2
6748	Post-treatment techniques for high-performance perovskite solar cells. MRS Bulletin, 2020, 45, 431-438.	1.7	11
6749	Fabrication of Thin-Film Solar Cells Based on CdTe Films and Investigation of Their Photoelectrical Properties. Applied Solar Energy (English Translation of Geliotekhnika), 2020, 56, 94-98.	0.2	7
6750	Solar Cells for Indoor Applications: Progress and Development. Polymers, 2020, 12, 1338.	2.0	69
6751	Unifying Charge Generation, Recombination, and Extraction in Lowâ€Offset Nonâ€Fullerene Acceptor Organic Solar Cells. Advanced Energy Materials, 2020, 10, 2001203.	10.2	74
6752	Interdigitated backâ€contacted structure: A different approach towards highâ€efficiency ultrathin copper indium gallium (di)selenide solar cells. Progress in Photovoltaics: Research and Applications, 2020, 28, 899-908.	4.4	13
6753	Tuning the crystallization process of perovskite active layer using a functionalized graphene oxide for enhanced photovoltaic performance. Journal of Materials Science: Materials in Electronics, 2020, 31, 12257-12268.	1.1	8
6754	Intermarriage of Halide Perovskites and Metalâ€Organic Framework Crystals. Angewandte Chemie, 2020, 132, 19602-19617.	1.6	14
6755	A general design guideline for strain-balanced quantum-wells toward high-efficiency photovoltaics. Solar Energy, 2020, 206, 655-669.	2.9	4

#	Article	IF	CITATIONS
6756	Spectrally robust series/parallel-connected triple-junction photovoltaic cells used for artificial photosynthesis. Journal of Applied Physics, 2020, 127, .	1.1	8
6757	Extensive Study on Effect of Pinhole Induced Electric Field in Si CS-TOPCon Solar Cell. , 2020, , .		3
6758	Epitaxial mist chemical vapor deposition growth and characterization of Cu3N films on (0001)α-Al2O3 substrates. Applied Physics Express, 2020, 13, 075505.	1.1	1
6759			

CITATION REPORT ARTICLE IF CITATIONS Quantitative study on the mechanisms underlying the phonon bottleneck effect in InN/InGaN multiple 1.5 10 6774 quantum wells. Applied Physics Letters, 2020, 116, 103104. Shining Light on the Photoluminescence Properties of Metal Halide Perovskites. Advanced Functional 6775 101 Materials, 2020, 30, 1910004. Performance analysis of cubic silicon carbide solar cell as an appropriate candidate for high 6776 1.5 3 temperature application. Optical and Quantum Electronics, 2020, 52, 1. Bayesian optimization based on a unified figure of merit for accelerated materials screening: A case 6777 study of halide perovskites. Science China Materials, 2020, 63, 1024-1035. Efficiency Limits of Underwater Solar Cells. Joule, 2020, 4, 840-849. 11.7 47 6778 6779 Luminescence properties of rare-earth doped oxide materials., 2020, , 345-364. Theoretical study of structural, electronic, and optical properties of ternary metal sulfides MBiS2 (M) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 6780 Suppressing triplet decay in quinoidal singlet fission materials: the role of molecular planarity and 6781 1.3 rigidity. Physical Chemistry Chemical Physics, 2020, 22, 7546-7551. Dilute Oxygen Alloys of ZnS as a Promising Toxic-Free Buffer Layer for Cu(In, Ga)Se<sub>2</sub> 6782 1.6 18 Thin-Film Solar Cells. IEEE Transactions on Electron Devices, 2020, 67, 1666-1673. Enabling Security-Aware D2D Spectrum Resource Sharing for Connected Autonomous Vehicles. IEEE 6783 5.5 Internet of Things Journal, 2020, 7, 3799-3811. Forming an Ultrathin SnS Layer on Cu<sub>2</sub>ZnSnS<sub>4</sub> Surface to Achieve Highly 6784 21 3.1Efficient Solar Cells with Zn(O,S) Buffer. Solar Rrl, 2020, 4, 2000010. The emerging science of electrosynbionics. Bioinspiration and Biomimetics, 2020, 15, 033001. 6785 1.5 The use of low-lying excited states of zethrene and its homologs in singlet fission within 6786 Pariser-Parr-Pople model Hamiltonian: A Density Matrix Renormalization Group study. Chemical 0.9 3 Physics, 2020, 533, 110717. GeSe: Optical Spectroscopy and Theoretical Study of a van der Waals Solar Absorber. Chemistry of Materials, 2020, 32, 3245-3253. 6787 3.2 A review of Sb2Se3 photovoltaic absorber materials and thin-film solar cells. Solar Energy, 2020, 201, 6788 2.9 243 227-246. Hot Carrier Dynamics in Perovskite Nanocrystal Solids: Role of the Cold Carriers, Nanoconfinement, 6789 and the Surface. Nano Letters, 2020, 20, 2271-2278. Upper limit to the photovoltaic efficiency of imperfect crystals from first principles. Energy and 6790 15.6 107 Environmental Science, 2020, 13, 1481-1491.

6791	Pitfalls and prospects of optical spectroscopy to characterize perovskite-transport layer interfaces. Applied Physics Letters, 2020, 116, .	1.5	28
------	--	-----	----

#	Article	IF	Citations
6792	Infrared Absorption Enhancement Using Periodic Inverse Nanopyramids in Crystalline-Silicon Bottom Cells for Application in Tandem Devices. IEEE Journal of Photovoltaics, 2020, 10, 740-748.	1.5	7
6793	Determination of Frequency Characteristics During Commissioning of the Synchronous Generator Excitation System. , 2020, , .		2
6794	Space Solar. , 2020, , 519-542.		3
6795	Increased efficiency of 23% for CIGS solar cell by using ITO as front contact. Materials Today: Proceedings, 2020, 28, 361-365.	0.9	17
6796	Temperature dependence of Raman scattering in the Cu2ZnSnSe4 thin films on a Ta foil substrate. Solar Energy, 2020, 201, 480-488.	2.9	10
6797	Molecular vibrations reduce the maximum achievable photovoltage in organic solar cells. Nature Communications, 2020, 11, 1488.	5.8	40
6798	Non-equilibrium dynamics, materials and structures for hot carrier solar cells: a detailed review. Semiconductor Science and Technology, 2020, 35, 073002.	1.0	23
6799	Enhanced Device Performance with Passivation of the TiO <sub>2</sub> Surface Using a Carboxylic Acid Fullerene Monolayer for a SnPb Perovskite Solar Cell with a Normal Planar Structure. ACS Applied Materials & Interfaces, 2020, 12, 17776-17782.	4.0	24
6800	Improved Average Figureâ€ofâ€Merit of Highâ€Efficiency Nonfullerene Solar Cells via Minor Combinatory Side Chain Approach. Solar Rrl, 2020, 4, 2000062.	3.1	38
6801	Functionalized metal oxide nanoparticles for efficient dye-sensitized solar cells (DSSCs): A review. Materials Science for Energy Technologies, 2020, 3, 472-481.	1.0	62
6802	Inorganic photovoltaic cells based on BiFeO <sub>3</sub> : spontaneous polarization, lattice matching, light polarization and their relationship with photovoltaic performance. Physical Chemistry Chemical Physics, 2020, 22, 8658-8666.	1.3	6
6803	Growth and Characterization of Cu2Zn1â^'xFexSnS4 Thin Films for Photovoltaic Applications. Materials, 2020, 13, 1471.	1.3	10
6804	Perovskites fabricated on textured silicon surfaces for tandem solar cells. Communications Chemistry, 2020, 3, .	2.0	31
6805	Hidden figures of photo-charging: a thermo-electrochemical approach for a solar-rechargeable redox flow cell system. Sustainable Energy and Fuels, 2020, 4, 2650-2655.	2.5	8
6806	Performance analysis of c-Si heterojunction solar cell with passivated transition metal oxides carrier-selective contacts. Journal of Computational Electronics, 2020, 19, 875-883.	1.3	3
6807	Quantization in Compressive Sensing: A Signal Processing Approach. IEEE Access, 2020, 8, 50611-50625.	2.6	10
6808	Wi-Fi Signal Analysis for Heartbeat and Metal Detection: A Comparative Study of Reliable Contactless Systems. , 2020, , .		3
6809	Inhibiting radiative recombination rate to enhance quantum yields in a quantum photocell*. Chinese Physics B, 2020, 29, 064207.	0.7	2

	Сітаті	on Report	
#	Article	IF	Citations
6810	Bandgap-Tuned CuInS <sub>2</sub> /ZnS Core/Shell Quantum Dots for a Luminescent Downshifting Layer in a Crystalline Silicon Solar Module. ACS Applied Nano Materials, 2020, 3, 3417-3426.	2.4	29
6811	Theoretical Analysis of the Geometrical Effects of Tilted/Horizontal MoS <sub>2</sub> /WSe <sub>2</sub> van der Waals Heterostructures: Implications for Photoelectric Properties and Energy Conversion. ACS Applied Nano Materials, 2020, 3, 3930-3938.	2.4	10
6812	LoRa vs. WiFi Ad Hoc: A Performance Analysis and Comparison. , 2020, , .		14
6813	Resilient Networked AC Microgrids Under Unbounded Cyber Attacks. IEEE Transactions on Smart Grid, 2020, 11, 3785-3794.	6.2	53
6814	An energetics perspective on why there are so few triplet–triplet annihilation emitters. Journal of Materials Chemistry C, 2020, 8, 10816-10824.	2.7	32
6815	Fractal solar panels: Optimizing aesthetic and electrical performances. PLoS ONE, 2020, 15, e0229945.	1.1	11
6816	Spontaneously Selfâ€Assembly of a 2D/3D Heterostructure Enhances the Efficiency and Stability in Printed Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000173.	10.2	126
6817	Investigation of germanium selenide electrodes for the integrated photoâ€rechargeable battery. International Journal of Energy Research, 2020, 44, 6015-6022.	2.2	14
6818	Internal polarization electric field effects on the efficiency of InN/In <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si54.svg"&gt;<mml:mrow><mml:msub><mml:mrow /&gt;<mml:mrow><mml:mi>x</mml:mi></mml:mrow></mml:mrow </mml:msub><mml:msub><mml:msub><mml:mrow>/ multiple guaptum dot color color color Energy 2020, 201, 220, 247</mml:mrow></mml:msub></mml:msub></mml:mrow></mml:math 	2.9 Ga<	16 :/mml:mrow
6819	Efficient defect passivation of Sb <sub>2</sub> Se <sub>3</sub> film by tellurium doping for high performance solar cells. Journal of Materials Chemistry A, 2020, 8, 6510-6516.	5.2	48
6820	Angular Dependence of Photonic Crystal Coupled to Photovoltaic Solar Cell. Applied Sciences (Switzerland), 2020, 10, 1574.	1.3	9
6821	Influence of the selenization condition on the properties of ambient-air processed CZTSSe thin films and device performance. Applied Surface Science, 2020, 516, 145872.	3.1	12
6822	Optical design and optimization for back-contact perovskite solar cells. Solar Energy, 2020, 201, 84-91.	2.9	29
6823	Transforming energy using quantum dots. Energy and Environmental Science, 2020, 13, 1347-1376.	15.6	76
6824	Lead chalcogenide quantum dots for photoelectric devices. Russian Chemical Reviews, 2020, 89, 379-391.	2.5	23
6825	Water Additive Enhanced Solution Processing of Alloy Sb <sub>2</sub> (S <sub>1â~<i>x</i></sub> Se <sub><i>x</i></sub> ) <sub>3</sub> â€Based Solar Cells. Se Rrl, 2020, 4, 1900582.	olar 3.1	38
6826	Multiphoton Near-Infrared Quantum Splitting of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"&gt;<mml:msup><mml:mi>Er</mml:mi><mml:mrow><mml:mn>3</mml:mn><ml:mo>+<!--<br-->Physical Review Applied, 2020, 13, .</ml:mo></mml:mrow></mml:msup></mml:math 	/mml:mo>ጚ/mml:r	mrðw>
6827	Triple-halide wide–band gap perovskites with suppressed phase segregation for efficient tandems. Science, 2020, 367, 1097-1104.	6.0	669

~		~	
(		REDU	DT
$\sim$	плп	<b>NLFU</b>	

#	Article	IF	CITATIONS
6828	Tuning the electronic, optical and structural properties of GaS/C2N van der Waals heterostructure for photovoltaic application: first-principle calculations. SN Applied Sciences, 2020, 2, 1.	1.5	16
6829	Efficiency improvement of GaAs Quantum Dot in GaAs1-xPx matrix for solar cell applications. Microelectronics Journal, 2020, 99, 104738.	1.1	2
6830	The photon absorber and interconnecting layers in multijunction organic solar cell. Solar Energy, 2020, 201, 28-44.	2.9	22
6831	Influence of Perovskite Interface Morphology on the Photon Management in Perovskite/Silicon Tandem Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 15080-15086.	4.0	30
6832	Theoretical Study on Singlet Fission Dynamics in Pentacene Ringâ€Shaped Aggregate Models with Different Configurations. ChemPhotoChem, 2020, 4, 5249-5263.	1.5	2
6833	Elucidating the Relationship between Multiradical Character and Predicted Singlet Fission Activity. ChemPhotoChem, 2020, 4, 5223-5229.	1.5	17
6834	Insights into Ultrafast Carrier Dynamics in Perovskite Thin Films and Solar Cells. ACS Photonics, 2020, 7, 1893-1907.	3.2	34
6835	DFT screening of metallic single-replacements for lead-free perovskites with intrinsic photovoltaic functionalities. RSC Advances, 2020, 10, 23743-23748.	1.7	6
6836	Numerical study of CZTS based solar cell for the improvement of performance. AIP Conference Proceedings, 2020, , .	0.3	0
6837	Numerical study of mono-crystalline silicon solar cells with passivated emitter and rear contact configuration for the efficiency beyond 24% based on mass production technology. Journal of Semiconductors, 2020, 41, 062701.	2.0	11
6838	Delocalization effects in singlet fission: Comparing models with two and three interacting molecules. Journal of Chemical Physics, 2020, 152, 244125.	1.2	12
6839	Numerical–Experimental Performance Assessment of a Non-Concentrating Solar Thermoelectric Generator (STEG) Operating in the Southern Hemisphere. Energies, 2020, 13, 2666.	1.6	5
6840	Metal-Free Hybrid Organic–Inorganic Perovskites for Photovoltaics. Journal of Physical Chemistry Letters, 2020, 11, 5938-5947.	2.1	12
6841	Quantum Photovoltaic Cells Driven by Photon Pulses. Entropy, 2020, 22, 693.	1.1	1
6842	The significance of antiâ€fluorite <scp> Cs <sub>2</sub> Nbl <sub>6</sub> </scp> via its structural, electronic, magnetic, optical and thermoelectric properties. International Journal of Energy Research, 2020, 44, 10179-10191.	2.2	25
6843	Photovoltaic effect in Si/SiO2 superlattice microdisk array solar cell structure. Superlattices and Microstructures, 2020, 145, 106640.	1.4	4
6844	Optimization of electrical and optical properties of tin sulfide for thin film photovoltaics using SCAPS. Journal of Physics: Conference Series, 2020, 1531, 012016.	0.3	0
6845	Prolonged and efficient near-infrared photoluminescence of a sensitized organic ytterbium-containing molecular composite. Journal of Materials Chemistry C, 2020, 8, 9502-9505.	2.7	5

#	Article	IF	Citations
6846	2-Terminal CIGS-perovskite tandem cells: A layer by layer exploration. Solar Energy, 2020, 207, 270-288.	2.9	44
6847	Understanding the interplay of stability and efficiency in A-site engineered lead halide perovskites. APL Materials, 2020, 8, .	2.2	57
6848	Very high V <sub>OC</sub> and FF of CdTe thinâ€film solar cells with the applications of organoâ€metallic halide perovskite thin film as a hole transport layer. Progress in Photovoltaics: Research and Applications, 2020, 28, 1024-1033.	4.4	8
6849	Proposal of CIGS dual-junction solar cell and investigation of different metal grids effect. Optical and Quantum Electronics, 2020, 52, 1.	1.5	5
6850	Band-Structure Engineering of <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline" overflow="scroll"&gt;<mml:msub><mml:mi>Zn</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi mathvariant="normal"&gt;S<mml:mi>y</mml:mi></mml:mi </mml:msub><mml:msub> Physical Review Applied 2020, 13</mml:msub></mml:math>	> Olds:/mml <mml:mi></mml:mi>	:næi> <mml:m Se</mml:m 
6851	Ultrafast Energy Transfer from Local Exciton to Intermolecular CT States in a Supramolecular Model of the Donor–Acceptor Interfaces. Journal of Physical Chemistry C, 2020, 124, 16248-16260.	1.5	6
6852	Performance investigation of Sb2Se3 based solar cell by device optimization, band offset engineering and Hole Transport Layer in SCAPS-1D. Current Applied Physics, 2020, 20, 973-981.	1.1	32
6853	Molecular insights and concepts to engineer singlet fission energy conversion devices. Energy and Environmental Science, 2020, 13, 2741-2804.	15.6	66
6854	Recent Progress on Cu 2 BaSn(S x Se 1– x ) 4 : From Material to Solar Cell Applications. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000060.	0.8	4
6855	Polyacrylonitrile-based gel polymer electrolytes for dye-sensitized solar cells: a review. Ionics, 2020, 26, 4215-4238.	1.2	34
6856	High-performance piezo-phototronic multijunction solar cells based on single-type two-dimensional materials. Nano Energy, 2020, 76, 105091.	8.2	14
6857	Photosystem (PSII)-based hybrid nanococktails for the fabrication of BIO-DSSC and photo-induced memory device. Journal of Photochemistry and Photobiology A: Chemistry, 2020, 401, 112743.	2.0	8
6858	First-principles study on Sb-doped SnS2 as a low cost and non-toxic absorber for intermediate band solar cell. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126695.	0.9	13
6859	Multiexcitonic Triplet Pair Generation in Oligoacene Dendrimers as Amorphous Solidâ€&tate Miniatures. Angewandte Chemie, 2020, 132, 21142-21150.	1.6	2
6860	Multiexcitonic Triplet Pair Generation in Oligoacene Dendrimers as Amorphous Solid‣tate Miniatures. Angewandte Chemie - International Edition, 2020, 59, 20956-20964.	7.2	30
6861	Rapid Decoherence Induced by Light Expansion Suppresses Charge Recombination in Mixed Cation Perovskites: Time-Domain <i>ab Initio</i> Analysis. Journal of Physical Chemistry Letters, 2020, 11, 1601-1608.	2.1	19
6862	Effect of rubidium incorporation on the structural, electronic and properties of MAPbI3. Chemical Physics Letters, 2020, 743, 137179.	1.2	2
6863	Overview of Si Tandem Solar Cells and Approaches to PV-Powered Vehicle Applications. MRS Advances, 2020, 5, 441-450.	0.5	11

#	Article	IF	CITATIONS
6864	FAPb <sub>0.5</sub> Sn <sub>0.5</sub> I <sub>3</sub> : A Narrow Bandgap Perovskite Synthesized through Evaporation Methods for Solar Cell Applications. Solar Rrl, 2020, 4, 2070024.	3.1	9
6865	Unraveling the effect of Bi2S3 on the optical, electrical and magnetic properties of Î <sup>3</sup> -MnS-based composite thin films. Physica B: Condensed Matter, 2020, 585, 412121.	1.3	12
6866	Enhancement in the performance of nanostructured CuO–ZnO solar cells by band alignment. RSC Advances, 2020, 10, 7839-7854.	1.7	70
6867	Highly Efficient and Stable GABrâ€Modified Idealâ€Bandgap (1.35 eV) Sn/Pb Perovskite Solar Cells Achieve 20.63% Efficiency with a Record Small <i>V</i> <sub>oc</sub> Deficit of 0.33 V. Advanced Materials, 2020, 32, e1908107.	11.1	101
6868	Photoexcited organic molecules en route to highly efficient autoionization. Journal of Chemical Physics, 2020, 152, 074715.	1.2	3
6869	Design and Realization of a Low Cross-Polarization Conical Horn With Thin Metasurface Walls. IEEE Transactions on Antennas and Propagation, 2020, 68, 3477-3486.	3.1	8
6870	Design of Lead-Free and Stable Two-Dimensional Dion–Jacobson-Type Chalcogenide Perovskite A′La2B3S10 (A′ = Ba/Sr/Ca; B = Hf/Zr) with Optimal Band Gap, Strong Optical Absorption, and High Efficiency for Photovoltaics. Chemistry of Materials, 2020, 32, 2450-2460.	3.2	19
6871	Metal-free photocatalysts for hydrogen evolution. Chemical Society Reviews, 2020, 49, 1887-1931.	18.7	374
6872	Band alignment control in a blue phosphorus/C <sub>2</sub> N van der Waals heterojunction using an electric field. Physical Chemistry Chemical Physics, 2020, 22, 5873-5881.	1.3	29
6873	Colloidal PbS quantum dot stacking kinetics during deposition <i>via</i> printing. Nanoscale Horizons, 2020, 5, 880-885.	4.1	21
6874	Strategies for Design of Potential Singlet Fission Chromophores Utilizing a Combination of Ground-State and Excited-State Aromaticity Rules. Journal of the American Chemical Society, 2020, 142, 5602-5617.	6.6	86
6875	Efficient and Stable Ideal Bandgap Perovskite Solar Cell Achieved by a Small Amount of Tin Substituted Methylammonium Lead Iodide. Electronic Materials Letters, 2020, 16, 224-230.	1.0	20
6876	n-Graphene/p-Silicon-based Schottky junction solar cell, with very high power conversion efficiency. SN Applied Sciences, 2020, 2, 1.	1.5	6
6877	Towards highly efficient thin-film solar cells with a graded-bandgap CZTSSe layer. JPhys Energy, 2020, 2, 025004.	2.3	10
6878	Energy, temperature, and deposition angle dependence of Cd and Te2 deposited on CdTe. Thin Solid Films, 2020, 697, 137798.	0.8	1
6879	Low-frequency lattice phonons in halide perovskites explain high defect tolerance toward electron-hole recombination. Science Advances, 2020, 6, eaaw7453.	4.7	182
6880	Radiative and non-radiative losses by voltage-dependent in-situ photoluminescence in perovskite solar cell current-voltage curves. Journal of Luminescence, 2020, 222, 117106.	1.5	10
6881	Superatomic molecules with internal electric fields for light harvesting. Nanoscale, 2020, 12, 4736-4742.	2.8	15

ARTICLE IF CITATIONS Making triplets from photo-generated charges: observations, mechanisms and theory. Photochemical 6882 94 1.6 and Photobiological Sciences, 2020, 19, 136-158. Synthesis and characterization of CoFe2O4 thin films for solar absorber application. Materials 1.9 Science in Semiconductor Processing, 2020, 111, 104992. Wavefunction engineering for efficient photoinduced-electron transfer in CuInS<sub>2</sub> 6884 1.3 4 quantum dot-sensitized solar cells. Nanotechnology, 2020, 31, 215408. Two-Dimensional 111-Type In -Based Halide Perovskite Cs3In2X9(X=Cl,Br,I) with Optimal Band Gap for 6885 1.5 Photovoltaics and Defect-Insensitive Blue Emission. Physical Review Applied, 2020, 13, . All Antimony Chalcogenide Tandem Solar Cell. Solar Rrl, 2020, 4, 2000048. 6886 3.138 An End-to-End Multi-Task Deep Learning Framework for Skin Lesion Analysis. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 2912-2921. 6887 Efficient Perovskite Solar Cells by Reducing Interfaceâ€Mediated Recombination: a Bulky Amine 6888 10.2 198 Approach. Advanced Energy Materials, 2020, 10, 2000197. Broadband downconversion in Bi3+-Yb3+-codoped transparent glass ceramics containing LaF3 6889 1.1 nanocrystals. Journal of Materials Science: Materials in Electronics, 2020, 31, 5117-5123. Atomistic Origins of the Limited Phase Stability of Cs<sup>+</sup>-Rich 6890 FA<sub><i>x</i>/i></sub>Cs<sub>(1â€"<i>x</i>)</sub>Pbl<sub>3</sub> Mixtures. Chemistry of Materials, 3.2 24 2020, 32, 2605-2614. Carrier Multiplication and Hot-Carrier Cooling Dynamics in Quantum-Confined CsPbl<sub>3</sub> 6891 2.1 Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2020, 11, 1921-1926. Novel hydrothermal route for synthesis of photoactive Cu2ZnSn(S,Se)4 nanocrystalline thin film: efficient photovoltaic performance. Journal of Materials Science: Materials in Electronics, 2020, 31, 6892 1.1 11 5441-5451. Molecular-Scale Characterization of Photoinduced Charge Separation in Mixed-Dimensional 6893 7.3 InSe–Organic van der Waals Heterostructures. ACS Nano, 2020, 14, 3509-3518. 6894 Recent progress in indoor organic photovoltaics. Nanoscale, 2020, 12, 5792-5804. 2.8 126 Electron spin polarization generated by transport of singlet and quintet multiexcitons to spin-correlated triplet pairs during singlet fissions. Chemical Science, 2020, 11, 2934-2942. 6895 3.7 44 Lead-free perovskite 6896 [H<sub>3</sub>NC<sub>6</sub>H<sub>4</sub>NH<sub>3</sub>]CuBr<sub>4</sub> with both a 20 5.2bandgap of 1.43 eV and excellent stability. Journal of Materials Chemistry A, 2020, 8, 5484-5488. Computational functionality $\hat{a} \in driven$  design of semiconductors for optoelectronic applications. InformaÄnÃ-MateriÃ; ly, 2020, 2, 879-904. XUV laser mass spectrometry for nano-scale 3D elemental profiling of functional thin films. Applied 6898 1.1 4 Physics A: Materials Science and Processing, 2020, 126, 1. Influence of a nanostructured ZnO layer on the carrier recombination and dynamics in chalcopyrite 6899 1.7 solar cells. Journal of Materials Science, 2020, 55, 9703-9711.

CITATION REPORT

#	Article		CITATIONS
6900	DFT-based study of the bulk tin mixed-halide CsSnI3-Br perovskite. Computational Materials Science, 2020, 178, 109619.	1.4	19
6901	Enhanced device performance of Si nanowires/Si nanocrystals heterojunction solar cells with ultrathin Al2O3 passivation. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 120, 114048.	1.3	5
6902	Practical target values of Shockley–Read–Hall recombination rates in stateâ€ofâ€ŧheâ€art tripleâ€junction solar cells for realizing conversion efficiencies within 1% of the internal radiative limit. Progress in Photovoltaics: Research and Applications, 2020, 28, 417-424.	4.4	4
6903	Heterogeneous Supersaturation in Mixed Perovskites. Advanced Science, 2020, 7, 1903166.	5.6	13
6904	Relation between Fluorescence Quantum Yield and Open ircuit Voltage in Complete Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900554.	3.1	13
6905	Impact of SnF <sub>2</sub> Addition on the Chemical and Electronic Surface Structure of CsSnBr <sub>3</sub> . ACS Applied Materials & amp; Interfaces, 2020, 12, 12353-12361.	4.0	35
6906	Efficiency Enhancement of Ultra-thin CIGS Solar Cells Using Bandgap Grading and Embedding Au Plasmonic Nanoparticles. Plasmonics, 2020, 15, 1173-1182.	1.8	23
6907	Paper-patent citation linkages as early signs for predicting delayed recognized knowledge: Macro and micro evidence. Journal of Informetrics, 2020, 14, 101017.	1.4	15
6908	Study of (AgxCu1â^'x)2ZnSn(S,Se)4 monograins synthesized by molten salt method for solar cell applications. Solar Energy, 2020, 198, 586-595.	2.9	14
6909	Optimization of CH3NH3PbI3 perovskite solar cells: A theoretical and experimental study. Solar Energy, 2020, 199, 198-205.	2.9	109
6910	Evaluation of performance of near-field thermophotovoltaic systems based on entropy analysis. Journal of Applied Physics, 2020, 127, .	1.1	8
6911	Device simulation of 17.3% efficient lead-free all-perovskite tandem solar cell. Solar Energy, 2020, 197, 212-221.	2.9	188
6912	Pyrene-stabilized acenes as intermolecular singlet fission candidates: Importance of exciton wave-function convergence. Journal of Physics Condensed Matter, 2020, 32, 184001.	0.7	15
6913	Silicon Degradation in Monolithic II–VI/Si Tandem Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 690-695.	1.5	6
6914	Effects of different counter electrodes on performance of CdSeTe alloy QDSSC. Solar Energy, 2020, 197, 519-526.	2.9	14
6915	Lanthanide doping in metal halide perovskite nanocrystals: spectral shifting, quantum cutting and optoelectronic applications. NPG Asia Materials, 2020, 12, .	3.8	179
6916	2D group 6 transition metal dichalcogenides toward wearable electronics and optoelectronics. Journal of Applied Physics, 2020, 127, .	1.1	19
6917	Radiative recombination rate suppressed in a quantum photocell with three electron donors. European Physical Journal Plus, 2020, 135, 1.	1.2	4

#	Article	IF	CITATIONS
6918	Broadening Near-Field Emission for Performance Enhancement in Thermophotovoltaics. Nano Letters, 2020, 20, 1654-1661.	4.5	37
6919	Management of losses (thermalization-transmission) in the Si-QDs inside 3C–SiC to design an ultra-high-efficiency solar cell. Materials Science in Semiconductor Processing, 2020, 109, 104936.	1.9	21
6920	High-efficiency solar thermophotovoltaic system using a nanostructure-based selective emitter. Solar Energy, 2020, 197, 538-545.	2.9	81
6921	Solar Cell Using Hourglass-Shaped Silicon Nanowires for Increased Light-Trapping Path. IEEE Journal of Photovoltaics, 2020, 10, 475-479.	1.5	13
6922	Sputtered single-phase kesterite Cu2ZnSnS4 (CZTS) thin film for photovoltaic applications: Post annealing parameter optimization and property analysis. AIP Advances, 2020, 10, .	0.6	37
6923	xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"> <mml:msub><mml:mi>Cs</mml:mi><mml:mn>2</mml:mn></mml:msub> <mml:msup><mml:r mathvariant="normal"&gt;I</mml:r </mml:msup> <mml:msup><mml:mi>Au</mml:mi><mml:mi>III</mml:mi><td>ni&gt;Aunl:msup&gt;&lt;</td><td>ml:mi&gt;<mml mml:msub&gt;</mml </td></mml:msup>	ni>Aunl:msup><	ml:mi> <mml mml:msub&gt;</mml 
3	77		

#	Article	IF	CITATIONS
6937	Roomâ€Temperature Partial Conversion of αâ€FAPbl <sub>3</sub> Perovskite Phase via Pbl <sub>2</sub> Solvation Enables Highâ€Performance Solar Cells. Advanced Functional Materials, 2020, 30, 1907442.	7.8	41
6938	Trap States, Electric Fields, and Phase Segregation in Mixedâ€Halide Perovskite Photovoltaic Devices. Advanced Energy Materials, 2020, 10, 1903488.	10.2	79
6939	Computational Protocol for Precise Prediction of Dye-Sensitized Solar Cell Performance. Journal of Physical Chemistry C, 2020, 124, 3980-3987.	1.5	28
6940	Application of Photo-Electrochemically Generated Hydrogen with Fuel Cell Based Micro-Combined Heat and Power: A Dynamic System Modelling Study. Molecules, 2020, 25, 123.	1.7	5
6941	Band gap engineered ternary semiconductor Pb x Cd 1 â^'x S: Nanoparticleâ€sensitized solar cells with an efficiency of 8.5% under 1% sun—A combined theoretical and experimental study. Progress in Photovoltaics: Research and Applications, 2020, 28, 328-341.	4.4	9
6942	Two-Dimensional BAs/InTe: A Promising Tandem Solar Cell with High Power Conversion Efficiency. ACS Applied Materials & Interfaces, 2020, 12, 6074-6081.	4.0	32
6943	Nanoscale photovoltage mapping in CZTSe/Cu <sub>x</sub> Se heterostructure by using kelvin probe force microscopy. Materials Research Express, 2020, 7, 016418.	0.8	1
6944	Simulation studies on photovoltaic response of ultrathin CuSb(S/Se) <sub>2</sub> ternary compound semiconductors absorberâ€based single junction solar cells. International Journal of Energy Research, 2020, 44, 3724-3736.	2.2	18
6945	Fabrication of group IV semiconductor alloys on Si substrate applying Al paste with screen-printing. Japanese Journal of Applied Physics, 2020, 59, SGGF07.		0
6946	Ligand-assisted cation-exchange engineering for high-efficiency colloidal Cs1â^'xFAxPbI3 quantum dot solar cells with reduced phase segregation. Nature Energy, 2020, 5, 79-88.	19.8	412
6947	In Situ Passivation on Rear Perovskite Interface for Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 7690-7700.	4.0	12
6948	Preparation of Cu2ZnSn(SxSe1â^'x)4 solar cells with two step sulfurization. Solar Energy, 2020, 197, 73-77.	2.9	6
6949	Na incorporation controlled single phase kesterite Cu2ZnSnS4 solar cell material. Materials Letters, 2020, 265, 127355.	1.3	7
6950	Real-Time Retrieval of Precipitable Water Vapor From Galileo Observations by Using the MGEX Network. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 4743-4753.	2.7	12
6951	Releasing the hidden shift current in the TTF-CA organic molecular solid via symmetry lowering. Npj Computational Materials, 2020, 6, .	3.5	3
6952	Preferred orientations of organic cations at lead-halide perovskite interfaces revealed using vibrational sum-frequency spectroscopy. Materials Horizons, 2020, 7, 1348-1357.	6.4	15
6953	Color Space Transformation and Multi-Class Weighted Loss for Adhesive White Blood Cell Segmentation. IEEE Access, 2020, 8, 24808-24818.	2.6	24
6954	First-principles study of the structural, electronic, magnetic properties of orthorhombic PrCuO3 perovskites. Chemical Physics Letters, 2020, 743, 137166.	1.2	2

#	Article	IF	CITATIONS
6955	Robust Modulation Classification Over \$alpha\$-Stable Noise Using Graph-Based Fractional Lower-Order Cyclic Spectrum Analysis. IEEE Transactions on Vehicular Technology, 2020, 69, 2836-2849.	3.9	32
6956	Improving the performance of silicon solar cell by optimizing metallization. Measurement and Control, 2020, 53, 742-747.	0.9	1
6957	Effect of solvent on the characteristic properties of nebulizer spray pyrolyzed Cu2ZnSnS4 absorber thin films for photovoltaic application. Thin Solid Films, 2020, 697, 137841.	0.8	16
6958	xmlns:mpl="http://www.w3.org/1998/Math/MathML" altimg="si59.svg"> <mml:mrow><mml:mrow><mml:mi mathvariant="normal"&gt;n</mml:mi </mml:mrow><mml:mrow><mml:mrow><mml:mo>+</mml:mo></mml:mrow><td>2.0 &gt;&gt; <td>2 nrow&gt;</td></td></mml:mrow></mml:mrow>	2.0 >> <td>2 nrow&gt;</td>	2 nrow>
6959	Effect of Cu and Sn concentration on the performance of all-sprayed CZTS solar cell. Journal of Physics: Conference Series, 2020, 1461, 012181.	0.3	3
6960	Towards Efficient Integrated Perovskite/Organic Bulk Heterojunction Solar Cells: Interfacial Energetic Requirement to Reduce Charge Carrier Recombination Losses. Advanced Functional Materials, 2020, 30, 2001482.	7.8	43
6961	Lead-free tin-halide perovskite solar cells with 13% efficiency. Nano Energy, 2020, 74, 104858.	8.2	347
6962	Bifacial Four-Terminal Perovskite/Silicon Tandem Solar Cells and Modules. ACS Energy Letters, 2020, 5, 1676-1680.	8.8	49
6963	Hot-Carrier Extraction in Nanowire-Nanoantenna Photovoltaic Devices. Nano Letters, 2020, 20, 4064-4072.	4.5	21
6964	<i>&gt;V</i> <sub>OC</sub> Over 1.4 V for Amorphous Tin-Oxide-Based Dopant-Free CsPbl <sub>2</sub> Br Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 9725-9734.	6.6	162
6965	Thermodynamic limits for simultaneous energy harvesting from the hot sun and cold outer space. Light: Science and Applications, 2020, 9, 68.	7.7	70
6966	Characterization of Cu <sub>2</sub> ZnSnS <sub>4</sub> Particles Obtained by the Hot-Injection Method. ACS Omega, 2020, 5, 10501-10509.	1.6	19
6967	Near Zero-Energy Buildings in Lebanon: The Use of Emerging Technologies and Passive Architecture. Sustainability, 2020, 12, 2267.	1.6	9
6968	Singlet Fission in Enantiomerically Pure Pentacene Dimers. ChemPhotoChem, 2020, 4, 5168-5174.	1.5	8
6969	The interplay between Mn valence and the optical response of ZnMnO thin films. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	9
6970	Enhanced photoconversion efficiency in cesium-antimony-halide perovskite derivatives by tuning crystallographic dimensionality. Applied Materials Today, 2020, 19, 100637.	2.3	32
6971	Energy ordering of singlet and triplet excited states in indacenodithiophene and indenofluorenes molecules in singlet fission: A model exact and density matrix renormalization group study. Chemical Physics Letters, 2020, 749, 137368.	1.2	4
6972	Effects of site-specific substitution to hexacene and its effect towards singlet fission. Journal of Molecular Graphics and Modelling, 2020, 98, 107608.	1.3	4

	CITATION REI	PORT	
#	Article	IF	CITATIONS
6973	Challenges and opportunities for nanomaterials in spectral splitting for high-performance hybrid solar photovoltaic-thermal applications: A review. Nano Materials Science, 2020, 2, 183-203.	3.9	79
6974	Thickness dependence of solar cell efficiency in transition metal dichalcogenides MX2 (M: Mo, W; X: S,) Tj ETQq1	1 0 78431 3.0	.4.rgBT /O
6975	van der Waals Epitaxy of Earth-Abundant Zn <sub>3</sub> P <sub>2</sub> on Graphene for Photovoltaics. Crystal Growth and Design, 2020, 20, 3816-3825.	1.4	24
6976	Six-junction Ill–V solar cells with 47.1% conversion efficiency under 143 Suns concentration. Nature Energy, 2020, 5, 326-335.	19.8	408
6977	Strain-induced structural phase transition, electric polarization and unusual electric properties in photovoltaic materials CsMI3 (M = Pb, Sn). RSC Advances, 2020, 10, 12432-12438.	1.7	7
6978	Pulsed laser deposition of antimony selenosulfide thin film for efficient solar cells. Applied Physics Letters, 2020, 116, .	1.5	16
6979	Deep Product Quantization Module for Efficient Image Retrieval. , 2020, , .		3
6980	An Effect of a Needle Electrode for the Ohmic Contact Between an Electrode and Liquid Metal Droplet in Electrical Switching. , 2020, , .		1
6981	Adaptive Flow-Level Scheduling for the IoT MAC. , 2020, , .		0
6983	Low-Loss Impedance-Matched Sub-25-μ m Vias in 3-D Millimeter-Wave Packages. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 870-877.	1.4	11
6984	The rational and effective design of nonfullerene acceptors guided by a semi-empirical model for an organic solar cell with an efficiency over 15%. Journal of Materials Chemistry A, 2020, 8, 9726-9732.	5.2	54
6985	Atomic layer deposition of metal oxides for efficient perovskite single-junction and perovskite/silicon tandem solar cells. RSC Advances, 2020, 10, 14856-14866.	1.7	18
6986	Combined Optical-Electrical Optimization of Cd1â^'xZnxTe/Silicon Tandem Solar Cells. Materials, 2020, 13, 1860.	1.3	7
6987	A review on quantum dot sensitized solar cells: Past, present and future towards carrier multiplication with a possibility for higher efficiency. Solar Energy, 2020, 203, 210-239.	2.9	103
6988	Computational determination of structural, electronic, optical, thermoelectric and thermodynamic properties of hybrid perovskite CH3CH2NH3GeI3: An emerging material for photovoltaic cell. Materials Chemistry and Physics, 2020, 251, 123103.	2.0	19
6989	Energy Loss in Organic Solar Cells: Mechanisms, Strategies, and Prospects. Solar Rrl, 2020, 4, 2000130.	3.1	59
6990	Soft chemistry synthesis of CaMnO3 powders and films. Ceramics International, 2020, 46, 18200-18207.	2.3	21
6991	Influence of Sulfurization Time on the Properties of Cu2ZnSnS4 Thin Films Deposited on Mo-coated Soda Lime Class Substrates by Co-sputtering Technique. Thin Solid Films, 2020, 704, <u>138028</u> .	0.8	13

#	Article	IF	CITATIONS
6992	Transparent Electrode and Buffer Layer Combination for Reducing Carrier Recombination and Optical Loss Realizing over a 22%-Efficient Cd-Free Alkaline-Treated Cu(In,Ga)(S,Se)2 Solar Cell by the All-Dry Process. ACS Applied Materials & Interfaces, 2020, 12, 22298-22307.	4.0	17
6993	Lead-Free Perovskite Narrow-Bandgap Oxide Semiconductors of Rare-Earth Manganates. ACS Omega, 2020, 5, 8766-8776.	1.6	31
6994	A systematic analysis of excitonic properties to seek optimal singlet fission: the BN-substitution patterns in tetracene. Journal of Materials Chemistry C, 2020, 8, 7793-7804.	2.7	22
6995	Quasi-Fermi level splitting in nanoscale junctions from ab initio. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10142-10148.	3.3	14
6996	Down-Shifting and Anti-Reflection Effect of CsPbBr3 Quantum Dots/Multicrystalline Silicon Hybrid Structures for Enhanced Photovoltaic Properties. Nanomaterials, 2020, 10, 775.	1.9	19
6997	Spatially Resolved Performance Analysis for Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1904001.	10.2	30
6998	Efficient Interconnection in Perovskite Tandem Solar Cells. Small Methods, 2020, 4, 2000093.	4.6	43
6999	Quantum Dot Optoelectronic Devices. Lecture Notes in Nanoscale Science and Technology, 2020, , .	0.4	5
7000	Ideal efficiency of resonant cavity-enhanced perovskite solar cells. Optical and Quantum Electronics, 2020, 52, 1.	1.5	5
7001	Electronic and optical properties of layered Ruddlesden Popper hybrid X2(MA)n-1SnnI3n+1 perovskite insight by first principles. Journal of Physics and Chemistry of Solids, 2020, 144, 109510.	1.9	3
7002	Feasibility of band gap engineering of iron pyrite (FeS2) by codoping Os, Ru or Zn together with O. Materials Chemistry and Physics, 2020, 244, 122742.	2.0	9
7003	Nanostructured CuO film grown from solution by preferential microwave heating of the conducting glass substrate. Materials Letters, 2020, 270, 127687.	1.3	2
7004	Advanced radiative cooler for multi-crystalline silicon solar module. Solar Energy, 2020, 201, 751-759.	2.9	20
7005	Built-In Electric Field Hindering Photogenerated Carrier Recombination in Polar Bilayer SnO/BiOX (X =) Tj ETQq1 1	0,784314 1.5	ŀrgβT /Over
7006	Light Intensity Dependence of Photochemical Charge Separation in the BiVO <sub>4</sub> /Ru-SrTiO <sub>3</sub> :Rh Direct Contact Tandem Photocatalyst for Overall Water Splitting. Journal of Physical Chemistry C, 2020, 124, 9724-9733.	1.5	22
7007	Optimized Molecular Packing and Nonradiative Energy Loss Based on Terpolymer Methodology Combining Two Asymmetric Segments for High-Performance Polymer Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 20393-20403.	4.0	9
7008	Exploiting intervalley scattering to harness hot carriers in III–V solar cells. Nature Energy, 2020, 5, 336-343.	19.8	45
7009	Effect of high-temperature post-deposition annealing on cesium lead bromide thin films deposited by vacuum evaporation. AlP Advances, 2020, 10, .	0.6	8

#	Article		CITATIONS
7010	Toward reliable high performing organic solar cells: Molecules, processing, and monitoring. APL Materials, 2020, 8, .	2.2	6
7011	Review of ZnSnN <sub>2</sub> semiconductor material. JPhys Energy, 2020, 2, 032007.	2.3	31
7012	Optimized Operation of Quantum-Dot Intermediate-Band Solar Cells Deduced from Electronic Transport Modeling. Physical Review Applied, 2020, 13, .	1.5	2
7013	Thin-Film Tandem Organic Solar Cells With Improved Efficiency. IEEE Access, 2020, 8, 74093-74100.	2.6	12
7014	The History of Photovoltaics with Emphasis on CdTe Solar Cells and Modules. Coatings, 2020, 10, 344.	1.2	68
7015	Optimizing Band Gap of Inorganic Halide Perovskites by Donor–Acceptor Pair Codoping. Inorganic Chemistry, 2020, 59, 6053-6059.	1.9	8
7016	Design principles for efficient photoelectrodes in solar rechargeable redox flow cell applications. Communications Materials, 2020, 1, .	2.9	14
7017	Performance Analysis of NOMA Assisted Mobile Ad Hoc Networks for Sustainable Future Radio Access. IEEE Transactions on Sustainable Computing, 2021, 6, 347-357.	2.2	15
7018	Perovskite Solar Cells with Allâ€Inkjetâ€Printed Absorber and Charge Transport Layers. Advanced Materials Technologies, 2021, 6, 2000271.	3.0	72
7019	Optimization of TOPCon Structured Solar Cell Using AFORS-HET. Transactions on Electrical and Electronic Materials, 2021, 22, 160-166.	1.0	15
7020	Highâ€ŧhroughput computational materials screening and discovery of optoelectronic semiconductors. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2021, 11, .	6.2	52
7021	CZTS thin film solar cells on flexible Molybdenum foil by electrodeposition-annealing route. Journal of Applied Electrochemistry, 2021, 51, 209-218.	1.5	23
7022	VRH and NSPT conduction mechanisms in Culn0.7Ga0.3Se2 near the liquid nitrogen temperature. Physica B: Condensed Matter, 2021, 604, 412689.	1.3	2
7023	Photovoltatronics: intelligent PV-based devices for energy and information applications. Energy and Environmental Science, 2021, 14, 106-126.	15.6	33
7024	Fabrication of perovskite solar cells using novel <scp>2D</scp> / <scp>3D</scp> â€blended perovskite single crystals. International Journal of Energy Research, 2021, 45, 5555-5566.	2.2	11
7025	Use of hetero intrinsic layer in GaAs P-I-N solar cell to improve the intermediate band performance. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 263, 114862.	1.7	5
7026	Technical principles of atmospheric carbon dioxide reduction and conversion: economic considerations for some developing countries. Clean Technologies and Environmental Policy, 2021, 23, 475-482.	2.1	4
7027	Effect of Ge & ZnO inter-layer on the properties of CZTSSe absorber layer. Materials Today: Proceedings, 2021, 39, 1843-1847.	0.9	1

#	Article	IF	CITATIONS
7028	Experimental and DFT study of BaLaCuS3: Direct band gap semiconductor. Journal of Physics and Chemistry of Solids, 2021, 148, 109670.	1.9	12
7029	Advanced Characterization Techniques for Overcoming Challenges of Perovskite Solar Cell Materials. Advanced Energy Materials, 2021, 11, 2001753.	10.2	29
7030	Kontrolle des intramolekularen Försterâ€Resonanzenergietransfers und der Singulettspaltung in einem Subporphyrazinâ€Pentacenâ€Konjugat mittels Lösungsmittelpolaritä Angewandte Chemie, 2021, 133, 1496-1503.	1.6	2
7031	Controlling Intramolecular Förster Resonance Energy Transfer and Singlet Fission in a Subporphyrazine–Pentacene Conjugate by Solvent Polarity. Angewandte Chemie - International Edition, 2021, 60, 1474-1481.	7.2	12
7032	<scp>Firstâ€principles</scp> spectroscopic screening of hybrid perovskite ( <scp> CH <sub>3</sub> CH) Tj ETQc potential photovoltaic absorber. International Journal of Energy Research, 2021, 45, 908-919.</scp>	0 0 0 rgB 2.2	T /Overlock 12
7033	Photo assisted negative differential resistance in porous silicon: A potential nano-structure for hot carrier solar cell. Materials Today: Proceedings, 2021, 39, 1930-1933.	0.9	2
7034	Perovskite/perovskite planar tandem solar cells: A comprehensive guideline for reaching energy conversion efficiency beyond 30%. Nano Energy, 2021, 79, 105400.	8.2	69
7035	Minimizing Voltage Losses in Perovskite Solar Cells. Small Structures, 2021, 2, 2000050.	6.9	43
7036	Investigations of the structural, optoelectronic and band alignment properties of Cu2ZnSnS4 prepared by hot-injection method towards low-cost photovoltaic applications. Journal of Alloys and Compounds, 2021, 854, 157093.	2.8	23
7037	High open-circuit voltage in transition metal dichalcogenide solar cells. Nano Energy, 2021, 79, 105427.	8.2	31
7038	Realizing broadband spectral conversion in novel Ce3+,Cr3+,Ln3+ (Ln = Yb, Nd, Er) tridoped near-infrared phosphors via multiple energy transfers. Ceramics International, 2021, 47, 3127-3135.	2.3	20
7039	Perovskite tandem solar cells with improved efficiency and stability. Journal of Energy Chemistry, 2021, 58, 219-232.	7.1	32
7040	Passivation with crosslinkable diamine yields 0.1ÂV non-radiative Voc loss in inverted perovskite solar cells. Science Bulletin, 2021, 66, 417-420.	4.3	12
7041	An Alternative Approach to Simulate the Power Conversion Efficiency of Bulk Heterojunction Organic Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000597.	0.8	14
7042	Revisiting tantalum based nanostructures for efficient harvesting of solar radiation in STPV systems. Nano Energy, 2021, 80, 105520.	8.2	39
7043	Group-III Nitrides Catalyzed Transformations of Organic Molecules. CheM, 2021, 7, 64-92.	5.8	9
7044	Recent progress in reducing voltage loss in organic photovoltaic cells. Materials Chemistry Frontiers, 2021, 5, 709-722.	3.2	41
7045	2.0–2.2ÂeV AlGaInP solar cells grown by molecular beam epitaxy. Solar Energy Materials and Solar Cells, 2021, 219, 110774.	3.0	11

$\sim$				
	ITAT	121	FDC	NDΤ
$\sim$		IVL		

#	Article		CITATIONS
7046	Comparison of the effects of Sr2+ and Ca2+ substitution on the structural and electronic properties of the perovskites CH3NH3Pb1-Y I3 (Y Sr, Ca) by using the Density Functional Theory. Physica B: Condensed Matter, 2021, 600, 412579.	1.3	3
7047	Organic Solar Cells—The Path to Commercial Success. Advanced Energy Materials, 2021, 11, 2002653.	10.2	287
7048	First‑principles calculations of the electronic, and optical properties of a GaAs/AlAs van der Waals heterostructure. Chemical Physics Letters, 2021, 765, 138194.	1.2	11
7049	Sodium doping of solution-processed Cu2ZnSn(S,Se)4 thin film and its effect on Cu2ZnSn(S,Se)4 based solar cells. Vacuum, 2021, 184, 109908.	1.6	5
7050	Exploring the Optical, Structural and Electronic Properties of a Two-Dimensional GaSe/C2N van der Waals Heterostructure As a Photovoltaic Cell: A Computational Investigation. Journal of Electronic Materials, 2021, 50, 620-628.	1.0	5
7051	Boosting silicon photovoltaic efficiency from regasification of liquefied natural gas. Energy, 2021, 214, 118907.	4.5	5
7052	Nanowire Solar Cell Above the Radiative Limit. Advanced Optical Materials, 2021, 9, 2001636.	3.6	9
7053	Bulk and interface defects analysis of n-CdS/p-Si heterojunction solar cell. Optical Materials, 2021, 111, 110687.		30
7054	Numerical investigation of one-intermediate band InN/GaN QW solar cell under electric field, impurity and size effects. Physica B: Condensed Matter, 2021, 602, 412427.	1.3	4
7055	Structural, electronic and optical properties of <mm:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"&gt;&lt; cmml:mrow&gt;<mml:msub><mml:mi>A</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi (AA= K, Cs, and Rb) for photovoltaic applications: First-principles calculation. Computational</mml:mi </mm:math 	>Sa./mml:n	ni8 <mml:mi< td=""></mml:mi<>
7056	Impact of Semiconductor Band Tails and Band Filling on Photovoltaic Efficiency Limits. ACS Energy Letters, 2021, 6, 52-57.	8.8	49
7057	Device Performance of Emerging Photovoltaic Materials (Version 1). Advanced Energy Materials, 2021, 11, 2002774.	10.2	93
7058	ASnX <sub>3</sub> —Better than Pbâ€based Perovskite. Nano Select, 2021, 2, 159-186.	1.9	5
7059	Synergistic incorporation of NaF and CsF PDT for high efficiency kesterite solar cells: unveiling of grain interior and grain boundary effects. Journal of Materials Chemistry A, 2021, 9, 413-422.	5.2	34
7060	Analysis and optimization of BSF layer for highly efficient GaInP single junction solar cell. Materials Today: Proceedings, 2021, 43, 3420-3423.	0.9	13
7061	On the application of holeâ€selective MoO <sub><i>x</i></sub> as fullâ€area rear contact for industrial scale pâ€type câ€5i solar cells. Progress in Photovoltaics: Research and Applications, 2021, 29, 281-293.	4.4	22
7062	Progress of all-perovskite tandem solar cells: the role of narrow-bandgap absorbers. Science China Chemistry, 2021, 64, 218-227.	4.2	37
7063	Fabrication of monoclinic-Cu2SnS3 thin-film solar cell and its photovoltaic device performance. Optical Materials, 2021, 111, 110668.	1.7	10

#	Article	IF	CITATIONS
7064	Inserting an intermediate band in Cu- and Ag-based Kesterite compounds by Sb doping: A first-principles study. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 264, 114937.	1.7	9
7065	Metal-organic framework-based photocatalysts for carbon dioxide reduction to methanol: A review on progress and application. Journal of CO2 Utilization, 2021, 43, 101374.	3.3	47
7066	Simple Solutionâ€Processed Approach for Nanoscale Coverage of Perovskite on Textured Silicon Surface Enabling Highly Efficient Perovskite/Si Tandem Solar Cells. Energy Technology, 2021, 9, 2000778.	1.8	11
7067	Highâ€Efficiency Tin Halide Perovskite Solar Cells: The Chemistry of Tin (II) Compounds and Their Interaction with Lewis Base Additives during Perovskite Film Formation. Solar Rrl, 2021, 5, .	3.1	50
7068	p+aSixC1-x: H/i-aSi:H/n+aSi1-xGex:H graded band gap single junction solar cell with composition graded amorphous silicon carbon alloy as window layer. Materials Today: Proceedings, 2021, 39, 1910-1915.	0.9	3
7069	Improvement of Cu2ZnSnS4 thin film performance by using oxygen-containing Cu-Zn-Sn precursor. Materials Science in Semiconductor Processing, 2021, 123, 105556.	1.9	3
7070	Wide bandgap polymer donors for high efficiency non-fullerene acceptor based organic solar cells. Materials Advances, 2021, 2, 115-145.	2.6	47
7071	Nonâ€fullerene all small molecule OBHJSCs with profound device characteristics. Nano Select, 2021, 2, 549-560.	1.9	2
7072	First-principles study of the stability, electronic and optical properties of CdTe under hydrostatic pressure. Chemical Physics Letters, 2021, 764, 138272.	1.2	11
7073	Screening of perovskite materials for solar cell applications by first-principles calculations. Materials and Design, 2021, 198, 109387.	3.3	24
7074	Sm3+/Yb3+ co-doped GeO2-PbO glass for efficiency enhancement of silicon solar cells. Optical Materials, 2021, 111, 110730.	1.7	8
7075	Efficiency limit of excitonic photovoltaic cells under phosphor-based white LED illumination. Organic Electronics, 2021, 88, 105999.	1.4	1
7076	A low cost and nontoxic absorber for intermediate band solar cell based on P-doped Cu2SiS3: A first-principles study. Thin Solid Films, 2021, 718, 138473.	0.8	3
7077	CsPbBr3 perovskite detectors with 1.4% energy resolution for high-energy Î <sup>3</sup> -rays. Nature Photonics, 2021, 15, 36-42.	15.6	210
7078	Rare-earth quantum cutting in metal halide perovskites – a review. Materials Horizons, 2021, 8, 1072-1083.	6.4	34
7079	Electronic couplings for singlet fission: Orbital choice and extrapolation to the complete basis set limit. Journal of Computational Chemistry, 2021, 42, 326-333.	1.5	0
7080	Perovskite/Silicon Tandem Solar Cells: Effect of Luminescent Coupling and Bifaciality. Solar Rrl, 2021, 5, 2000628.	3.1	33
7081	The Path to 20% Power Conversion Efficiencies in Nonfullerene Acceptor Organic Solar Cells. Advanced Energy Materials, 2021, 11, 2003441.	10.2	154

#	Article	IF	CITATIONS
7082	Subcells Analysis of Thinâ€Film Fourâ€Junction Solar Cells Using Optoelectronic Reciprocity Relation. Solar Rrl, 2021, 5, 2000542.	3.1	7
7083	Transparent and Colored Solar Photovoltaics for Building Integration. Solar Rrl, 2021, 5, 2000614.	3.1	27
7084	First-principles study of electronic and optical properties of ternary compounds AuBX2 (X = S, Se, Te) and AuMTe2 (M = Al, In, Ga). Solid State Sciences, 2021, 111, 106508.	1.5	27
7085	Size-Dependent Hot Carrier Dynamics in Perovskite Nanocrystals Revealed by Two-Dimensional Electronic Spectroscopy. Journal of Physical Chemistry Letters, 2021, 12, 238-244.	2.1	20
7086	Comparison of three IBSCs in terms of photo-filling, capture cross section of carriers, the concentration of IB states and overlapping of absorption coefficients in the wide range of band gaps including GaAs. Optik, 2021, 225, 165680.	1.4	0
7087	Theoretical optimization of double dielectric back reflector layer for thin c-Si based advanced solar cells with notable enhancement in MAPD. Superlattices and Microstructures, 2021, 149, 106747.	1.4	10
7088	Tuning the electronic band structure and optoelectrical characteristics of ALD-grown Zn(O,S) buffer layers for SnS solar cells. Optik, 2021, 228, 165921.	1.4	9
7089	Wide-Bandgap Metal Halide Perovskites for Tandem Solar Cells. ACS Energy Letters, 2021, 6, 232-248.	8.8	89
7090	Potassium-containing triple-cation mixed-halide perovskite materials: Toward efficient and stable solar cells. Journal of Alloys and Compounds, 2021, 858, 158335.	2.8	13
7091	Understanding of the Nearly Linear Tunable Open-Circuit Voltages in Ternary Organic Solar Cells Based on Two Non-fullerene Acceptors. Journal of Physical Chemistry Letters, 2021, 12, 151-156.	2.1	14
7092	First-principles study of aziridinium tin iodide perovskites for photovoltaics. Journal of Materials Chemistry C, 2021, 9, 982-990.	2.7	7
7093	Recent progress, fabrication challenges and stability issues of lead-free tin-based perovskite thin films in the field of photovoltaics. Coordination Chemistry Reviews, 2021, 429, 213633.	9.5	51
7094	MXenes: promising donor and acceptor materials for high-efficiency heterostructure solar cells. Sustainable Energy and Fuels, 2021, 5, 135-143.	2.5	32
7095	A Critical Review on the Voltage Requirement in Hybrid Cells with Solar Energy Harvesting and Energy Storage Capability. Batteries and Supercaps, 2021, 4, 252-267.	2.4	14
7096	Elliptic paraboloid-based solar spectrum splitters for self-powered photobioreactors. Renewable Energy, 2021, 163, 1773-1785.	4.3	2
7097	Advancing the open-circuit voltage of tin halide perovskites via tailoring electron transport layer. Science Bulletin, 2021, 66, 204-205.	4.3	0
7098	Structural, optoelectronic and photo-thermoelectric properties of crystalline alloy CuAlxFe1-xO2 delafossite oxide materials. Journal of Alloys and Compounds, 2021, 857, 157613.	2.8	8
7099	Leadâ€Free Perovskiteâ€Inspired Absorbers for Indoor Photovoltaics. Advanced Energy Materials, 2021, 11, 2002761.	10.2	95

#	Article	IF	CITATIONS
7100	Optoelectronic and material properties of solution-processed Earth-abundant Cu2BaSn(S, Se)4 films for solar cell applications. Nano Energy, 2021, 80, 105556.	8.2	23
7101	Mechanistic Understanding and Rational Design of Quantum Dot/Mediator Interfaces for Efficient Photon Upconversion. Accounts of Chemical Research, 2021, 54, 70-80.	7.6	34
7102	Highâ€ŧhroughput computational design of halide perovskites and beyond for optoelectronics. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2021, 11, e1500.	6.2	16
7103	Photonics for Photovoltaics: Advances and Opportunities. ACS Photonics, 2021, 8, 61-70.	3.2	52
7104	Influence of the Shape and Size of Ag Nanoparticles on the Performance Enhancement of CIGS Solar Cells: the Role of Surface Plasmons. Plasmonics, 2021, 16, 273-282.	1.8	4
7105	Efficient charge collection of photoanodes and light absorption of photosensitizers: A review. International Journal of Energy Research, 2021, 45, 1425-1448.	2.2	23
7106	The Dion–Jacobson perovskite CsSbCl <sub>4</sub> : a promising Pb-free solar-cell absorber with optimal bandgap â^¼1.4 eV, strong optical absorption â^¼10 <sup>5</sup> cm <sup>â^'1</sup> , and large power-conversion efficiency above 20%. Journal of Materials Chemistry A, 2021, 9, 16436-16446.	5.2	13
7107	Examining the electron transport in chalcogenide perovskite BaZrS <sub>3</sub> . Journal of Materials Chemistry C, 2021, 9, 3892-3900.	2.7	24
7108	Enhanced optical properties of perovskite thin film through material optimization for photovoltaic application. E3S Web of Conferences, 2021, 239, 00020.	0.2	4
7109	Scalable synthesis of Cu–Sb–S phases from reactive melts of metal xanthates and effect of cationic manipulation on structural and optical properties. Scientific Reports, 2021, 11, 1887.	1.6	13
7111	Recent Advances in the Fabrication of BiVO4 Photoanodes and CuBi2O4 Photocathodes for the Photoelectrochemical Water Splitting. Engineering Materials, 2021, , 271-287.	0.3	0
7112	Perovskite indoor photovoltaics: opportunity and challenges. Chemical Science, 2021, 12, 11936-11954.	3.7	72
7113	Low temperature synthesis of photoconductive BaSi <sub>2</sub> films <i>via</i> mechanochemically assisted close-spaced evaporation. Materials Advances, 2021, 2, 6713-6721.	2.6	11
7114	Recent advances and the design criteria of metal sulfide photocathodes and photoanodes for photoelectrocatalysis. Journal of Materials Chemistry A, 2021, 9, 20277-20319.	5.2	53
7115	Recent progress in meniscus coating for large-area perovskite solar cells and solar modules. Sustainable Energy and Fuels, 2021, 5, 1926-1951.	2.5	11
7116	In-depth understanding of the energy loss and efficiency limit of dye-sensitized solar cells under outdoor and indoor conditions. Journal of Materials Chemistry A, 2021, 9, 24830-24848.	5.2	28
7117	Toward highly efficient and stable Sn <sup>2+</sup> and mixed Pb <sup>2+</sup> /Sn <sup>2+</sup> based halide perovskite solar cells through device engineering. Energy and Environmental Science, 2021, 14, 3256-3300.	15.6	49
7118	Recent progress of metal-halide perovskite-based tandem solar cells. Materials Chemistry Frontiers, 2021, 5, 4538-4564.	3.2	15

#	Article	IF	CITATIONS
7119	Sleeping Beauties of Coronavirus Research. IEEE Access, 2021, 9, 21192-21205.	2.6	7
7120	Nanotools and devices in solar power energy. , 2021, , 429-446.		2
7121	Solution-processed two-dimensional materials for next-generation photovoltaics. Chemical Society Reviews, 2021, 50, 11870-11965.	18.7	96
7122	NiO/ZrO <sub>2</sub> nanocomposites as photocathodes of tandem DSCs with higher photoconversion efficiency with respect to parent single-photoelectrode p-DSCs. Sustainable Energy and Fuels, 2021, 5, 4736-4748.	2.5	6
7123	Comment on "Upconversion-Assisted Dual-Band Luminescent Solar Concentrator Coupled for High Power Conversion Efficiency Photovoltaic Systems― ACS Photonics, 2021, 8, 678-681.	3.2	6
7124	A Bayesian approach to luminescent down-conversion. Journal of Chemical Physics, 2021, 154, 014201.	1.2	2
7125	The role of the A-cations in the polymorphic stability and optoelectronic properties of lead-free ASnI3 perovskites. Physical Chemistry Chemical Physics, 2021, 23, 2286-2297.	1.3	11
7126	Temporal-spatial-energy resolved advance multidimensional techniques to probe photovoltaic materials from atomistic viewpoint for next-generation energy solutions. Energy and Environmental Science, 2021, 14, 4760-4802.	15.6	12
7127	Plasmonics for Photovoltaics. , 2021, , 627-627.		0
7128	<i>Ab initio</i> nonadiabatic molecular dynamics of charge carriers in metal halide perovskites. Nanoscale, 2021, 13, 10239-10265.	2.8	70
7129	Catalyst deep neural networks (Cat-DNNs) in singlet fission property prediction. Physical Chemistry Chemical Physics, 2021, 23, 20835-20840.	1.3	2
7130	Balancing crystallization rate in a mixed Sn–Pb perovskite film for efficient and stable perovskite solar cells of more than 20% efficiency. Journal of Materials Chemistry A, 2021, 9, 17830-17840.	5.2	51
7131	Highly stable and efficient α-phase FA-based perovskite solar cells prepared in ambient air by strategically enhancing the interaction between ions in crystal lattices. Sustainable Energy and Fuels, 2021, 5, 4268-4276.	2.5	8
7132	Harnessing Photoelectrochemistry for Wastewater Nitrate Treatment Coupled with Resource Recovery. ACS Sustainable Chemistry and Engineering, 2021, 9, 3688-3701.	3.2	15
7134	First-principles study of photoelectric properties of CsSnBr <sub>3</sub> under hydrostatic pressure. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 158801.	0.2	4
7135	Hot carriers in graphene – fundamentals and applications. Nanoscale, 2021, 13, 8376-8411.	2.8	75
7136	An efficient and stable solar flow battery enabled by a single-junction GaAs photoelectrode. Nature Communications, 2021, 12, 156.	5.8	22
7137	Loss mechanism analyses of perovskite solar cells with equivalent circuit model. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 098801.	0.2	6

#	Article	IF	CITATIONS
7138	Interface of Sn-doped AgAlTe2 and LiInTe2: A theoretical model of tandem intermediate band absorber. Applied Physics Letters, 2021, 118, .	1.5	6
7139	Enhanced optical absorption of rutile TiO2 through (Sm, C) codoping: a first-principles study. Optical and Quantum Electronics, 2021, 53, 1.	1.5	11
7140	Revealing the electronic structure, heterojunction band offset and alignment of Cu2ZnGeSe4: a combined experimental and computational study towards photovoltaic applications. Physical Chemistry Chemical Physics, 2021, 23, 9553-9560.	1.3	6
7141	Modified solar generating panel for high-efficiency solar power station – Using temperature study. Materials Today: Proceedings, 2021, 43, 3942-3946.	0.9	1
7142	Recent progress on defect passivation in perovskites for solar cell application. Materials Science for Energy Technologies, 2021, 4, 282-289.	1.0	8
7143	The influence of the shape and configuration of sensitizer molecules on the efficiency of DSSCs: a theoretical insight. RSC Advances, 2021, 11, 5556-5567.	1.7	7
7144	Unconventional singlet fission materials. Chemical Society Reviews, 2021, 50, 3485-3518.	18.7	97
7145	First-principles study of defect control in thin-film solar cell materials. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	2.0	17
7146	Effect of TiO2 scatterer on photovoltaic performance of quantum dot solar cell. AIP Conference Proceedings, 2021, , .	0.3	0
7147	ZnS/CdX (X = S, Se, Te) core/shell nanowires: an attempt at tuning the electronic bandgaps and SQ efficiencies. Journal of Materials Chemistry C, 2021, 9, 6605-6617.	2.7	4
7148	Soft annealing effect on the properties of sputter grown Cu2ZnSnS4 (CZTS) thin films for solar cell applications. Materials Today: Proceedings, 2021, 34, 690-696.	0.9	5
7149	Accelerated design of promising mixed lead-free double halide organic–inorganic perovskites for photovoltaics using machine learning. Nanoscale, 2021, 13, 12250-12259.	2.8	21
7150	The Complicated Morality of Named Inventions. ACS Energy Letters, 2021, 6, 565-567.	8.8	9
7151	Design of radiative cooler based on porous TiO2 for improving solar cells' performance. Applied Optics, 2021, 60, 445.	0.9	8
7152	Engineering Sr-doping for enabling long-term stable FAPb <sub>1â^'x</sub> Sr <sub>x</sub> I <sub>3</sub> quantum dots with 100% photoluminescence quantum yield. Journal of Materials Chemistry C, 2021, 9, 1555-1566.	2.7	23
7153	Recent progress in tin-based perovskite solar cells. Energy and Environmental Science, 2021, 14, 1286-1325.	15.6	257
7154	Hot carrier photovoltaics in van der Waals heterostructures. Nature Reviews Physics, 2021, 3, 178-192.	11.9	77
7155	Tin halide perovskites for efficient lead-free solar cells. , 2021, , 259-285.		Ο

#	Article	IF	Citations
7156	A Perspective on Perovskite Solar Cells. Energy, Environment, and Sustainability, 2021, , 55-151.	0.6	1
7157	Perovskite-CIGS materials based tandem solar cell with an increased efficiency of 27.5%. Materials Today: Proceedings, 2021, 45, 5047-5051.	0.9	5
7158	Solar cell contacts: quantifying the impact of interfacial layers on selectivity, recombination, charge transfer, and <i>V</i> <sub>oc</sub> . Sustainable Energy and Fuels, 2021, 5, 1767-1778.	2.5	3
7159	Photo-energy conversion efficiency of CH3NH3PbI3/C60 heterojunction perovskite solar cells from first-principles. Materials Advances, 2021, 2, 1665-1675.	2.6	2
7160	High-Efficiency Semiconductor Photovoltaic Devices. , 2021, , 433-461.		0
7161	Spin blockade and phonon bottleneck for hot electron relaxation observed in n-doped colloidal quantum dots. Nature Communications, 2021, 12, 550.	5.8	23
7162	Spray Pyrolyzed TiO2 Embedded Multi-Layer Front Contact Design for High-Efficiency Perovskite Solar Cells. Nano-Micro Letters, 2021, 13, 36.	14.4	50
7163	First-principle investigation of hybrid improper ferroelectricity of <i>n</i> = 2 Ruddlesden-Popper Sr <sub>3</sub> <i>B</i> <sub>2</sub> Se <sub>7</sub> ( <i>B</i> = Zr, Hf). Wuli Xuebao/Acta Physica Sinica, 2021, 70, 116302-116302.	0.2	0
7164	Defect tolerant device geometries for lead-halide perovskites. Materials Advances, 2021, 2, 3655-3670.	2.6	17
7165	A first-principles study of the stability, electronic structure, and optical properties of halide double perovskite Rb <sub>2</sub> Sn <sub>1â^'x</sub> Te <sub>x</sub> I <sub>6</sub> for solar cell applications. Physical Chemistry Chemical Physics, 2021, 23, 4646-4657.	1.3	19
7166	A high-throughput study of oxynitride, oxyfluoride and nitrofluoride perovskites. Journal of Materials Chemistry A, 2021, 9, 8501-8513.	5.2	18
7167	Prediction of band gap for 2D hybrid organic–inorganic perovskites by using machine learning through molecular graphics descriptors. New Journal of Chemistry, 2021, 45, 9427-9433.	1.4	11
7168	Solar power energy derived from nanotools and devices. , 2021, , 473-503.		1
7169	Roadmap of Nanomaterials in Renewable Energy. , 2021, , 669-677.		0
7170	Challenges for the future of tandem photovoltaics on the path to terawatt levels: a technology review. Energy and Environmental Science, 2021, 14, 3840-3871.	15.6	32
7171	Optical properties of orthorhombic germanium selenide: an anisotropic layered semiconductor promising for optoelectronic applications. Journal of Materials Chemistry C, 2021, 9, 14838-14847.	2.7	9
7172	Ternary quantum dots for solar cell applications. , 2021, , 237-249.		0
7173	Towards defect-free thin films of the earth-abundant absorber zinc phosphide by nanopatterning. Nanoscale Advances, 2021, 3, 326-332.	2.2	13

#	Article	IF	CITATIONS
7174	Photon upconverting bioplastics with high efficiency and in-air durability. Journal of Materials Chemistry C, 2021, 9, 11655-11661.	2.7	13
7175	Perovskite-inspired materials for photovoltaics and beyond—from design to devices. Nanotechnology, 2021, 32, 132004.	1.3	106
7176	Enhancing photoelectrochemical water splitting with plasmonic Au nanoparticles. Nanoscale Advances, 2021, 3, 5981-6006.	2.2	27
7177	Inorganic hole transport layers in inverted perovskite solar cells: A review. Nano Select, 2021, 2, 1081-1116.	1.9	65
7178	Large Bulk Piezophotovoltaic Effect of Monolayer 2 <i>H</i> -MoS <sub>2</sub> . Journal of Physical Chemistry Letters, 2021, 12, 1244-1249.	2.1	37
7179	ALD Pt nanoparticles and thin-film coatings enhancing the stability and performance of silicon photocathodes for solar water splitting. Sustainable Energy and Fuels, 2021, 5, 3115-3123.	2.5	2
7180	Theoretical study on the effect of applying an external static electric field on the singlet fission dynamics of pentacene dimer models. Physical Chemistry Chemical Physics, 2021, 23, 11624-11634.	1.3	0
7181	Band-Gap Tuning in All-Inorganic CsPb <i><sub>x</sub></i> Sn <sub>1–<i>x</i></sub> Br <sub>3</sub> Perovskites. ACS Applied Materials & Interfaces, 2021, 13, 4203-4210.	4.0	24
7182	Raman spectroscopy insights into the α- and δ-phases of formamidinium lead iodide (FAPbI <sub>3</sub> ). Dalton Transactions, 2021, 50, 3315-3323.	1.6	12
7183	Waste-Recovered Nanomaterials for Emerging Electrocatalytic Applications. Topics in Mining, Metallurgy and Materials Engineering, 2021, , 247-292.	1.4	1
7184	The performance of conjugated polymers as emitters for triplet–triplet annihilation upconversion. Materials Advances, 2021, 2, 2031-2035.	2.6	5
7185	Low photoactive phase temperature all-inorganic, tin–lead mixed perovskite solar cell. RSC Advances, 2021, 11, 3264-3271.	1.7	6
7186	Efficient Sb <sub>2</sub> (S,Se) <sub>3</sub> Solar Modules Enabled by Hydrothermal Deposition. Solar Rrl, 2021, 5, 2000750.	3.1	11
7188	Photogenerated carrier dynamics of TIPS-pentacene films as studied by photocurrent and electrically detected magnetic resonance. Physical Chemistry Chemical Physics, 2021, 23, 6361-6369.	1.3	3
7189	Understanding the low voltage losses in high-performance non-fullerene acceptor-based organic solar cells. Materials Advances, 2021, 2, 4291-4302.	2.6	24
7190	Strain-engineered photoelectric conversion properties of lateral monolayer WS <sub>2</sub> /WSe <sub>2</sub> heterojunctions. Journal Physics D: Applied Physics, 2021, 54, 145107.	1.3	6
7191	When photoluminescence, electroluminescence, and open-circuit voltage diverge – light soaking and halide segregation in perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 13967-13978.	5.2	8
7193	Earth-abundant non-toxic perovskite nanocrystals for solution processed solar cells. Materials Advances, 2021, 2, 4140-4151.	2.6	14

ARTICLE IF CITATIONS High efficiency deep red to yellow photochemical upconversion under solar irradiance. Energy and 7194 15.6 10 Environmental Science, 0, , . Temperature Dependence of Carrier Extraction Processes in GaSb/AlGaAs Quantum Nanostructure Intermediate-Band Solar Cells. Nanomaterials, 2021, 11, 344. 7196 Bismuth-based nanomaterials for energy applications., 2021, , 3-35. 0 Inhomogeneous Trap-State-Mediated Ultrafast Photocarrier Dynamics in CsPbBr<sub>3</sub> 4.0 34 Microplates. ACS Applied Materials & amp; Interfaces, 2021, 13, 6820-6829. Singlet Fission in a Flexible Bichromophore with Structural and Dynamic Control. Journal of the 7198 6.6 30 American Chemical Society, 2021, 143, 2361-2371. Effect of luminescent material NaYbF4: Ho3+ on the photovoltaic performance of dye-sensitized solar cells. Journal of Materials Science: Materials in Electronics, 2021, 32, 1445-1456. 7199 1.1 Shaping Perovskites: <i>In Situ</i> Crystallization Mechanism of Rapid Thermally Annealed, 7200 4.0 17 Prepatterned Perovskite Films. ACS Applied Materials & amp; Interfaces, 2021, 13, 6854-6863. Tuning Ionic and Electronic Conductivities in the "Hollow―Perovskite {<i>en</i>}MAPbl<sub>3</sub>. 3.2 24 Chemistry of Materials, 2021, 33, 719-726. 7202 Application of Micro- and Nanotechnology in Photovoltaics., 2021, , 481-481. 0 Ge 4s<sup>2</sup> lone pairs and band alignments in GeS and GeSe for photovoltaics. Journal of 5.2 Materials Chemistry A, 2021, 9, 22440-22452. Zinc oxide heterostructures: advances in devices from self-powered photodetectors to self-charging 7204 19 2.6 supercapacitors. Materials Advances, 2021, 2, 6768-6799. Radiative sky cooling of solar cells: fundamental modelling and cooling potential of single-junction 2.5 devices. Sustainable Energy and Fuels, 2021, 5, 2085-2096. Optimizing kesterite solar cells from Cu<sub>2</sub>ZnSnS<sub>4</sub> to 7206 5.2 18 Cu<sub>2</sub>CdGe(S,Se)<sub>4</sub>. Journal of Materials Chemistry A, 2021, 9, 9882-9897. Joint Effects of Exciton–Exciton and Exciton–Photon Couplings on the Singlet Fission Dynamics in 1.5 . Organic Aggregates. Journal of Physical Chemistry C, 2021, 125, 1654-1664. Introduction to photovoltaics and alternative materials for silicon in photovoltaic energy 7208 2 conversion., 2021, , 131-173. The limiting factors and improving solutions of P-I-N type tin-lead perovskite solar cells performance. 7209 Wuli Xuebao/Acta Physica Sinica, 2021, . Correlations between Electrochemical Ion Migration and Anomalous Device Behaviors in Perovskite 7210 8.8 39 Solar Cells. ACS Energy Letters, 2021, 6, 1003-1014. Exciton effect on shift current in single-walled boron-nitride nanotubes. Physical Review B, 2021, 103, . 1.1

CITATION REPORT

#	Article	IF	Citations
7212	Theoretical modeling of a "giant―colloidal core–shell quantum dot with an alloyed interfacial layer for solar cell applications. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 842.	0.9	4
7213	Modifying Surface Termination of CsPbl <sub>3</sub> Grain Boundaries by 2D Perovskite Layer for Efficient and Stable Photovoltaics. Advanced Functional Materials, 2021, 31, 2009515.	7.8	62
7215	Study of open circuit voltage loss mechanism in perovskite solar cells. Japanese Journal of Applied Physics, 2021, 60, SBBF13.	0.8	11
7216	Controllable Electrochemical Deposition and Theoretical Understanding of Conformal Perovskite on Textured Silicon towards Efficient Perovskite/Silicon Tandem Solar Cells. Journal of Physical Chemistry C, 2021, 125, 2875-2883.	1.5	9
7217	Escalated Photocurrent with Excitation Energy in Dual-Gated MoTe <sub>2</sub> . Nano Letters, 2021, 21, 1976-1981.	4.5	8
7218	Mitigating Open-Circuit Voltage Loss in Pb–Sn Low-Bandgap Perovskite Solar Cells via Additive Engineering. ACS Applied Energy Materials, 2021, 4, 1731-1742.	2.5	43
7219	Two-step excitation induced photovoltaic properties in an InAs quantum dot-in-well intermediate-band solar cell. Journal of Applied Physics, 2021, 129, .	1.1	5
7220	Photogeneration of Long-Lived Triplet States through Singlet Fission in Lycopene H-Aggregates. Journal of Physical Chemistry Letters, 2021, 12, 1468-1474.	2.1	14
7221	Solution-Processed Perovskite/Perovskite Heterostructure Via a Grafting-Assisted Transfer Technique. ACS Applied Energy Materials, 2021, 4, 1962-1971.	2.5	9
7223	Defect-assisted nonradiative recombination in <mmi:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mrow><mml:msub><mml:mi>Cu</mml:mi><mml: : A comparative study with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mrow><mml:msub><mml:mi>Cu</mml:mi><mml:< td=""><td>mn&gt;20.9 mn&gt;2<td>nl:mn&gt;8 nl:mn&gt;</td></td></mml:<></mml:msub></mml:mrow></mml:math </mml: </mml:msub></mml:mrow></mmi:math 	mn>20.9 mn>2 <td>nl:mn&gt;8 nl:mn&gt;</td>	nl:mn>8 nl:mn>
7224	methyariant="normal", Scrimminic complaints 4 s/mmla Physical Review Materials, 2021, 5 Improving the performance of textured silicon solar cells through the fieldâ€effect passivation of aluminum oxide layers and upâ€conversion via multiple coatings with Er/Ybâ€doped phosphors. International Journal of Energy Research, 2022, 46, 278-289.	2.2	8
7225	Study of loss mechanisms on Sb2(S1â^'xSex)3 solar cell with n–i–p structure: Toward an efficiency promotion. Applied Physics Letters, 2021, 118, .	1.5	17
7226	Device design for highâ€efficiency monolithic twoâ€ŧerminal, fourâ€ŧerminal mechanically stacked, and fourâ€ŧerminal optically coupled perovskiteâ€silicon tandem solar cells. International Journal of Energy Research, 2021, 45, 10538-10545.	2.2	15
7227	Nanostructure of Porous Si and Anodic SiO2 Surface Passivation for Improved Efficiency Porous Si Solar Cells. Nanomaterials, 2021, 11, 459.	1.9	12
7228	Atomistic Mechanism of Passivation of Halide Vacancies in Lead Halide Perovskites by Alkali Ions. Chemistry of Materials, 2021, 33, 1285-1292.	3.2	26
7229	Tin Halide Perovskite Solar Cells: An Emerging Thin-Film Photovoltaic Technology. Accounts of Materials Research, 2021, 2, 210-219.	5.9	147
7230	One of the most efficient methods to utilize full-spectrum solar energy: A photovoltaic-thermoradiative coupled system. Energy Conversion and Management, 2021, 229, 113741.	4.4	14
7231	Efficiency limits of concentrating spectral-splitting hybrid photovoltaic-thermal (PV-T) solar collectors and systems. Light: Science and Applications, 2021, 10, 28.	7.7	53

#	Article	IF	CITATIONS
7232	Efficiency enhancement in a single bandgap silicon solar cell considering hot-carrier extraction using selective energy contacts. Optics Express, 2021, 29, 5068.	1.7	5
7233	Multiexciton state of singlet fission in triisopropylsilylethynylâ€pentacene. Microwave and Optical Technology Letters, 2021, 63, 1399-1405.	0.9	1
7234	Introducing a 1D numerical model for the simulation of PN junctions of varying spectral material properties and operating conditions. Energy Conversion and Management, 2021, 230, 113819.	4.4	2
7235	Metal Sulfide Nanoparticle Synthesis with Ionic Liquids – State of the Art and Future Perspectives. ChemistryOpen, 2021, 10, 272-295.	0.9	16
7236	A review of experimental and computational attempts to remedy stability issues of perovskite solar cells. Heliyon, 2021, 7, e06211.	1.4	15
7237	Comment on "an overview of various configurations of luminescent solar concentrators for photovoltaic applicationsâ€. Optical Materials, 2021, 112, 110752.	1.7	0
7238	Back contacts materials used in thin film CdTe solar cells—A review. Energy Science and Engineering, 2021, 9, 606-632.	1.9	37
7239	Crystallographic, Optical, and Electronic Properties of the Cs2AgBi1–xInxBr6 Double Perovskite: Understanding the Fundamental Photovoltaic Efficiency Challenges. ACS Energy Letters, 2021, 6, 1073-1081.	8.8	19
7240	Defect Engineering in Earthâ€Abundant Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Photovoltaic Materials via Ga <sup>3+</sup> â€Doping for over 12% Efficient Solar Cells. Advanced Functional Materials, 2021, 31, 2010325.	7.8	79
7241	Review on performance analysis of P3HT:PCBM-based bulk heterojunction organic solar cells. Semiconductor Science and Technology, 2021, 36, 045005.	1.0	36
7242	Ideal solar cell efficiencies. Nature Photonics, 2021, 15, 163-164.	15.6	4
7243	Behind the Breakthrough of the â <sup>-1</sup> ⁄430% Perovskite Solar Cell. Joule, 2021, 5, 295-297.	11.7	9
7244	Study of Alkali (Na,K)-Doped Cu2ZnSnS4 Thin Films Prepared by Sol–Gel Method. Semiconductors, 2021, 55, 179-193.	0.2	4
7245	Low-temperature direct growth for low dislocation density in III-V on Si towards high-efficiency III-V/Si tandem solar cells. Japanese Journal of Applied Physics, 2021, 60, SBBF14.	0.8	3
7246	Charge recombination suppressed CdSeS/CdSe/ZnS QDSSC design. Hacettepe Journal of Biology and Chemistry, 2021, 49, 175-187.	0.3	2
7247	Sequential Coevaporation and Deposition of Antimony Selenosulfide Thin Film for Efficient Solar Cells. Advanced Materials, 2021, 33, e2006689.	11.1	33
7248	Thermoradiative Cell Equivalent Circuit Model. IEEE Transactions on Electron Devices, 2021, 68, 928-930.	1.6	4
7249	Low Band Gap Conjugated Semiconducting Polymers. Advanced Materials Technologies, 2021, 6, 2000857.	3.0	112

#	Article	IF	CITATIONS
7250	Two-dimensional halide perovskite single crystals: principles and promises. Emergent Materials, 2021, 4, 865-880.	3.2	14
7251	A Review of Inorganic Photoelectrode Developments and Reactor Scaleâ€Up Challenges for Solar Hydrogen Production. Advanced Energy Materials, 2021, 11, 2003286.	10.2	51
7252	Colossal switchable photocurrents in topological Janus transition metal dichalcogenides. Npj Computational Materials, 2021, 7, .	3.5	27
7253	Reply to â€~Ideal solar cell efficiencies'. Nature Photonics, 2021, 15, 165-166.	15.6	7
7254	Modeling Quantum Dot Systems as Random Geometric Graphs with Probability Amplitude-Based Weighted Links. Nanomaterials, 2021, 11, 375.	1.9	8
7255	Advances in Metal Halide Perovskite Film Preparation: The Role of Antiâ€Solvent Treatment. Small Methods, 2021, 5, e2100046.	4.6	39
7256	Enhancing the photovoltaic performance of Cd-free Cu2ZnSnS4 heterojunction solar cells using SnS HTL and TiO2 ETL. Solar Energy, 2021, 215, 64-76.	2.9	70
7257	Efficient Wide-Bandgap Mixed-Cation and Mixed-Halide Perovskite Solar Cells by Vacuum Deposition. ACS Energy Letters, 2021, 6, 827-836.	8.8	81
7258	Using plasmonics and nanoparticles to enhance the efficiency of solar cells: review of latest technologies. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 638.	0.9	28
7259	Broadband optical absorption enhancement in hybrid organic–inorganic perovskite metasurfaces. AlP Advances, 2021, 11, .	0.6	9
7261	Moderate-Temperature Near-Field Thermophotovoltaic Systems with Thin-Film InSb Cells. Chinese Physics Letters, 2021, 38, 024201.	1.3	9
7262	Connecting experimental synthetic variables with the microstructure and electronic properties of doped ferroelectric perovskites for solar cell applications using high-throughput frameworks. Acta Materialia, 2021, 204, 116466.	3.8	4
7263	Effects of Ag on the carrier lifetime and efficiency of (Cu <sub>1â^'x </sub> Ag <sub>x</sub> ) Tj ETQq0 0 0 rgBT	Overlock 0.8	10 <sub>4</sub> Tf 50 262
7264	Efficient Inverted Perovskite Solar Cells with Low Voltage Loss Achieved by a Pyridineâ€Based Dopantâ€Free Polymer Semiconductor. Angewandte Chemie - International Edition, 2021, 60, 7227-7233.	7.2	107
7265	Efficient perovskite solar cells via improved carrier management. Nature, 2021, 590, 587-593.	13.7	1,972
7266	Efficient Inverted Perovskite Solar Cells with Low Voltage Loss Achieved by a Pyridineâ€Based Dopantâ€Free Polymer Semiconductor. Angewandte Chemie, 2021, 133, 7303-7309.	1.6	18
7267	Elucidating Mechanisms behind Ambient Storage-Induced Efficiency Improvements in Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 925-933.	8.8	52
7268	Halide Segregation in Mixed-Halide Perovskites: Influence of A-Site Cations. ACS Energy Letters, 2021, 6, 799-808.	8.8	129

#	Article	IF	CITATIONS
7269	High Efficiency (15.8%) All-Polymer Solar Cells Enabled by a Regioregular Narrow Bandgap Polymer Acceptor. Journal of the American Chemical Society, 2021, 143, 2665-2670.	6.6	245
7270	Resolving the mechanism of oxygen vacancy mediated nonradiative charge recombination in monoclinic bismuth vanadate. Chemical Physics Letters, 2021, 766, 138342.	1.2	9
7271	A common optical approach to thickness optimization in polymer and perovskite solar cells. Scientific Reports, 2021, 11, 5005.	1.6	8
7272	Impact on Structural and Optical Properties of CZTS Thin Films with Solvents and Ge Incorporation. International Journal of Photoenergy, 2021, 2021, 1-9.	1.4	1
7274	Effect of different operating conditions on the conversion efficiency of triple-junction solar cell. Materials Research Express, 2021, 8, 035902.	0.8	3
7275	Growth, crystal structure and optical properties of CdTe <sub>1–</sub> <i><sub>x</sub></i> Se <i><sub>x</sub></i> thin films prepared by quasi close-space sublimation method. Molecular Crystals and Liquid Crystals, 2021, 717, 128-135.	0.4	3
7276	Plasmonic luminescent solar concentrator. Solar Energy, 2021, 216, 61-74.	2.9	12
7277	Thermodynamic limit of tandem solar cells under different solar spectra and their perovskite top solar cell. Optical Materials, 2021, 113, 110819.	1.7	10
7278	Exploring the State Space Structure of Multiple Spins via Modular Tensor Diagram Approach: Going beyond the Exciton Pair State. Journal of Physical Chemistry A, 2021, 125, 1972-1980.	1.1	1
7279	PbS Quantum Dots with Inorganic Ligands: Physical Modeling of the Charge and Excitation Transport in Photovoltaic Cells. Journal of Physical Chemistry C, 2021, 125, 6020-6025.	1.5	4
7280	Comparison of Perovskite Solar Cells with other Photovoltaics Technologies from the Point of View of Life Cycle Assessment. Advanced Energy and Sustainability Research, 2021, 2, 2000088.	2.8	46
7281	Hot Hole Cooling and Transfer Dynamics from Lead Halide Perovskite Nanocrystals Using Porphyrin Molecules. Journal of Physical Chemistry C, 2021, 125, 5859-5869.	1.5	37
7283	Determining the band alignment of copper-oxide gallium-oxide heterostructures. Journal of Applied Physics, 2021, 129, .	1.1	6
7284	Sustainable hydrogen production from water using tandem dye-sensitized photoelectrochemical cells. Nano Convergence, 2021, 8, 7.	6.3	19
7285	Review—A Review of 2D Perovskites and Carbon-Based Nanomaterials for Applications in Solar Cells and Photodetectors. ECS Journal of Solid State Science and Technology, 2021, 10, 031009.	0.9	5
7286	CuO based solar cell with V2O5 BSF layer: Theoretical validation of experimental data. Superlattices and Microstructures, 2021, 151, 106830.	1.4	30
7287	Quantifying the Absorption Onset in the Quantum Efficiency of Emerging Photovoltaic Devices. Advanced Energy Materials, 2021, 11, 2100022.	10.2	61
7288	Direct Probing of Gap States and Their Passivation in Halide Perovskites by High-Sensitivity, Variable Energy Ultraviolet Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2021, 125, 5217-5225.	1.5	12
#	Article	IF	CITATIONS
------	--	-----	-----------
7289	Multifunctional Chemical Bridge and Defect Passivation for Highly Efficient Inverted Perovskite Solar Cells. ACS Energy Letters, 0, , 1596-1606.	8.8	115
7290	Predicting efficiencies >25% A3MX3 photovoltaic materials and Cu ion implantation modification. Applied Physics Letters, 2021, 118, .	1.5	22
7291	Engineering of Halide Cation in All-Inorganic Perovskite with Full-Color Luminescence. Coatings, 2021, 11, 330.	1.2	2
7292	Modeling and Simulation of High-Efficiency Eco-Friendly Perovskite-CZTSe1 – xSx Solar Cell. Semiconductors, 2021, 55, 373-378.	0.2	1
7293	High-low refractive index stacks for broadband antireflection coatings for multijunction solar cells. Solar Energy, 2021, 217, 29-39.	2.9	17
7294	Intrinsic losses in photovoltaic laser power converters. Applied Physics Letters, 2021, 118, .	1.5	11
7295	N-type doping feasibility of Cu2O with In and Al for cost-effective photovoltaics: An ab initio investigation. Materials Today Communications, 2021, 26, 102015.	0.9	5
7296	Efficiency Improvement of Bournonite CuPbSbS <sub>3</sub> Solar Cells via Crystallinity Enhancement. ACS Applied Materials & Interfaces, 2021, 13, 13273-13280.	4.0	13
7297	The Complex Interplay of Lead Halide Perovskites with Their Surroundings. Advanced Optical Materials, 2021, 9, 2100133.	3.6	7
7298	Adjusting the energy of interfacial states in organic photovoltaics for maximum efficiency. Nature Communications, 2021, 12, 1772.	5.8	27
7299	Enhancement of Photovoltaic Current through Dark States in Donorâ€Acceptor Pairs of Tungstenâ€Based Transition Metal Diâ€Chalcogenides. Advanced Functional Materials, 2021, 31, 2100387.	7.8	19
7300	Impact of Auger recombination on performance limitation of perovskite solar cell. Solar Energy, 2021, 217, 342-353.	2.9	27
7301	Process Systems Engineering Perspective on the Design of Materials and Molecules. Industrial & Engineering Chemistry Research, 2021, 60, 5194-5206.	1.8	22
7302	Modulation of optical absorption in m-Fe1â^'xRuxS2 and exploring stability in new m-RuS2. Scientific Reports, 2021, 11, 6601.	1.6	7
7303	Experimental demonstration of energy-transfer ratchet intermediate-band solar cell. Communications Physics, 2021, 4, .	2.0	14
7304	Na incorporation into Cu2ZnSnS4 thin film absorbers from RF-sputtered NaF precursors. Solar Energy, 2021, 217, 280-291.	2.9	3
7305	Wide-Bandgap Halide Perovskites for Indoor Photovoltaics. Frontiers in Chemistry, 2021, 9, 632021.	1.8	27
7306	Deposition and characterization of lithium doped direct current magnetron sputtered Cu2O films. Thin Solid Films, 2021, 722, 138573.	0.8	14

#	Article	IF	CITATIONS
7307	Growth of GaP Layers on Si Substrates in a Standard MOVPE Reactor for Multijunction Solar Cells. Coatings, 2021, 11, 398.	1.2	5
7308	Grain Boundary Passivation with Dion–Jacobson Phase Perovskites for Highâ€Performance Pb–Sn Mixed Narrowâ€Bandgap Perovskite Solar Cells. Solar Rrl, 2021, 5, 2000681.	3.1	22
7309	Singlet Fission Driven by Anisotropic Vibronic Coupling in Single-Crystalline Pentacene. Journal of Physical Chemistry Letters, 2021, 12, 3142-3150.	2.1	9
7310	High-throughput screening to modulate electronic and optical properties of alloyed Cs <sub>2</sub> AgBiCl <sub>6</sub> for enhanced solar cell efficiency. JPhys Materials, 2021, 4, 025005.	1.8	14
7311	Engineering of TiO2 or ZnO—Graphene Oxide Nanoheterojunctions for Hybrid Solar Cells Devices. Photonics, 2021, 8, 75.	0.9	7
7312	Singlet exciton fission in a modified acene with improved stability and high photoluminescence yield. Nature Communications, 2021, 12, 1527.	5.8	26
7313	Imaging of Bandtail States in Silicon Heterojunction Solar Cells: Nanoscopic Current Effects on Photovoltaics. ACS Applied Nano Materials, 2021, 4, 2404-2412.	2.4	2
7314	Electronic and optical properties of vacancy ordered double perovskites A2BX6 (A = Rb, Cs; B =â€9	‰Sn, Pd, P	۲;) <sub>7</sub> 5 ETQql
7315	A review of stability and progress in tin halide perovskite solar cell. Solar Energy, 2021, 216, 26-47.	2.9	67
7316	A Review of CZTS Thin Film Solar Cell Technology. Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 2021, 81, 73-87.	0.3	29
7317	Rapid Recombination by Cadmium Vacancies in CdTe. ACS Energy Letters, 2021, 6, 1392-1398.	8.8	39
7318	Progress in Semitransparent Organic Solar Cells. Solar Rrl, 2021, 5, 2100041.	3.1	44
7319	Contribution to the Study of Sub-Bandgap Photon Absorption in Quantum Dot InAs/AlGaAs Intermediate Band Solar Cells. IEEE Journal of Photovoltaics, 2021, 11, 420-428.	1.5	11
7320	Energy Conversion Systems and Processes. , 2021, , 79-146.		0
7321	Chelating agent effect on optical properties of SnS films and an output characteristics simulation of based solar cells. Materials Today: Proceedings, 2021, , .	0.9	2
7322	First-principles investigation of intrinsic point defects in perovskite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:msub><mml:mi>CsSnBr</mml:mi><mml:mn>3Physical Review Materials, 2021, 5, .</mml:mn></mml:msub></mml:math 	ml <b>ore</b> n> <td>nmal4msub&gt;<!--</td--></td>	nmal4msub> </td
7323	Kesterite Solar Cells: Insights into Current Strategies and Challenges. Advanced Science, 2021, 8, 2004313.	5.6	90
7324	Bulky Cations Improve Band Alignment and Efficiency in Sn–Pb Halide Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 2616-2628.	2.5	11

#	Article	IF	CITATIONS
7325	The prospects and challenges of solar electrochemical capacitors. Journal of Energy Storage, 2021, 35, 102294.	3.9	10
7326	Suppression of Nonradiative Recombination by Vacuumâ€Assisted Process for Efficient Leadâ€Free Tin Perovskite Solar Cells. Advanced Materials Interfaces, 2021, 8, 2100135.	1.9	20
7327	Unveiling the influence of ZnTe and Te layers as part of the back-contact on CdTe solar cells performance. AIP Advances, 2021, 11, .	0.6	5
7328	Effects of low-lying excitations in pentalene and its derivatives in singlet fission: a model exact and density matrix renormalisation group study. Molecular Physics, 2021, 119, e1895346.	0.8	0
7329	Isotope alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 808, 140910.	2.6	0
7330	Recent Developments in Organic Tandem Solar Cells toward High Efficiency. Advanced Energy and Sustainability Research, 2021, 2, 2000050.	2.8	12
7331	The triplet exciton dynamics and diffusion properties of zinc and platinum-octaethylporphyrin nanoaggregates. Journal of Photochemistry and Photobiology A: Chemistry, 2021, 408, 113105.	2.0	2
7332	Rutherford backscattering spectroscopy analysis of the growth quality of chemical bath deposited PbSe thin films. Solid State Sciences, 2021, 113, 106545.	1.5	5
7333	Toward an Enhanced Room-Temperature Photovoltaic Effect in Ferroelectric Bismuth and Iron Codoped BaTiO3. Journal of Physical Chemistry C, 2021, 125, 5315-5326.	1.5	12
7334	The investigation of CsPb(I1â^'xBrx)3/crystalline silicon two- and four-terminal tandem solar cells. Solar Energy, 2021, 216, 145-150.	2.9	16
7335	Highly Absorbing Lead-Free Semiconductor Cu <sub>2</sub> AgBil <sub>6</sub> for Photovoltaic Applications from the Quaternary Cul–Agl–Bil <sub>3</sub> Phase Space. Journal of the American Chemical Society, 2021, 143, 3983-3992.	6.6	59
7336	Origin, Influence, and Countermeasures of Defects in Perovskite Solar Cells. Small, 2021, 17, e2005495.	5.2	61
7337	Monolithic all-perovskite tandem solar cells: recent progress and challenges. Journal of the Korean Ceramic Society, 2021, 58, 399-413.	1.1	14
7338	Studying the Effect of Light Incidence Angle on Photoelectric Parameters of Solar Cells by Simulation. International Journal of Renewable Energy Development, 2021, 10, 731-736.	1.2	14
7340	Atomic Scale Structure of (Ag,Cu)2ZnSnSe4 and Cu2Zn(Sn,Ge)Se4 Kesterite Thin Films. Frontiers in Energy Research, 2021, 9, .	1.2	4
7341	Quantum dot and quantum well solar energy converters. European Physical Journal: Special Topics, 2021, 230, 963-977.	1.2	1
7342	(Li,Na)SbS2 as a promising solar absorber material: A theoretical investigation. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2021, 250, 119389.	2.0	6
7343	Emerging potential photovoltaic absorber hybrid halide perovskites ( <scp> CH <sub>3</sub> CH) Tj ETQq1 1 0. International Journal of Energy Research, 2021, 45, 15231-15244.</scp>	.784314 rg 2.2	BT /Overlock 10

ARTICLE IF CITATIONS Suppressed Oxidation and Photodarkening of Hybrid Tin Iodide Perovskite Achieved with Reductive 7344 2.5 10 Organic Small Molecule. ACS Applied Energy Materials, 2021, 4, 4704-4710. Role of earth-abundant selenium in different types of solar cells. Journal of Electrical Engineering, 7346 0.4 2021, 72, 132-139. Silicon dots films deposited by spin-coating as a generated carrier addition layer of third generation 7347 2 1.8 photovoltaics. Progress in Natural Science: Materials International, 2021, 31, 192-200. Highly Efficient PEDOT:PSS/Silicon Hybrid Solar Cells via Effective Surface Microengineering of 7348 2.5 34 Low-Ćost Solar-Grade Silicon Wafers. ACS Applied Energy Materials, 2021, 4, 4181-4198. Influence of Post-selenization Temperature on the Performance of Substrate-Type 7349 2.5 32 Sb<sub>2</sub>Se<sub>3</sub>Solar Cells. ACS Applied Energy Materials, 2021, 4, 4313-4318. Exciton effects in perovskite nanocrystals. JPhys Photonics, 2021, 3, 021002. 2.2 Recent progress of organic photovoltaics for indoor energy harvesting. Nano Energy, 2021, 82, 105770. 7351 8.2 128 Wide Bandgap Sb<sub>2</sub>S<sub>3</sub> Solar Cells. Advanced Functional Materials, 2021, 31, 7.8 2100265. Manganese Doping Promotes the Synthesis of Bismuthâ€based Perovskite Nanocrystals While Tuning 7353 5.2 25 Their Band Structures. Small, 2021, 17, e2100101. Configurational Isomers Induced Significant Difference in Allâ€Polymer Solar Cells. Advanced 7354 58 Functional Materials, 2021, 31, 2100877. Minimizing Open ircuit Voltage Loss in Perovskite/Si Tandem Solar Cells via Exploring the Synergic 7355 7 1.2 Effect of Cations and Anions. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100119. Hybrid organic–inorganic perovskite ferroelectrics bring light to semiconducting applications: 2.2 29 Bándgap engineering as a starting point. APL Materials, 2021, 9, . Fabrication of High <i>V</i><sub>OC</sub> Organic Solar Cells with a Non-Halogenated Solvent and the Effect of Substituted Groups for "Same-A-Strategy―Material Combinations. ACS Applied Materials 7357 4.0 29 & Interfaces, 2021, 13, 21556-21564. Fabrication of Cu-rich CZTS thin films by two-stage process: Effect of gas flow-rate in sulfurization process. Journal of Molecular Structure, 2021, 1230, 129922. 7358 1.8 Importance of Terminal Group Pairing of Polymer Donor and Smallâ€Molecule Acceptor in Optimizing Blend Morphology and Voltage Loss of Highâ€Performance Solar Cells. Advanced Functional Materials, 7359 7.8 34 2021, 31, 2100870. Silicon quantum dots: chemical, physical synthesis, and applications in fluorescence detection, solar cell, photocatalyst and composite. Current Nanoscience, 2021, 17, . Characterization of Plasmonic Scattering, Luminescent Down-Shifting, and Metal-Enhanced 7361 1.9 4 Fluorescence and Applications on Silicon Solar Cells. Nanomaterials, 2021, 11, 1013. Highly Efficient 1D/3D Ferroelectric Perovskite Solar Cell. Advanced Functional Materials, 2021, 31, 24 2100205.

#	Article	IF	CITATIONS
7363	Economic Convenience of Hybrid Thermoelectric-Photovoltaic Solar Harvesters. ACS Applied Energy Materials, 2021, 4, 4029-4037.	2.5	12
7364	Diphenylanthracene Dimers for Triplet–Triplet Annihilation Photon Upconversion: Mechanistic Insights for Intramolecular Pathways and the Importance of Molecular Geometry. Journal of the American Chemical Society, 2021, 143, 5745-5754.	6.6	58
7365	Band-Edge Orbital Engineering of Perovskite Semiconductors for Optoelectronic Applications. Journal of Physical Chemistry Letters, 2021, 12, 4227-4239.	2.1	50
7366	Recent Advances in Transition Metal Nitrideâ€Based Materials for Photocatalytic Applications. Advanced Functional Materials, 2021, 31, 2100553.	7.8	80
7367	Binary copper oxides as photovoltaic absorbers: recent progress in materials and applications. Journal Physics D: Applied Physics, 2021, 54, 263002.	1.3	12
7368	When iodide meets bromide: Halide mixing facilitates the light-induced decomposition of perovskite absorber films. Nano Energy, 2021, 86, 106082.	8.2	12
7369	Efficient Hybrid Amorphous Silicon/Organic Tandem Solar Cells Enabled by Nearâ€Infrared Absorbing Nonfullerene Acceptors. Advanced Energy Materials, 2021, 11, 2100166.	10.2	5
7370	Photosensitivity and reflectivity of the active layer in a Tamm-plasmon-polariton-based organic solar cell. Applied Optics, 2021, 60, 3338.	0.9	19
7371	Phonon-Assisted Ballistic Current from First-Principles Calculations. Physical Review Letters, 2021, 126, 177403.	2.9	32
7372	High-Efficiency GaAs-Based Solar Cells. , 0, , .		8
7372 7373	High-Efficiency GaAs-Based Solar Cells. , 0, , . Hybrid Nanocomposite Thin Films for Photovoltaic Applications: A Review. Nanomaterials, 2021, 11, 1117.	1.9	8
7372 7373 7374	High-Efficiency GaAs-Based Solar Cells. , 0, , .         Hybrid Nanocomposite Thin Films for Photovoltaic Applications: A Review. Nanomaterials, 2021, 11, 1117.         Thermodynamic bounds on work extraction from photocells and photosynthesis. European Physical Journal: Special Topics, 2021, 230, 873-879.	1.9	8 18 2
7372 7373 7374 7375	High-Efficiency GaAs-Based Solar Cells. , 0, , .         Hybrid Nanocomposite Thin Films for Photovoltaic Applications: A Review. Nanomaterials, 2021, 11, 1117.         Thermodynamic bounds on work extraction from photocells and photosynthesis. European Physical Journal: Special Topics, 2021, 230, 873-879.         High-Lying 3 <sup>1</sup> A <sub>g</sub> Dark-State-Mediated Singlet Fission. Journal of the American Chemical Society, 2021, 143, 5691-5697.	1.9 1.2 6.6	8 18 2 19
7372 7373 7374 7375 7376	High-Efficiency GaAs-Based Solar Cells. , 0, , .         Hybrid Nanocomposite Thin Films for Photovoltaic Applications: A Review. Nanomaterials, 2021, 11, 1117.         Thermodynamic bounds on work extraction from photocells and photosynthesis. European Physical Journal: Special Topics, 2021, 230, 873-879.         High-Lying 3 <sup>1</sup> A <sub>g</sub> Dark-State-Mediated Singlet Fission. Journal of the American Chemical Society, 2021, 143, 5691-5697.         Simulation and Optimization of Back Surface Field for Efficient HIT Solar Cells. Silicon, 2022, 14, 2999-3003.	1.9 1.2 6.6 1.8	8 18 2 19
<ul> <li>7372</li> <li>7373</li> <li>7374</li> <li>7375</li> <li>7376</li> <li>7377</li> </ul>	High-Efficiency GaAs-Based Solar Cells. , 0, , .         Hybrid Nanocomposite Thin Films for Photovoltaic Applications: A Review. Nanomaterials, 2021, 11, 1117.         Thermodynamic bounds on work extraction from photocells and photosynthesis. European Physical Journal: Special Topics, 2021, 230, 873-879.         High-Lying 3 <sup>1</sup> A <sub>g</sub> Dark-State-Mediated Singlet Fission. Journal of the American Chemical Society, 2021, 143, 5691-5697.         Simulation and Optimization of Back Surface Field for Efficient HIT Solar Cells. Silicon, 2022, 14, 2999-3003.         Quantum Dots for Photovoltaics: A Tale of Two Materials. Advanced Energy Materials, 2021, 11, 2100354.	1.9 1.2 6.6 1.8 10.2	8 18 2 19 4 77
<ul> <li>7372</li> <li>7373</li> <li>7374</li> <li>7375</li> <li>7376</li> <li>7377</li> <li>7378</li> </ul>	High-Efficiency GaAs-Based Solar Cells., 0, , .         Hybrid Nanocomposite Thin Films for Photovoltaic Applications: A Review. Nanomaterials, 2021, 11, 1117.         Thermodynamic bounds on work extraction from photocells and photosynthesis. European Physical Journal: Special Topics, 2021, 230, 873-879.         High-Lying 3 <sup>1gg Dark-State-Mediated Singlet Fission. Journal of the American Chemical Society, 2021, 143, 5691-5697.         Simulation and Optimization of Back Surface Field for Efficient HIT Solar Cells. Silicon, 2022, 14, 2999-3003.         Quantum Dots for Photovoltaics: A Tale of Two Materials. Advanced Energy Materials, 2021, 11, 2100354.         Toward Real Setting Applications of Organic and Perovskite Solar Cells: A Comparative Review. Energy Technology, 2021, 9, 2000901.</sup>	1.9 1.2 6.6 1.8 10.2	8 18 2 19 4 777
<ul> <li>7372</li> <li>7373</li> <li>7374</li> <li>7375</li> <li>7376</li> <li>7377</li> <li>7378</li> <li>7379</li> </ul>	High-Efficiency GaAs-Based Solar Cells. , 0, , .         Hybrid Nanocomposite Thin Films for Photovoltaic Applications: A Review. Nanomaterials, 2021, 11, 1117.         Thermodynamic bounds on work extraction from photocells and photosynthesis. European Physical Journal: Special Topics, 2021, 230, 873-879.         High-Lying 3 <sup>1 </sup> A <sub>g </sub> Dark-State-Mediated Singlet Fission. Journal of the American Chemical Society, 2021, 143, 5691-5697.         Simulation and Optimization of Back Surface Field for Efficient HIT Solar Cells. Silicon, 2022, 14, 2999-3003.         Quantum Dots for Photovoltaics: A Tale of Two Materials. Advanced Energy Materials, 2021, 11, 2100354.         Toward Real Setting Applications of Organic and Perovskite Solar Cells: A Comparative Review. Energy Technology, 2021, 9, 2000901.         Twoô&Ferminal Perovskiteå&Based Tandem Solar Cells for Energy Conversion and Storage. Small, 2021, 17, e2006145.	1.9 1.2 6.6 1.8 10.2 1.8 5.2	8 18 2 19 4 77 33 16

#	Article	IF	CITATIONS
7381	Energy Tracing of Photovoltaic Cells. Solar Rrl, 2021, 5, 2100199.	3.1	5
7382	Relations between absorption, emission, and excited state chemical potentials from nanocrystal 2D spectra. Science Advances, 2021, 7, .	4.7	10
7383	Ambient Air Bladeâ€Coating Fabrication of Stable Tripleâ€Cation Perovskite Solar Modules by Green Solvent Quenching. Solar Rrl, 2021, 5, 2100073.	3.1	34
7384	Tuning the Molecular Weight of <scp>Chlorine‣ubstituted</scp> Polymer Donors for Small Energy Loss <sup>â€</sup> . Chinese Journal of Chemistry, 2021, 39, 1651-1658.	2.6	20
7385	Non-fullerene acceptors with branched side chains and improved molecular packing to exceed 18% efficiency in organic solar cells. Nature Energy, 2021, 6, 605-613.	19.8	1,307
7386	Defect engineering on all-inorganic perovskite solar cells for high efficiency. Journal of Semiconductors, 2021, 42, 050203.	2.0	17
7387	Multimodal Microscale Imaging of Textured Perovskite–Silicon Tandem Solar Cells. ACS Energy Letters, 2021, 6, 2293-2304.	8.8	25
7388	Optical properties of CdTe thin film obtained by high-frequency magnetron sputtering method. Journal of the Belarusian State University Physics, 2021, , 88-95.	0.1	0
7389	Fabricating over 7%-efficient Sb2(S,Se)3 thin-film solar cells by vapor transport deposition using Sb2Se3 and Sb2S3 mixed powders as the evaporation source. Journal of Power Sources, 2021, 493, 229737.	4.0	32
7390	Interfacial Trapâ€Assisted Triplet Generation in Lead Halide Perovskite Sensitized Solidâ€State Upconversion. Advanced Materials, 2021, 33, e2100854.	11.1	18
7391	GaAs solar cell performance improvement by design optimization using NSGA approach. Materials Today: Proceedings, 2021, 51, 178-178.	0.9	1
7392	A review of next generation bifacial solar farms: predictive modeling of energy yield, economics, and reliability. Journal Physics D: Applied Physics, 2021, 54, 323001.	1.3	24
7393	An insight into the surface engineering of colloidal PbSe quantum dots for polymer hybrid photovoltaic applications. Journal of Sol-Gel Science and Technology, 2021, 99, 295-314.	1.1	1
7394	A Review of Integrated Systems Based on Perovskite Solar Cells and Energy Storage Units: Fundamental, Progresses, Challenges, and Perspectives. Advanced Science, 2021, 8, 2100552.	5.6	19
7395	Tinâ€Lead Perovskite Fabricated via Ethylenediamine Interlayer Guides to the Solar Cell Efficiency of 21.74%. Advanced Energy Materials, 2021, 11, 2101069.	10.2	110
7396	Chemical bath deposition of high structural and morphological quality PbSe thin films with potential optoelectronic properties for infrared detection applications. Materials Chemistry and Physics, 2021, 264, 124479.	2.0	13
7397	Decay mechanisms in CdSâ€buffered Cu(In,Ga)Se <sub>2</sub> thinâ€film solar cells after exposure to thermal stress: Understanding the role of Na. Progress in Photovoltaics: Research and Applications, 2021, 29, 1034-1053.	4.4	4
7398	First-principles study for comparison of the electronic and optic bandgaps of the CH3NH3Pb1-Y I3 (Y=Bi,) Tj ETQq	1 1 0.784 1.3	314 rgBT /O 1

#	Article	IF	CITATIONS
7399	Elucidating the Trajectory of the Charge Transfer Mechanism and Recombination Process of Hybrid Perovskite Solar Cells. Materials, 2021, 14, 2698.	1.3	5
7400	Optimized bandgaps of top and bottom subcells for bifacial two-terminal tandem solar cells under different back irradiances. Solar Energy, 2021, 220, 163-174.	2.9	12
7401	Hot-carrier dynamics in InAs/AlAsSb multiple-quantum wells. Scientific Reports, 2021, 11, 10483.	1.6	10
7402	Recent advancements in halide perovskite nanomaterials and their optoelectronic applications. InformaÄnÃ-Materiály, 2021, 3, 962-986.	8.5	25
7403	Near-infrared quantum cutting in Pr3+/Yb3+ NaYF4 nanocrystals for luminescent solar converter. Journal of Luminescence, 2021, 233, 117919.	1.5	17
7404	Halide Perovskites: A New Era of Solutionâ€Processed Electronics. Advanced Materials, 2021, 33, e2005000.	11.1	138
7405	Photonic crystals for perovskiteâ€based optoelectronic applications. Nano Select, 2022, 3, 39-50.	1.9	4
7406	Investigation of the Photon to Charge Conversion and Its Implication on Photovoltaic Cell Efficient Operation. Energies, 2021, 14, 3022.	1.6	9
7407	Separation and Recombination of Photocarriers from Color Centers and Optically Silent Trap States from 100 to 450 K: The Halide Double Photochromic Perovskite Cs <sub>2</sub> AgBiBr <sub>6</sub> . ACS Applied Materials & Interfaces, 2021, 13, 25513-25522.	4.0	2
7408	The Role of the Core Attachment Positioning in Triggering Intramolecular Singlet Exciton Fission in Perylene Diimide Tetramers. Journal of Physical Chemistry B, 2021, 125, 5114-5131.	1.2	9
7409	Suitable Top Cell Partners for Copper Indium Gallium Selenideâ€Based Tandem Solar Cells to Achieve >30% Efficiency. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000796.	0.8	6
7410	Role of nanosize and defect trapping upon singlet fission yield and singlet fission dynamics of 1,6-Diphenyl-1,3,5-hexatriene nanoaggregates. Journal of Photochemistry and Photobiology A: Chemistry, 2021, 413, 113262.	2.0	6
7411	Singlet fission in nanoaggregate of bis(phenylethynyl) derivative of benzene (BPEB): High energy triplet exciton generation with >100 % yield. Journal of Photochemistry and Photobiology A: Chemistry, 2021, 412, 113251.	2.0	3
7412	Percolative charge transport in binary nanocrystal solids. Physical Review B, 2021, 103, .	1.1	1
7413	Selecting nitride host for Yb3+ toward near-infrared emission with low-energy charge transfer band. Journal of Rare Earths, 2021, 39, 1484-1491.	2.5	8
7414	The Influence of Dopant Concentration on Optical-Electrical Features of Quantum Dot-Sensitized Solar Cell. Molecules, 2021, 26, 2865.	1.7	4
7415	Outdoor performance of a tandem InGaP/Si photovoltaic luminescent solar concentrator. Solar Energy Materials and Solar Cells, 2021, 223, 110945.	3.0	13
7416	Impact of Irradiance Data on the Energy Yield Modeling of Dual-Junction Solar Module Stacks for One-Sun Applications. IEEE Journal of Photovoltaics, 2021, 11, 692-698.	1.5	3

#	Article	IF	CITATIONS
7417	A review of spectral controlling for renewable energy harvesting and conserving. Materials Today Physics, 2021, 18, 100388.	2.9	31
7418	Characterization of Cu2ZnSnS4 thin films deposited by one-step thermal evaporation for a third generation solar cell. Journal of Alloys and Compounds, 2021, 862, 158503.	2.8	22
7419	The correlation between limiting efficiency of indoor photovoltaics and spectral characteristics of multi-color white LED sources. Journal Physics D: Applied Physics, 2021, 54, 315503.	1.3	1
7420	Influence of Geometrical Shape on the Characteristics of the Multiple InN/InxGa1â^'xN Quantum Dot Solar Cells. Nanomaterials, 2021, 11, 1317.	1.9	9
7421	Efficient Direct Band Gap Photovoltaic Material Predicted <i>Via</i> Doping Double Perovskites Cs <sub>2</sub> AgBiX <sub>6</sub> (X = Cl, Br). Journal of Physical Chemistry C, 2021, 125, 10868-10875.	1.5	37
7422	Feasibility Study of the Solar-Promoted Photoreduction of CO2 to Liquid Fuels with Direct or Indirect Use of Renewable Energy Sources. Energies, 2021, 14, 2804.	1.6	0
7423	Electrode-induced impurities in tin halide perovskite solar cell material CsSnBr3 from first principles. Npj Computational Materials, 2021, 7, .	3.5	13
7424	Singlet fission and tandem solar cells reduce thermal degradation and enhance lifespan. Progress in Photovoltaics: Research and Applications, 2021, 29, 899-906.	4.4	12
7425	Exceptional Radiation Absorption in a Pentagon-Based Si Allotrope. Nano Letters, 2021, 21, 4287-4291.	4.5	0
7426	Ta2O5 as Tunneling Oxide for n-type Passivated c-Si CS-TOPCon Solar Cell. , 2021, , .		0
7427	Controllable Photoelectric Properties in Double-Wall MoS <sub>2</sub> Nanotubes by the Flexoelectric Effect. Journal of Physical Chemistry C, 2021, 125, 11318-11324.	1.5	7
7428	lonic screening in perovskite p–n homojunctions. Nature Energy, 2021, 6, 589-591.	19.8	10
7429	Effect of crystallization on the photovoltaic parameters and stability of perovskite solar cells. Polyhedron, 2021, 199, 115089.	1.0	4
7430	Molecularly Engineered Interfaces in Metal Halide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 4882-4901.	2.1	21
7431	A Theoretical Perspective of the Photochemical Potential in the Spectral Performance of Photovoltaic Cells. Entropy, 2021, 23, 579.	1.1	0
7432	Elucidating the Effect of the Different Buffer Layers on the Thermal Stability of CIGSe Solar Cells. IEEE Journal of Photovoltaics, 2021, 11, 648-657.	1.5	2
7433	Methods of Stability Control of Perovskite Solar Cells for High Efficiency. Energies, 2021, 14, 2918.	1.6	12
7434	A Study of Interfacial Electronic Structure at the CuPc/CsPbl2Br Interface. Crystals, 2021, 11, 547.	1.0	2

ARTICLE IF CITATIONS # Antimony chalcogenide-based thin film solar cells: Device engineering routes to boost the 7435 10 1.1 performance. Journal of Applied Physics, 2021, 129, . Development of dip-coated Cu2ZnSnS4 absorber material without sulphurisation. Journal of Sol-Gel 7436 1.1 Science and Technology, 2021, 99, 252-262. An Effective Strategy of Combining Surface Passivation and Secondary Grain Growth for Highly 7437 5.223 Efficient and Stable Perovskite Solar Cells. Small, 2021, 17, e2100678. Charge transfer evidence in donor–acceptor singleâ€walled carbon nanotubes filled with sexithiophene oligomers: Nanotube diameter dependence. Journal of Raman Spectroscopy, 2021, 52, 7438 1.2 1381-1394. Broadband wavelength excitable Er3+, Ni2+ co-doped MgGa2O4 up-conversion phosphor. Ceramics 7439 2.3 12 International, 2021, 47, 13853-13858. 7440 Refractive index of different perovskite materials. Journal of Materials Research, 2021, 36, 1773-1793. 1.2 Efficiency of bulk perovskite-sensitized upconversion: Illuminating matters. Applied Physics Letters, 7441 1.5 12 2021, 118, . Prospects for metal halide perovskite-based tandem solar cells. Nature Photonics, 2021, 15, 411-425. 7442 15.6 195 Layered Perovskites in Solar Cells: Structure, Optoelectronic Properties, and Device Design. Advanced 7443 10.2 49 Energy Materials, 2021, 11, 2003877. Numerical Simulation and Performance Evaluation of Highly Efficient Sb<sub>2</sub>Se<sub>3</sub> 7444 Solar Cell with Tin Sulfide as Hole Transport Layer. Physica Status Solidi (B): Basic Research, 2021, 258, 2000630. Controlled growth of perovskite KMnF3 upconverting nanocrystals for near-infrared light-sensitive 7445 1.7 11 perovskite solar cells and photodetectors. Journal of Materials Science, 2021, 56, 14207-14221. Structural and Trapâ€State Density Enhancement in Flash Infrared Annealed Perovskite Layers. Advanced 1.9 7446 Materials Interfaces, 2021, 8, 2100355. Minimizing Reabsorption in Multilayered Luminescent Solar Concentrators with Quantum Dots., 2021, 7447 0 **,** • InGaN quantum dot superlattices as ratchet band solar cells., 2021, , . 7448 Characterizing the Back-Contact Interface of Poly-Crystalline Cd(Se)Te Devices Using Transmission 7449 0 Electron Microscopy., 2021,,. Luminescent properties and energy transfer of novel NIR K(Ga/Al)11O17:Cr3+,Yb3+ phosphors for solar cells. Materials Today Energy, 2021, 20, 100674. 7450 2.5 Properties of Yb-added ZnO (Yb:ZnO) films as an energy-conversion layer on polycrystalline silicon 7451 2.07 solar cells. Materials Chemistry and Physics, 2021, 265, 124513. 7452 Chemical Vapor Deposited Mixed Metal Halide Perovskite Thin Films. Materials, 2021, 14, 3526. 1.3

ARTICLE IF CITATIONS <i>Ab initio</i> calculation of the detailed balance limit to the photovoltaic efficiency of single p-n 7453 1.5 7 junction kesterite solar cells. Applied Physics Letters, 2021, 118, . Multi-junction solar cells paving the way for super high-efficiency. Journal of Applied Physics, 2021, 7454 1.1 89 129, . Colloidal Lithography for Photovoltaics: An Attractive Route for Light Management. Nanomaterials, 7455 1.9 21 2021, 11, 1665. Defect activity in metal halide perovskites with wide and narrow bandgap. Nature Reviews Materials, 7456 121 2021, 6, 986-1002. Helium incorporation induced direct-gap silicides. Npj Computational Materials, 2021, 7, . 7457 3.5 6 7458 Optoelectronic Properties of Tinâ€"Lead Halide Perovskites. ACS Energy Letters, 2021, 6, 2413-2426. 8.8 Effects of HTL/ETL properties on the performance of (FAPbI<sub>3</sub>)<sub>0.85</sub>(MAPbBr<sub>3</sub>)<sub>0.15</sub> perovskite solar cells. 7459 1.34 Journal Physics D: Applied Physics, 2021, 54, 334001. Organic Polymer Hosts for Tripletâ€"Triplet Annihilation Upconversion Systems. Macromolecules, 2021, 7460 54, 5287-5303. Chemical Passivation of Crystalline Si by Al<sub>2</sub>O<sub>3</sub> Deposited Using Atomic Layer 7461 2.4 6 Deposition: Implications for Solar Cells. ACS Applied Nano Materials, 2021, 4, 6629-6636. High-Photovoltage All-Perovskite Tandem Solar Cells for Photovoltaic-Electrolysis Water-Splitting 7462 Applications., 2021,,. Fundamental Photovoltaic Efficiency Limits Due to Semiconductor Band Tails., 2021, , . 7463 0 Efficiency enhancement of intermediate band solar cell using front surface pyramid grating. Optical 7464 1.5 and Quantum Electronics, 2021, 53, 1. Light trapping in thin silicon solar cells: A review on fundamentals and technologies. Progress in 7465 4.4 60 Photovoltaics: Research and Applications, 2021, 29, 1125-1137. A recalculation of the efficiency limit in crystalline Si/Si tandem solar cells. Solar Energy Materials 7466 and Solar Cells, 2021, 224, 111008. Stable and high efficiency mixed-cation lead-based halide perovskite: A theoretical study. Physica B: 7467 1.3 1 Condensed Matter, 2021, 610, 412938. Transparent conductive electrodes based on co-sputtered ultra-thin metal layers for 7468 semi-transparent perovskites solar cells. Applied Physics Letters, 2021, 118, From binary to multinary copper based nitrides  $\hat{a} \in$  "Unlocking the potential of new applications. 7469 9.5 15 Coordination Chemistry Reviews, 2021, 436, 213791. Performance Analysis of Photonic Crystal Enhanced Micro-Combustor Thermophotovoltaic System 7470 for Drone Application. Journal of the Korea Institute of Military Science and Technology, 2021, 24, 0.1 309-316.

#	Article	IF	CITATIONS
7471	Electron Delocalization and Structure Coupling Promoted π-Conjugated Charge Transport in a Novel [Ga-Tpy <sub>2</sub> ]PbI <sub>5</sub> Perovskite-like Single Crystal. Journal of Physical Chemistry Letters, 2021, 12, 5571-5579.	2.1	7
7472	Light Harvesting Using Biomimetic Micro-textured Transparent Films for Photovoltaic Applications. , 2021, 6, 775-785.		2
7473	Unintentional passivation of 4-tertbutyl pyridine for improved efficiency and decreased operational stability of perovskite solar cells. Applied Physics Letters, 2021, 118, .	1.5	10
7474	Li-based selenized Cu2ZnSnS4 surface: Possible route to overcoming <i>v</i> oc-deficit of kesterite solar cells. Applied Physics Letters, 2021, 118, .	1.5	5
7475	A unified description of non-radiative voltage losses in organic solar cells. Nature Energy, 2021, 6, 799-806.	19.8	235
7476	Improved UV Photodetection of Terbium-doped NiO thin films prepared by cost-effective nebulizer spray technique. Materials Science in Semiconductor Processing, 2021, 127, 105673.	1.9	26
7477	Quantization effects in semiconductor nanostructures and singlet fission in molecular chromophores for photovoltaics and solar fuels. Chemical Physics Reviews, 2021, 2, .	2.6	7
7478	Optimized Titanium Nitride Epitaxial Film for Refractory Plasmonics and Solar Energy Harvesting. Journal of Physical Chemistry C, 2021, 125, 13658-13665.	1.5	18
7479	lonic Liquid-Based Dye-Sensitized Solar Cells—Insights into Electrolyte and Redox Mediator Design. ACS Sustainable Chemistry and Engineering, 2021, 9, 8107-8114.	3.2	22
7480	Evaluation of CuInSe2 Materials and Solar Cells Co-evaporated at Different Rates Based on Real Time Spectroscopic Ellipsometry Calibrations. , 2021, , .		6
7481	Comparing optical performance of a wide range of perovskite/silicon tandem architectures under real-world conditions. , 2021, , .		0
7482	Synthesis and Characterisation of Hafnium Oxynitride Thin Film: Can It Be Used as a Hot Carrier Solar Cell Material?. , 2021, , .		1
7483	Understanding VOC and performance deficit in wide bandgap perovskite photovoltaic devices. Solar Energy Materials and Solar Cells, 2021, 225, 111015.	3.0	9
7484	Advances in Lead-Free Perovskite Single Crystals: Fundamentals and Applications. , 2021, 3, 1025-1080.		70
7485	Design of Low Bandgap CsPb <sub>1â^'</sub> <i><sub>x</sub></i> Sn <i><sub>x</sub></i> l <sub>2</sub> Br Perovskite Solar Cells with Excellent Phase Stability. Small, 2021, 17, e2101380.	5.2	42
7486	State of the Art and Prospects for Halide Perovskite Nanocrystals. ACS Nano, 2021, 15, 10775-10981.	7.3	705
7487	Free Charge Carriers in Homo-Sorted π-Stacks of Donor–Acceptor Conjugates. Chemical Reviews, 2021, 121, 8234-8284.	23.0	64
7488	Comparative analysis of machine learning approaches on the prediction of the electronic properties of perovskites: A case study of ABX3 and A2BB'X6. Materials Today Communications, 2021, 27, 102462.	0.9	11

#	Article	IF	Citations
7489	Monte Carlo simulation of a LSC based on stacked layers of fiber arrays with core-coating different absorbing properties. Optics Express, 2021, 29, 19566.	1.7	2
7490	Theoretical Study on Singlet Fission Dynamics in Slip-Stack-like Pentacene Ring-Shaped Aggregate Models. Journal of Physical Chemistry A, 2021, 125, 5585-5600.	1.1	2
7491	First-Principles Investigation into Hybrid Improper Ferroelectricity in Ruddlesden–Popper Perovskite Chalcogenides Sr3B2X7 (B = Ti, Zr, Hf; X = S, Se). Journal of Physical Chemistry C, 2021, 125, 13971-13983.	1.5	3
7492	Fabrication of Perovskite Solar Cells with Digital Control of Transparency by Inkjet Printing. ACS Applied Materials & Interfaces, 2021, 13, 30524-30532.	4.0	29
7493	Reduced material quality requirements for electronically coupled upconverters compared to intermediate band solar cells. , 2021, , .		0
7494	The impact of spectral variation on the thermodynamic limits to photovoltaic energy conversion. Solar Energy, 2021, 221, 131-139.	2.9	2
7495	Opto-electronic properties and solar cell efficiency modelling of Cu <sub>2</sub> ZnXS <sub>4</sub> (X = Sn, Ge, Si) kesterites. JPhys Energy, 2021, 3, 035005.	2.3	9
7496	What defines biomimetic and bioinspired science and engineering?. Pure and Applied Chemistry, 2021, 93, 1275-1292.	0.9	3
7497	Theory of exciton thermal radiation in semiconducting single-walled carbon nanotubes. Optics Letters, 2021, 46, 3021.	1.7	7
7498	Hot-carrier optoelectronic devices based on semiconductor nanowires. Applied Physics Reviews, 2021, 8, .	5.5	24
7500	Cross-linked hole transport layers for high-efficiency perovskite tandem solar cells. Science China Chemistry, 2021, 64, 2025-2034.	4.2	23
7501	A universal Urbach rule for disordered organic semiconductors. Nature Communications, 2021, 12, 3988.	5.8	78
7502	Ambient Air Temperature Assisted Crystallization for Inorganic CsPbI2Br Perovskite Solar Cells. Molecules, 2021, 26, 3398.	1.7	6
7503	Efficient Free Triplet Generation Follows Singlet Fission in Diketopyrrolopyrrole Polymorphs with Goldilocks Coupling. Journal of Physical Chemistry C, 2021, 125, 12207-12213.	1.5	14
7504	Monolithic perovskite-silicon tandem cells using molybdenum oxide hole selective contact silicon solar cells as bottom structures. , 2021, , .		0
7505	Assessment of a New Analytical Expression for the Maximum-Power Point Voltage with Series Resistance. , 2021, , .		0
7506	Effect of CdS and CdSe pre-treatment on interdiffusion with CdTe in CdS/CdTe and CdSe/CdTe heterostructures. Materials Science in Semiconductor Processing, 2021, 128, 105750.	1.9	11
7507	First-principles study of the stability, mechanical, electronic and optical properties of Cd0.75Hg0.25Se. Chemical Physics, 2021, 546, 111164.	0.9	3

		CITATION REPORT		
#	Article		IF	CITATIONS
7508	Low-bandgap Sn–Pb perovskite solar cells. Journal of Semiconductors, 2021, 42, 060	)202.	2.0	14
7509	Characterizations and Understanding of Additives Induced Passivation Effects in Narro Sn–Pb Alloyed Perovskite Solar Cells. Journal of Physical Chemistry C, 2021, 125, 12	w-Bandgap 560-12567.	1.5	6
7510	Selective area epitaxy of Ill–V nanostructure arrays and networks: Growth, applicatic directions. Applied Physics Reviews, 2021, 8, .	ns, and future	5.5	75
7511	Switchable photovoltaic response in hexagonal LuMnO3 single crystals. Applied Physic 118, .	s Letters, 2021,	1.5	8
7512	Spatial profiles of photon chemical potential in near-field thermophotovoltaic cells. Jou Applied Physics, 2021, 129, .	rnal of 0.784314 rg <mark>8T (Overlock</mark>	<b>1.1</b> 10 Tf 50 5	13 62 Td (xmln:
7513			2.5	4
7514	Today Energy, 2021, 20, 100689. On the Characteristics of Perovskite Structured BiFeO3-PbTiO3 Thin Films: Their Poten Multifunctional Photovoltaic Applications. Brazilian Journal of Physics, 2021, 51, 1215	tial to 1223.	0.7	5
7515	Optimizing the Selenization of Sb2Se3 Absorbers to Improve the Film Quality and Sola Performances. , 2021, , .	r Cell		0
7516	Photoluminescence Study of the MgxZn1-xO/CdSeyTe1-y Interface: The Effect of Oxide Resulting Band Alignment. , 2021, , .	e Bandgap and		0
7517	Evaluation of Damage Coefficient for Minority-Carrier Diffusion Length of Triple-Cation Solar Cells under 1 MeV Electron Irradiation for Space Applications. Journal of Physical 2021, 125, 13131-13137.	Perovskite Chemistry C,	1.5	12
7518	Optoelectronic Properties of Chalcogenide Perovskites by Many-Body Perturbation The Physical Chemistry Letters, 2021, 12, 5301-5307.	ory. Journal of	2.1	25
7519	Tolerance of Perovskite Solar Cells to Targeted Proton Irradiation and Electronic Ioniza Healing. ACS Energy Letters, 2021, 6, 2362-2368.	tion Induced	8.8	44
7520	A review on thermalization mechanisms and prospect absorber materials for the hot ca cells. Solar Energy Materials and Solar Cells, 2021, 225, 111073.	ırrier solar	3.0	27
7521	Introduction of a Novel Figure of Merit for the Assessment of Transparent Conductive Photovoltaics: Exact and Approximate Form. Advanced Energy Materials, 2021, 11, 21	Electrodes in 00875.	10.2	33
7522	Photoinduced Self-healing of Halide Segregation in Mixed-halide Perovskites. ACS Ener 6, 2502-2511.	gy Letters, 2021,	8.8	34
7523	Current Development toward Commercialization of Metalâ€Halide Perovskite Photovc Optical Materials, 2021, 9, 2100390.	ltaics. Advanced	3.6	15
7524	Reducing Nonâ€Radiative Voltage Losses by Methylation of Push–Pull Molecular Do Solar Cells. ChemSusChem, 2021, 14, 3622-3631.	nors in Organic	3.6	4
7525	Elimination of Charge Recombination Centers in Metal Halide Perovskites by Strain. Jou American Chemical Society, 2021, 143, 9982-9990.	ırnal of the	6.6	52

#	Article	IF	CITATIONS
7526	Exploring Exciton and Polaron Dominated Photophysical Phenomena in Ruddlesden–Popper Phases of Ba <sub><i>n</i>+1</sub> Zr <sub><i>n</i></sub> S <sub>3<i>n</i>+1</sub> ( <i>n</i> = 1–3) from Many Body Perturbation Theory. Journal of Physical Chemistry Letters, 2021, 12, 6698-6706.	2.1	7
7527	High carrier mobility and remarkable photovoltaic performance of two-dimensional Ruddlesden–Popper organic–inorganic metal halides (PA)2(MA)2M3I10 for perovskite solar cell applications. Materials Today, 2021, 47, 45-52.	8.3	12
7528	InSe/Te van der Waals Heterostructure as a High-Efficiency Solar Cell from Computational Screening. Materials, 2021, 14, 3768.	1.3	7
7529	How band tail recombination influences the open ircuit voltage of solar cells. Progress in Photovoltaics: Research and Applications, 2022, 30, 702-712.	4.4	35
7530	Subband-enhanced carrier multiplication in graphene nanoribbons. Physical Review B, 2021, 104, .	1.1	1
7531	Optimization of the optoelectronic properties of copper zinc tin sulfide thin films for solar photovoltaic applications. Physica Scripta, 0, , .	1.2	0
7532	Performance Investigation and Optimization of Perovskite/CIGS Tandem Solar Cell by Using SCAPS-1D Modeling and Simulation. , 2021, , .		0
7534	Screening of II-IV-V2 Materials for Photovoltaic Applications Based on Density Functional Theory Calculations. Crystals, 2021, 11, 883.	1.0	1
7535	Pathways toward 30% Efficient Singleâ€Junction Perovskite Solar Cells and the Role of Mobile Ions. Solar Rrl, 2021, 5, 2100219.	3.1	48
7536	Synthesis of superlattice heterostructure of germanium quantum dots in silicon spacer layers and its application in photovoltaic solar cells. Superlattices and Microstructures, 2021, 155, 106924.	1.4	2
7537	Electric field mapping in CdSeTe solar cell using 4D-STEM. Microscopy and Microanalysis, 2021, 27, 2196-2198.	0.2	0
7538	Structural and electrical characterization of Cu <sub>2</sub> ZnSnS <sub>4</sub> ingot material grown by melting method. Journal of Semiconductors, 2021, 42, 072701.	2.0	5
7539	Preparation and characterization of Cu2ZnSnS4 thin films with various compositions deposited by a dual thermal evaporation technique. Journal of Alloys and Compounds, 2021, 870, 159392.	2.8	4
7540	Methylamine Gas Treatment Affords Improving Semitransparency, Efficiency, and Stability of CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> â€Based Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100277.	3.1	11
7541	Effect of MoS2 interlayer on performances of copper-barium-tin-sulfur thin film solar cells via theoretical simulation. Solar Energy, 2021, 223, 384-397.	2.9	15
7542	The Vibrational and Thermodynamic Properties of CsPbI <sub>3</sub> Polymorphs: An Improved Description Based on the SCAN meta-GGA Functional. Journal of Physical Chemistry Letters, 2021, 12, 6613-6621.	2.1	24
7543	Comparative study of the CZTS, CuSbS2 and CuSbSe2 solar photovoltaic cell with an earth-abundant non-toxic buffer layer. Solar Energy, 2021, 222, 175-185.	2.9	44
7544	Hot-carrier radiative recombination through phonon confinement in silicon nanocrystals embedded in colloidal xerogel matrix. Journal of Applied Physics, 2021, 130, 033102.	1.1	1

#	Article	IF	CITATIONS
7545	Three-dimensional acetylenic modified graphene for high-performance optoelectronics and topological materials. Npj Computational Materials, 2021, 7, .	3.5	4
7546	Investigation of size and barrier dependent efficiency in InAs quantum dot solar cells. Materials Today: Proceedings, 2023, 80, 2602-2609.	0.9	2
7547	High-pressure behavior of disodered kesterite-type Cu2ZnSnS4. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	3
7548	Over 30% efficiency bifacial 4-terminal perovskite-heterojunction silicon tandem solar cells with spectral albedo. Scientific Reports, 2021, 11, 15524.	1.6	35
7549	Importance of Fine Control of Se Flux for Improving Performances of Sb <sub>2</sub> Se <sub>3</sub> Solar Cells Prepared by Vapor Transport Deposition. Solar Rrl, 2021, 5, 2100327.	3.1	14
7550	Triplet exciton formation for non-radiative voltage loss in high-efficiency nonfullerene organic solar cells. Joule, 2021, 5, 1832-1844.	11.7	98
7551	Co‣vaporated Formamidinium Lead Iodide Based Perovskites with 1000 h Constant Stability for Fully Textured Monolithic Perovskite/Silicon Tandem Solar Cells. Advanced Energy Materials, 2021, 11, 2101460.	10.2	102
7552	Performance Limitations of Wideâ€Gap (Ag,Cu)(In,Ga)Se <sub>2</sub> Thinâ€Film Solar Cells. Solar Rrl, 2021, 5, 2100403.	3.1	16
7553	Rapid fabrication and characterization of CuGaS2:Ti intermediate-band material by the solvothermal method. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	1
7554	Enhanced Photovoltaic Performance of BiSCl Solar Cells Through Nanorod Array. ChemSusChem, 2021, 14, 3351-3358.	3.6	11
7556	High-Performance Perovskite Betavoltaics Employing High-Crystallinity MAPbBr <sub>3</sub> Films. ACS Omega, 2021, 6, 20015-20025.	1.6	7
7557	Strong self-sensitized green and NIR emission in NaYS2 doped with Pr3+ and Yb3+ by inducing Laporte allowed and charge transfer transitions. Journal of Luminescence, 2021, 235, 118012.	1.5	9
7558	Characterizing the Back-Contact Interface of Poly-Crystalline Cd(Se)Te Devices with XEDS, EELS, and HRSTEM. Microscopy and Microanalysis, 2021, 27, 742-744.	0.2	0
7559	More Se Vacancies in Sb <sub>2</sub> Se <sub>3</sub> under Seâ€Rich Conditions: An Abnormal Behavior Induced by Defectâ€Correlation in Compensated Compound Semiconductors. Small, 2021, 17, e2102429.	5.2	32
7560	Comparing and Quantifying Indoor Performance of Organic Solar Cells. Advanced Energy Materials, 2021, 11, 2101474.	10.2	25
7561	Beyond the Limit of Goldschmidt Tolerance Factor: Crystal Surface Engineering to Boost the αâ€Phase Stability of Formamidiniumâ€Only Hybrid Inorganic–Organic Perovskites. Solar Rrl, 2021, 5, 2100188.	3.1	8
7562	The Berry phase rectification tensor and the solar rectification vector. Journal Physics D: Applied Physics, 2021, 54, 404001.	1.3	6
7563	Growth and structural characterization of Sb <sub>2</sub> Se <sub>3</sub> solar cells with vertical Sb <sub>4</sub> Se <sub>6</sub> ribbon alignment by RF magnetron sputtering. Journal Physics D: Applied Physics, 2021, 54, 385502.	1.3	11

#	Article	IF	CITATIONS
7564	Laser-assisted fabrication and modification of copper and zinc oxide nanostructures in liquids for photovoltaic applications. Applied Surface Science, 2021, 554, 149570.	3.1	16
7565	Spectral broadening of 1.0Âμm emission in Nd3+/Pr3+co-doped and Er3+/Nd3+/Pr3+ tri-doped zinc tellurite glass. Optical Materials, 2021, 117, 111140.	1.7	4
7566	Layered metal halide perovskite solar cells: A review from structureâ€properties perspective towards maximization of their performance and stability. EcoMat, 2021, 3, e12124.	6.8	27
7567	Kesterite Thinâ€Film Solar Cell: Role of Grain Boundaries and Defects in Copper–Zinc–Tin–Sulfide and Copper–Zinc–Tin–Selenide. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100039.	0.8	11
7568	Optical Properties on the Ferroelectric Perovskite Materials: a Study for Photovoltaic Applications. Brazilian Journal of Physics, 2021, 51, 1428-1437.	0.7	2
7569	Detailed balance analysis of advanced geometries for singlet fission solar cells. Applied Physics Letters, 2021, 119, 013301.	1.5	8
7570	Hotspots, frontiers, and emerging trends of tandem solar cell research: A comprehensive review. International Journal of Energy Research, 2022, 46, 104-123.	2.2	12
7571	Work Generation from Thermal Noise by Quantum Phase-Sensitive Observation. Physical Review Letters, 2021, 127, 040602.	2.9	7
7572	Submerged solar energy harvesting using ferroelectric Tiâ€doped <scp>BFO</scp> â€based heterojunction solar cells. International Journal of Energy Research, 2021, 45, 20400-20412.	2.2	6
7573	Boosting photoelectrochemical efficiency by near-infrared-active lattice-matched morphological heterojunctions. Nature Communications, 2021, 12, 4296.	5.8	23
7574	The Advantage of Nanowire Configuration in Band Structure Determination. Advanced Functional Materials, 2021, 31, 2105426.	7.8	4
7575	Opportunities from Doping of Non ritical Metal Oxides in Last Generation Light onversion Devices. Advanced Energy Materials, 2021, 11, 2101041.	10.2	29
7576	Interfacial Defects Change the Correlation between Photoluminescence, Ideality Factor, and Open ircuit Voltage in Perovskite Solar Cells. Small, 2021, 17, e2101839.	5.2	16
7577	The Role of Defects on the Performance of Quantum Dot Intermediate Band Solar Cells. IEEE Journal of Photovoltaics, 2021, 11, 1022-1031.	1.5	2
7578	DFT Study of Lead-Free Mixed-Halide Materials Cs2X2Y2 (X, Y = F, Cl, Br, I) for Optoelectronic Applications. Journal of Electronic Materials, 2021, 50, 5647-5655.	1.0	0
7579	Shockley-Queisser analysis of the temperature-efficiency correlation of solar cells in the presence of non-radiative heat transfer. Optics Express, 2021, 29, 27554.	1.7	5
7580	Theory of Graded-Bandgap Thin-Film Solar Cells. Synthesis Lectures on Electromagnetics, 2021, 2, 1-140.	0.5	1
7581	Slowing Hot-Electron Relaxation in Mix-Phase Nanowires for Hot-Carrier Photovoltaics. Nano Letters, 2021, 21, 7761-7768.	4.5	15

#	Article	IF	CITATIONS
7583	Correlation formulation for optimum tilt angle for maximizing the solar radiation on solar collector in the Western Himalayan region. Case Studies in Thermal Engineering, 2021, 26, 101185.	2.8	27
7584	Performance Analysis of a Single Junction Crystalline Solar Cell using 1D Drift Diffusion Modelling. , 2021, , .		0
7585	Polymerâ€Based Antiâ€Solvent Engineering to Fabricate Stable and Efficient Tripleâ€Cation Perovskite Solar Cells. ChemistrySelect, 2021, 6, 7254-7261.	0.7	14
7586	Multiple Heterojunction System of Boron Nitrideâ€Graphene/Black Phosphorene as Highly Efficient Solar Cell. Advanced Theory and Simulations, 2021, 4, 2100169.	1.3	10
7587	Electronic structure transition of cubic CsSnCl3 under pressure: effect of rPBE and PBEsol functionals and GW method. Heliyon, 2021, 7, e07796.	1.4	7
7588	Unique Curve for the Radiative Photovoltage Deficit Caused by the Urbach Tail. Journal of Physical Chemistry Letters, 2021, 12, 7840-7845.	2.1	9
7589	Bandgap Tuning in BaZrS <sub>3</sub> Perovskite Thin Films. ACS Applied Electronic Materials, 2021, 3, 3306-3312.	2.0	31
7590	Thiolâ€Amineâ€Based Solution Processing of Cu <sub>2</sub> S Thin Films for Photoelectrochemical Water Splitting. ChemSusChem, 2021, 14, 3967-3974.	3.6	10
7591	Practical PV energy harvesting under real indoor lighting conditions. Solar Energy, 2021, 224, 3-9.	2.9	11
7592	Effects of Scattering of Luminescent Down-Shifting Particles Inside Ethylene-Vinyl Acetate Films on Reflection of Light. Frontiers in Materials, 2021, 8, .	1.2	1
7594	Potential photovoltaic properties of thin film solar cells based on chemically deposited ZnO/PbSe junctions. Journal of Alloys and Compounds, 2021, 871, 159559.	2.8	9
7595	Drop-dry deposition of Co <sub>3</sub> O <sub>4</sub> and fabrication of heterojunction solar cells with electrochemically deposited ZnO. Semiconductor Science and Technology, 2021, 36, 095030.	1.0	3
7596	Photon Recycling in Semiconductor Thin Films and Devices. Advanced Science, 2021, 8, e2004076.	5.6	16
7597	Light Recycling Using Perovskite Solar Cells in a Halfâ€Cylinder Photonic Plate for an Energy Efficient Broadband Polarized Light Emission. Advanced Photonics Research, 2021, 2, 2100077.	1.7	2
7599	Compatible Acceptors Mediate Morphology and Charge Generation, Transpration, Extraction, and Energy Loss in Efficient Ternary Polymer Solar Cells. ACS Applied Energy Materials, 2021, 4, 10187-10196.	2.5	4
7600	Efficiency enhancement of CIGS solar cell by cubic silicon carbide as prospective buffer layer. Solar Energy, 2021, 224, 271-278.	2.9	28
7601	Enhance the performance of dye-sensitized solar cells by constructing upconversion-core/semiconductor-shell structured NaYF4:Yb,Er @BiOCl microprisms. Solar Energy, 2021, 224, 563-568.	2.9	16
7602	Slow carrier relaxation in tin-based perovskite nanocrystals. Nature Photonics, 2021, 15, 696-702.	15.6	40

#	Article	IF	CITATIONS
7603	Novel Polymerâ€Based Organic/câ€5i Monolithic Tandem Solar Cell: Enhanced Efficiency using Interlayer and Transparent Top Electrode Engineering. Macromolecular Rapid Communications, 2021, 42, 2100305.	2.0	4
7604	Control Perovskite Crystals Vertical Growth for Obtaining Highâ€Performance Monolithic Perovskite/Silicon Heterojunction Tandem Solar Cells with <i>V</i> <sub>OC</sub> of 1.93 V. Solar Rrl, 2021, 5, 2100357.	3.1	15
7605	Voltage boost effects in two-step photon upconversion solar cells with a modulation-doped structure. Journal of Applied Physics, 2021, 130, 085701.	1.1	2
7606	Surface-Tailored InP Nanowires via Self-Assembled Au Nanodots for Efficient and Stable Photoelectrochemical Hydrogen Evolution. Nano Letters, 2021, 21, 6967-6974.	4.5	13
7607	Exploring Multidimensional Chemical Spaces: Instrumentation and Chemical Systems for the Parallelization of Hydrogen Evolving Photocatalytic Reactions. Energy & Fuels, 2021, 35, 18957-18981.	2.5	9
7608	Rapid discovery of narrow bandgap oxide double perovskites using machine learning. Computational Materials Science, 2021, 196, 110528.	1.4	33
7609	Green and cool roof choices integrated into rooftop solar energy modelling. Applied Energy, 2021, 296, 117082.	5.1	21
7610	Comparison of co-operative down-conversion luminescence in Pr3+, Yb3+ doped CaF2 and SrF2. Optik, 2021, 240, 166814.	1.4	3
7611	Revealing Ultrafast Charge-Carrier Thermalization in Tin-Iodide Perovskites through Novel Pump–Push–Probe Terahertz Spectroscopy. ACS Photonics, 2021, 8, 2509-2518.	3.2	14
7612	Structural Properties and Electrical Characteristics of p-n Junctions Based on Kesterite Cu2ZnSnS4 Layers for Thin-Film Solar Cells. Energies, 2021, 14, 5182.	1.6	1
7613	Simulated development and optimized performance of narrow-bandgap CsSnI <sub>3</sub> -based all-inorganic perovskite solar cells. Journal Physics D: Applied Physics, 2021, 54, 465104.	1.3	6
7614	Annual energy yield of mono- and bifacial silicon heterojunction solar modules with high-index dielectric nanodisk arrays as anti-reflective and light trapping structures. Optics Express, 2021, 29, 34494.	1.7	1
7615	An effective Li-containing interfacial-treating strategy for performance enhancement of air-processed CZTSSe solar cells. Solar Energy Materials and Solar Cells, 2021, 227, 111102.	3.0	18
7616	First principle study of structural, mechanical, electronic and optical properties of K2TiX6 (X=Cl, Br,) Tj ETQq1 1	0.784314 1.5	rgBT /Overlo
7617	Hotâ€carrier solar cells and improved types using wideâ€bandgap energyâ€selective contacts. Progress in Photovoltaics: Research and Applications, 0, , .	4.4	6
7618	Efficiency enhancement of an updated solar-driven intermediate band thermoradiative device. Energy, 2021, 228, 120590.	4.5	10
7619	Growth and characterization of pure stannite Cu2MnSnS4 thin films deposited by dip-coating technique. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	6
7620	On the performance of concentrating fluid-based spectral-splitting hybrid PV-thermal (PV-T) solar collectors. Renewable Energy, 2021, 174, 590-605.	4.3	34

#	Article	IF	CITATIONS
7621	Influence of substrate temperature on the growth properties of Ag-doped SnS films deposited by sputtering method. Journal of Physics and Chemistry of Solids, 2021, 155, 110099.	1.9	7
7622	Impact of improvements in ZnO thin film solution process on ZnO/Cu2O solar cell performance. Superlattices and Microstructures, 2021, 156, 106948.	1.4	12
7623	Impact of Cation Substitution in (Ag <sub><i>x</i></sub> Cu <sub>1â^'<i>x</i></sub> ) <sub>2</sub> ZnSnSe <sub>4</sub> Absorberâ€Based Solar Cells toward 10% Efficiency: Experimental and Theoretical Analyses. Solar Rrl, 2021, 5, 2100441.	3.1	11
7624	Ferroelectric and photovoltaic properties of (Ba, Ca)(Ti, Sn, Zr)O3 perovskite ceramics. Ceramics International, 2021, 47, 23453-23462.	2.3	11
7625	Defect passivation and crystallization control of perovskite films for photovoltaic application. Materials Today Nano, 2021, 15, 100118.	2.3	9
7626	Cost-Effective High-Throughput Calculation Based on Hybrid Density Functional Theory: Application to Cubic, Double, and Vacancy-Ordered Halide Perovskites. Journal of Physical Chemistry Letters, 2021, 12, 7885-7891.	2.1	8
7627	Interfacial Charge Transfer and Photovoltaic Properties in C <sub>60</sub> /MoS <sub>2</sub> 0D–2D van der Waals Heterostructures. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100311.	1.2	9
7628	Optical simulations to inform the design of UV-absorbing organic materials and solar cells. Solar Energy Materials and Solar Cells, 2021, 227, 111114.	3.0	4
7629	Bi-ferrocene based molecular rectifier for nano-patch rectenna device. , 2021, , .		0
7630	Charge transfer enhancement of TiO2/perovskite interface in perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2021, 32, 22936-22943.	1.1	6
7631	Role of Structural Phases and Octahedra Distortions in the Optoelectronic and Excitonic Properties of CsGeX <sub>3</sub> (X = Cl, Br, I) Perovskites. Journal of Physical Chemistry C, 2021, 125, 19142-19155.	1.5	26
7632	Electronic and Optical Properties of C4N2H14-Based Lead-Less Halide Perovskites Investigated by First Principles. Journal of Physical Chemistry C, 2021, 125, 19445-19454.	1.5	Ο
7633	Insights and future perspectives for constructing efficient electron pathways in photoanodes of QDSSCs. Solar Energy, 2021, 224, 650-665.	2.9	9
7634	Bifacial Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Thin Film Solar Cell Based on Molecular Ink and Rapid Thermal Processing. Advanced Materials Interfaces, 2021, 8, 2100971.	1.9	6
7635	Computational discovery of energy materials in the era of big data and machine learning: A critical review. Materials Reports Energy, 2021, 1, 100047.	1.7	24
7636	High-performance photonic transformers for DC voltage conversion. Nature Communications, 2021, 12, 4684. First-principles study of the quasi-one-dimensional organic-inorganic hybrid perovskites communath	5.8	11
7697	xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mml:mrow><mml:mrow><mml:mo>(</mml:mo><mml: mathvariant="normal"&gt;I<mml:mn>3</mml:mn><mml:msub><mml:mi>Cl</mml:mi><m< td=""><td>mi&gt;MVml:mn&gt;2&lt;</td><td>nml:mi&gt;<mml: /mml:mn&gt;</mml: </td></m<></mml:msub></mml: </mml:mrow></mml:mrow>	mi>MVml:mn>2<	nml:mi> <mml: /mml:mn&gt;</mml: 

#	Article	IF	CITATIONS
7639	Optimum matching of photovoltaic–thermophotovoltaic cells efficiently utilizing full-spectrum solar energy. Renewable Energy, 2021, 173, 942-952.	4.3	25
7640	Effect of annealing treatment and ICL in the improvement of OSC properties based on MEH-PPV:PC70BM and P3HT:PC70BM sub-cells. Bulletin of Materials Science, 2021, 44, 1.	0.8	1
7641	Unlocking Higher Power Efficiencies in Luminescent Solar Concentrators through Anisotropic Luminophore Emission. ACS Applied Materials & Interfaces, 2021, 13, 40742-40753.	4.0	8
7642	Enhance efficiency in flat and nano roughness surface perovskite solar cells with the use of index near zero materials filter. Optical and Quantum Electronics, 2021, 53, 1.	1.5	2
7643	A tin-based perovskite solar cell with an inverted hole-free transport layer to achieve high energy conversion efficiency by SCAPS device simulation. Optical and Quantum Electronics, 2021, 53, 1.	1.5	25
7644	Efficiency enhancement of Sb2Se3 solar cells based on electron beam evaporation CdS film with variable deposition temperature. Solar Energy, 2021, 224, 875-882.	2.9	10
7645	Investigation of temperature coefficients of PV modules through field measured data. Solar Energy, 2021, 224, 425-439.	2.9	32
7646	Beyond 3rd generation solar cells and the full spectrum project. Recent advances and new emerging solar cells. Sustainable Energy Technologies and Assessments, 2021, 46, 101287.	1.7	16
7647	Middle Cell Development for Wafer-Bonded III-V//Si Tandem Solar Cells. IEEE Journal of Photovoltaics, 2021, 11, 1264-1270.	1.5	4
7648	Effect of sulfur precursors on structural, optical, and electrical properties of Cu2SnS3 nanoparticles. Journal of Nanoparticle Research, 2021, 23, 1.	0.8	0
7649	Inorganic–organic interfaces in hybrid solar cells. Electronic Structure, 2021, 3, 033002.	1.0	20
7649 7650	Inorganic–organic interfaces in hybrid solar cells. Electronic Structure, 2021, 3, 033002. Progress of Pbâ€&n Mixed Perovskites for Photovoltaics: AÂReview. Energy and Environmental Materials, 2022, 5, 370-400.	1.0 7.3	20 20
7649 7650 7651	Inorganic–organic interfaces in hybrid solar cells. Electronic Structure, 2021, 3, 033002.         Progress of Pbâ€6n Mixed Perovskites for Photovoltaics: AÂReview. Energy and Environmental Materials, 2022, 5, 370-400.         Light-Driven Extremely Nonlinear Bulk Photogalvanic Currents. Physical Review Letters, 2021, 127, 126601.	1.0 7.3 2.9	20 20 25
7649 7650 7651 7652	Inorganic–organic interfaces in hybrid solar cells. Electronic Structure, 2021, 3, 033002.         Progress of Pb‣n Mixed Perovskites for Photovoltaics: AÂReview. Energy and Environmental Materials, 2022, 5, 370-400.         Light-Driven Extremely Nonlinear Bulk Photogalvanic Currents. Physical Review Letters, 2021, 127, 126601.         Advances in upconversion enhanced solar cell performance. Solar Energy Materials and Solar Cells, 2021, 230, 111234.	1.0 7.3 2.9 3.0	20 20 25 45
7649 7650 7651 7652 7653	Inorganic–organic interfaces in hybrid solar cells. Electronic Structure, 2021, 3, 033002.         Progress of Pb‧n Mixed Perovskites for Photovoltaics: AÂReview. Energy and Environmental Materials, 2022, 5, 370-400.         Light-Driven Extremely Nonlinear Bulk Photogalvanic Currents. Physical Review Letters, 2021, 127, 126601.         Advances in upconversion enhanced solar cell performance. Solar Energy Materials and Solar Cells, 2021, 230, 111234.         HTL-Free Sb <sub>2</sub> (S, Se) <sub>3</sub> Solar Cells with an Optimal Detailed Balance Band Gap. ACS Applied Materials & amp; Interfaces, 2021, 13, 46858-46865.	1.0 7.3 2.9 3.0 4.0	20 20 25 45 33
7649 7650 7651 7652 7653	Inorganic–organic interfaces in hybrid solar cells. Electronic Structure, 2021, 3, 033002.         Progress of Pb‣n Mixed Perovskites for Photovoltaics: AÂReview. Energy and Environmental Materials, 2022, 5, 370-400.         Light-Driven Extremely Nonlinear Bulk Photogalvanic Currents. Physical Review Letters, 2021, 127, 126601.         Advances in upconversion enhanced solar cell performance. Solar Energy Materials and Solar Cells, 2021, 230, 111234.         HTL-Free Sb <sub>2</sub> (S, Se) <sub>3</sub> Solar Cells with an Optimal Detailed Balance Band Gap. ACS Applied Materials & amp; Interfaces, 2021, 13, 46858-46865.         Interface engineering of p-n heterojunction for kesterite photovoltaics: A progress review. Journal of Energy Chemistry, 2021, 60, 1-8.	1.0 7.3 2.9 3.0 4.0 7.1	20 20 25 45 33
7649 7650 7651 7653 7653	Inorganic–organic interfaces in hybrid solar cells. Electronic Structure, 2021, 3, 033002.         Progress of Pb‣n Mixed Perovskites for Photovoltaics: AÂReview. Energy and Environmental Materials, 2022, 5, 370-400.         Light-Driven Extremely Nonlinear Bulk Photogalvanic Currents. Physical Review Letters, 2021, 127, 126601.         Advances in upconversion enhanced solar cell performance. Solar Energy Materials and Solar Cells, 2021, 230, 111234.         HTL-Free Sb <sub>2</sub> (S, Se) <sub>3</sub> Solar Cells with an Optimal Detailed Balance Band Gap. ACS Applied Materials & amp; Interfaces, 2021, 13, 46858-46865.         Interface engineering of p-n heterojunction for kesterite photovoltaics: A progress review. Journal of Energy Chemistry, 2021, 60, 1-8.         Selenium Thin-Film Solar Cells with Cadmium Sulfide as a Heterojunction Partner. ACS Applied Energy Materials, 2021, 4, 10697-10702.	1.0 7.3 2.9 3.0 4.0 7.1 2.5	20 20 25 45 33 31

#	Article	IF	CITATIONS
7657	Performance modelling of photovoltaic modules under actual operating conditions considering loss mechanism and energy distribution. Applied Energy, 2021, 298, 117205.	5.1	16
7658	CZTS nanoparticles as an effective hole-transport layer for Sb2Se3 thin-film solar cells. Solar Energy, 2021, 226, 154-160.	2.9	10
7659	Regio-regular poly(thienylene vinylene)s (rr-PTVs) through acyclic diene metathesis (ADMET) polymerization and the impact of alkyl side-chains on polymer molecular weight and solubility. Polymer, 2021, 231, 124150.	1.8	1
7660	Illumination Intensity Dependence of the Recombination Mechanism in Mixed Perovskite Solar Cells. ChemPlusChem, 2021, 86, 1347-1356.	1.3	15
7661	In <sub>2</sub> O <sub>3</sub> :H-Based Hole-Transport-Layer-Free Tin/Lead Perovskite Solar Cells for Efficient Four-Terminal All-Perovskite Tandem Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 46488-46498.	4.0	20
7662	Reduced Recombination Losses in Evaporated Perovskite Solar Cells by Postfabrication Treatment. Solar Rrl, 2021, 5, 2100400.	3.1	5
7663	Analysis of temperature coefficients and their effect on efficiency of solar cell modules for photovoltaics-powered vehicles. Journal Physics D: Applied Physics, 2021, 54, 504002.	1.3	9
7664	The Mystery behind Dynamic Charge Disproportionation in BaBiO <sub>3</sub> . Nano Letters, 2021, 21, 8433-8438.	4.5	7
7665	A new protocol for the identification of singlet fission sensitizers through computational screening. Journal of Computational Chemistry, 2021, 42, 2241-2249.	1.5	5
7666	An n-ZnO/i-MoS2/p-Si heterojunction solar cell with an enhanced photoswitching response. Journal of Computational Electronics, 2021, 20, 1851-1859.	1.3	1
7667	Application of upconversion photoluminescent materials in perovskite solar cells: opportunities and challenges. Materials Today Energy, 2021, 21, 100740.	2.5	5
7668	Defects in CsPbX <sub>3</sub> Perovskite: From Understanding to Effective Manipulation for Highâ€Performance Solar Cells. Small Methods, 2021, 5, e2100725.	4.6	37
7669	Theoretical DFT studies of Cu2HgSnS4 absorber material and Al:ZnO/ZnO/CdS/Cu2HgSnS4/Back contact heterojunction solar cell. Solar Energy, 2021, 225, 802-813.	2.9	18
7670	Organic-quantum dot hybrid interfaces and their role in photon fission/fusion applications. Chemical Physics Reviews, 2021, 2, 031305.	2.6	17
7671	High short-circuit current density in a non-toxic Bi2S3 quantum dot sensitized solar cell. Materials Today Energy, 2021, 21, 100783.	2.5	7
7672	A carbazole-based dopant-free hole-transport material for perovskite solar cells by increasing the molecular conjugation. Organic Electronics, 2021, 96, 106244.	1.4	2
7673	There is plenty of room at the top: generation of hot charge carriers and their applications in perovskite and other semiconductor-based optoelectronic devices. Light: Science and Applications, 2021, 10, 174.	7.7	32
7674	A Study on the Effects of Selenization Temperature on the Properties of Na-Doped Cu2ZnSn(S,Se)4 Thin Film and Its Correlation with the Performance of Solar Cells. Nanomaterials, 2021, 11, 2434.	1.9	0

#	Article	IF	Citations
7675	Advanced Laser Processing towards Solar Cells Fabrication. , 0, , .		1
7676	Surface-Functionalized Boron Arsenide as a Photocathode for CO2 Reduction. Journal of Physical Chemistry C, 0, , .	1.5	0
7677	Strategies and methods for fabricating high quality metal halide perovskite thin films for solar cells. Journal of Energy Chemistry, 2021, 60, 300-333.	7.1	31
7678	Cu2ZnSnS4 as a hole-transport layer in triple-cation perovskite solar cells: Current density versus layer thickness. Ceramics International, 2022, 48, 711-719.	2.3	3
7679	Moltenâ€Saltâ€Assisted CsPbI <sub>3</sub> Perovskite Crystallization for Nearly 20%â€Efficiency Solar Cells. Advanced Materials, 2021, 33, e2103770.	11.1	81
7680	Scalable Preparation of Highâ€₽erformance ZnO–SnO <sub>2</sub> Cascaded Electron Transport Layer for Efficient Perovskite Solar Modules. Solar Rrl, 2022, 6, 2100639.	3.1	13
7681	Optimizing the Ratio of Sn <sup>4+</sup> and Sn <sup>2+</sup> in Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Precursor Solution via Air Environment for Highly Efficient Solar Cells. Solar Rrl, 2021, 5, 2100574.	3.1	21
7682	Common Defects Accelerate Charge Carrier Recombination in CsSnl <sub>3</sub> without Creating Mid-Gap States. Journal of Physical Chemistry Letters, 2021, 12, 8699-8705.	2.1	31
7683	Air fabrication of SnO2 based planar perovskite solar cells with an efficiency approaching 20%: Synergistic passivation of multi-defects by choline chloride. Ceramics International, 2022, 48, 212-223.	2.3	6
7684	Radiation stability of mixed tin–lead halide perovskites: Implications for space applications. Solar Energy Materials and Solar Cells, 2021, 230, 111232.	3.0	15
7685	Bulk Metal Halide Perovskites as Triplet Sensitizers: Taking Charge of Upconversion. ACS Energy Letters, 2021, 6, 3686-3694.	8.8	33
7686	Efficient Singlet Fission in Loose Packing Benzodipyrrolidone Thin Films. Journal of Physical Chemistry C, 2021, 125, 22093-22099.	1.5	5
7687	Cost-Effective Hybrid Density Functional Theory Calculation of Three-Dimensional Band Structure and Search of Band Edge Positions. Journal of Physical Chemistry A, 2021, 125, 8514-8518.	1.1	5
7688	Nanomaterials: Applications in Electronics. International Journal of Advanced Engineering and Nano Technology, 2021, 4, 7-19.	0.4	2
7689	Designing hole conductor free tin–lead halide based all-perovskite heterojunction solar cell by numerical simulation. Journal of Physics and Chemistry of Solids, 2021, 156, 110168.	1.9	20
7690	Predominant Range of Serial Resistance and Recombination Velocity at Different Concentration Levels: Vertical Multijunction Cell. Silicon, 0, , 1.	1.8	0
7691	MSELD SnS1â~'xSex alloy thin films towards efficient structural and bandgap engineering for photonic devices. Journal of Materials Research, 2021, 36, 3506-3518.	1.2	3
7692	Classifiying advanced concepts to assess device requirements for high efficiency solar cells. , 2021, , . 		0

#	Article	IF	CITATIONS
7693	A review on the integration of radiative cooling and solar energy harvesting. Materials Today Energy, 2021, 21, 100776.	2.5	39
7694	Synthesis, characterization, crystal structure prediction, and ab initio study of bandgap of Cu3VSe4. Journal of Solid State Chemistry, 2021, 301, 122336.	1.4	3
7695	Role of defects in organic–inorganic metal halide perovskite: detection and remediation for solar cell applications. Emergent Materials, 2022, 5, 987-1020.	3.2	10
7696	Recent advances of organometallic complexes in emerging photovoltaics. Journal of Polymer Science, 2022, 60, 865-916.	2.0	23
7697	Enhancing the Photovoltaic Performance of Triplet Acceptors Enabled by Sideâ€Chain Engineering. Solar Rrl, 2021, 5, 2100522.	3.1	12
7698	Direct band gap halide-double-perovskite absorbers for solar cells and light emitting diodes: <i>Ab initio</i> study of bulk and layers. Physical Review Materials, 2021, 5, .	0.9	6
7699	Uncertainty quantification in deterministic parameterization of single diode model of a silicon solar cell. Optimization and Engineering, 2021, 22, 2429-2456.	1.3	5
7700	Current Status and Challenges of Solar Cells Based on Semiconductor Nanocrystals. Energy & Fuels, 2021, 35, 18928-18941.	2.5	12
7701	Improved Nanophotonic Front Contact Design for Highâ€Performance Perovskite Singleâ€Junction and Perovskite/Perovskite Tandem Solar Cells. Solar Rrl, 2021, 5, 2100509.	3.1	23
7702	Boosting Long-Term Stability of Pure Formamidinium Perovskite Solar Cells by Ambient Air Additive Assisted Fabrication. ACS Energy Letters, 2021, 6, 3511-3521.	8.8	56
7703	Spectral conversion by silicon nanocrystal dispersed gel glass: efficiency enhancement of silicon solar cell. Journal Physics D: Applied Physics, 2022, 55, 025106.	1.3	6
7704	A proposal to enhance SnS solar cell efficiency: the incorporation of SnSSe nanostructures. Journal Physics D: Applied Physics, 2021, 54, 505501.	1.3	3
7705	Recent progress on all-inorganic metal halide perovskite solar cells. Materials Today Nano, 2021, 16, 100143.	2.3	13
7706	The superatomic state beyond conventional magic numbers: Ligated metal chalcogenide superatoms. Journal of Chemical Physics, 2021, 155, 120901.	1.2	9
7707	The role of charge recombination to triplet excitons in organic solar cells. Nature, 2021, 597, 666-671.	13.7	225
7708	Stability Issues of Perovskite Solar Cells: A Critical Review. Energy Technology, 2021, 9, 2100560.	1.8	31
7709	How photoluminescence can predict the efficiency of solar cells. JPhys Materials, 2021, 4, 042010.	1.8	22
7710	Replacing the Electron-Hole Transport Layer by Doping: Optimization of Tin-Based Perovskite Solar Cells from a Simulation Perspective. ECS Journal of Solid State Science and Technology, 2021, 10, 105002	0.9	4

#	Article	IF	CITATIONS
7711	Inorganic perovskites improved film and crystal quality of CsPbIBr2 when doped with rubidium. Journal of Materials Science: Materials in Electronics, 2021, 32, 24825-24833.	1.1	7
7712	Regulating the Surface Passivation and Residual Strain in Pure Tin Perovskite Films. ACS Energy Letters, 2021, 6, 3555-3562.	8.8	45
7713	Efficient inclined core-shell nanowire solar cells. Optik, 2021, 248, 167974.	1.4	3
7714	Highly efficient Cu2ZnSn(S,Se)4 bifacial solar cell via a composition gradient strategy through the molecular ink. Science China Materials, 2022, 65, 612-619.	3.5	7
7715	Future of photovoltaic technologies: A comprehensive review. Sustainable Energy Technologies and Assessments, 2021, 47, 101410.	1.7	28
7716	Impermeable inorganic "walls―sandwiching perovskite layer toward inverted and indoor photovoltaic devices. Nano Energy, 2021, 88, 106286.	8.2	19
7717	Impact of in/ex situ annealing and reaction temperature on structural, optical and electrical properties of SnS thin films. Journal of Molecular Structure, 2021, 1241, 130631.	1.8	9
7718	Rooftop solar for all: Closing the gap between the technically possible and the achievable. Energy Research and Social Science, 2021, 80, 102203.	3.0	12
7719	On the spectral response of interdiffused quantum dot ensembles embedded in the intrinsic region of InGaAs/GaAs quantum dot solar cells. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 134, 114810.	1.3	1
7720	Modeling and simulation of bifacial perovskite/PERT-silicon tandem solar cells. Solar Energy, 2021, 227, 292-302.	2.9	7
7721	Performance evaluation for the dielectric asymmetric compound parabolic concentrator with almost unity angular acceptance efficiency. Energy, 2021, 233, 121065.	4.5	6
7722	Stability of mixed-halide wide bandgap perovskite solar cells: Strategies and progress. Journal of Energy Chemistry, 2021, 61, 395-415.	7.1	34
7723	Practical development of efficient thermoelectric – Photovoltaic hybrid systems based on wide-gap solar cells. Applied Energy, 2021, 300, 117343.	5.1	37
7724	Ultraviolet to near infrared down-conversion in CaF2:Nd3+/Yb3+/Li+ phosphors. Journal of Luminescence, 2021, 238, 118241.	1.5	7
7725	Computational design of passivants for CdTe grain boundaries. Solar Energy Materials and Solar Cells, 2021, 232, 111279.	3.0	2
7726	Loss mechanisms in CZTS and CZTSe Kesterite thin-film solar cells: Understanding the complexity of defect density. Solar Energy, 2021, 227, 56-66.	2.9	39
7727	Optimizing photovoltaic conversion of solar energy. AIP Advances, 2021, 11, .	0.6	6
7728	High-efficiency ultra-thin Cu2ZnSnS4 solar cells by double-pressure sputtering with spark plasma sintered quaternary target. Journal of Energy Chemistry, 2021, 61, 186-194.	7.1	20

#	Article	IF	CITATIONS
7729	rGO@CuSCN bilayer as composite back contact for highly efficient CdTe thin-film solar cells. Optical Materials, 2021, 120, 111421.	1.7	6
7730	Numerical study of a high‑performance thin film CIGS solar cell with a-Si and MoTe2 hole transport layer. Optik, 2021, 243, 167498.	1.4	32
7731	A study on the influence of the albedo spectrum on the bifacial GaAs/c-Si heterojunction tandem solar cell using computer modelling. Solar Energy, 2021, 227, 490-496.	2.9	3
7732	Preparing Cu2ZnSn(SxSe1a^'x)4 thin-film solar cells with front band gap grading by plasma sulfurization. Solar Energy, 2021, 227, 516-524.	2.9	7
7733	Revealing the influence of steric bulk on the triplet–triplet annihilation upconversion performance of conjugated polymers. Scientific Reports, 2021, 11, 19585.	1.6	2
7734	Application of Triplet–Triplet Annihilation Upconversion in Organic Optoelectronic Devices: Advances and Perspectives. Advanced Materials, 2021, 33, e2100704.	11.1	72
7735	Design guidelines for a highly efficient high-purity germanium (HPGe)-based double-heterojunction solar cell. Optics and Laser Technology, 2021, 143, 107306.	2.2	30
7736	Ternary alloyed CdS1â^'xSex quantum dots on TiO2/ZnS electrodes for quantum dots-sensitized solar cells. Journal of Alloys and Compounds, 2021, 880, 160480.	2.8	11
7737	Energy management in hybrid organic-silicon nanostructured solar cells by downshifting using CdZnS/ZnS and CdZnSe/ZnS quantum dots. Nano Energy, 2021, 89, 106470.	8.2	16
7738	Intense sulphurization process can lead to superior heterojunction properties in Cu(In,Ga)(S,Se)2 thin-film solar cells. Nano Energy, 2021, 89, 106375.	8.2	5
7739	Novel design of reactor to grow CuSbS2 films by chalcogenisation of metal precursors sequentially evaporated. Journal of Materials Research and Technology, 2021, 15, 1642-1652.	2.6	1
7740	First-principle calculations to investigate structural, electronic and optical properties of MgHfS3. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 273, 115405.	1.7	4
7741	A promising all-inorganic double perovskite Rb2TiBr6 for photovoltaic applications: Insight from first-principles calculations. Journal of Solid State Chemistry, 2021, 303, 122473.	1.4	10
7742	Effect of novel double treatment on the properties of CdTe solar cells. Energy Reports, 2021, 7, 1396-1403.	2.5	8
7743	Additive effect of bromides and chlorides on the performance of perovskite solar cells fabricated via sequential deposition. Journal of Power Sources, 2021, 513, 230528.	4.0	4
7744	Structural, optoelectronic, optical coating and thermoelectric properties of the chalcogenides type Kesterite Ag2CdSnX4 (with X=S, Se): A computational insight. Materials Science in Semiconductor Processing, 2021, 134, 106031.	1.9	6
7745	A novel spectrum allocation method in the photovoltaic-thermochemical hybrid solar system. Journal of Power Sources, 2021, 513, 230541.	4.0	9
7746	Optical management of spacer layer of high-performance four-terminal perovskite/silicon tandem solar cells. Solar Energy, 2021, 228, 226-234.	2.9	6

#	Article	IF	CITATIONS
7747	Structural transformation and transport behavior of mixed valence compound Sn3O4 under high pressure. Journal of Alloys and Compounds, 2021, 886, 161197.	2.8	1
7748	Non-destructive determination of phase, size, and strain of individual grains in polycrystalline photovoltaic materials. Journal of Alloys and Compounds, 2021, 887, 161364.	2.8	3
7749	Prediction of optoelectronic features and efficiency for CuMX2 (M=Ga, In; X=S, Se) semiconductors using mbj+U approximation. Current Applied Physics, 2021, 32, 11-23.	1.1	1
7750	Fe-doped CuGaS2 (CuGa1-xFexS2) - Detailed analysis of the intermediate band optical response of chalcopyrite thin films based on first principle calculations and experimental studies. Materials Science in Semiconductor Processing, 2021, 136, 106133.	1.9	11
7751	Test of a spectral splitting prototype hybridizing photovoltaic and solar syngas power generation. Applied Energy, 2021, 304, 117779.	5.1	13
7752	Theoretical investigation of Cs2InBiX6 (XÂ=ÂCl, Br, I) double perovskite halides using first-principle calculations. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 274, 115456.	1.7	40
7753	Exploring the electronic and optical properties of vacancy-ordered double perovskites Cs2PtX6 (X =) Tj ETQq0 0	0 rgBT /Ον £4	erlock 10 Tf 10
7754	Hard x-ray photoelectron spectroscopy at a soft x-ray source: Present and future perspectives of hard x-ray photoelectron spectroscopy at BESSY II. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	1
7755	Pulsed laser deposited and sulfurized Cu2ZnSnS4 thin film for efficient solar cell. Solar Energy Materials and Solar Cells, 2021, 233, 111383.	3.0	11
7756	Screening for lead-free inorganic double perovskites with suitable band gaps and high stability using combined machine learning and DFT calculation. Applied Surface Science, 2021, 568, 150916.	3.1	38
7757	Preparation of CZTS thin films for the fabrication of ZnO nanorods based superstrate solar cells. Journal of Alloys and Compounds, 2021, 884, 161124.	2.8	8
7758	Epitaxial growth of CIGSe layers on GaP/Si(001) pseudo-substrate for tandem CIGSe/Si solar cells. Solar Energy Materials and Solar Cells, 2021, 233, 111385.	3.0	3
7759	Impact of stacking order and annealing temperature on properties of CZTS thin films and solar cell performance. Renewable Energy, 2021, 179, 1865-1874.	4.3	20
7760	Photovoltaic Converters. , 2022, , 629-718.		0
7761	Stability of Sn-Pb mixed organic–inorganic halide perovskite solar cells: Progress, challenges, and perspectives. Journal of Energy Chemistry, 2022, 65, 371-404.	7.1	36
7762	All inorganic lead free solar cell material Cs2PdI6: a first-principles study. Applied Physics Express, 2021, 14, 021005.	1.1	3
7763	Light management studies by using different surface texturing for thin c-Si solar cells. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	3
7764	Study of structural, optical and morphological properties of ZnO/ZnS hetrostructures deposited by spray pyrolysis method. Optical and Quantum Electronics, 2021, 53, 1.	1.5	6

#	Article	IF	CITATIONS
7765	Progress in Development of CZTS for Solar Photovoltaics Applications. , 2022, , 681-698.		2
7766	Hidden spontaneous polarisation in the chalcohalide photovoltaic absorber Sn <sub>2</sub> SbS <sub>2</sub> I <sub>3</sub> . Materials Horizons, 2021, 8, 2709-2716.	6.4	24
7767	SIn <sub>2</sub> Te/TeIn <sub>2</sub> Se: a type-II heterojunction as a water-splitting photocatalyst with high solar energy harvesting. Journal of Materials Chemistry C, 2021, 9, 7734-7744.	2.7	10
7768	Energy Transfer between Anthracene-9-carboxylic Acid Ligands and CsPbBr <sub>3</sub> and CsPbl <sub>3</sub> Nanocrystals. Journal of Physical Chemistry C, 2021, 125, 1447-1453.	1.5	11
7769	Lower limits for non-radiative recombination loss in organic donor/acceptor complexes. Materials Horizons, 2022, 9, 325-333.	6.4	12
7770	Optical Properties of Solar Absorber Materials and Structures. Topics in Applied Physics, 2021, , 1-165.	0.4	2
7771	Palliating the efficiency loss due to shunting in perovskite/silicon tandem solar cells through modifying the resistive properties of the recombination junction. Sustainable Energy and Fuels, 2021, 5, 2036-2045.	2.5	10
7773	Vertically aligned Co 3 O 4 nanorods as a platform for inverted allâ€oxide heterojunctions. Nano Select, 2021, 2, 967-978.	1.9	3
7774	Wide-bandgap organic–inorganic hybrid and all-inorganic perovskite solar cells and their application in all-perovskite tandem solar cells. Energy and Environmental Science, 2021, 14, 5723-5759.	15.6	114
7775	Recent advances and challenges of inverted lead-free tin-based perovskite solar cells. Energy and Environmental Science, 0, , .	15.6	62
7776	17.25% high efficiency ternary solar cells with increased open-circuit voltage using a high HOMO level small molecule guest donor in a PM6:Y6 blend. Journal of Materials Chemistry A, 2021, 9, 20493-20501.	5.2	24
7777	Down-Shifting of the Incident Light for Photovoltaic Applications. , 2021, , 534-534.		7
7778	High-throughput computational search for high carrier lifetime, defect-tolerant solar absorbers. Energy and Environmental Science, 2021, 14, 5057-5073.	15.6	23
7779	Mixed lead–tin perovskite films with >7 μs charge carrier lifetimes realized by maltol post-treatment. Chemical Science, 2021, 12, 13513-13519.	3.7	36
7780	Electrolytes, Dyes, and Perovskite Materials in Third Generation Photovoltaic Cells. , 2022, , 621-634.		7
7781	Chalcogenides-based nanomaterials for solar cells and dye sensitized solar cells. , 2021, , 185-218.		0
7782	High efficiency Cu <sub>2</sub> ZnSnS <sub>4</sub> solar cells over FTO substrates and their CZTS/CdS interface passivation <i>via</i> thermal evaporation of Al <sub>2</sub> O <sub>3</sub> . Journal of Materials Chemistry C, 2021, 9, 5356-5361.	2.7	10
7783	Machine Learning Accelerated Insights of Perovskite Materials. Springer Series in Materials Science, 2021, , 197-223.	0.4	0

	Сітат	CITATION REPORT	
#	Article	IF	Citations
7784	Chalcogenide compounds for solar cells. , 2021, , 245-270.		2
7785	Applications of quantum dots in batteries. , 2021, , 287-318.		1
7786	Energy for rural development. , 2021, , 181-222.		0
7787	Recent progress toward highly efficient tinâ€based perovskite (ASnX3) solar cells. Nano Select, 2021, 2, 1023-1054.	1.9	11
7788	Wasted photons: photogeneration yield and charge carrier collection efficiency of hematite photoanodes for photoelectrochemical water splitting. Energy and Environmental Science, 2021, 14, 4584-4598.	15.6	22
7789	Numerical Investigation of an InGaP/GaAs Heterojunction Solar Cell by AMPS-1D. Springer Proceedings in Energy, 2021, , 183-191.	0.2	0
7790	New insights on the substantially reduced bandgap of bismuth layered perovskite oxide thin films. Journal of Materials Chemistry C, 2021, 9, 3161-3170.	2.7	9
7791	Effect of post-annealing on the significant photoresponsivity enhancement of BaSi <sub>2</sub> epitaxial films on Si(111). Applied Physics Express, 2021, 14, 021003.	1.1	8
7792	Thermophotovoltaic Cells: Electrical Power Generation at Night. Algorithms for Intelligent Systems, 2021, , 105-109.	0.5	0
7793	Data-driven analysis of the rotational energy landscapes of an organic cation in a substituted alloy perovskite. Materials Advances, 2021, 2, 2366-2372.	2.6	0
7794	Perovskite/silicon heterojunction tandem solar cells: Advances in optical simulation. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 057802-057802.	0.2	1
7795	Enhanced Near-Infrared Luminescence in Ba <sub>3</sub> Y(BO <sub>3</sub> ) <sub>3</sub> : Nd <sup>3+</sup> by Codoping with Ce <sup>3+</sup> . ECS Journal of Solid State Science and Technology, 2021, 10, 016004.	0.9	4
7796	Nesting-like band gap in bismuth sulfide Bi <sub>2</sub> S <sub>3</sub> . Journal of Materials Chemistry C, 2021, 9, 13733-13738.	2.7	18
7797	Photovoltaics: Advanced Inorganic Materials. , 2021, , 5-16.		0
7798	Assessing the true power of bifacial perovskite solar cells under concurrent bifacial illumination. Sustainable Energy and Fuels, 2021, 5, 2865-2870.	2.5	17
7799	Homogeneous doping of entire perovskite solar cells <i>via</i> alkali cation diffusion from the hole transport layer. Journal of Materials Chemistry A, 2021, 9, 9266-9271.	5.2	8

7800	Fundamentals of tin iodide perovskites: a promising route to highly efficient, lead-free solar cells. Journal of Materials Chemistry A, 2021, 9, 11812-11826.	5.2	32
7801	Lead-Free Perovskite Materials for Solar Cells. Nano-Micro Letters, 2021, 13, 62.	14.4	175

#	Article	IF	CITATIONS
7803	Computational mining of Janus Sc <sub>2</sub> C-based MXenes for spintronic, photocatalytic, and solar cell applications. Journal of Materials Chemistry A, 2021, 9, 10882-10892.	5.2	52
7804	Mid-IR-Sensitive n/p-Junction Fabricated on p-Type Si Surface via Ultrashort Pulse Laser n-Type Hyperdoping and High-Temperature Annealing. ACS Applied Electronic Materials, 2021, 3, 769-777.	2.0	1
7805	Nano-emitting Heterostructures Violate Optical Reciprocity and Enable Efficient Photoluminescence in Halide-Segregated Methylammonium-Free Wide Bandgap Perovskites. ACS Energy Letters, 2021, 6, 419-428.	8.8	31
7806	Clarification of mechanisms of protonic photovoltaic action initiated by photoexcitation of strong photoacids covalently bound to hydrated Nafion cation-exchange membranes wetted by aqueous electrolytes. Energy and Environmental Science, 2021, 14, 4961-4978.	15.6	9
7807	Singlet fission in covalent dimers of methylene-locked 1,3-diphenyl-isobenzofuran: semiclassical simulations of nonadiabatic dynamics. Journal of Materials Chemistry A, 2021, 9, 21897-21909.	5.2	5
7808	Massive dipoles across the metal–semiconductor cluster interface: towards chemically controlled rectification. Physical Chemistry Chemical Physics, 2021, 23, 18975-18982.	1.3	0
7809	Thin film solar cells with graded-bandgap photon-absorbing layer. , 2021, , 239-264.		0
7810	Towards multistate multimode landscapes in singlet fission of pentacene: the dual role of charge-transfer states. Chemical Science, 2021, 12, 12928-12938.	3.7	6
7811	Improving quantum efficiency in organic solar cells with a small energetic driving force. Journal of Materials Chemistry A, 2021, 9, 19770-19777.	5.2	39
7812	Relaxed Current Matching Requirements in Highly Luminescent Perovskite Tandem Solar Cells and Their Fundamental Efficiency Limits. ACS Energy Letters, 2021, 6, 612-620.	8.8	38
7813	Phonon-Assisted Hot Carrier Generation in Plasmonic Semiconductor Systems. Nano Letters, 2021, 21, 1083-1089.	4.5	38
7818	Synergistic Effects of Cation and Anion in an Ionic Imidazolium Tetrafluoroborate Additive for Improving the Efficiency and Stability of Halfâ€Mixed Pbâ€Sn Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2008801.	7.8	66
7819	Graded 2D/3D Perovskite Heterostructure for Efficient and Operationally Stable MAâ€Free Perovskite Solar Cells. Advanced Materials, 2020, 32, e2000571.	11.1	166
7820	Recent Progress and Challenges toward Highly Stable Nonfullerene Acceptorâ€Based Organic Solar Cells. Advanced Energy Materials, 2021, 11, 2003002.	10.2	146
7821	Preparation of methylammonium lead iodide (CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> ) thin film perovskite solar cells by chemical vapor deposition using methylamine gas (CH <sub>3</sub> NH <sub>2</sub> ) and hydrogen iodide gas. Energy Science and Engineering, 2020, 8, 3165-3173.	1.9	13
7822	Evaluation of subcell power conversion efficiencies of radiationâ€damaged tripleâ€junction solar cells using photoluminescence decays. Progress in Photovoltaics: Research and Applications, 2017, 25, 1005-1014.	4.4	3
7823	Failure analysis of thinâ€film fourâ€junction inverted metamorphic solar cells. Progress in Photovoltaics: Research and Applications, 2021, 29, 181-187.	4.4	10
7824	Chemical composition dependence of photoluminescence from Cu <sub>2</sub> ZnSnS <sub>4</sub> thin films with potential fluctuations. Physica Status Solidi C: Current Topics in Solid State Physics, 2017, 14, 1600138.	0.8	4

#	Article	IF	Citations
7825	Recent Development of Organic-Inorganic Perovskite-Based Tandem Solar Cells. Solar Rrl, 2017, 1, 1700045.	3.1	32
7826	Photoelectrolysis. , 2008, , 115-190.		4
7827	Organic Solar Cells. , 2012, , 7553-7584.		2
7828	Quantum Dot-Sensitized, Three-Dimensional Nanostructures for Photovoltaic Applications. , 2011, , 413-446.		1
7829	Photoelectrochemical Devices for Solar Energy Conversion. Reviews of Physiology, Biochemistry and Pharmacology, 1986, , 61-112.	0.9	3
7830	Non-Equilibrium Concepts in Solar Energy Conversion. NATO ASI Series Series B: Physics, 1984, , 537-592.	0.2	8
7831	Will Rectenna Solar Cells Be Practical?. , 2013, , 3-24.		14
7832	Efficiency Limits for Solar Spectrum Rectification. , 2013, , 47-67.		4
7833	Nanoscale Photovoltaics and the Terawatt Challenge. Nanostructure Science and Technology, 2013, , 77-116.	0.1	1
7834	Photovoltaics photovoltaic (PV) , Status of. , 2013, , 174-211.		3
7835	CIGS Thin Film Photovoltaic—Approaches and Challenges. Springer Series in Optical Sciences, 2020, , 175-218.	0.5	5
7836	Renewable Energy Sources and Systems. Green Energy and Technology, 2020, , 59-158.	0.4	1
7837	Colloidal Quantum Dots for Highly Efficient Photovoltaics. Lecture Notes in Nanoscale Science and Technology, 2020, , 49-82.	0.4	1
7838	Perspective of Nanomaterials in the Performance of Solar Cells. , 2020, , 25-54.		4
7839	Recent Advances in Solar Cells. , 2020, , 79-122.		7
7840	Photovoltaic Materials Design by Computational Studies: Metal Sulfides. , 2020, , 123-138.		2
7842	Techno-economics of Algal Biodiesel. Green Energy and Technology, 2016, , 111-141.	0.4	5
7843	A Proposal for Intermediate Band Solar Cells with Optimized Transition Energy in Cr Doped 3C-SiC. Springer Proceedings in Energy, 2015, , 69-76.	0.2	2

#	Article	IF	CITATIONS
7844	Aggregation-Induced Emitters in Light Harvesting. , 2019, , 479-504.		2
7845	Flexible Dye-Sensitized Nano-Porous Films Solar Cells. , 2009, , 618-649.		1
7846	Fluorescent Solar Energy Concentrators: Principle and Present State of Development. Springer Series in Optical Sciences, 2009, , 159-176.	0.5	7
7847	Silicon Based Photovoltaic Materials. , 2013, , 1-23.		3
7848	Solar Radiation Conversion. , 1991, , 17-83.		9
7849	Light Conversion Efficiency in Photosynthesis. , 1977, , 125-135.		12
7850	Quantum Solar Energy Conversion and Application to Organic Solar Cells. Springer Series in Materials Science, 2003, , 118-158.	0.4	6
7851	Plasmonically Enhanced Dye-Sensitized Solar Cells. Challenges and Advances in Computational Chemistry and Physics, 2013, , 125-147.	0.6	3
7852	Mechanistic Aspects of Semiconductor Photoelectrochemistry: The Behavior of Si and GaAs in Nonaqueous Solvents. , 1986, , 343-362.		6
7853	Intensity Enhancement in Textured Optical Sheets for Solar Cells. , 1982, , 465-476.		7
7854	Thermodynamic Limitations of Direct Solar Energy Conversion. , 1981, , 922-926.		3
7855	Thermodynamical Limits to Photovoltaic Solar Energy Conversion Efficiency. , 1981, , 927-932.		3
7856	Efficiency of a Combined Solar Concentrator Cell and Thermal Power Engine System. , 1991, , 11-14.		1
7857	Nanostructured Solar Cells. , 2008, , 552-564.		1
7858	Cluster-assembled devices for solar energy conversion. Frontiers of Nanoscience, 2020, 15, 59-86.	0.3	2
7859	Hydrogen-Generating Solar Cells Based on Platinum-Group Metal Activated Photocathodes. , 1983, , 385-420.		4
7860	Photovoltaic Converters. , 2009, , 625-720.		1
7861	Photovoltaic Phenomena in Organic Solids. , 1982, , 127-213.		3

ARTICLE IF CITATIONS EPITAXY IN SOLAR CELLS., 1975, , 113-121. 1 7862 Semiconductor Nanowire Optoelectronic Devices. Semiconductors and Semimetals, 2016, 94, 1-15. 7863 0.4 Optimisation of emitter properties for silicon heterojunction solar cell 7864 1.4 7 ITO/p-a-Si:H/i-a-Si:H/n-c-Si/BSF/Al. Optik, 2020, 217, 164802. Impact of ZnTe, SbZnTe and SnZnTe absorber materials for multi-layered solar cell: Parametric 7865 extraction and layer wise internal analysis. Optik, 2020, 224, 165626. Rectifying antennas for energy harvesting from the microwaves to visible light: A review. Progress in 7866 3.5 17 Quantum Electronics, 2020, 72, 100265. Stable lead-free perovskite solar cells: A first-principles investigation. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 239, 118493. 7867 Znlâ^'xMgxO second buffer layer of Cu2Snlâ^'xGexS3 thin-film solar cell for minimizing carrier 7868 2.9 4 recombination and open-circuit voltage deficit. Solar Energy, 2020, 204, 769-776. Progress and Opportunities for Cs Incorporated Perovskite Photovoltaics. Trends in Chemistry, 2020, 7869 4.4 2,638-653. Development and Testing of an All-Atom Force Field for Diketopyrrolopyrrole Polymers with 7871 1.2 6 Conjugated Substituents. Journal of Physical Chemistry B, 2020, 124, 11030-11039. Ultrafast Singlet Fission in Rigid Azaarene Dimers with Negligible Orbital Overlap, Journal of Physical 1.2 Chemistry B, 2020, 124, 9163-9174. Planarity and Length of the Bridge Control Rate and Efficiency of Intramolecular Singlet Fission in 7873 1.2 14 Pentacene Dimers. Journal of Physical Chemistry B, 2021, 125, 231-239. Engineering the Band Offsets at the Back Contact Interface for Efficient Kesterite CZTSSe Solar Cells. 7874 2.5 ACS Applied Energy Materials, 2020, 3, 10976-10982. Sustainability in Perovskite Solar Cells. ACS Applied Materials & amp; Interfaces, 2021, 13, 1-17. 7875 4.0 53 Characterization of Capacitance, Transport and Recombination Parameters in Hybrid Perovskite and 0.2 Organic Solar Cells. RSC Energy and Environment Series, 2016, , 57-106. Bulk Heterojunction Organic Solar Cells: Working Principles and Power Conversion Efficiencies. RSC 7877 0.2 1 Nanoscience and Nanotechnology, 2017, , 33-68. Chapter 1. Concepts of Photoelectrochemical Energy Conversion and Fuel Generation. RSC Energy and 7878 Environment Series, 2018, , 1-42. Chapter 7. Artificial Photosynthesis with Inorganic Particles. RSC Energy and Environment Series, 7879 0.2 4 2018, , 214-280. 7880 Chapter 12. High-efficiency Water Splitting Systems. RSC Energy and Environment Series, 2018, , 454-499.

#	Article	IF	CITATIONS
7881	Microstructural and photoconversion efficiency enhancement of compact films of lead-free perovskite derivative Rb <sub>3</sub> Sb <sub>2</sub> I <sub>9</sub> . Journal of Materials Chemistry A, 2020, 8, 4396-4406.	5.2	32
7882	Photonic crystal light trapping: Beyond 30% conversion efficiency for silicon photovoltaics. APL Photonics, 2020, 5, .	3.0	29

7884	Challenges, myths, and opportunities in hot carrier solar cells. Journal of Applied Physics, 2020, 128, .	1.1	21
7885	Photovoltaic properties of all-inorganic lead-free perovskite Cs2PdBr6: A first-principles study. AlP Advances, 2020, 10, .	0.6	15
7886	Charge transfer states impact the triplet pair dynamics of singlet fission polymers. Journal of Chemical Physics, 2020, 153, 244902.	1.2	13
7887	InGaAs metamorphic laser power converters with distributed Bragg reflector for wavelength range λ=1 – 1.1â€Âµm. AIP Conference Proceedings, 2020, , .	0.3	4
7888	Roadmap on organic–inorganic hybrid perovskite semiconductors and devices. APL Materials, 2021, 9, .	2.2	102
7889	Parasitic photon process versus productive photon process: a theoretical study of free-carrier absorption in conventional and hot-carrier solar cells. Journal Physics D: Applied Physics, 2020, 53, 505503.	1.3	6
7890	Defects in halide perovskite semiconductors: impact on photo-physics and solar cell performance. Journal Physics D: Applied Physics, 2020, 53, 503003.	1.3	26
7891	Nanotechnology for catalysis and solar energy conversion. Nanotechnology, 2021, 32, 042003.	1.3	44
7892	Raman spectroscopy and lattice dynamics calculations of tetragonally-structured single crystal zinc phosphide (Zn <sub>3</sub> P <sub>2</sub> ) nanowires. Nanotechnology, 2021, 32, 085704.	1.3	10
7893	Optical responses of lead halide perovskite semiconductors. Semiconductor Science and Technology, 2020, 35, 093001.	1.0	11
7894	Carrier dynamics and recombination in silicon doped InAs/GaAs quantum dot solar cells with AlAs cap layers. Semiconductor Science and Technology, 2020, 35, 115018.	1.0	3
7895	Recent progress in developing efficient monolithic all-perovskite tandem solar cells. Journal of Semiconductors, 2020, 41, 051201.	2.0	19
7896	Solar cell as a self-oscillating heat engine. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 015002.	0.7	16
7897	Atomic scale structure and its impact on the band gap energy for Cu <sub>2</sub> Zn(Sn,Ge)Se <sub>4</sub> kesterite alloys. JPhys Energy, 2020, 2, 035004.	2.3	3
7898	Hafnium and zirconium nitrides with rock-salt and Th <sub>3</sub> P <sub>4</sub> structures: electronic and phonon band structure calculations to examine hot carrier solar cell and thermoelectric properties. Electronic Structure, 2020, 2, 025004.	1.0	3

#	Article	IF	CITATIONS
7899	Pentacene and tetracene molecules and films on H/Si(111): level alignment from hybrid density functional theory. Electronic Structure, 2020, 2, 035002.	1.0	15
7900	Enhancement of impact ionization in Hubbard clusters by disorder and next-nearest-neighbor hopping. Physical Review B, 2020, 102, .	1.1	7
7901	Computational Bounds to Light–Matter Interactions via Local Conservation Laws. Physical Review Letters, 2020, 125, 263607.	2.9	23
7902	Real-space study of the optical absorption in alternative phases of silicon. Physical Review Materials, 2017, 1, .	0.9	2
7903	Opposing effects of stacking faults and antisite domain boundaries on the conduction band edge in kesterite quaternary semiconductors. Physical Review Materials, 2018, 2, .	0.9	15
7904	Double perovskites overtaking the single perovskites: A set of new solar harvesting materials with much higher stability and efficiency. Physical Review Materials, 2018, 2, .	0.9	60
7905	Inducing spontaneous electric polarizations in double perovskite iodide superlattices for ferroelectric photovoltaic materials. Physical Review Materials, 2018, 2, .	0.9	7
7906	Alternative materials for perovskite solar cells from materials informatics. Physical Review Materials, 2019, 3, .	0.9	14
7907	High-performance ternary alkali nitrides for renewable energy applications. Physical Review Materials, 2019, 3, .	0.9	7
7908	Tuning the electronic band gap of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mrow><mml:msub><mml:mi>Cu</mml:mi><mml:n mathvariant="normal"&gt;O</mml:n </mml:msub></mml:mrow> via transition metal doping for improved photovoltaic applications. Physical Review Materials. 2019. 3</mml:math 	וח>20.9	ıl:mn>
7909	Effect of Ag incorporation on structure and optoelectronic properties of (Ag1â^'xCux)2ZnSnSe4 solid solutions. Physical Review Materials, 2020, 4, .	0.9	12
7910	xmlns:mml="http://www.w3.org/1998/Math/MathML"> < mml:msup> < mml:mrow > < mml:mi>Yb < /mml:mi> < /mml:r speciation and energy-transfer dynamics in quantum-cutting < mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"> < mml:msup > < mml:mi>Yb < /mml:mi> < /mml:r -doped < mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"> < mml:mrow > < m. Physical	nrow> <mr nr<mark>0%</mark>&gt;<mr< td=""><td>ml:mrow&gt; &lt; m ml:ືinfrow&gt; &lt; m</td></mr<></mr 	ml:mrow> < m ml:ືinfrow> < m
7911	Review Materials, 2020, 4, . How solar cell efficiency is governed by the αμI, product. Physical Review Research, 2020, 2, .	1.3	17
7912	Generating Power at Night Using a Thermoradiative Diode, How is this Possible?. , 2020, , .		5
7913	Influence of meta- and para-phosphonated diphenylanthracene on photon upconversion in self-assembled bilayers. Journal of Photonics for Energy, 2017, 8, 1.	0.8	10
7914	Recent advances in the application triplet–triplet annihilation-based photon upconversion systems to solar technologies. Journal of Photonics for Energy, 2017, 8, 1.	0.8	64
7915	Enhancing silicon solar cells with singlet fission: the case for Förster resonant energy transfer using a quantum dot intermediate. Journal of Photonics for Energy, 2018, 8, 1.	0.8	12
7916	Nanophotonic light management for perovskite–silicon tandem solar cells. Journal of Photonics for Energy, 2018, 8, 1.	0.8	40

#	Article	IF	CITATIONS
7917	Full-spectrum solar energy allocation for efficient space-based photovoltaic–thermoelectric energy conversion. Journal of Photonics for Energy, 2019, 9, 1.	0.8	6
7918	Optical modeling of two-stage concentrator photovoltaic system using parabolic trough. Journal of Photonics for Energy, 2019, 9, 1.	0.8	6
7919	Quantum engineering of intrinsic losses in the diluted nitride InAsN quantum dot intermediate band solar cell. Journal of Photonics for Energy, 2019, 9, 1.	0.8	2
7920	Performance enhancement of flexible CZTSSe solar cells on optimized roughness substrate. Optical Engineering, 2018, 57, 1.	0.5	2
7921	Highly efficient silicon solar cells designed with photon trapping micro/nano structures. , 2017, , .		1
7922	Photovoltaics moving into the terawatt age. , 2017, , .		3
7923	Wide and ultra-wide bandgap oxides: where paradigm-shift photovoltaics meets transparent power electronics. , 2018, , .		6
7924	Investigation of narrow bandgap interband cascade thermophotovoltaic cells. , 2019, , .		3
7926	Radiative Recombination and Impact Ionization in Semiconductor Nanostructures (a Review). Semiconductors, 2020, 54, 1527-1547.	0.2	2
7928	DeepSnow. , 2020, , .		3
7929	Effect of the Niobium-Doped Titanium Oxide Thickness and Thermal Oxide Layer for Silicon Quantum Dot Solar Cells as a Dopant-Blocking Layer. Nanoscale Research Letters, 2020, 15, 39.	3.1	6
7931	Solar Silicon Processes. , 0, , .		6
7932	Nanoparticles for Solar Spectrum Conversion. , 2010, , 351-390.		1
7933	Photovoltaic Device Physics on the Nanoscale. , 2010, , 73-146.		2
7934	Multiexciton Phenomena in Semiconductor Nanocrystals. , 2017, , 147-214.		1
7935	Structural Changes in Flash Lamp Annealed Amorphous Si Layers Probed by Slow Positron Implantation Spectroscopy. Acta Physica Polonica A, 2008, 113, 1273-1278.	0.2	3
7936	Cadmium Selenide and Cadmium Telluride Based High Efficiency Multijunction Photovoltaics for Solar Energy Harvesting. International Journal of Electrical Energy, 2013, 1, 1-5.	0.4	8
7937	Carbon nanotube/silicon hybrid heterojunctions for photovoltaic devices. Advances in Nano Research, 2014, 2, 23-56.	0.9	18

#	Article	IF	CITATIONS
7938	Structural, Vibrational, and Electronic Properties of Trigonal Cu2SrSnS4 Photovoltaic Absorber from First-Principles Calculations. Material Science Research India, 2020, 17, 07-12.	0.9	1
7939	Metamaterial-Plasmonic Ultra-thin Absorbers for Thin Film Solar Cells. , 2012, , .		1
7940	Effects of working pressure and power on photovoltaic and defect properties of magnetron sputtered Sb <sub>2</sub> Se <sub>3</sub> thin-film solar cells. Applied Optics, 2020, 59, 948.	0.9	13
7941	Influence of Se beam pressure on deep-level defects in Cu(In,Ga)Se_2 thin films studied by photocapacitance and time-resolved photoluminescence measurements. Applied Optics, 2017, 56, 1291.	2.1	4
7942	Spectral splitting for an InGaP/GaAs parallel junction solar cell. Applied Optics, 2019, 58, 4265.	0.9	5
7943	Design of an InP/ZnO core–shell nanocone array solar cell with efficient broadband light absorption enhancement. Applied Optics, 2020, 59, 107.	0.9	8
7944	Diagnosis of electrically active defects in CH3NH3PbI3 perovskite solar cells via admittance spectroscopy measurements. Applied Optics, 2020, 59, 552.	0.9	2
7945	Highly Efficient GaAs Solar Cells with Dual Layer of Quantum Dots And A Flexible PDMS Film. , 2012, , .		1
7946	Machine-learning-assisted topology optimization for highly efficient thermal emitter design. , 2019, , .		4
7947	Improved broadband spectral selectivity of absorbers/emitters for solar thermophotovoltaics based on 2D photonic crystal heterostructures. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2018, 35, 1832.	0.8	27
7948	Higher efficiency tandem solar cells through composite-cell current matching. Optics Express, 2019, 27, A543.	1.7	8
7949	Photon recycling characteristics of InGaAs/GaAsP multiple quantum well solar cells incorporating a spectrally selective filter and distributed Bragg reflector. Optics Express, 2019, 27, 36046.	1.7	7
7950	Passive radiative cooling and other photonic approaches for the temperature control of photovoltaics: a comparative study for crystalline silicon-based architectures. Optics Express, 2020, 28, 18548.	1.7	45
7951	Silicon nitride grating based planar spectral splitting concentrator for NIR light harvesting. Optics Express, 2020, 28, 21474.	1.7	4
7952	Design and validation of a high-efficiency planar solar thermophotovoltaic system using a spectrally selective emitter. Optics Express, 2020, 28, 21869.	1.7	29
7953	Self-powered broadband photo-detection and persistent energy generation with junction-free strained Bi <sub>2</sub> Te <sub>3</sub> thin films. Optics Express, 2020, 28, 27644.	1.7	7
7954	Backside light management of 4-terminal bifacial perovskite/silicon tandem PV modules evaluated under realistic conditions. Optics Express, 2020, 28, 37487.	1.7	9
7955	Symmetrical TiN-SiO2 Multilayer as an Absorber for Solar Thermo-Photovoltaic System. , 2019, , .		1
#	Article	IF	CITATIONS
------	--	-----	-----------
7956	Designing high-performance nighttime thermoradiative systems for harvesting energy from outer space. Optics Letters, 2020, 45, 5929.	1.7	6
7957	Design of an InSb thermoradiative system for harvesting low-grade waste heat. Optics Letters, 2019, 44, 3354.	1.7	16
7958	Transparent planar indium tin oxide for a thermo-photovoltaic selective emitter. Optical Materials Express, 2020, 10, 2330.	1.6	3
7959	Ultra-thin titanium nitride films for refractory spectral selectivity [Invited]. Optical Materials Express, 2018, 8, 3717.	1.6	26
7960	Nonreciprocal cavities and the time-bandwidth limit: reply. Optica, 2020, 7, 1102.	4.8	4
7961	Ultraviolet radiation impact on the efficiency of commercial crystalline silicon-based photovoltaics: a theoretical thermal-electrical study in realistic device architectures. OSA Continuum, 2020, 3, 1436.	1.8	8
7962	Detailed Balance Solar Cell Efficiency Limits for Internal Fluorescence Yield Slightly Less Than 100%. , 2010, , .		8
7963	Phase segregation in inorganic mixed-halide perovskites: from phenomena to mechanisms. Photonics Research, 2020, 8, A56.	3.4	45
7964	Optimal design of aperiodic, vertical silicon nanowire structures for photovoltaics. , 2011, , .		1
7965	Developing Efficient Upconverter Silicon Solar Cell Devices. , 2013, , .		1
7966	Enhancement of Upconversion for Photovoltaics with $\hat{I}^2$ -NaYF4:Er3+ and Concentrating Integrated Optics. , 2013, , .		2
7967	Structure and Optical Bandgap Relationship of π-Conjugated Systems. PLoS ONE, 2014, 9, e86370.	1.1	30
7969	Hybrid organic-inorganic perovskite metamaterial for light trapping and photon-to-electron conversion. Nanophotonics, 2020, 9, 3323-3333.	2.9	19
7970	Lead-free metal-halide double perovskites: from optoelectronic properties to applications. Nanophotonics, 2021, 10, 2181-2219.	2.9	33
7971	Efficient wide-bandgap perovskite solar cells enabled by doping a bromine-rich molecule. Nanophotonics, 2021, 10, 2059-2068.	2.9	17
7972	Ultrafast dynamics of photoexcited carriers in perovskite semiconductor nanocrystals. Nanophotonics, 2021, 10, 1943-1965.	2.9	16
7973	Photon recycling in perovskite solar cells and its impact on device design. Nanophotonics, 2021, 10, 2023-2042.	2.9	29
7974	Temporal probing of excitons in organic semiconductors. Pure and Applied Chemistry, 2020, 92, 707-716.	0.9	3

5

#	Article	IF	CITATIONS
7975	Progress in perovskite based solar cells: scientific and engineering state of the art. Reviews on Advanced Materials Science, 2020, 59, 10-25.	1.4	9
7976	Luminescent converter of solar light into electrical energy. Review. Semiconductor Physics, Quantum Electronics and Optoelectronics, 2016, 19, 229-247.	0.3	9
7977	Characterization of Screen-Printed Nickel Oxide Electrodes for p-type Dye-Sensitized Solar Cells. Journal of Materials Science and Nanotechnology, 2016, 4, .	0.2	4
7978	Growth of Cu2ZnSnS4 Thin Films Using Moderate Annealing Temperature and Short Dwell Time. Cumhuriyet Science Journal, 2019, 40, 554-562.	0.1	1
7982	Effects of Moderate Amounts of Sulfur Substitutional Impurities on ZnO Using Density Functional Theory. The Open Nanoscience Journal, 2011, 5, 1-10.	1.8	3
7983	Plasmonic enhancement of light trapping in photodetectors. Facta Universitatis - Series Electronics and Energetics, 2014, 27, 183-203.	0.6	2
7984	Efficiency limits in photovoltaics: Case of single junction solar cells. Facta Universitatis - Series Electronics and Energetics, 2014, 27, 631-638.	0.6	5
7985	Comparison of measured performance and theoretical limits of gaas laser power converters under monochromatic light. Facta Universitatis - Series Electronics and Energetics, 2017, 30, 93-106.	0.6	1
7987	An Overview of the Operational Principles, Light Harvesting and Trapping Technologies, and Recent Advances of the Dye Sensitized Solar Cells (Review). Applied Solar Energy (English Translation of) Tj ETQq0 0 0 rg	BD/Øverlo	oc <b>k</b> 410 Tf 50
7989	Recent Progress and Future Prospects for Quantum Dot Solar Cell Technology. Journal of the Vacuum Society of Japan, 2012, 55, 556-561.	0.3	2
7990	The Path to Perovskite on Silicon PV. , 2018, 1, 1-8.		16
7991	The photoluminescent layers based on ZnO nanoparticles as radiation converters in photovoltaic applications. Acta Innovations, 2018, , 16-26.	0.4	4
7994	Identification of deep level defects in CdTe solar cells using transient photo-capacitance spectroscopy. Japanese Journal of Applied Physics, 2021, 60, SBBF01.	0.8	6
7995	Emission properties of intrinsic and extrinsic defects in Cu <sub>2</sub> SnS <sub>3</sub> thin films and solar cells. Japanese Journal of Applied Physics, 2021, 60, 015504.	0.8	12
7996	Impact of radio-frequency power on the photoresponsivity enhancement of BaSi <sub>2</sub> films formed by sputtering. Applied Physics Express, 2020, 13, 085511.	1.1	8
7997	Preparation and Characterization of Cu <sub>2</sub> ZnSnS <sub>4</sub> Nanoparticles and Films. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2012, 27, 79-82.	0.6	2

7998 Type-II Core/Shell Nanowire Heterostructures and Their Photovoltaic Applications. , 2012, 4, 135.

7999	Modeling lattice-matched InP-based multijunction solar cells. Turkish Journal of Electrical Engineering and Computer Sciences, 2017, 25, 1010-1020.	0.9	2
------	--	-----	---

		CITATION RE	PORT	
#	Article		IF	CITATIONS
8000	Performance enhancement of PV cells through micro-channel cooling. AIMS Energy, 20	15, 3, 699-710.	1.1	15
8001	Evolución hacia la cerámica fotovoltaica. Boletin De La Sociedad Espanola De Cerami 50, 15-22.	ca Y Vidrio, 2011,	0.9	1
8002	Physics, Modelling, and Optimization Studies of Photon-Enhanced Thermionic Emission Energy Conversion System. Advances in Computer and Electrical Engineering Book Ser 399-452.	i-Based Hybrid ies, 2018, ,	0.2	1
8005	Role of PV-Powered Vehicles in Low-Carbon Society and Some Approaches of High-Effic Modules for Cars. Energy and Power Engineering, 2020, 12, 375-395.	tiency Solar Cell	0.5	28
8006	Optical Analysis of a ZnO/Cu <sub>2</sub> O Subcell in a Tandem Heterojunction Solar Cell. Green and Sustainable Chemistry, 2017, 07, 57-69.	a Silicon-Based	0.8	22
8007	A Novel Thin-Film, Single-Junction Solar Cell Design <sup>1</sup> to Achieve Conversion Efficiency above 30 Percent. Materials Sciences and Applications, 2016, 07	Power , 823-835.	0.3	3
8008	Fabrication of CdS/SnS Heterojunction for Photovoltaic Application. World Journal of C Matter Physics, 2015, 05, 10-17.	condensed	1.1	11
8009	Effect of Ultrathin Al <sub>2</sub> O <sub>3</sub> Layer on TiO <sub>2</sub> Surface Co-Sensitized Quantum Dot Solar Cells. Bulletin of the Korean Chemical Society, 2013,	in CdS/CdSe , 34, 411-414.	1.0	8
8010	Temperature Effect on Intermediate Band Solar Cells (IBSCs). , 2015, , .			1
8012	Near-IR Quantum Cutting Phosphors: A Step Towards Enhancing Solar Cell Efficiency. A and Convergence Technology, 2014, 23, 221-239.	Applied Science	0.3	4
8013	Photons as Working Body of Solar Engines. , 0, , .			2
8014	Thin Film Solar Cells Using Earth-Abundant Materials. , 0, , .			7
8015	Effect of Wavelength on the Photocurrent and Photovoltage of Vertical Parallel Silicon under Steady State Condition. Journal of Basic and Applied Physics, 2016, 5, 30-39.	Solar Cells	0.4	3
8016	Influence of structure parameters on the performance of p-i-n InGaN solar cell. Wuli Xu Physica Sinica, 2012, 61, 168402.	ebao/Acta	0.2	2
8017	Recent progress in material study and photovoltaic device of Sb2Se3. Wuli Xuebao/Act 2015, 64, 038406.	a Physica Sinica,	0.2	15
8018	Ultrafast multiexciton Auger recombination of CdSeS. Wuli Xuebao/Acta Physica Sinica 107801.	, 2019, 68,	0.2	7
8019	Limitations to photosynthesis by proton motive force-induced photosystem II photoda 5, .	mage. ELife, 2016,	2.8	101
8020	Effect of Excitons in AlGaAs/GaAs Superlattice Solar Cells. Japanese Journal of Applied P 052302.	hysics, 2011, 50,	0.8	4

#	Article	IF	CITATIONS
8021	Time-Resolved Microphotoluminescence Study of Cu(In,Ga)Se <sub>2</sub> . Japanese Journal of Applied Physics, 2011, 50, 05FC01.	0.8	25
8022	Synthesis of Cu2ZnSnS4Nanocrystallines by a Hydrothermal Route. Japanese Journal of Applied Physics, 2011, 50, 065003.	0.8	15
8023	Advanced Modelling of Silicon Wafer Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 10NA06.	0.8	1
8024	Hot-Carrier Extraction from Intermediate-Band Absorbers through Quantum-Well Energy-Selective Contacts. Japanese Journal of Applied Physics, 2012, 51, 10ND03.	0.8	8
8025	Effect of Quantum Well on the Efficiency of Carrier Collection in InGaAs/GaAsP Multiple Quantum Well Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 10ND04.	0.8	27
8026	Numerical Approach to the Performance of Silicon Quantum Dots Superlattice Solar Cells Taking into Account the Quantum Effect. Japanese Journal of Applied Physics, 2012, 51, 10NE09.	0.8	17
8027	Light Absorption in Semiconductor Nanowire Arrays with Multijunction Cell Structures. Japanese Journal of Applied Physics, 2012, 51, 11PE07.	0.8	9
8028	Numerical Approach to the Investigation of Performance of Silicon Nanowire Solar Cells Embedded in a SiO2Matrix. Japanese Journal of Applied Physics, 2012, 51, 11PE12.	0.8	20
8029	Femtosecond stimulated Raman spectroscopy – guided library mining leads to efficient singlet fission in rubrene derivatives. Chemical Science, 2021, 12, 13825-13835.	3.7	2
8030	Principles of Solar Energy Conversion. , 2021, , .		0
8031	Synthesis and Applications of Colloidal Nanomaterials of Main Group- and Transition- Metal Phosphides. Indian Institute of Metals Series, 2021, , 461-536.	0.2	1
8032	Enhancing Ag-alloyed Cu <sub>2</sub> ZnSnS <sub>4</sub> solar cell performance by interfacial modification <i>via</i> In and Al. Journal of Materials Chemistry A, 2021, 9, 25196-25207.	5.2	18
8033	Semiconductor quantum dot solar cells. Frontiers of Nanoscience, 2021, , 319-352.	0.3	0
8034	Designs and understanding of small molecule-based non-fullerene acceptors for realizing commercially viable organic photovoltaics. Chemical Science, 2021, 12, 14004-14023.	3.7	22
8035	Optoelectronic property comparison for isostructural Cu <sub>2</sub> BaGeSe <sub>4</sub> and Cu <sub>2</sub> BaSnS <sub>4</sub> solar absorbers. Journal of Materials Chemistry A, 2021, 9, 23619-23630.	5.2	10
8036	Upconversion. , 2022, , 499-517.		1
8037	Limitations of conjugated polymers as emitters in triplet–triplet annihilation upconversion. Materials Advances, 0, , .	2.6	3
8038	Crystalline Silicon Solar Cells $\hat{a} \in $ State-of-the-Art and Future Developments. , 2021, , .		0

#	Article	IF	CITATIONS
8039	Optimization of Tunnelâ€Junction for Perovskite/Tunnel Oxide Passivated Contact (TOPCon) Tandem Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100562.	0.8	6
8040	Halide Perovskites: Advanced Photovoltaic Materials Empowered by a Unique Bonding Mechanism. Advanced Functional Materials, 2022, 32, 2110166.	7.8	35
8041	Preparation and properties of Si/Ni intermediate band photovoltaic materials. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	2
8042	Interfacial Engineering of Wideâ€Bandgap Perovskites for Efficient Perovskite/CZTSSe Tandem Solar Cells. Advanced Functional Materials, 2022, 32, 2107359.	7.8	43
8043	Organic additives in all-inorganic perovskite solar cells and modules: from moisture endurance to enhanced efficiency and operational stability. Journal of Energy Chemistry, 2022, 67, 361-390.	7.1	21
8044	A comprehensive review on defect passivation and gradient energy alignment strategies for highly efficient perovskite solar cells. Journal Physics D: Applied Physics, 2022, 55, 043001.	1.3	9
8045	Layered Dion–Jacobson-Type Chalcogenide Perovskite CsLaM <sub>2</sub> X <sub>7</sub> (M = Ta/Nb; X) Tj E ACS Applied Materials & Interfaces, 2021, 13, 48971-48980.	TQq0 0 0 4.0	rgBT /Overlog 3
8046	Electronically Coupled TTA-UC Solar Cells. , 2022, , 209-237.		0
8047	Emerging Perovskite Solar Cell Technology: Remedial Actions for the Foremost Challenges. Advanced Energy Materials, 2021, 11, .	10.2	40
8048	Photophysics. , 2022, , 9-28.		1
8049	Electrical properties of perovskite solar cells by illumination intensity and temperatureâ€dependent photoluminescence imaging. Progress in Photovoltaics: Research and Applications, 2022, 30, 1038-1044.	4.4	7
8050	Ultra-low profile solar-cell-integrated antenna with a high form factor. Scientific Reports, 2021, 11, 20918.	1.6	9
8051	Spray Coating Luminescence Layers on Glass for Si Solar Cells Efficiency Enhancement. Energies, 2021, 14, 6884.	1.6	2
8052	Prospects of Integrated Photovoltaic-Fuel Cell Systems in a Hydrogen Economy: A Comprehensive Review. Energies, 2021, 14, 6827.	1.6	10
8053	Bimetallic superalkali substitution in the CsPbBr3 perovskite: Pseudocubic phases and tunable bandgap. Journal of Chemical Physics, 2021, 155, 174307.	1.2	6
8054	Semitransparent Perovskite Solar Cells for Building Integration and Tandem Photovoltaics: Design Strategies and Challenges. Solar Rrl, 2021, 5, 2100702.	3.1	31
8055	A comprehensive review on Cu2ZnSnS4 (CZTS) thin film for solar cell: forecast issues and future anticipation. Optical and Quantum Electronics, 2021, 53, 1.	1.5	14
8056	Numerical simulation design of all-inorganic hole-transport-layer-free CsSnl <sub>3</sub> (Sn-rich)/CsSnl <sub>3</sub> perovskite efficient solar cells. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 3754.	0.9	3

			_
#	Article	IF	CITATIONS
8057	Various facets of ferroelectrics as functional materials: an informative review. Ferroelectrics, 2021, 582, 98-123.	0.3	2
8058	Organic Triplet Photosensitizers for Triplet-Triplet Annihilation Upconversion. , 2022, , 71-105.		2
8059	Rare-Earth Ion-Based Photon Up-Conversion for Transmission-Loss Reduction in Solar Cells. , 2022, , 241-267.		1
8060	A-site phase segregation in mixed cation perovskite. Materials Reports Energy, 2021, 1, 100064.	1.7	19
8061	Recent Progress in the Design of Fused-Ring Non-Fullerene Acceptors─Relations between Molecular Structure and Optical, Electronic, and Photovoltaic Properties. ACS Applied Energy Materials, 2021, 4, 11899-11981.	2.5	37
8062	Growth and Photovoltaic Device Application of Cu <sub>2</sub> BaGe <sub>1–<i>x</i></sub> Sn <sub><i>x</i></sub> Se <sub>4</sub> Films Prepared by Selenization of Sequentially Deposited Precursors. ACS Applied Energy Materials, 2021, 4, 11528-11536.	2.5	5
8063	Comprehensive device simulation of 23.36% efficient two-terminal perovskite-PbS CQD tandem solar cell for low-cost applications. Scientific Reports, 2021, 11, 19829.	1.6	40
8064	Efficient 2T CsKPb(IBr)3—Tin Incorporated Narrow Bandgap Perovskite Tandem Solar Cells: A Numerical Study with Current Matching Conditions. Advanced Theory and Simulations, 2021, 4, 2100121.	1.3	5
8065	Nâ€Type Surface Design for pâ€Type CZTSSe Thin Film to Attain High Efficiency. Advanced Materials, 2021, 33, e2104330.	11.1	49
8067	Novel Two-Dimensional MA <sub>2</sub> N <sub>4</sub> Materials for Photovoltaic and Spintronic Applications. Journal of Physical Chemistry Letters, 2021, 12, 10120-10127.	2.1	30
8068	Optimal Interfacial Band Bending Achieved by Fine Energy Level Tuning in Mixed-Halide Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 3970-3981.	8.8	18
8069	Combined <i>in Situ</i> Photoluminescence and X-ray Scattering Reveals Defect Formation in Lead-Halide Perovskite Films. Journal of Physical Chemistry Letters, 2021, 12, 10156-10162.	2.1	15
8071	Highâ€Performance Tin–Lead Mixedâ€Perovskite Solar Cells with Vertical Compositional Gradient. Advanced Materials, 2022, 34, e2107729.	11.1	88
8072	Light Intensity Analysis of Photovoltaic Parameters for Perovskite Solar Cells. Advanced Materials, 2022, 34, e2105920.	11.1	83
8073	Knowledge-infused process monitoring for quality improvement in solar cell manufacturing processes. Journal of Quality Technology, 0, , 1-12.	1.8	0
8074	Monocrystalline Methylammonium Lead Halide Perovskite Materials for Photovoltaics. Advanced Materials, 2021, 33, e2102588.	11.1	22
8075	Pressure Effects on Leadâ€Free Metal Halide Perovskites: a Route to Design Optimized Materials for Photovoltaics. Solar Rrl, 2021, 5, 2100550.	3.1	15
8077	Effect of various interlayers on the performance of cesium formamidinium lead mixed halide (CsFAPbX3) – Formamidinium tin iodide (FASnI3) two-terminal tandem solar cell. Solar Energy, 2021, 228, 523-530.	2.9	5

#	Article	IF	CITATIONS
8078	Machine learning stability and band gap of lead-free halide double perovskite materials for perovskite solar cells. Solar Energy, 2021, 228, 689-699.	2.9	23
8079	Review on perovskite silicon tandem solar cells: Status and prospects 2T, 3T and 4T for real world conditions. Materials and Design, 2021, 211, 110138.	3.3	53
8080	Evolution of hybrid organic–inorganic perovskite materials under external pressure. Applied Physics Reviews, 2021, 8, .	5.5	7
8081	Review article on the lattice defect and interface loss mechanisms in kesterite materials and their impact on solar cell performance. Solar Energy, 2021, 230, 13-58.	2.9	20
8082	Interfacial engineering of a thiophene-based 2D/3D perovskite heterojunction for efficient and stable inverted wide-bandgap perovskite solar cells. Nano Energy, 2021, 90, 106608.	8.2	71
8083	Thermodynamic calculation of Sâ^'Sb system and Cuâ^'Sâ^'Sb system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2021, 75, 102362.	0.7	6
8084	Comprehensive device simulation of 16.9% efficient two-terminal PbS–PbS CQD tandem solar cell. Optical Materials, 2021, 122, 111677.	1.7	8
8085	Silver-alloyed wide-gap CuGaSe2 solar cells. Solar Energy, 2021, 230, 509-514.	2.9	7
8088	Performance of Solar Cell. Journal of Japan Institute of Electronics Packaging, 2000, 3, 158-165.	0.0	0
8091	Energiewandlung — Methoden der Strom- und Wämeerzeugung. , 2002, , 107-616.		0
8092	Crystalline Silicon P-N Junction Solar Cells — Efficiency Limits And Low-Cost Fabrication Technology. , 2002, , 109-130.		0
8093	High Efficiency Silicon Light Emitting Diodes. , 2003, , 1-10.		1
8095	Tandem cells for very high concentration. Series in Optics and Optoelectronics, 2003, , .	0.0	0
8096	Intermediate-band solar cells. Series in Optics and Optoelectronics, 2003, , .	0.0	2
8097	Quantum dot solar cells. Series in Optics and Optoelectronics, 2003, , .	0.0	1
8098	Heteronanostructures of CdS and Pt Nanoparticles in Polyelectrolytes. , 2005, , 437-461.		0
8099	Photoexcitation Dynamics on the Nanoscale. Springer Series in Chemical Physics, 2007, , 5-30.	0.2	0
8100	Nanostructured Tungsten Absorber and Emitter for Solar Thermal Photovoltaics. , 2008, , .		0

#	Article	IF	CITATIONS
8101	Photovoltaics. , 2008, , 3370-3385.		1
8102	Photovoltaik. , 2009, , 121-172.		0
8103	Nanostructured Absorber and Emitter for Solar Thermophotovoltaics exceeding the Shockley- Queisser limit. , 2009, , .		0
8104	Bulk Heterojunction Solar Cells for Large-Area PV Fabrication on Flexible Substrates. Kluwer International Series in Electronic Materials: Science and Technology, 2009, , 373-412.	0.3	0
8105	High Efficiency Solar Cells based on Spontaneous Emission Inhibition in Photonic Crystals. , 2009, , .		1
8106	Overview of Spacecraft Power System. Journal of the Institute of Electrical Engineers of Japan, 2009, 129, 731-734.	0.0	0
8107	Thermodynamische Bewertung Regenerativer Energiewandlungen. , 2009, , 441-519.		0
8108	Cellules photovoltaÃ <sup>-</sup> quesÂ: la filière silicium cristallin aujourd'hui et demain. Materiaux Et Techniques, 2009, 97, 241-245.	0.3	1
8109	Optical absorption enhancement in silicon nanowire and nanohole arrays for photovoltaic application. , 2010, , .		1
8110	A Semi-analytical Model and Characterization Techniques for Concentrated Photovoltaic Multijunction Solar Cells. , 2010, , .		2
8111	The Influence of the 4n2 Light Trapping Factor on Ultimate Solar Cell Efficiency. , 2010, , .		2
8112	Energy-Autarkic Monitor for FTTx Networks. , 2010, , .		0
8113	Multiexciton Phenomena in Semiconductor Nanocrystals. , 2010, , 147-213.		0
8114	Quantum Dots and Quantum Dot Arrays. , 2010, , 311-367.		0
8115	THEORY OF SOLAR CELL DEVICES (SEMI-CONDUCTOR DIODES). , 2010, , 145-235.		1
8116	Optical Characterisation of Thin Silicon. , 2011, , 309-318.		0
8117	Angular Dependence of Absorption in Silicon Nanowire Arrays. , 2011, , .		0
8118	Enhanced Si thin film solar cells short-circuit current with rational-designed Si nano-pillar array surface texturing. , 2011, , .		0

#	Article	IF	CITATIONS
8119	Optimal design of aperiodic, vertical silicon nanowire structures for photovoltaics. , 2011, , .		1
8120	Absorption of Silicon Nanowire Arrays on Silicon and Silica Substrates. , 2011, , .		0
8122	Mechanically stacked solar cells for concentrator photovoltaics. Renewable Energy and Power Quality Journal, 0, , 1294-1299.	0.2	3
8123	Silicon-Based Third Generation Photovoltaics. , 0, , .		1
8124	Study on the possibility of use of photovoltaic cells for the supply of electrolysers. Archives of Thermodynamics, 2011, 32, 33-53.	1.0	1
8125	CdTe Solar Cells solar cell. , 2012, , 1976-2004.		1
8126	Quantum Dots with Built-in Charge for Enhancing Quantum Dot Solar Cells and Infrared Photodetectors. , 2012, , 297-316.		0
8127	Disorder in Silicon Nanowire Arrays for Photovoltaic Applications , 2012, , .		0
8128	Limiting Efficiencies of Tandem Solar Cells for III-V Nanowire Arrays on Silicon Substrates. , 2012, , .		0
8129	Solar Cells solar cell : Very High Efficiencies Approaches solar cell very high efficiencies approaches. , 2012, , 9412-9431.		0
8130	Photovoltaics photovoltaic (PV) , Status of. , 2012, , 7935-7972.		0
8131	R^ ^amp;DTrends of Next Generation High-Efficiency Photovoltaic Cells -Toward Conversion Efficiency Beyond 50%. Journal of the Japan Institute of Marine Engineering, 2012, 47, 535-542.	0.0	0
8132	Elements of radiotherapy physics. , 2012, , 53-87.		0
8133	P/N/P Double-Junction GaAs/Ge Solar Cell Devices for PV and CPV. Smart Innovation, Systems and Technologies, 2012, , 629-636.	0.5	0
8134	Efficiency enhancement calculations of solar cells with quantum tripling layer and the discovery of a quantum tripling phosphor. , 2012, , .		0
8135	Organic Photodiode with High Infrared Light Sensitivity Based on Tin Phthalocyanine/C60Bulk Heterojunction and Optical Interference Effect. Japanese Journal of Applied Physics, 2012, 51, 034103.	0.8	1
8139	Principles and Systems in Light-Induced Energy Conversion. , 2012, , 1-52.		0
8140	High Temperature Epsilon-Near-Zero and Epsilon-Near-Pole Metamaterial Emitters for Thermophotovoltaics. , 2013, , .		1

#	Article	IF	CITATIONS
8141	GaAs solar cells close to the thermodynamic limit. , 2013, , .		0
8142	Optimization of thickness in luminescent down-conversion layers for photovoltaic applications. , 2013, , .		0
8144	Practicable fabrication technology of high-temperature photonic materials for thermophotovoltaic systems. , 2013, , .		0
8145	The Heterojunction with Light. , 2013, , 625-647.		0
8146	C8.3 - Photovoltaic Energy Harvesting under Low Lighting Conditions. , 2013, , .		3
8148	Thermodynamische Bewertung Regenerativer Energiewandlungen. , 2013, , 741-850.		0
8149	The Shadows Cast by Inadequate Energy Governance: Why More Sun Does Not Necessarily Mean More Photovoltaic Electricity. Lecture Notes in Energy, 2013, , 277-293.	0.2	1
8150	Theory and Literature Survey: Application of BLH to Solar Cells. Springer Theses, 2013, , 95-116.	0.0	0
8152	Intermediate Band Solar Cells: Promises and Reality. , 2013, , .		0
8153	Multi-bandgap High-efficiency Photovoltaics Enabled by Broadband Diffractive Optics. , 2013, , .		0
8154	Effect of doping concentration on the performance of solar cell constructed from (Muscovite/TiO <sub>2</sub> /Dye/Al). Natural Science, 2013, 05, 52-56.	0.2	1
8155	Organic Solar Cells organic solar cell. , 2013, , 97-128.		1
8156	Lateral multijunction photovoltaic cells. Semiconductor Physics, Quantum Electronics and Optoelectronics, 2013, 16, 1-17.	0.3	3
8158	Simulation Study on Heterojunction InGaP/InAlGaP Solar Cell. Applied Science and Convergence Technology, 2013, 22, 162-167.	0.3	0
8159	Increasing Efficiency with Multiple Exciton Generation. Lecture Notes in Nanoscale Science and Technology, 2014, , 233-253.	0.4	1
8160	Chalcopyrite Quantum Wells and Dots in Solar-Cell Applications. Springer Series in Materials Science, 2014, , 115-130.	0.4	1
8162	Nanostructured Optoelectronics. , 2014, , 271-352.		0
8163	Physics of Solar Cells. SpringerBriefs in Applied Sciences and Technology, 2014, , 21-45.	0.2	1

		CITATION REPORT	
# 8164	ARTICLE An Entropy Approach to a Practical Limit of the Efficiencies of Developed and Multijunction Solar Cells Journal of Electromagnetic Analysis and Applications, 2014, 06, 383-390	IF 0.1	CITATIONS 2
8165	Introduction to Solar Cell Operation. Springer Theses, 2014, , 7-24.	0.0	0
8166	Organic Photovoltaics. , 2014, , 1-9.		0
8167	Quantum Dot Sensitization. , 2014, , 1755-1758.		0
8168	Monolithic Solar Water-Splitting Systems: Towards a Sustainable Hydrogen-Energy Future. , 0, , .		0
8169	Photovoltaics: Organic-Based Solar Cells. , 2014, , 3657-3672.		0
8170	Optoelectronic devices. , 1967, , 217-263.		1
8171	Materials for Solar Energy Conversion. , 1979, , 201-262.		2
8172	Solar Cell Materials and Structures. , 1981, , 69-132.		0
8173	Physical Limitations of Present Thin Film Solar Cells. , 1982, , 688-697.		0
8174	Latest Developments in Solar Cells. , 1987, , 41-74.		0
8177	The Influence of Surface Recombination on the Limiting Efficiency and Optimum Thickness of Silico Solar Cells. , 1991, , 66-69.	n	13
8178	Polykristalline Dünnfilmsolarzellen. , 1993, , 100-108.		0
8179	Crystalline Silicon Solar Cells. Springer Series in Materials Science, 1994, , 339-344.	0.4	0
8180	Physik der Solarzelle. , 1995, , 5-112.		9
8181	Solar Cell Mechanism and Performance. , 1997, , 83-115.		0
8182	Optical Absorption Enhancement in Slanted Micro-Hole C-Si for Photovoltaic Applications. , 2012, ,		1
8184	Nanotechnology in Electronics. , 2014, , 17-36.		2

#	Article	IF	CITATIONS
8185	Optimum Monochromatic Wavelengths for Solar Panel Testing and Conversion of Parameters to STC. Bonfring International Journal of Power Systems and Integrated Circuits, 2014, 4, 18-24.	0.3	0
8186	Tandem and Multijunction Organic Solar Cells. , 2014, , 295-332.		0
8187	Technologia i charakteryzacja struktury p-i-n na bazie InGaAsN do zastosowania w ogniwie tandemowym InGaAsN/GaAs. Elektronika, 2014, 1, 44-46.	0.0	0
8188	Badanie wp�ywu temperatury na charakterystyki fotoogniw. Elektronika, 2014, 1, 97-100.	0.0	0
8189	Electrochemical Characterization of Multilayered CdTe/PSS Films Prepared by Electrostatic Self-assembly Method. Transactions on Electrical and Electronic Materials, 2014, 15, 257-261.	1.0	0
8191	Solar Cells - the Energy Source for Earth & the beginning of Space Exploration. Vacuum Magazine, 2014, 1, 4-9.	0.0	0
8192	Analyses of Saturable Behavior of Two-Step Photoexcitation in InAs/GaAs/Al <sub>0.3</sub> Ga <sub>0.7</sub> As Intermediate-Band Solar Cells. Zairyo/Journal of the Society of Materials Science, Japan, 2015, 64, 690-695.	0.1	0
8195	Ultrafast spectroscopic study for singlet fission. Wuli Xuebao/Acta Physica Sinica, 2015, 64, 094210.	0.2	0
8197	Advanced Concepts: Beyond the Shockley–Queisser Limit. Lecture Notes in Physics, 2015, , 167-200.	0.3	0
8198	Detailed Balance Analysis. SpringerBriefs in Applied Sciences and Technology, 2015, , 111-148.	0.2	0
8200	Anodically Grown TiO2 Nanotube Membranes: Synthesis, Characterization, and Application in Dye-Sensitized Solar Cells. , 2015, , 1-23.		0
8201	Carrier dynamics at pentacene/fullerene interfaces investigated by time-resolved photoluminescence. , 2015, , .		0
8202	Singlet-Exciton Fission Dynamics in Single-Crystalline Perfluoropentacene. , 2015, , .		0
8203	Study on photoluminescence properties of 1.05 eV InGaAsP layers grown by molecular beam epitaxy. Wuli Xuebao/Acta Physica Sinica, 2015, 64, 177802.	0.2	1
8204	Computational prediction of lattice defects in multinary compound semiconductors as photovoltaic materials. Wuli Xuebao/Acta Physica Sinica, 2015, 64, 186102.	0.2	3
8205	Inorganic Materials for Solar Cell Applications. , 2015, , 57-82.		0
8206	An Entropy Approach to Modified Natures of Thermoelectric, Photoelectric and Photovoltaic Effects. International Conference on Aerospace Sciences and Aviation Technology, 2015, 16, 1-9.	0.0	0
8209	Anodically Grown TiO2 Nanotube Membranes: Synthesis, Characterization, and Application in Dye-Sensitized Solar Cells. , 2016, , 1299-1325.		0

	Сіт	ation Report	
#	ARTICLE Analysis of the Stationary and Transient Behavior of a Photovoltaic Solar Array: Modeling and	IF	CITATIONS
8210	Simulation. International Journal of Computer Applications, 2015, 127, 26-33.	0.2	3
8212	Modeling of PV Module Performance under Influence of Surrounding and Essential Factors Variation using Matlab Simulink. International Journal of Computer Applications, 2015, 130, 40-44.	0.2	1
8213	A Study of Impurity Deposition on ITO Substrate using RF Magnetron Sputtering. The Transactions of the Korean Institute of Electrical Engineers P, 2015, 64, 277-280.	0.0	0
8215	A Study on Impurity Deposition using of ITO Substrate. Han'gug Inteo'nes Bangsong Tongsin TV Haghe Nonmunji, 2015, 15, 231-238.	be 0.1	0
8216	Light-to-Electricity Conversion. Graduate Texts in Physics, 2016, , 669-723.	0.1	0
8217	Photon Management using Index-Near-Zero Materials. , 2016, , .		0
8218	Chapter 10. Small Molecule Organic Solar Cells. RSC Energy and Environment Series, 2016, , 332-366.	0.2	0
8219	A Preliminary Study on Conversion Efficiency Improvement of a Multi-junction PV Cell with MPPT. Studies in Systems, Decision and Control, 2016, , 49-73.	0.8	2
8220	Electronic and Optoelectronic Materials and Device Innovations. , 2016, , 1-38.		0
8221	Field-Dependent Characteristics of Two-Step Photoexcited Current Generation in a Quantum-Dot Superlattice Solar Cell. Zairyo/Journal of the Society of Materials Science, Japan, 2016, 65, 647-651.	0.1	1
8222	An analysis of solar energy conversion systems based on photon and thermal processes. Geology Geophysics & Environment, 2016, 42, 403.	1.0	0
8223	Chapter 6. Structural, Electronic, and Optical Properties of Lead Halide Perovskites. RSC Energy and Environment Series, 2016, , 177-201.	0.2	0
8224	Enhancing the Efficiency of Thermophotovoltaics with Photon Recycling. , 2016, , .		1
8225	Chapter 14 Silicon Nanostructures for Photovoltaics. , 2016, , 429-456.		0
8226	Calculation of the ultimate efficiency of p-n-junction solar cells taking into account the semiconductor absorption coefficient. Przeglad Elektrotechniczny, 2016, 1, 87-89.	0.1	2
8229	Sustainable Design of Photovoltaics. , 2017, , 416-493.		0
8230	Photovoltaik. , 2017, , 193-278.		0
8231	Quantum Dots Searching for Bondots. , 2017, , 1805-1874.		1

#	Article	IF	CITATIONS
8233	Low-Cost Harvesting of Solar Energy: The Future of Global Photovoltaics. Nanoscience and Technology, 2017, , 215-261.	1.5	1
8234	Sustainable Design of Photovoltaics. Advances in Chemical and Materials Engineering Book Series, 2017, , 412-489.	0.2	2
8235	Design and Control of Nanostructures and Interfaces for Excitonic Solar Cells. Engineering Materials and Processes, 2017, , 635-679.	0.2	0
8236	Optimizing a Single-Absorption-Layer Thin-Film Solar Cell1 Model to Achieve 31% Efficiency. Journal of Materials Science and Chemical Engineering, 2017, 05, 54-60.	0.2	2
8237	Quantum Dots Searching for Bondots. Advances in Chemical and Materials Engineering Book Series, 2017, , 261-327.	0.2	3
8238	Thermodynamische Bewertung regenerativer Energiewandlungen. , 2017, , 809-918.		0
8239	Upconversion in a finite, one-dimensional photonic crystal: a simulation-based assessment of the potential for increasing the upconversion efficiency of β-NaYF4:Er3+. , 2017, , .		0
8241	Simulation of IQE tuning of individual cells for DC-balancing multijunction tandem cells. , 2017, , .		0
8242	The voltage boost enabled by luminescence extraction in solar cells. , 2017, , .		0
8243	Voc overestimation from photoluminescence quantum yield in disordered absorber layers. , 2017, , .		0
8244	A single panel PV microinverter based on coupled inductor DC-DC. , 2017, , .		2
8245	Sprawność konwersji promieniowania sÅ,onecznego na energiÄ™ elektrycznÄ wspóÅ,czesnych ogniw i moduÅ,ów fotowoltaicznych. Przeglad Elektrotechniczny, 2017, 1, 124-129.	0.1	1
8246	Silicon nanowire and nanohole arrays. , 2017, , 193-212.		0
8247	Nanoscale silicon in photonics and photovoltaics. , 2017, , 593-616.		0
8248	Nanoscale silicon in photonics and photovoltaics. Series in Materials Science and Engineering, 2017, , 593-616.	0.1	0
8249	Volume holographic lens spectrum-splitting photovoltaic system for high energy yield with direct and diffuse solar illumination. , 2017, , .		3
8250	Silicon nanowire and nanohole arrays. Series in Materials Science and Engineering, 2017, , 193-212.	0.1	0
8251	Nanostructure Solar Cells. Series in Optics and Optoelectronics, 2017, , 441-474.	0.0	0

#	Article	IF	CITATIONS
8252	Nanowire Solar Cells: Electro-Optical Performance. Series in Optics and Optoelectronics, 2017, , 475-496.	0.0	0
8253	Solar Cell Fundamentals. Series in Optics and Optoelectronics, 2017, , 383-414.	0.0	2
8254	Design and optimization of cascaded DCG based holographic elements for spectrum-splitting PV systems. , 2017, , .		0
8255	Au-Catalyst Assisted MOVPE Growth of CdTe Nanowires for Photovoltaic Applications. Lecture Notes in Electrical Engineering, 2018, , 279-288.	0.3	0
8256	Nanostructure Solar Cells. , 2017, , 441-474.		1
8258	Ill–V Nitride-Based Photodetection. Series in Optics and Optoelectronics, 2017, , 597-613.	0.0	0
8259	Perovskites boost solar-cell potential. Communications of the ACM, 2017, 60, 11-13.	3.3	3
8260	Building-Integrated Photovoltaic System. , 2018, , 1-22.		0
8261	CAVITY ABSORBER-EMITTERS FOR HIGH-TEMPERATURE SOLAR THERMOPHOTOVOLTAICS. , 2018, , .		1
8262	Design and fabrication of cascaded dichromate gelatin holographic filters for spectrum-splitting PV systems. Journal of Photonics for Energy, 2018, 8, 1.	0.8	4
8263	Recent advance in multiple exciton generation in semiconductor nanocrystals. Wuli Xuebao/Acta Physica Sinica, 2018, 67, 027302.	0.2	1
8264	Photovoltaic effect in ferroelectrics. Wuli Xuebao/Acta Physica Sinica, 2018, 67, 157801.	0.2	8
8265	Review of Thermodynamics of Systems that Embrace Transfer of Electric and Magnetic Energies. Journal of Physical Science and Application, 2018, 8, .	0.1	5
8266	Synthesis of Electrocatalysts for Electrochemistry in Energy. Advances in Chemical and Materials Engineering Book Series, 2018, , 300-385.	0.2	0
8267	First-principles study of H, Cl and F passivation for Cu2ZnSnS4(112) surface states. Wuli Xuebao/Acta Physica Sinica, 2018, 67, 166401.	0.2	0
8268	Chapter 6. Heterojunction Approaches for Stable and Efficient Photoelectrodes. RSC Energy and Environment Series, 2018, , 183-213.	0.2	0
8269	Precision Grinding for Functional Microstructured Surface. Micro/Nano Technologies, 2018, , 1-33.	0.1	0
8270	Solution Processed Sb2(S, Se)3 Solar Cells. , 2018, , .		0

#	Article	IF	CITATIONS
8271	Lead-Free Perovskite Solar Cells with Efficiencies Reaching 8.29% Based on Single-Crystalline Precursor Solutions. SSRN Electronic Journal, 0, , .	0.4	0
8272	Radio frequency sputter deposition of Cu2ZnSnS4 thin films with a temperature-controlled reflector wall: Effects of H2 addition to the sputtering gas. Thin Solid Films, 2018, 646, 75-82.	0.8	2
8273	Ab initio calculation of transport properties between PbSe quantum dots facets with iodide ligands. , 2018, , .		0
8274	Nanocrystalline Silicon-Based Multilayers and Solar Cells. , 2018, , 1-35.		0
8275	Quantitative analysis of InAs quantum dot solar cells by photoluminescence spectroscopy. , 2018, , .		0
8276	Complex epsilon-near-zero metamaterials for broadband light harvesting systems. , 2018, , .		0
8277	Two-step photon up-conversion solar cell: propose and demonstration. , 2018, , .		1
8278	Stochastic modelling of hopping charge carrier transport mechansim in organic photovoltaic structures. , 2018, , .		4
8279	Photonic structures for III-V//Si multijunction solar cells with efficiency >33%. , 2018, , .		4
8281	Emittance-controlled Ceramic Emitter for a Thermophotovoltaic. Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2018, 65, 335-341.	0.1	0
8282	Photoelectronic properties of lead-free CH3NH3SnI3 perovskite solar cell materials and devices. , 2018, , .		0
8283	Toward high-efficiency solution-processed tandem solar cells. , 2018, , .		0
8284	Ultra-high luminescence efficiency as a technology enabler: solar cells, thermophotovoltaics, and optoelectronic refrigerators. , 2018, , .		0
8285	Thermodynamic limits of energy harvesting from outgoing thermal radiation. , 2018, , .		5
8286	Finding A Renewable And Sustainable Source of Hydrogen: A Computational Look Into A Possible Limiting Intermediate Of Photocatalytic Water Splitting On TiO2. , 2018, , .		0
8287	Semiconductor photovoltaics: Ñurrent state and actual directions of research. Optoèlektronika I Poluprovodnikovaâ Tehnika, 2018, 53, 13-37.	0.3	1
8288	Physical Macroeconomics: Part V - Primary Energy and Macroeconomic Efficiency. SSRN Electronic Journal, 0, , .	0.4	0
8289	Recent Trend in High-Efficiency Quantum Dot Multiband Solar Cell Research. The Review of Laser Engineering, 2019, 47, 142.	0.0	0

		CITATION RE	PORT	
#	Article		IF	CITATIONS
8290	Nanocrystalline Silicon-Based Multilayers and Solar Cells. , 2019, , 843-878.			0
8291	Photosynthese: Das biologische Vorbild. Technik Im Fokus, 2019, , 39-67.		0.2	1
8292	Silicon Solar Cells Efficiency Enhanced in NIR Band by Coating Plasmonics ITO- and UC Phosphors-Particles Layers on Back-Side Surface Using Spin-On Film Deposition. , 2019	· · ·		1
8293	Theoretical Analyses of Copper-based Solar Cell Materials for the Next Generation of Ph Inorganic Materials Series, 2019, , 193-240.	otovoltaics.	0.5	1
8294	Solar Energy: Potential and Toxicology. , 2019, , 1-44.			0
8295	Trap States Impact Photon Upconversion in Rubrene Sensitized by Lead Halide Perovsk SSRN Electronic Journal, 0, , .	ite Thin Films.	0.4	1
8296	High-Temperature Refractory Metasurfaces For Solar Thermophotovoltaic Energy Harve	sting., 2019,,.		2
8297	A Simplified Model for the Estimation of Solar Cell Efficiency Based on the Air Mass Effe Academic Research Community Publication, 2019, 3, 199-204.	ct. The	0.1	0
8298	A concept of nonequilibrium solar cell heat recovery solar cell. , 2019, , .			0
8299	Towards biomimetic red solar cells. , 2019, , .			1
8300	Life Cycle Assessment of Silicon-Based Tandem Solar Photovoltaics and their End-of-Life Journal of Life Cycle Assessment and Sustainability, 0, , .	2. Indonesian	0.0	2
8301	Incorporation of Different Quantum Superlattices in a Single Junction GaAs Solar Cell: A Study. , 2020, , 796-802.	Comparative		0
8302	İKİ AŞAMALI YÖNTEM İLE HAZIRLANAN Cu2ZnSnS4 (CZTS) İNCE FİLMLERİ Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, 0, , .	N ÖZELLİKLERİNDE S	ÜLFÜR 0.2	LEMENİN E
8303	Efficient broadband light absorption enhancement in InP/ZnO core-shell nanocone array photovoltaic application. , 2019, , .	ys for		0
8304	Potentiostat Electro-Deposited Cuprous Oxide and Cupric Oxide Thin Films for Photovo International Journal of Automotive and Mechanical Engineering, 2019, 16, 6624-6633	ltaic Use.	0.5	4
8305	Formation of the IR photodetecting structures based on silicon hyperdoped with telluri 430-436.	um. , 2019, 63,	0.0	0
8306	Fluorescent Solar Energy Concentrators: Principle and Present State of Development. S in Optical Sciences, 2020, , 277-295.	pringer Series	0.5	0
8308	Cost–Benefit Calculation Using AB2X4 (A = Zn, Cd; B = Ga; X Lecture Notes in Electrical Engineering, 2020, , 313-317.	= Te): A Promising M	aterial for 1	Solar Cells.

		CITATION RE	EPORT	
#	Article		IF	CITATIONS
8309	Solar elements based on organic and organo-inorganic materials. Surface, 2019, 11(26	j), 270-343.	0.4	0
8310	Efficiency Enhancement of p-i-n Solar Cell Embedding Quantum Wires in the Intrinsic L in Science, Technology and Engineering Systems, 2020, 5, 540-546.	ayer. Advances	0.4	1
8311	Quantum Dot-Based Thin-Film III–V Solar Cells. Lecture Notes in Nanoscale Science a 2020, , 1-48.	ind Technology,	0.4	2
8312	Going beyond the Shockley-Queisser efficiency limit for a GaAs laser power converter ( optical front and rear coat optimization. , 2020, , .	LPC) using		0
8313	Heteromolecular exciton delocalization and heterofission in tetracene $\hat{a} {\ensuremath{ \in } }^{\ensuremath{ \circ } }$	olends. , 2020, , .		0
8314	Nanostructured Chalcogenide Thin Films Synthesized by Chemical Methods for Photov Applications. International Journal of Theoretical and Applied Nanotechnology, 0, , .	roltaic	0.0	0
8315	Efficiency Improvement Analysis for Recent High-Efficient Solar Cells. AIUB Journal of S Engineering, 2020, 19, 1-6.	cience and	0.3	4
8316	New Trends in Solar Cells Research. Seikei-Kakou, 2020, 32, 202-205.		0.0	0
8317	Importance of Developing High-Efficiency Solar Cells for PV-Powered Vehicles. , 2020, ,			0
8318	Comparison of the Thermal Stability of Differently Buffered CIGSe Solar Cells. , 2020, ,			1
8319	On the use of electroluminescence-based reciprocity relations for quantitative mapping modules performance. , 2020, , .	g of PV		0
8320	Intermediate band mobility requirements in intermediate band solar cells. , 2020, , .			0
8321	External Radiative Efficiency In Multijunction Devices. , 2020, , .			0
8322	Enhanced Internal Reflectance of Emission in Solar Cells with Angle- and Energy-selecti , 2020, , .	ve Reflectors.		0
8323	Effects of the Non-Radiative Recombination and Bandgap Reduction in Heat-Recovery , ,	Solar Cell. , 2020,		1
8324	Effect of the Interaction between Formamidinium Lead Iodine and PbS Quantum Dots Perovskite Phase Formation and Stability. , 2020, , .	in the Black		0
8325	Limit Temperature Coefficient in Silicon Solar Cells. , 2020, , .			1
8326	Subcell Development for Wafer-Bonded III-V//Si Tandem Solar Cells. , 2020, , .			4

	CITATION REPORT	-
Article	IF	CITATIONS
Temperature Coefficients of Solar Cell Parameters at Maximum Power Point. , 2020, ,		1
Up-converted photocurrent enhancement in modulation-doped two-step photon up-c cells. , 2020, , .	onversion solar	О
Improved Temperature Coefficient Modeling through the Recombination Parameter \$	gamma\$. , 2020, , .	1

8329	Improved Temperature Coefficient Modeling through the Recombination Parameter \$gamma\$. , 2020, , .		1
8330	Calculation of the thermodynamic voltage limit of CdSeTe solar cells. , 2020, , .		1
8331	Numerical Analysis of Pb-free Perovskite Absorber Materials: Prospects and Challenges. , 2020, , .		0
8332	Three-Terminal Perovskite/Silicon Tandem Solar Cells with Top and Interdigitated Back-Contacts. , 2020, , .		0
8333	Material selection method for a perovskite solar cell design based on the genetic algorithm. , 2020, , .		5
8334	III-V-on-silicon triple-junction based on the heterojunction bipolar transistor solar cell concept. , 2020, , .		4
8335	Comparing optical performance of a wide range of perovskite/silicon tandem architectures under real-world conditions. Nanophotonics, 2021, 10, 2043-2057.	2.9	12
8336	Structural and optical properties of metal-organic halide perovskite thin films for varying methylammonium chloride and iodide concentrations in the precursor solution. Thin Solid Films, 2020, 707, 138067.	0.8	1
8337	Highly efficient solar-heat shield based on the bipolaron-assisted PEDOT:PSS thin film. Chinese Journal of Physics, 2020, 66, 102-108.	2.0	2
8338	Development of a Comprehensive Matlab/Simulink Based Model for High-Efficiency 2nd Generation Photovoltaic (PV) Modules. Current Nanoscience, 2020, 16, 568-577.	0.7	0
8339	Pulsed studies of intervalley transfer in Al0.35In0.65As : A paradigm for valley photovoltaics. Physical Review Materials, 2020, 4, .	0.9	3
8340	Investigation of Bismuth Doping Effects on CZTS Properties: A Density Functional Theory Study. , 2020,		0
8341	Role of Interfacial Oxide in the Preferred Orientation of Ga <sub>2</sub> O <sub>3</sub> on Si for Deep Ultraviolet Photodetectors. ACS Omega, 2021, 6, 29149-29156.	1.6	4
8342	Physical device simulation of dopant-free asymmetric silicon heterojunction solar cell featuring tungsten oxide as a hole-selective layer with ultrathin silicon oxide passivation layer. Renewable Energy, 2022, 183, 188-201.	4.3	8
8343	Hydrogen-Anion-Induced Carrier Recombination in MAPbI <sub>3</sub> Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 10677-10683.	2.1	12
8344	Photovoltaic Behavior of Junctions. , 1983, , 71-152.		0

#

8327

		CITATION RE	EPORT	
#	Article		IF	CITATIONS
8345	Beyond 4% photo conversion efficiency achieved by low temperature phase selective s synthesized CZTS quantum dot solar cell. AIP Conference Proceedings, 2020, , .	olvothermally	0.3	1
8346	Fundamental Limiting Efficiency and Intrinsic Loss Components of Quantum-Wire Inte Solar Cells. Physical Review Applied, 2020, 14, .	rmediate-Band	1.5	0
8347	Solar Energy Harvesting by Carbon Nanotube Optical Rectenna: A Review. , 2020, , .			5
8348	A new ultrafast energy funneling material harvests three times more diffusive solar energy photovoltaics. Proceedings of the National Academy of Sciences of the United States of 117, 32929-32938.	ergy for GalnP of America, 2020,	3.3	2
8349	Open-Circuit Voltage in Organic Solar Cells. , 2021, , 195-216.			0
8350	Proposal for Future Organic Solar Cells. , 2021, , 255-267.			2
8351	Polymer Solar Cells: Development of ï€-Conjugated Polymers with Controlled Energetic Structural Orders. , 2021, , 89-121.	cs and		1
8352	Firstâ€principles study of Cs 2 Ti 1â^' x M x Br 6 (M = Pb, Sn) and numerical simulation based on Cs 2 Ti 0.25 Sn 0.75 Br 6. International Journal of Energy Research, 2021, 45	of the solar cells ,8049-8060.	2.2	5
8353	Basic Principles of Modern Organic Solar Cells. , 2021, , 1-21.			0
8354	Higher Power Conversion Efficiency on Silicon based Heterojunction Device with FeZn Magnetic Semiconductors. IOP Conference Series: Materials Science and Engineering,	D Dilute 0, 993, 012159.	0.3	1
8355	Numerical modeling of the size effect in CdSe/ZnS and InP/ZnS-based Intermediate Bar Physica Scripta, 2021, 96, 035502.	nd Solar Cells.	1.2	4
8356	Self-Assembly and Electrochemical Characterization of Ferrocene-based Molecular Dio Rectenna Device. MRS Advances, 2020, 5, 3185-3194.	les for Solar	0.5	3
8357	Basics: Thermodynamics. , 2021, , .			0
8358	Introduction to Photovoltaic Technology. , 2022, , 1-7.			1
8359	A Brief History of Light Management in Solar Cells. , 2021, , .			1
8360	Fundamentals of BIPVT design and integration. , 2022, , 45-129.			2
8361	A novel selective thermophotovoltaic emitter based on multipole resonances. Internation of Heat and Mass Transfer, 2022, 182, 122039.	onal Journal	2.5	9
8362	Efficient near-infrared luminescence and energy transfer mechanism in Ca3Al2O6: Ce3 phosphors. Journal of Luminescence, 2022, 241, 118511.	+, Yb3+	1.5	7

#	Article	IF	Citations
8363	Experimental and theoretical study of crystal structure and bandgap of CdBi2S4. Journal of Solid State Chemistry, 2022, 305, 122695.	1.4	1
8364	Enhanced interfacial characteristics of perovskite solar cell with multi-functional organic hole-selective interlayer. Dyes and Pigments, 2022, 197, 109837.	2.0	10
8365	Photovoltaic solar energy. , 2022, , 397-439.		4
8366	Ab-initio study of halogen inter-substituted perovskite cesium lead halides for photovoltaic applications. Journal of Physics and Chemistry of Solids, 2022, 161, 110430.	1.9	4
8367	Ab-initio investigations for structural, mechanical, optoelectronic, and thermoelectric properties of Ba2SbXO6 (X Nb, Ta) compounds. Journal of Alloys and Compounds, 2022, 893, 162332.	2.8	7
8368	Photovoltaics. Springer Theses, 2020, , 3-20.	0.0	0
8369	Device Physics in Organic Solar Cells and Drift-Diffusion Simulations. , 2020, , 1-36.		1
8370	Charge Carrier and Mobile ion Dynamic Processes in Perovskite Solar Cells: Progress and Prospect. , 2020, , 1-34.		0
8371	Effect of Absorptivity on Device Performance of Ratchet-Type Intermediate Band Solar Cells. IEEE Transactions on Electron Devices, 2022, 69, 189-194.	1.6	1
8372	Nearly-hyperuniform anti-reflection coatings made from high-index nanodisks for silicon heterojunction solar cells. , 2021, , .		0
8373	Research progress of wide bandgap perovskite materials and solar cells. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 207401.	0.2	2
8374	Perovskite Self-Passivation with PCBM for Small Open-Circuit Voltage Loss. Energy and Power Engineering, 2020, 12, 257-272.	0.5	5
8375	Photovoltaic Model Based on Manufacture's Datasheet: Experimental Validation for Different Photovoltaic Technologies. Advanced Structured Materials, 2020, , 239-256.	0.3	0
8376	SiO2 Grating-Based Photonic Structures as Ideal Narrowband Emitter for Solar Thermophotovoltaics Application. Springer Proceedings in Energy, 2020, , 29-35.	0.2	1
8377	Solar Cells: Basics. Springer Series in Materials Science, 2020, , 33-72.	0.4	1
8378	PHOTO-THERMOELECTRIC CONVERSION OF SOLAR ENERGY USING A PHOTOTHERMOGENERATOR. $\hat{\mathfrak{h}}\hat{\mathbb{I}}\oplus\hat{\mathbb{I}}$ the of Scientific Mind, 2020, , .	e Art 0.0	0
8379	Optics of Perovskite-based Highly Efficient Tandem Solar Cells. , 2020, , .		0
838 <u>0</u>	Hot Carrier Transfer and Carrier Manipulation of Semiconductor Nanocrystals. , 2020, , 171-196.		0

		CITATION REPORT	
#	ARTICLE	IF	CITATIONS
8381	HIGH-TEMPERATURE THERMAL PHOTONICS. Annual Review of Heat Transfer, 2020, 23, 355-3	95. 0.3	6
8382	Simulating bifacial perovskite/silicon tandem solar cells in large PV fields. , 2020, , .		0
8383	Charge Transfer State and Voltage Losses in Organic Solar Cells. , 2020, , 1-24.		0
8384	Modelling of Limitations of BHJ Architecture in Organic Solar Cells. Lecture Notes in Computer Science, 2020, , 323-332.	1.0	0
8385	Upconversion Nanophosphors: An Overview. Materials Horizons, 2020, , 47-102.	0.3	3
8387	Modulating the dynamics of Förster resonance energy transfer and singlet fission by variable molecular spacers. Nanoscale, 2020, 12, 23061-23068.	2.8	9
8388	Singlet fission relevant energetics from optimally tuned range-separated hybrids. Physical Che Chemical Physics, 2020, 22, 27060-27076.	mistry 1.3	7
8389	The Intermediate Band Solar Cell. , 2021, , .		О
8390	High-Throughput Computational Studies in Catalysis and Materials Research, and Their Impact Rational Design. , 2020, , 1-44.	: on	1
8392	Optical Characterization of InAs/InGaP Intermediate Band Solar Cells. , 2021, , .		0
8393	Anti-reflection glass coverslips for indoor MOS photovoltaic cells. , 2021, , .		0
8394	Mid-gap trap state mediated dark current in organic photodiodes. , 0, , .		0
8397	Revealing Fundamental Efficiency Limits of Monolithic Perovskite/Silicon Tandem Photovoltaic through Subcell Characterization. ACS Energy Letters, 2021, 6, 3982-3991.	s 8.8	22
8402	Faradaic junction and isoenergetic charge transfer mechanism on semiconductor/semiconduc interfaces. Nature Communications, 2021, 12, 6363.	tor 5.8	14
8403	Above-Band-Gap Voltage from Oriented Bismuth Ferrite Ceramic Photovoltaic Cells. ACS Appli Energy Materials, 2021, 4, 12703-12708.	ed 2.5	6
8404	Carrier transport and performance limit of semi-transparent photovoltaics: Culn1â°' <i>x</i> Ga <i>x</i> Se2 as a case study. Journal of Applied Physics, 2021, 130, .	1.1	4
8408	Controllable Photoelectric Properties of Carbon Dots and Their Application in Organic Solar Ce Chinese Journal of Polymer Science (English Edition), 2022, 40, 7-20.	2.0 x	7
8409	Homologous Bromides Treatment for Improving the Openâ€Circuit Voltage of Perovskite Sola Advanced Materials, 2022, 34, e2106280.	r Cells. 11.1	26

		CITATION RE	PORT	
#	Article		IF	CITATIONS
8410	Recent progress in inorganic tin perovskite solar cells. Materials Today Energy, 2022, 23	s, 100891.	2.5	16
8411	Low ost Strategy for Highâ€Efficiency Bifacial Perovskite/câ€Si Tandem Solar Cells. S 2100781.	Solar Rrl, 2022, 6,	3.1	5
8412	Analytic modelling of multi-junction solar cells via multi-diodes. Renewable Energy, 2022 1033-1042.	2, 184,	4.3	5
8413	The Voltage Loss in Tin Halide Perovskite Solar Cells: Origins and Perspectives. Advance Materials, 2022, 32, 2108832.	d Functional	7.8	43
8414	Physical Limitations of Photovoltaic Conversion. Advances in Chemical and Materials En Book Series, 0, , 22-31.	gineering	0.2	0
8415	Quantum Dot Solar Cells. Advances in Chemical and Materials Engineering Book Series,	0, , 163-187.	0.2	0
8416	Phononic Engineering for Hot Carrier Solar Cells. Advances in Chemical and Materials Er Book Series, 0, , 214-242.	igineering	0.2	0
8417	Prospects and Strategy of Development for Advanced Solar Cells. Advances in Chemical Engineering Book Series, 0, , 287-296.	and Materials	0.2	0
8418	Photovoltaic Devices. , 0, , 126-162.			0
8419	Nanotechnology for Photovoltaic Energy. , 0, , 163-191.			0
8420	Nanotechnology for Photovoltaic Energy. , 0, , 319-346.			0
8421	Quantum Dot Solar Cells. , 0, , 406-429.			0
8422	Phononic Engineering for Hot Carrier Solar Cells. , 0, , 1152-1180.			0
8423	Photon Upconversion in Lanthanide-Activated Inorganic Luminescent Materials. Advanc and Materials Engineering Book Series, 0, , 86-116.	es in Chemical	0.2	2
8424	Energetic Beam Synthesis of Dilute Nitrides and Related Alloys. , 2008, , 1-34.			0
8425	Infrared Photon Pair-Production in Ligand-Sensitized Lanthanide Nanocrystals. Frontiers Chemistry, 2020, 8, 579942.	in	1.8	2
8426	Thermal and electrical conductivity of single crystalline kesterite Cu <sub>2</sub> ZnSnS <sub>4</sub> . Materials Research Express, 2020, 7, 105908.		0.8	1
8427	Reduction of non-radiative recombination by inserting a GaAs strain-relaxation interlaye InGaAs/GaAsP superlattice solar cells investigated by photo-thermal spectroscopy. Jourr Physics, 2020, 128, 195702.	r in al of Applied	1.1	4

#	Article	IF	Citations
8428	Effect of Prefabricated Layer Structure on Properties of CZTS Thin Films and Solar Cells. IOP Conference Series: Earth and Environmental Science, 2020, 571, 012033.	0.2	0
8429	Improving the performance of CZTS battery with environmental buffer layer and analyzing the effect of MoS <sub>2</sub> layer on the battery. Modern Physics Letters B, 2021, 35, 2150071.	1.0	0
8430	Atomistic insight into the significantly enhanced photovoltaic cells of monolayer GaTe <sub>2</sub> <i>via</i> two-dimensional van der Waals heterostructures engineering. ChemistrySelect, 2022, 7, 629-644.	0.7	0
8431	Theoretical study of structural, electronic, and optical properties of mixed chalcogenide-halide bismuth perovskites CH3NH3BiChI2 (Ch = S, Se, Te). Japanese Journal of Applied Physics, 2020, 59, 121002.	0.8	2
8432	Periodic Nanophotonic Structures-Based Light Management for Solar Energy Harvesting. , 0, , .		0
8434	First-principles insight into the structural, mechanical, electronic and optical properties of Be3X2 (X) Tj ETQq1 1	0.784314 1.9	rgǥT /Overloo
8435	Upconversion Nanoparticles: Synthesis, Photoluminescence Properties, and Applications. Nanotechnologies in Russia, 2020, 15, 655-678.	0.7	8
8436	Tandem cells for very high concentration. , 0, , .		2
8437	Impact of the polar optical phonon and alloy scattering on the charge-carrier mobilities of FA0.83Cs0.17Pb(I1â^'xBrx)3 hybrid perovskites. Physical Chemistry Chemical Physics, 2021, , .	1.3	3
8438	Investigations aimed at producing 33% efficient perovskite–silicon tandem solar cells through device simulations. RSC Advances, 2021, 11, 37366-37374.	1.7	34
8439	Homogenization of Optical Field in 'Plum Pudding'-Like Nanocrystal-Perovskite Composites. SSRN Electronic Journal, 0, , .	0.4	0
8440	Remarkable Cd-free Sb <sub>2</sub> Se <sub>3</sub> solar cell yield achieved by interface band-alignment and growth orientation screening. Journal of Materials Chemistry A, 2021, 9, 26963-26975.	5.2	17
8441	Singlet fission and triplet pair recombination in bipentacenes with a twist. Materials Horizons, 2022, 9, 462-470.	6.4	14
8442	Numerical modeling of AZTS as buffer layer in CZTS solar cells with back surface field for the improvement of cell performance. Solar Energy, 2022, 231, 41-46.	2.9	15
8443	High-temperature post-annealing effect on the surface morphology and photoresponse and electrical properties of B-doped BaSi2 films grown by molecular beam epitaxy under various Ba-to-Si deposition rate ratios. Journal of Crystal Growth, 2022, 578, 126429.	0.7	7
8444	Local magnetic spin mismatch promoting photocatalytic overall water splitting with exceptional solar-to-hydrogen efficiency. Energy and Environmental Science, 2022, 15, 265-277.	15.6	37
8445	First-principles calculations to investigate the electronic and optical properties of Cu2ZnSnS4 with Ag and Se codoping. Chemical Physics, 2022, 554, 111418.	0.9	6
8446	Passivating contacts for high-efficiency silicon-based solar cells: From single-junction to tandem architecture. Nano Energy, 2022, 92, 106712.	8.2	30

#	Article	IF	CITATIONS
8447	Electron-hole pair creation and conversion efficiency in radioisotope microbatteries. Applied Radiation and Isotopes, 2022, 180, 110042.	0.7	7
8448	Silicon-based solar cell: Materials, fabrication and applications. , 2021, , .		2
8450	Antireflective Huygens' Metasurface with Correlated Disorder Made from High-Index Disks Implemented into Silicon Heterojunction Solar Cells. ACS Photonics, 2021, 8, 3476-3485.	3.2	14
8451	Updated Progresses in Perovskite Solar Cells. Chinese Physics Letters, 2021, 38, 107801.	1.3	11
8452	Coexistence of Photoelectric Conversion and Storage in van der Waals Heterojunctions. Physical Review Letters, 2021, 127, 217401.	2.9	13
8454	Halide perovskite-based indoor photovoltaics: recent development and challenges. Materials Today Energy, 2022, 23, 100907.	2.5	27
8455	Enhanced Stability of Tin Halide Perovskite Photovoltaics Using a Bathocuproine—Copper Top Electrode. Advanced Energy Materials, 2021, 11, 2102766.	10.2	12
8456	Enhanced photocurrent in PbSe nanorod-quantum dot bulk nano-heterojunction solar cells. Journal of Materials Science: Materials in Electronics, 2022, 33, 714-724.	1.1	1
8457	Increasing donor-acceptor spacing for reduced voltage loss in organic solar cells. Nature Communications, 2021, 12, 6679.	5.8	56
8458	Theoretical study of selective absorber and narrowband emitter based on metamaterial matched with InGaAsSb cells for an STPV system. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 278, 108016.	1.1	4
8459	Assessing the Photovoltaic Quality of Vacuumâ€Thermal Evaporated Organic Semiconductor Blends. Advanced Materials, 2021, , 2107584.	11.1	5
8460	Templated Growth and Passivation of Vertically Oriented Antimony Selenide Thin Films for Highâ€Efficiency Solar Cells in Substrate Configuration. Advanced Functional Materials, 2022, 32, 2110032.	7.8	40
8461	Revisited Electronic Structure Properties of GaN-ZnO Quaternary Alloys for High Solar Absorption. Journal of Electronic Materials, 2022, 51, 594-600.	1.0	1
8462	Tuning the Band Gaps of Oxide and Halide Perovskite Compounds via Biaxial Strain in All Directions. Journal of Physical Chemistry C, 2021, 125, 25951-25958.	1.5	6
8463	Energy Storage upon Photochromic 6-Ï€ Photocyclization and Efficient On-Demand Heat Release with Oxidation Stimuli. Journal of Physical Chemistry Letters, 2021, 12, 11391-11398.	2.1	7
8464	Strategies to improve light utilization in solar fuel synthesis. Nature Energy, 2022, 7, 13-24.	19.8	120
8465	Resonant tunneling in natural photosynthetic systems. Physica Scripta, 2021, 96, 125038.	1.2	1
8466	Regioâ€regular and crossâ€conjugated poly(thienylene vinylene)s through acyclic diene metathesis. Journal of Polymer Science, 0, , .	2.0	1

#	Article	IF	CITATIONS
8467	Hydrothermal growth of Sb2S3 thin films on molybdenum for solar cell applications: Effect of post-deposition annealing. Journal of Alloys and Compounds, 2022, 898, 162891.	2.8	14
8468	Fourteen percent efficiency ultrathin silicon solar cells with improved infrared light management enabled by holeâ€selective transition metal oxide fullâ€area rear passivating contacts. Progress in Photovoltaics: Research and Applications, 2022, 30, 823-834.	4.4	9
8469	Effect of alloying on the carrier dynamics in high-performance perovskite solar cells. Journal of Energy Chemistry, 2022, 68, 267-274.	7.1	2
8470	Improving the performance of solar thermophotovoltaic (STPV) cells with spectral selected absorbers and small apertured radiation shields. International Journal of Heat and Mass Transfer, 2021, 184, 122266.	2.5	2
8471	On the Optoelectronic Mechanisms Ruling Tiâ€hyperdoped Si Photodiodes. Advanced Electronic Materials, 2022, 8, .	2.6	12
8472	Arithmetic optimization approach for parameters identification of different PV diode models with FOPI-MPPT. Ain Shams Engineering Journal, 2022, 13, 101612.	3.5	10
8473	Device Performance of Emerging Photovoltaic Materials (Version 2). Advanced Energy Materials, 2021, 11, .	10.2	66
8474	Structure Set in Stone: Designing Rigid Linkers to Control the Efficiency of Intramolecular Singlet Fission. Journal of Physical Chemistry B, 2021, 125, 13235-13245.	1.2	5
8475	Analytical Modeling of the Maximum Power Point with Series Resistance. Applied Sciences (Switzerland), 2021, 11, 10952.	1.3	5
8476	Temperature-related photovoltaic characteristics of (In,Ga)N single-intermediate band quantum well solar cells for different shapes. Physica B: Condensed Matter, 2022, 626, 413495.	1.3	9
8479	Explore the correlation between intervalley scattering and phonon bottleneck effect on the hot carrier relaxation in bulk GaSb and InN for hot carrier solar cells. Journal of Applied Physics, 2021, 130, .	1.1	5
8480	A Review at the Utilization of Renewable Energy in an Agricultural Operation. Biophysical Economics and Sustainability, 2021, 6, 1.	0.7	1
8481	Excitonic effects in absorption spectra of carbon dioxide reduction photocatalysts. Npj Computational Materials, 2021, 7, .	3.5	12
8482	Role of conducting polymers in enhancing the stability and performance of perovskite solar cells: a brief review. Materials Today Sustainability, 2022, 17, 100090.	1.9	20
8483	Optical analysis of an integrated solar cell and a photon up converter, providing guidance for future device engineering efforts. Journal of Applied Physics, 2021, 130, 194501.	1.1	2
8484	Two-Dimensional GeC <sub>2</sub> with Tunable Electronic and Carrier Transport Properties and a High Current ON/OFF Ratio. Journal of Physical Chemistry Letters, 2021, 12, 11488-11496.	2.1	6
8485	Bilayer CZTS/Si absorber for obtaining highly efficient CZTS solar cell. Solar Energy, 2021, 230, 1189-1198.	2.9	7
8486	Unlocking Voltage Potentials of Mixedâ€Halide Perovskite Solar Cells via Phase Segregation Suppression. Advanced Functional Materials, 2022, 32, 2110698.	7.8	30

#	Article	IF	CITATIONS
8487	AgSbSe2 nanoparticles: A solar absorber material with an optimal Shockley-Queisser band gap. Materials Letters, 2022, 309, 131412.	1.3	5
8488	Role of the Optical–Acoustic Phonon Interaction in the Ultrafast Cooling Process of CVD Graphene. Journal of Physical Chemistry C, 2021, 125, 27283-27289.	1.5	5
8489	Metal Chalcohalides: Next Generation Photovoltaic Materials?. Solar Rrl, 2022, 6, 2100829.	3.1	29
8490	Impedance spectroscopy for perovskite solar cells: characterisation, analysis, and diagnosis. Journal of Materials Chemistry C, 2022, 10, 742-761.	2.7	68
8491	Approaches for High-Efficiency III-V/Si Tandem Solar Cells. Energy and Power Engineering, 2021, 13, 413-427.	0.5	7
8492	The Role of Carbon Allotrope-Based Charge Transport Layers in Enhancing the Performance of Perovskite Solar Cells. , 2021, , 1-38.		0
8493	Modeling Methods for Plasmonic Effects in Halide Perovskite Based Systems for Photonics Applications. , 2021, , 1-52.		0
8494	Hybrid perovskites: Charge carrier recombination effects in photovoltaic devices. , 2022, 5, .		0
8495	Dynamics of photoconversion processes: the energetic cost of lifetime gain in photosynthetic and photovoltaic systems. Chemical Society Reviews, 2021, 50, 13372-13409.	18.7	10
8496	Performance Enhancement of Heterojunction Silicon Solar Cells Based on LDS Effect of Various Concentrations of Eu-Doped Phosphors. , 2021, , .		0
8497	High Electric Field Sensing in Ultrathin SiOâ,, and Tunnel Region to Enhance GalnP/Si Dual Junction Solar Cell Performance. IEEE Sensors Journal, 2022, 22, 1273-1279.	2.4	10
8498	Excited-State Dynamics in Metal Halide Perovskites: A Theoretical Perspective. , 2021, , 1-54.		0
8499	Wide-bandgap organic solar cells with a novel perylene-based non-fullerene acceptor enabling open-circuit voltages beyond 1.4 V. Journal of Materials Chemistry A, 2022, 10, 2888-2906.	5.2	21
8500	Improved <i>J</i> <sub> <i>sc</i> </sub> by Increasing the Absorber Layer Thickness of Monoclinicâ€Dominated Cu <sub>2</sub> SnS <sub>3</sub> Thin Film Solar Cells Fabricated on Flexible Mo Foil. Solar Rrl, 2022, 6, .	3.1	2
8501	Ultrathin Oxides for Solar Cells. RSC Energy and Environment Series, 2022, , 27-69.	0.2	1
8502	Solar cells efficiency enhancement using multilevel selective energy contacts (SECs). Optical and Quantum Electronics, 2022, 54, 1.	1.5	8
8503	Impact ionization and multiple photon absorption in the two-dimensional photoexcited Hubbard model. Physical Review B, 2022, 105, .	1.1	4
8504	Optimization of a Pb-free all-perovskite tandem solar cell with 30.85% efficiency. Optical Materials, 2022, 123, 111891.	1.7	18

#	Article	IF	CITATIONS
8505	Electronic structure and anion engineering for perovskite oxysulfide BaTi(O,S)3. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	3
8506	Inorganic CsSnl <sub>3</sub> Perovskite Solar Cells: The Progress and Future Prospects. Solar Rrl, 2022, 6, 2100841.	3.1	25
8507	Effect evaluation of micro/nano structured materials on the performance of solar thermophotovoltaic system: An analysis based on measurement data. Solar Energy, 2022, 231, 1037-1047.	2.9	14
8508	Near-infrared-to-visible upconversion from 980 nm excitation band by binary solid of PbS quantum dot with directly attached emitter. Journal of Materials Chemistry C, 2022, 10, 4563-4567.	2.7	8
8509	Performance Enhancement of TiO2-encapsulated Photoelectrodes Based on III–V Compound Semiconductors. RSC Energy and Environment Series, 2022, , 103-134.	0.2	0
8510	SHJ Solar Cells on an Adequately Thin c-Si Wafer With Dome-Like Front and Double-Layer ITO Nanoparticles as Rear Light Trapping Arrangements. IEEE Transactions on Electron Devices, 2022, 69, 216-224.	1.6	1
8511	Electric-field regulated crystallization process for enhanced performance of perovskite solar cells. Sustainable Energy and Fuels, 0, , .	2.5	0
8512	Bandgap engineering of lead-free ternary halide perovskites for photovoltaics and beyond: Recent progress and future prospects. Nano Energy, 2022, 92, 106710.	8.2	27
8513	Hybrid design of spectral splitters and concentrators of light for solar cells using iterative search and neural networks. Photonics and Nanostructures - Fundamentals and Applications, 2022, 48, 100987.	1.0	1
8514	Unravelling the effect of defect density, grain boundary and gradient doping in an efficient lead-free formamidinium perovskite solar cell. Optical Materials, 2022, 124, 111952.	1.7	11
8515	Study on bandgap predications of ABX3-type perovskites by machine learning. Organic Electronics, 2022, 101, 106426.	1.4	21
8516	Dopant-free materials for carrier-selective passivating contact solar cells: A review. Surfaces and Interfaces, 2022, 28, 101687.	1.5	11
8517	Sustaining efficiency at elevated power densities in InGaAs airbridge thermophotovoltaic cells. Solar Energy Materials and Solar Cells, 2022, 236, 111523.	3.0	15
8518	Impact of solvent on the downconversion efficiency of the N-GQDs/PMMA layer: Application in CIGS solar cells. Optik, 2022, 253, 168569.	1.4	3
8519	First-principles study of double perovskites Cs2Sn(Br1â^'l )6 for the design of high-efficiency thin-film photovoltaics. Computational Condensed Matter, 2022, 30, e00634.	0.9	4
8520	Recent progress in perovskite solar cells: challenges from efficiency to stability. Materials Today Chemistry, 2022, 23, 100686.	1.7	26
8521	Numerical investigation of solar cells based on hybrid organic cation perovskite with inorganic HTL via SCAPS-1D. Chinese Journal of Physics, 2022, 76, 94-109.	2.0	19
8522	Ternary organic solar cells: A review of the role of the third element. Nano Energy, 2022, 94, 106915.	8.2	87

#	Article	IF	Citations
8523	Perovskite solar cells based self-charging power packs: Fundamentals, applications and challenges. Nano Energy, 2022, 94, 106910.	8.2	41
8524	Stress-induced BiVO4 photoanode for enhanced photoelectrochemical performance. Applied Catalysis B: Environmental, 2022, 304, 121012.	10.8	52
8525	Broadband Absorption Limits for Ultrathin Solar Cells. , 2020, , .		0
8526	Application of Solar Concentrators for Increasing of Solar Power Generation. , 2020, , .		2
8527	Atypical Deposition Temperature of CZTS Thin Films in Spray-Pyrolysis Technique: Impact on Surface Morphology, Phase, and Chemical Composition. , 2020, , .		0
8528	Novelty Approach to GaAs Solar Cells Modelling. , 2020, , .		0
8529	External quantum efficiency response and conversion efficiency enhancement of silicon solar cells based on multiple layers of up conversion phosphors coating. , 2020, , .		1
8530	Investigating the effect of spectral changes on the electrical properties of Si, GaAs and CdTe solar cells. , 2020, , .		1
8531	Photovoltaic Performance and Up Scaling of Monolithic Dye-Sensitized Solar Module. , 2020, , .		1
8532	Donor Centres Involved into Downconversion in Yb-Doped Molybdate and Tungstate Single Crystals. , 2020, , .		0
8534	Performance Analysis of InAs <sub>0.98</sub> N <sub>0.02</sub> /AlP <sub>x</sub> Sb <sub>(1-x)</sub> Quantum Dot Intermediate Band Solar Cell. , 2021, , .		2
8535	Ultrafast Deep-Ultraviolet Laser-Induced Voltage Response of Pyrite. Micromachines, 2021, 12, 1555.	1.4	3
8536	A copper-based 2D hybrid perovskite solar absorber as a potential eco-friendly alternative to lead halide perovskites. Journal of Materials Chemistry C, 2022, 10, 3738-3745.	2.7	8
8537	Nanomaterial Assisted Photoelectrochemical Water Splitting. Materials Horizons, 2022, , 249-273.	0.3	1
8538	Module-Level Thermophotovoltaics With Polaritonic Emitters by Machine Learning. SSRN Electronic Journal, 0, , .	0.4	0
8539	Organic Chloride Salt Interfacial Modified Crystallization for Efficient Antimony Selenosulfide Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 4276-4284.	4.0	16
8540	Polymerized Small Molecular Acceptor with Branched Side Chains for All Polymer Solar Cells with Efficiency over 16.7%. Advanced Materials, 2022, 34, e2110155.	11.1	79
8541	Functionalized polyurethane composite gel electrolyte with cosensitized photoanode for higher solar cell efficiency using a passivation layer. Nanoscale Advances, 2022, 4, 1199-1212.	2.2	2

ARTICLE IF CITATIONS Passivation principle of deep-level defects: a study of Sn<sub>Zn</sub> defects in kesterites for 8542 5.2 7 high-efficient solar cells. Journal of Materials Chemistry A, 2022, 10, 2849-2855. Ionic liquids based sustainable materials for versatile optoelectronic applications., 2022, 207-223. 8543 A step beyond in steady-state and time-resolved electro-optical spectroscopy: Demonstration of a 8544 customized simple, compact, low-cost, fiber-based interferometer system. Structural Dynamics, 2022, 0.9 5 9,011101. A comparison study of the structural, electronic and mechanical properties of the pure pyrite FeS2 and oxygen doped pyrite FeO0.25S1.75 under pressure range from 0 to 25†GPa. Physica B: Condensed Matter, 2022, , 413710. 8545 Exploiting the Optical Limits of Thinâ€Film Solar Cells: A Review on Light Management Strategies in 8546 1.7 15 Cu(In,Ga)Se<sub>2</sub>. Advanced Photonics Research, 2022, 3, . Feasibility of Emission-Enhanced CsPbCl<sub>3</sub> Quantum Dots Co-Doped with Mn<sup>2+</sup> and Er<sup>3+</sup> as Luminescent Downshifting Layers in Crystalline Silicon Solar Modules. ACS 2.4 Applied Nano Materials, 2022, 5, 2522-2531. Unveiling the layer-dependent electronic properties in transition-metal dichalcogenide 8548 2.8 6 heterostructures assisted by machine learning. Nanoscale, 2022, 14, 2511-2520. Investigation of lead-free MASnI3-MASnIBr2 tandem solar cell: Numerical simulation. Optical 8549 1.7 Materials, 2022, 123, 111893. Role of carbon quantum dot for enhanced performance of photo-absorption in 8550 Cu<sub>2</sub>CoSnS<sub>4</sub> superstrate solar cell device. Materials Advances, 2022, 3, 7 2.6 2405-2416. Photo-modulated optical and electrical properties of graphene. Nanophotonics, 2022, 11, 917-940. Effect of stacking sequence on the structural ordering and phase formation in the sequentially deposited copper zinc tin sulfide thin films. International Journal of Energy Research, 2022, 46, 8552 3 2.2 7758-7774. Machine Learning Approach for Maximizing Thermoelectric Properties of BiCuSeO and Discovering 1.6 New Doping Element. Energies, 2022, 15, 779. Switchable out-of-plane shift current in ferroelectric two-dimensional material CuInP2S6. Applied 8554 1.5 6 Physics Letters, 2022, 120, 013103. Thermodynamic Optimization of Electrical and Thermal Energy Production of PV Panels and Potential for Valorization of the PV Low-Grade Thermal Energy into Cold. Energies, 2022, 15, 498. 1.6 An In-Depth Experimental Investigation of the Outdoor Performance of Wafer and Thin Film Photovoltaics Technologies in a Tropical Climate. Journal of Solar Energy Engineering, Transactions 8556 1.1 1 of the ASME, 2022, 144, . Development of formamidinium lead iodide-based perovskite solar cells: efficiency and stability. Chemical Science, 2022, 13, 2167-2183. A Refined Prediction Parameter for Molecular Alignability in Stretched Polymers and a New 8558 2.0 2 Light-Harvesting Material for AlGaAs Photovoltaics. Polymers, 2022, 14, 532. First-Principles DFT Insights into the Stabilization of Zinc Diphosphide (ZnP2) Nanocrystals via 8559 Surface Functionalization by 4-Aminothiophenol for Photovoltaic Applications. ACS Applied Energy Materials, 0, , .

#	Article	IF	CITATIONS
8560	Computational and experimental characterizations of annealed Cu2ZnSnS4 thin films. Heliyon, 2022, 8, e08683.	1.4	24
8561	Distinctive Deepâ€Level Defects in Nonâ€Stoichiometric Sb <sub>2</sub> Se <sub>3</sub> Photovoltaic Materials. Advanced Science, 2022, 9, e2105268.	5.6	34
8562	Dual Junction GaInP/GaAs Solar Cell with Enhanced Efficiency Using Typeâ€A InP Quantum Wells. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	0.8	7
8563	Plasmon-coupled Au-nanochain functionalized PEDOT:PSS for efficient mixed tin–lead iodide perovskite solar cells. Chemical Communications, 2022, 58, 1366-1369.	2.2	4
8564	Energy Flow in Hybrid Organic/Inorganic Systems for Triplet–Triplet Annihilation Upconversion. ACS Energy Letters, 2022, 7, 847-861.	8.8	20
8565	Phase evolution studies of mechanochemical-prepared Cu2ZnSnS4 powder via comprehensive annealing and milling investigation. Powder Diffraction, 0, , 1-12.	0.4	0
8566	Progress and challenges on scaling up of perovskite solar cell technology. Sustainable Energy and Fuels, 2022, 6, 243-266.	2.5	59
8567	Thermodynamic Limits to HgTe Quantum Dot Infrared Detector Performance. Journal of Electronic Materials, 2022, 51, 1428-1435.	1.0	7
8568	Polarization Insensitive Circular Ring Resonator Based Perfect Metamaterial Absorber Design and Simulation on a Silicon Substrate. Silicon, 2022, 14, 9009-9020.	1.8	11
8569	Optics in high efficiency perovskite tandem solar cells. , 2022, , 319-345.		1
8570	Singlet fission in colloid nanoparticles of amphipathic 9,10-bis(phenylethynyl)anthracene derivatives. Journal of Photochemistry and Photobiology A: Chemistry, 2022, 427, 113826.	2.0	6
8571	Numerical analysis and design of high performance HTL-free antimony sulfide solar cells by SCAPS-1D. Optical Materials, 2022, 123, 111880.	1.7	23
8573	Computational studies of ruthenium and iridium complexes for energy sciences and progress on greener alternatives. , 2022, , 115-145.		0
8574	Route to a direct-gap silicon allotrope Si <sub>32</sub> . Journal of Physics Condensed Matter, 2022, 34, 154006.	0.7	1
8575	Density Functional Theory Estimate of Halide Perovskite Band Gap: When Spin Orbit Coupling Helps. Journal of Physical Chemistry C, 2022, 126, 2184-2198.	1.5	40
8576	Design of Nearâ€Infrared Nonfullerene Acceptor with Ultralow Nonradiative Voltage Loss for Highâ€Performance Semitransparent Ternary Organic Solar Cells. Angewandte Chemie, 2022, 134, . ————————————————————————————————————	1.6	15
8577	Enhancing organic photovoltaic performance with 3D-transport dual nonfullerene acceptors. Journal of Materials Chemistry A, 2022, 10, 1948-1955.	5.2	11

#	Article	IF	CITATIONS
8579	Autonomous Design of Photoferroic Ruddlesden-Popper Perovskites for Water Splitting Devices. Materials, 2022, 15, 309.	1.3	3
8580	Analysis for efficiency potential of II–VI compound, chalcopyrite, and kesterite-based tandem solar cells. Journal of Materials Research, 2022, 37, 445-456.	1.2	9
8581	Advances in single crystals and thin films of chiral hybrid metal halides. Progress in Quantum Electronics, 2022, 82, 100375.	3.5	14
8582	Dicarbonyl anthracenes and phenanthrenes as singlet fission chromophores. Canadian Journal of Chemistry, 2022, 100, 520-529.	0.6	7
8583	Recent Progress and Future Prospects for Light Management of Allâ€Perovskite Tandem Solar Cells. Advanced Materials Interfaces, 2022, 9, .	1.9	16
8584	Scalable ways to break the efficiency limit of single-junction solar cells. Applied Physics Letters, 2022, 120, .	1.5	4
8585	Efficient light harvesting and photon sensing via engineered cooperative effects. New Journal of Physics, 2022, 24, 013027.	1.2	4
8586	Efficient singlet fission in nanoparticles of amphipathic anthracene–tetracene dyad with broadband light harvesting ability. Journal of Materials Chemistry C, 2022, 10, 1878-1886.	2.7	1
8587	Design of dyes for energy transformation: From the interaction with biological systems to application in solar cells. , 2022, , 79-114.		1
8588	Spotlight on Hot Carriers in Halide Perovskite Luminescence. ACS Energy Letters, 2022, 7, 749-756.	8.8	13
8589	Efficient Magnus-type integrators for solar energy conversion in Hubbard models. Journal of Computational Mathematics and Data Science, 2022, 2, 100018.	1.3	1
8590	Tunable engineering of photo- and electro-induced carrier dynamics in perovskite photoelectronic devices. Science China Materials, 2022, 65, 855-875.	3.5	9
8591	Featuring Semitransparent p–i–n Perovskite Solar Cells for Highâ€Efficiency Fourâ€Terminal/Silicon Tandem Solar Cells. Solar Rrl, 0, , 2100891.	3.1	3
8592	Antisolvents Treatment of Cs <sub>0.15</sub> FA <sub>0.85</sub> PbI <sub>3</sub> Boosting Efficiency for Perovskite Solar Cells. IEEE Journal of Photovoltaics, 2022, 12, 322-326.	1.5	1
8593	Substitutional alkaline earth metals delay nonradiative charge recombination in CH3NH3PbI3 perovskite: A time-domain study. Journal of Chemical Physics, 2022, 156, 014702.	1.2	2
8594	Influence of intrinsic defects on the structure and dynamics of the mixed Pb–Sn perovskite: first-principles DFT and NAMD simulations. Journal of Materials Chemistry A, 2021, 10, 234-244.	5.2	11
8595	Framework structure materials in photovoltaics based on perovskites 3D. , 2022, 5, .		0
8596	Understanding the impact of SrI2 additive on the properties of Sn-based halide perovskites. Optical Materials, 2022, 123, 111806.	1.7	3

#	Article	IF	CITATIONS
8597	Recent Advances of Monolithic <scp>Allâ€Perovskite</scp> Tandem Solar Cells: From Materials to Devices. Chinese Journal of Chemistry, 2022, 40, 856-871.	2.6	11
8598	Charge transfer state characterization and voltage losses of organic solar cells. JPhys Materials, 2022, 5, 024002.	1.8	19
8599	The "ferros―of MAPbI <sub>3</sub> : ferroelectricity, ferroelasticity and its crystallographic foundations in hybrid halide perovskites. Zeitschrift Fur Kristallographie - Crystalline Materials, 2022, 237, 135-140.	0.4	1
8600	Bandgap-tuned fluorescent CuGaS <sub>2</sub> /ZnS core/shell quantum dots for photovoltaic applications. Journal of Materials Chemistry C, 2022, 10, 3523-3530.	2.7	14
8601	Design of singlet fission chromophores by the introduction of <i>N</i> -oxyl fragments. Journal of Chemical Physics, 2022, 156, 034303.	1.2	7
8602	Potassium Iodide Doping Strategy for High-Efficiency Perovskite Solar Cells Revealed by Ultrafast Spectroscopy. Journal of Physical Chemistry Letters, 2022, 13, 711-717.	2.1	3
8603	Crystallochemical Characterizations, Raman Spectroscopy and Studies Nuclear Magnetic Resonance (NMR) of Cu <sub>2</sub> Zn(Sn, Si)S <sub>4 </sub> Compounds for Photovoltaic Applications. Journal of Materials Science and Chemical Engineering, 2022, 10, 24-40.	0.2	2
8604	Tailoring the EnergyÂManifold of Quasiâ€Twoâ€Dimensional Perovskites for Efficient Carrier Extraction. Advanced Energy Materials, 2022, 12, .	10.2	15
8605	lonicâ€Liquidâ€Based, Sustainable Wavelengthâ€Shifting Materials for Energy Conversion: A Minireview. ChemistrySelect, 2022, 7, .	0.7	2
8606	Computational predictions of adaptive aromaticity for the design of singlet fission materials. Inorganic Chemistry Frontiers, 2022, 9, 914-924.	3.0	13
8607	Novel Oligomer Enables Green Solvent Processed 17.5% Ternary Organic Solar Cells: Synergistic Energy Loss Reduction and Morphology Fine‶uning. Advanced Materials, 2022, 34, e2107659.	11.1	57
8608	Design of Nearâ€Infrared Nonfullerene Acceptor with Ultralow Nonradiative Voltage Loss for Highâ€Performance Semitransparent Ternary Organic Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	85
8609	An invertible crystallographic representation for general inverse design of inorganic crystals with targeted properties. Matter, 2022, 5, 314-335.	5.0	59
8610	Photoinduced Charge Transfer and Recombination Dynamics in Star Nonfullerene Organic Solar Cells. Journal of Physical Chemistry Letters, 2022, 13, 1123-1130.	2.1	27
8611	Highly Efficient Wideband Solar Energy Conversion Employing Singlet-Triplet Transitions. Bulletin of the Chemical Society of Japan, 2022, 95, 341-352.	2.0	5
8612	Toward stable lead halide perovskite solar cells: A knob on the A/X sites components. IScience, 2022, 25, 103599.	1.9	13
8613	Threeâ€ŧerminal perovskite/integrated back contact silicon tandem solar cells under low light intensity conditions. , 2022, 1, 148-156.		36
8614	Suppressed Halide Segregation and Defects in Wide Bandgap Perovskite Solar Cells Enabled by Doping Organic Bromide Salt with Moderate Chain Length. Journal of Physical Chemistry C, 2022, 126, 1711-1720.	1.5	8

		CITATION RE	PORT	
#	Article		IF	CITATIONS
8615	Carbon nanotubes in perovskite-based optoelectronic devices. Matter, 2022, 5, 448-481		5.0	19
8616	Excimer Formation Inhibits the Intramolecular Singlet Fission Dynamics: Systematic Tiltin Pentacene Dimers by Linking Positions. Journal of Physical Chemistry B, 2022, 126, 1054	ng of +-1062.	1.2	16
8617	Double Cascading Charge Transfer at Integrated Perovskite/Organic Bulk Heterojunctior Extended Nearâ€Infrared Photoresponse and Enhanced Photocurrent. Small, 2022, 18, 6	1s for 22106083.	5.2	7
8618	Visualizing Hot arrier Expansion and Cascaded Transport in WS <sub>2</sub> by Ultr Absorption Microscopy. Advanced Science, 2022, 9, e2105746.	afast Transient	5.6	9
8619	Promising applications of wide bandgap inorganic perovskites in underwater photovolta Solar Energy, 2022, 233, 489-493.	ic cells.	2.9	15
8620	Influence of an indefinite causal order on an Otto heat engine. Communications in Theo Physics, 2022, 74, 025601.	retical	1.1	2
8621	Illuminationâ€Driven Energy Level Realignment at Buried Interfaces between Organic Ch Layers and a Lead Halide Perovskite. Solar Rrl, 2022, 6, .	arge Transport	3.1	8
8622	The joint effect of spin–orbit coupling and atomistic disorder on bandgap evolution in CsSn1â^'xPbxl3 mixed perovskite. Journal of Applied Physics, 2022, 131, 055107.	inorganic	1.1	1
8623	Electronic and Photovoltaic Properties of Superlattices Constructed by Organic–Inorg Perovskites: a Theoretical Perspective. ACS Applied Energy Materials, 2022, 5, 2430-244	anic 1.	2.5	3
8624	First-principles study on the absorber for intermediate band solar cell from Si, Ge, and Sr LiGaTe2. Optik, 2022, 254, 168657.	i-doped	1.4	2
8625	Photovoltaic behavior of SnS solar cells under temperature variations. Optik, 2022, 254,	168635.	1.4	17
8626	Current status and future development of hybrid PV/T system with PCM module: 4E (end 112147.	ergy, exergy,) Tj ETQq1 1	0.784314 8.2	rgBT /Over 41
8627	Boost the efficiency of nickel oxide-based formamidinium-cesium perovskite solar cells to coumarin 343 dye as defect passivator. Nano Energy, 2022, 94, 106935.	o 21% by using	8.2	49
8628	Direct evidence for bulk photovoltaic charge transport in a ferroelectric polycrystalline fi Scripta Materialia, 2022, 211, 114498.	lm.	2.6	5
8629	Techno-economic and environmental sustainability of industrial-scale productions of per solar cells. Renewable and Sustainable Energy Reviews, 2022, 158, 112146.	ovskite	8.2	23
8630	Density functional theory analysis of structural and electronic properties of hexagonal h perovskite (CH3NH3)3Bi2I9. Physica B: Condensed Matter, 2022, 630, 413695.	ybrid	1.3	3
8631	Empirical analysis of recent temporal dynamics of research fields: Annual publications in and related areas as an example. Journal of Informetrics, 2022, 16, 101253.	chemistry	1.4	8
8632	Dynamics and physical process of hot carriers in optoelectronic devices. Nano Energy, 20	022, 95, 106977.	8.2	16

#	Article	IF	CITATIONS
8633	Selective emitter materials and designs for high-temperature thermophotovoltaic applications. Solar Energy Materials and Solar Cells, 2022, 238, 111554.	3.0	23
8634	Modeling and experiments of near-field thermophotovoltaic conversion: A review. Solar Energy Materials and Solar Cells, 2022, 238, 111556.	3.0	27
8635	Computational design of singlet fission biradicaloid chromophores. Journal of Photochemistry and Photobiology A: Chemistry, 2022, 427, 113807.	2.0	4
8636	Tamm plasmon enabled narrowband thermal emitter for solar thermophotovoltaics. Solar Energy Materials and Solar Cells, 2022, 238, 111589.	3.0	15
8637	Plasma-activated GaAs/Si wafer bonding with high mechanical strength and electrical conductivity. Materials Science in Semiconductor Processing, 2022, 143, 106481.	1.9	3
8638	Effect of varied number of multilayers, for cadmium sulphide with bismuth-doped zinc oxide buffer layer, on optical properties. Ferroelectrics, 2022, 586, 147-159.	0.3	0
8639	New Absorbers for Third-Generation Thin-Film Solar Cells Based on Cu–A–B–S–Sa (A = Ba, Sr, Fe, Ni, or) 7 2022, 67, 1-27.	j ETQq0 C 0.3	0 rgBT /Ove 7
8640	InCaN Quantum Dot Superlattices as Ratchet Band Solar Cells. IEEE Journal of Photovoltaics, 2022, 12, 474-482.	1.5	3
8643	Large-Scale Transparent Photovoltaics for a Sustainable Energy Future: Review of Inorganic Transparent Photovoltaics. Applied Science and Convergence Technology, 2022, 31, 1-8.	0.3	2
8644	Multiâ€Functional MoO <sub>3</sub> Doping of Carbonâ€Nanotube Top Electrodes for Highly Transparent and Efficient Semiâ€Transparent Perovskite Solar Cells. Advanced Materials Interfaces, 2022, 9, .	1.9	14
8645	Overcoming Shockley-Queisser limit using halide perovskite platform?. Joule, 2022, 6, 756-771.	11.7	56
8646	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges. Chemical Reviews, 2022, 122, 6514-6613.	23.0	187
8647	Gold-Based Double Perovskite-Related Polymorphs: Low Dimensional with an Ultranarrow Bandgap. Chemistry of Materials, 2022, 34, 1544-1553.	3.2	6
8648	Highâ€Polarizability Organic Ferroelectric Materials Doping for Enhancing the Builtâ€In Electric Field of Perovskite Solar Cells Realizing Efficiency over 24%. Advanced Materials, 2022, 34, e2110482.	11.1	65
8649	Advances in MEMS and Microfluidicsâ€Based Energy Harvesting Technologies. Advanced Materials Technologies, 2022, 7, .	3.0	19
8650	Engineering of Interface and Bulk Properties in Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Thin-Film Solar Cells with Ultrathin CuAlO <sub>2</sub> Intermediate Layer and Ge Doping. ACS Applied Energy Materials, 2022, 5, 2024-2035.	2.5	16
8651	Adaptive sampling methods via machine learning for materials screening. Science and Technology of Advanced Materials Methods, 2022, 2, 55-66.	0.4	2
8652	Herzberg–Teller Effect in Single-Crystalline Hexacene at Finite Temperatures. Journal of Physical Chemistry C, 2022, 126, 3366-3374.	1.5	3

#	Article	IF	CITATIONS
8653	A review on ferroelectric systems for next generation photovoltaic applications. Journal Physics D: Applied Physics, 2022, 55, 283001.	1.3	14
8654	Exciton Binding Energy of Nonâ€Fullerene Electron Acceptors. Advanced Energy and Sustainability Research, 2022, 3, .	2.8	27
8655	Study of CZTSSe-Based Solar Cells with Different ETMs by SCAPS. Sustainability, 2022, 14, 1916.	1.6	11
8656	Bandgap engineering and optoelectronic properties of all-inorganic lead-free Pd-based double perovskites. Arabian Journal of Chemistry, 2022, 15, 103785.	2.3	5
8657	Nanostructured Top Contact as an Alternative to Transparent Conductive Oxides in Tandem Perovskite/c-Si Solar Cells. Applied Sciences (Switzerland), 2022, 12, 1854.	1.3	0
8658	Inverted Perovskite Solar Cells: The Emergence of a Highly Stable and Efficient Architecture. Energy Technology, 2022, 10, .	1.8	11
8659	The statistical neural network-based regression approach for prediction of optical band gap of CuO. Indian Journal of Physics, 2022, 96, 3547-3557.	0.9	4
8660	Survival and extreme statistics of work, heat, and entropy production in steady-state heat engines. Physical Review E, 2022, 105, 024112.	0.8	2
8661	Static and dynamic components of Debye–Waller coefficients in the novel cubic polymorph of low-temperature disordered Cu <sub>2</sub> ZnSnS <sub>4</sub> . IUCrJ, 2022, 9, 272-285.	1.0	5
8662	Direct band gap AlPSi3 and GaPSi3 for tandem solar cells. Journal of Power Sources, 2022, 525, 231104.	4.0	0
8663	Comparison between spectrum-split conversion and thermophotovoltaic for solar energy utilization: Thermodynamic limitation and parametric analysis. Energy Conversion and Management, 2022, 255, 115331.	4.4	19
8664	Characterization of Cu2ZnSnS4 thin films prepared with and without thin Al2O3 barrier layer. Solar Energy, 2022, 234, 137-151.	2.9	7
8665	Effect of ultra-thin CdSexTe1â^'x interface layer on parameters of CdTe solar cells. Solar Energy, 2022, 234, 128-136.	2.9	7
8666	Narrow bandgap photovoltaic cells. Solar Energy Materials and Solar Cells, 2022, 238, 111636.	3.0	6
8667	Design and analysis of III-V two-dimensional van der Waals heterostructures for ultra-thin solar cells. Applied Surface Science, 2022, 586, 152799.	3.1	16
8668	Phase segregation induced efficiency degradation and variability in mixed halide perovskite solar cells. Journal of Applied Physics, 2021, 130, .	1.1	12
8669	Emerging Chalcogenide Thin Films for Solar Energy Harvesting Devices. Chemical Reviews, 2022, 122, 10170-10265.	23.0	81
8670	Competing Singlet Fission and Excimer Formation in Solid Fluorinated 1,3-Diphenylisobenzofurans. Journal of Physical Chemistry C, 2021, 125, 27058-27071.	1.5	9
#	Article	IF	CITATIONS
------	--	-----	-----------
8671	Carbon Nanotubes for Solar Cells and Photovoltaics. , 2021, , 1-31.		0
8672	Ferroelectric-Coupled CIGs Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
8673	Lone pair driven anisotropy in antimony chalcogenide semiconductors. Physical Chemistry Chemical Physics, 2022, 24, 7195-7202.	1.3	27
8675	Effect of electronic doping and traps on carrier dynamics in tin halide perovskites. Materials Horizons, 2022, 9, 1763-1773.	6.4	23
8676	Fabrication of SnS thin film by rapid thermal processing: effect of annealing temperature in sulfurization process. Gümüşhane Üniversitesi Fen Bilimleri EnstitÁ¼sü Dergisi, 0, , .	0.0	0
8677	Lead Reduction and Stability Enhancement of Mixed Cation Mixed Halide-Based Perovskite Solar Cell: A Numerical Simulation Approach Using SCAPS-1D Software. SSRN Electronic Journal, 0, , .	0.4	0
8678	Formation mechanisms of voids and pin-holes in CuSbS <sub>2</sub> thin film synthesized by sulfurizing a co-sputtered Cu–Sb precursor. Journal of Materials Chemistry A, 2022, 10, 8015-8024.	5.2	3
8679	Harnessing near-infrared light <i>via</i> S <sub>0</sub> to T <sub>1</sub> sensitizer excitation in a molecular photon upconversion solar cell. Journal of Materials Chemistry C, 2022, 10, 4947-4954.	2.7	9
8680	Impact of Aerosols on Photovoltaic Energy Production Using a Spectrally Resolved Model Chain: Case Study of Southern West Africa. SSRN Electronic Journal, 0, , .	0.4	0
8681	Nucleation and crystallization manipulations of tin halide perovskites for highly efficient solar cells. Journal of Materials Chemistry C, 2022, 10, 7423-7436.	2.7	6
8682	Lead-free layered Aurivillius-type Sn-based halide perovskite Ba <sub>2</sub> X <sub>2</sub> [Cs <sub><i>n</i><math>\hat{a}^1(-sub&gt;Snn) (X = I/Br/Cl) with an optimal band gap of <math>\hat{a}^1/41.26</math> eV and theoretical efficiency beyond 27% for photovoltaics, Journal of Materials Chemistry A, 2022, 10, 10682-10691.</math></sub>	5.2	1
8683	Ultrafast separation of multiexcitons within core/shell quantum dot hybrid systems. Nanoscale, 2022, 14, 3561-3567.	2.8	0
8685	Analyses of P–N Heterojunction in 9.4%-Efficiency Cztsse Thin-Film Solar Cells: Effect of Cu Content. SSRN Electronic Journal, 0, , .	0.4	0
8686	Molecular rotational conformation controls the rate of singlet fission and triplet decay in pentacene dimers. Chemical Science, 2022, 13, 4944-4954.	3.7	9
8687	Organic Semiconductors for Light Detection. Springer Theses, 2022, , 49-90.	0.0	0
8688	Investigation of CZTS absorber layer deposited by spin coating technique for photovoltaic applications. Materials Today: Proceedings, 2022, 53, 355-360.	0.9	7
8689	Fundamentals of Light Detection. Springer Theses, 2022, , 11-48.	0.0	0
8690	Altering singlet fission pathways in perylene-dimers; perylene-diimide <i>versus</i> perylene-monoimide. Nanoscale, 2022, 14, 5194-5203.	2.8	8

#	Article	IF	Citations
8691	Modulating the Molecular Orientation of Linear Benzodifuran-Based Isomeric Polymers by Exchanging the Positions of Chlorine and Fluorine Atoms. SSRN Electronic Journal, 0, , .	0.4	0
8692	Applicability of Light Induced Luminescence for Characterization of Internal Series-Parallel Connected Photovoltaic Modules. IEEE Journal of Photovoltaics, 2022, 12, 805-814.	1.5	3
8693	Revisiting carbazole-based polymer donors for efficient and thermally stable polymer solar cells: structural utility of coplanar l̃€-bridged spacers. Journal of Materials Chemistry A, 2022, 10, 9408-9418.	5.2	12
8694	Design and Analysis of lii-V Two-Dimensional Van Der Waals Heterostructures for Ultra-Thin Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
8696	Thin film transition metal dichalcogenide photoelectrodes for solar hydrogen evolution: a review. Journal of Materials Chemistry A, 2022, 10, 9327-9347.	5.2	16
8697	Exploiting heat transfer to achieve efficient photoelectrochemical CO <sub>2</sub> reduction under light concentration. Energy and Environmental Science, 2022, 15, 2061-2070.	15.6	12
8698	Nanostructured chromium-based broadband absorbers and emitters to realize thermally stable solar thermophotovoltaic systems. Nanoscale, 2022, 14, 6425-6436.	2.8	69
8699	Biomimetic advances in photovoltaics with potential aerospace applications. , 2022, , 291-329.		1
8700	Insights into Cu2O thin film absorber via pulsed laser deposition. Ceramics International, 2022, 48, 15274-15281.	2.3	8
8701	Optoelectronic properties of Ag2S/graphene and FeS2/graphene nanostructures and interfaces: A density functional study including dispersion forces. Journal of Materials Research, 2022, 37, 1047-1058.	1.2	2
8702	Manipulating molecular aggregation and crystalline behavior of Aâ€DA'Dâ€A type acceptors by side chain engineering in organic solar cells. Aggregate, 2022, 3, .	5.2	16
8703	A perspective on optimizing photoelectric conversion process in 2D transition-metal dichalcogenides and related heterostructures. Applied Physics Letters, 2022, 120, .	1.5	9
8704	Kesterite Cu <sub>2</sub> ZnSnS <sub>4-x</sub> Se <sub>x</sub> Thin Film Solar Cells. , 0, , .		0
8705	Unveiling Charge Carrier Recombination, Extraction, and Hotâ€Carrier Dynamics in Indium Incorporated Highly Efficient and Stable Perovskite Solar Cells. Advanced Science, 2022, 9, e2103491.	5.6	15
8706	The Important Role of Optical Absorption in Determining the Efficiency of Intermediate Band Solar Cells and a Design Principle for Perovskite Doping. Journal of Physical Chemistry Letters, 2022, 13, 2012-2018.	2.1	7
8707	CeTaN <sub>3</sub> and CeNbN <sub>3</sub> : Prospective Nitride Perovskites with Optimal Photovoltaic Band Gaps. Chemistry of Materials, 2022, 34, 2107-2122.	3.2	13
8708	Quantifying Exciton Transport in Singlet Fission Diblock Copolymers. Journal of the American Chemical Society, 2022, 144, 3269-3278.	6.6	17
8709	Recombination Pathways in Perovskite Solar Cells. Advanced Materials Interfaces, 2022, 9, .	1.9	20

#	Article	IF	CITATIONS
8710	Strain modulating electronic band gaps and SQ efficiencies of semiconductor 2D PdQ2 (Q = S, Se) monolayer. Scientific Reports, 2022, 12, 2964.	1.6	19
8711	Thinâ€Film Solar Cells by Siliconâ€Based Nanoâ€Pyramid Arrays. Advanced Theory and Simulations, 2022, 5, .	1.3	8
8713	Analysis of the combined effect of long-term heat light soaking and KF/NaF post-deposition treatment on the open-circuit voltage loss in CIGS solar cells. Japanese Journal of Applied Physics, 2022, 61, SC1050.	0.8	2
8714	Albedoâ€Enabled Enhanced Energy Harvesting via GaAs Bifacial Thinâ€Film Solar Cells. Advanced Photonics Research, 2022, 3, .	1.7	3
8715	Downâ€conversion materials for organic solar cells: Progress, challenges, and perspectives. Aggregate, 2022, 3, .	5.2	27
8717	Rubidium Fluoride Absorber Treatment for Wideâ€Gap (Ag,Cu)(In,Ga)Se <sub>2</sub> Solar Cells. Solar Rrl, 2022, 6, .	3.1	14
8718	Crossover between Bulk and Interface Photovoltaic Mechanisms in a Ferroelectric Vertical Heterostructure. Physical Review Applied, 2022, 17, .	1.5	6
8719	Performance Comparison of CdTe:Na, CdTe:As, and CdTe:P Single Crystals for Solar Cell Applications. Materials, 2022, 15, 1408.	1.3	5
8720	Passivating the interface between halide perovskite and SnO2 by capsaicin to accelerate charge transfer and retard recombination. Applied Physics Letters, 2022, 120, .	1.5	4
8721	Numerical simulations on a-Si:H/SnS/ZnSe based solar cells. Materials Today: Proceedings, 2022, 62, 5275-5282.	0.9	1
8722	Performance analysis of CuInSe2 based solar cells using SCAPS-1D. Materials Today: Proceedings, 2022, 66, 17-21.	0.9	3
8723	Combining Perovskites and Quantum Dots: Synthesis, Characterization, and Applications in Solar Cells, LEDs, and Photodetectors. Advanced Optical Materials, 2022, 10, .	3.6	23
8724	Impacts of CsPbBr <sub>3</sub> /PbSe Heterostructures on Carrier Cooling Dynamics at Low Carrier Density. Advanced Optical Materials, 2022, 10, .	3.6	16
8725	Two-Dimensional Type-II BP/MoSi <sub>2</sub> P <sub>4</sub> vdW Heterostructures for High-Performance Solar Cells. Journal of Physical Chemistry C, 2022, 126, 4677-4683.	1.5	22
8726	Nonâ€Fullereneâ€Based Inverted Organic Photovoltaic Device with <scp>Longâ€Term</scp> Stability. Energy and Environmental Materials, 2023, 6, .	7.3	5
8727	Effect of antimony doping in mechanochemically synthesized Cu2ZnSnSe4. Journal of Materials Science: Materials in Electronics, 0, , .	1.1	0
8728	Comparison of Environmental Impact Assessment Methods in the Assembly and Operation of Photovoltaic Power Plants: A Systematic Review in the Castilla—La Mancha Region. Energies, 2022, 15, 1926.	1.6	5
8729	Development of ZTO/Ag/ZTO transparent electrodes for thin film solar cells. Journal of Materials Science: Materials in Electronics, 2022, 33, 10955-10964.	1.1	4

#	Article	IF	CITATIONS
8730	Transition metal dichalcogenide thin films for solar hydrogen production. Current Opinion in Electrochemistry, 2022, 34, 100995.	2.5	6
8731	Importance and Advancement of Modification Engineering in Perovskite Solar Cells. Solar Rrl, 2022, 6,	3.1	8
8732	Optimizing the Photovoltaic Performance of Organic Solar Cells for Indoor Light Harvesting. ChemPhysChem, 2022, 23, .	1.0	5
8733	Device Modelling of CdTe Photovoltaic Cell Using V2O5/Cu2O/NiO as a Back Surface Field Layer Through Numerical Simulation. Mapan - Journal of Metrology Society of India, 2022, 37, 387-398.	1.0	5
8734	Tailoring Functional Terminals on Solution-Processable Fullerene Electron Transporting Materials for High Performance Perovskite Solar Cells. Nanomaterials, 2022, 12, 1046.	1.9	3
8735	What Next for Singlet Fission in Photovoltaics? The Fate of Triplet and Triplet-Pair Excitons. Journal of Physical Chemistry C, 2022, 126, 5369-5377.	1.5	19
8736	Enhancing Hole Density and Suppressing Recombination Centers through Illumination in Kesterite Thin Film Solar Cells. Journal of Physical Chemistry Letters, 2022, 13, 2474-2478.	2.1	3
8737	Towards ultimate limit InP nanowire solar cells. , 2022, , .		1
8738	Effects of <scp>Ï€â€conjugation</scp> on the <scp>chargeâ€transport</scp> properties of <scp>holeâ€transporting</scp> materials featuring diphenylamine― <scp>I€â€quinacridone</scp> for perovskite solar cells: A theoretical study. Bulletin of the Korean Chemical Society, 0, , .	1.0	1
8739	Understanding what limits the voltage of polycrystalline CdSeTe solar cells. Nature Energy, 2022, 7, 400-408.	19.8	36
8740	Energy transfer between photons, carriers, and phonons in hot-carrier solar cells: a theoretical investigation. , 2022, , .		0
8741	Synergistic Engineering of the Conductivity and Surface Properties of PEDOT:PSS-Based HTLs for Inverted Tin Perovskite Solar Cells to Achieve Efficiency over 10%. ACS Applied Materials & Interfaces, 2022, 14, 16125-16135.	4.0	18
8742	Cu2ZnSnS4 from oxide precursors grown by pulsed laser deposition for monolithic CZTS/Si tandem solar cells. Applied Physics A: Materials Science and Processing, 2022, 128, 1.	1.1	3
8743	Status and perspectives of crystalline silicon photovoltaics in research and industry. Nature Reviews Materials, 2022, 7, 597-616.	23.3	139
8744	Geminate and Nongeminate Pathways for Triplet Exciton Formation in Organic Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	22
8745	Anion Modification and Theoretical Understanding for Improving Annealing-Free Electrochemistry Deposition of Perovskites under an Ambient Atmosphere. Journal of Physical Chemistry C, 2022, 126, 4785-4791.	1.5	1
8746	Hybrid Organic–Inorganic Perovskite Halide Materials for Photovoltaics towards Their Commercialization. Polymers, 2022, 14, 1059.	2.0	18
8747	Wideâ€Bandgap Organic–Inorganic Lead Halide Perovskite Solar Cells. Advanced Science, 2022, 9, e2105085.	5.6	60

#	Article	IF	CITATIONS
8748	Theoryâ€Guided Material Design Enabling Highâ€Performance Multifunctional Semitransparent Organic Photovoltaics without Optical Modulations. Advanced Materials, 2022, 34, e2200337.	11.1	42
8749	Using Ligand Engineering to Produce Efficient and Stable Pb–Sn Perovskite Solar Cells with Antioxidative 2D Capping Layers. ACS Applied Materials & Interfaces, 2022, 14, 14729-14738.	4.0	8
8750	Crystal Growth Regulation of 2D/3D Perovskite Films for Solar Cells with Both High Efficiency and Stability. Advanced Materials, 2022, 34, e2200705.	11.1	91
8751	Collective Motion Improves the Stability and Charge Carrier Lifetime of Metal Halide Perovskites: A Phonon-Resolved Nonadiabatic Molecular Dynamics Study. Journal of Physical Chemistry Letters, 2022, 13, 3016-3022.	2.1	12
8752	Shockley: Queisser detailed balance limit after 60 years. Wiley Interdisciplinary Reviews: Energy and Environment, 2022, 11, .	1.9	10
8753	Loss analysis and theoretical efficiency limit of monolithic cell. Microwave and Optical Technology Letters, 0, , .	0.9	0
8754	Relative straggle of sputtering parameters as a potential measure of power conversion efficiency of Perovskite materials. IOP Conference Series: Earth and Environmental Science, 2022, 993, 012009.	0.2	0
8755	Time-resolved photo-assisted Kelvin probe force microscopy on Cu(In,Ga)Se <sub>2</sub> solar cells. Japanese Journal of Applied Physics, 2022, 61, SL1004.	0.8	2
8756	Passive radiative cooling of solar cells by low-cost and scalable metamaterials: physical simulation and efficiency limits. , 2022, , .		1
8757	Routes for Metallization of Perovskite Solar Cells. Materials, 2022, 15, 2254.	1.3	35
8758	Frontiers in Photonics Spot Light. Frontiers in Photonics, 2022, 3, .	1.1	0
8759	A review of band structure and material properties of transparent conducting and semiconducting oxides: Ga2O3, Al2O3, In2O3, ZnO, SnO2, CdO, NiO, CuO, and Sc2O3. Applied Physics Reviews, 2022, 9, .	5.5	124
8760	Ultrafast hot carrier transfer in WS2/graphene large area heterostructures. Npj 2D Materials and Applications, 2022, 6, .	3.9	17
8761	Understanding the Impacts of Grain Size Variation, Distribution, and Recombination Losses in Halide Perovskites: A Generalized Semiâ€Analytical Model from Thinâ€Film to Photovoltaics. Energy Technology, 2022, 10, .	1.8	1
8762	A double junction CZTS/CIGS solar cell optimization using analytical method. , 2022, 166, 207215.		1
8763	Toward Stable High-Performance Tin Halide Perovskite: First-Principles Insights into the Incorporation of Bivalent Dopants. Journal of Physical Chemistry C, 2022, 126, 5256-5264.	1.5	5
8764	Quick screening stable double perovskite oxides for photovoltaic applications by machine learning. Ceramics International, 2022, 48, 18074-18082.	2.3	10
8765	Siloxane-functional small molecule acceptor for high-performance organic solar cells with 16.6% efficiency. Chemical Engineering Journal, 2022, 442, 136018.	6.6	8

#	Article	IF	CITATIONS
8766	Study of pulsed laser deposited antimony selenide thin films. Journal of Materials Science: Materials in Electronics, 2022, 33, 10430-10438.	1.1	6
8767	Gettering in PolySi/SiO <i><sub>x</sub></i> Passivating Contacts Enables Si-Based Tandem Solar Cells with High Thermal and Contamination Resilience. ACS Applied Materials & Interfaces, 2022, 14, 14342-14358.	4.0	3
8768	Impact of Grain Boundaries on Triplet Exciton Diffusion in Organic Singlet-Fission Materials. Journal of Physical Chemistry C, 2022, 126, 4792-4798.	1.5	3
8769	Robust Design of High-Performance Optoelectronic Chalcogenide Crystals from High-Throughput Computation. Journal of the American Chemical Society, 2022, 144, 5878-5886.	6.6	21
8770	Low Voltage‣oss Organic Solar Cells Light the Way for Efficient Semitransparent Photovoltaics. Solar Rrl, 2022, 6, .	3.1	3
8771	Sputtered WOx thin film as the electron transport layer for efficient perovskite solar cells. Applied Physics A: Materials Science and Processing, 2022, 128, 1.	1.1	9
8772	Stability, optoelectronic and thermal properties of two-dimensional Janus α-Te <sub>2</sub> S. Nanotechnology, 2022, 33, 215405.	1.3	15
8773	"To Spin or Not to Spin?â€â€"Is Spinâ€Coating the Ideal Technique for Preâ€Deposition of Sodium Fluoride for CICS Rear Surface Passivated Ultrathin Solar Cells?. Physica Status Solidi (A) Applications and Materials Science, 0, , 2100830.	0.8	0
8774	Hexagonal yttrium manganite: A review on synthesis methods, physical properties and applications. Journal of Rare Earths, 2023, 41, 19-31.	2.5	4
8775	Submicron Organic–Inorganic Hybrid Radiative Cooling Coatings for Stable, Ultrathin, and Lightweight Solar Cells. ACS Photonics, 2022, 9, 1327-1337.	3.2	22
8776	Review of the mechanisms for the phonon bottleneck effect in III–V semiconductors and their application for efficient hot carrier solar cells. Progress in Photovoltaics: Research and Applications, 2022, 30, 581-596.	4.4	16
8777	Insights from scalable fabrication to operational stability and industrial opportunities for perovskite solar cells and modules. Cell Reports Physical Science, 2022, 3, 100827.	2.8	16
8778	Effect of the Selective Halogenation of Small Molecule Acceptors on the Blend Morphology and Voltage Loss of Highâ€Performance Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	27
8779	Improved PCE of solution processed kesterite Ag2ZnSnS4 quantum dot photovoltaic cell. Materials Chemistry and Physics, 2022, 281, 125878.	2.0	6
8780	Near-Infrared Optical Response and Carrier Dynamics for High Photoconversion in Tellurene. Journal of Physical Chemistry C, 2022, 126, 6129-6134.	1.5	1
8781	Not dark yet for strong light-matter coupling to accelerate singlet fission dynamics. Cell Reports Physical Science, 2022, 3, 100841.	2.8	16
8782	ITOâ€Free Indoor OPV Modules from Nonhalogenated Solvents. Solar Rrl, 2022, 6, .	3.1	8
8783	Advances in Organic and Perovskite Photovoltaics Enabling a Greener Internet of Things. Advanced Functional Materials, 2022, 32, .	7.8	24

		CITATION RE	PORT	
#	Article		IF	CITATIONS
8784	Optimization of inverted planar perovskite solar cells with environment-friendly MAPb0. absorber approaching Shockley Queisser limit for efficiency. Optical Materials, 2022, 12	25Ge0.75I3 26, 112202.	1.7	4
8785	Beyond efficiency fever: Preventing lead leakage for perovskite solar cells. Matter, 2022	, 5, 1137-1161.	5.0	32
8786	Investigation of the role of back contact work function for hole transporting layer free p solar cells applications. Optik, 2022, 256, 168749.	perovskite	1.4	19
8787	Solution route processed and organically-Capped Quinary Culn1-xGax(SySe1-y)2 (CIGS low-cost photovoltaics. Materials Chemistry and Physics, 2022, 282, 125903.	Se) inks for use in	2.0	2
8788	First principles approach to solar energy conversion efficiency of semiconductor heteroj Solar Energy, 2022, 236, 445-454.	unctions.	2.9	6
8789	Radiative Recombination in Bulkâ€Heterojunction Solar Cells. Israel Journal of Chemistry	y, O, , .	1.0	1
8790	Targeted Molecular Design of Functionalized Fullerenes for Highâ€Performance and Sta Solar Cells. Small Structures, 2022, 3, .	ble Perovskite	6.9	17
8791	Mixed Chalcogenideâ€Halides for Stable, Leadâ€Free and Defectâ€Tolerant Photovoltai Screening and Experimental Validation of CuBiSCl <sub>2</sub> with Ideal Band Gap. A Functional Materials, 2022, 32, .	cs: Computational dvanced	7.8	7
8792	Theoretical study on the multiferroic materials In2FeX (XÂ=ÂV, Cr, Mn, Co, and Ni) O6 f photovoltaics and photocatalysis performance. Results in Physics, 2022, 35, 105368.	or high	2.0	1
8793	A facile method to fabricate transparent TiO2 photoanodes for quantum dot–sensitiz Ionics, 2022, 28, 3049-3056.	ed solar cells.	1.2	4
8794	The nontoxic and the lowâ€cost solutionâ€processed CZTS absorber layer for solar pho application: effect of solvent on physical properties. Physica Status Solidi (A) Application Materials Science, 0, , .	tovoltaic ns and	0.8	0
8795	Charge dynamics in CuInS2 photovoltaic devices with In2S3 as buffer layer. Materials Cl Physics, 2022, 282, 125871.	nemistry and	2.0	4
8796	What ails the photovoltaic performance in single-layered unpoled BFO? – The role of a annealing in improving the photovoltaic efficiency. Solar Energy, 2022, 236, 822-831.	oxygen	2.9	8
8797	Near-field radiative heat transfer in hyperbolic materials. International Journal of Extreme Manufacturing, 2022, 4, 032002.	2	6.3	17
8798	Minimizing and Controlling Hydrogen for Highly Efficient Formamidinium Lead Triiodide Journal of the American Chemical Society, 2022, 144, 6770-6778.	Solar Cells.	6.6	10
8799	Hot-carrier photocatalysts for artificial photosynthesis. Journal of Chemical Physics, 202 164705.	2, 156,	1.2	1
8800	Highly efficient quantum-dot-sensitized solar cells with composite semiconductor of Zn and oxide inverse opal in photoanode. Electrochimica Acta, 2022, 412, 140145.	O nanorod	2.6	41
8801	A hybrid density functional design of intermediate band semiconductor for photovoltaid based on group IV elements (Si, Ge, Sn, and Pb)-doped CdIn2S4. Journal of Applied Phys	application ics, 2022, 131, .	1.1	2

#	Article	IF	CITATIONS
8802	Design and optimization of highly efficient perovskite/homojunction SnS tandem solar cells using SCAPS-1D. Solar Energy, 2022, 236, 195-205.	2.9	24
8803	Exploring a high-carrier-mobility black phosphorus/MoSe2 heterostructure for high-efficiency thin film solar cells. Solar Energy, 2022, 236, 576-585.	2.9	13
8804	A Selective Targeting Anchor Strategy Affords Efficient and Stable Idealâ€Bandgap Perovskite Solar Cells. Advanced Materials, 2022, 34, e2110241.	11.1	44
8805	Analyses of p–n heterojunction in 9.4%-efficiency CZTSSe thin-film solar cells: Effect of Cu content. Journal of Alloys and Compounds, 2022, 910, 164899.	2.8	4
8806	Investigation of broad-band optical absorption and electrical properties in vacuum annealed CZTS/Ag multi-layered stack structure for plasmonic solar cell application. Optical Materials, 2022, 127, 112316.	1.7	3
8807	Constraints imposed by the sparse solar photon flux on upconversion and hot carrier solar cells. Solar Energy, 2022, 237, 44-51 Determination of thermodynamic growth conditions for a high-efficiency Cu <mml:math< td=""><td>2.9</td><td>2</td></mml:math<>	2.9	2
8808	xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e1705" altimg="si10.svg"> <mml:msub><mml:mrow< td=""><td></td><td></td></mml:mrow<></mml:msub>		

#	Article	IF	Citations
8820	Two-dimensional XY monolayers (X = Al, Ga, In; Y = N, P, As) with a double layer hexagonal structure: A first-principles perspective. Applied Surface Science, 2022, 590, 152998.	3.1	53
8821	Global instability index as a crystallographic stability descriptor of halide and chalcogenide perovskites. Journal of Energy Chemistry, 2022, 70, 1-8.	7.1	13
8822	Ab-initio simulations of Li-based double perovksites A2LiInBr6 (AÂ=ÂRb, Cs) for solar cell applications. Chemical Physics Letters, 2022, 798, 139612.	1.2	10
8823	Effect of Pulsed Laser Annealing on Optical Properties of Selenium-Hyperdoped Silicon. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2021, 129, 1114-1124.	0.2	1
8824	Synthesis and Characterization of Ge Nanoclusters in Amorphous GeO <sub>x</sub> (xâ^¼0.1) Nano-Films Grown by Magnetron Sputtering. , 2021, , .		1
8825	Comparative Study Between a Single Junction and One Intermediate Band Solar Cells. , 2021, , .		0
8826	Role of Electronic States and Their Coupling on Radiative Losses of Open-Circuit Voltage in Organic Photovoltaics. ACS Applied Materials & Interfaces, 2021, 13, 60279-60287.	4.0	6
8827	CIGS photovoltaics: reviewing an evolving paradigm. Journal Physics D: Applied Physics, 2022, 55, 173001.	1.3	17
8828	Perovskite/silicon tandem solar cell: surface recombination analysis. , 2021, , .		0
8829	Effects of photon recycling and scattering in high-performance perovskite solar cells. Science Advances, 2021, 7, eabj1363.	4.7	17
8830	Statistical study of thermoradiative and photovoltaic cells based on a two-level model. Journal of Computational Electronics, 2022, 21, 106-110.	1.3	1
8831	Transparent Photovoltaics for Self-Powered Bioelectronics and Neuromorphic Applications. Journal of Physical Chemistry Letters, 2021, 12, 12426-12436.	2.1	12
8832	H-Type-like Aggregation-Accelerated Singlet Fission Process in Dipyrrolonaphthyridinedione Thin Film: The Role of Charge Transfer/Excimer Mixed Intermediate State. Journal of Physical Chemistry Letters, 2021, 12, 12276-12282.	2.1	19
8833	16.3% Efficiency binary all-polymer solar cells enabled by a novel polymer acceptor with an asymmetrical selenophene-fused backbone. Science China Chemistry, 2022, 65, 309-317.	4.2	54
8834	Weak Anharmonicity Rationalizes the Temperature-Driven Acceleration of Nonradiative Dynamics in Cu <sub>2</sub> ZnSnS <sub>4</sub> Photoabsorbers. ACS Applied Materials & Interfaces, 2021, 13, 61365-61373.	4.0	11
8835	Recent Advances in Materials Design Using Atomic Layer Deposition for Energy Applications. Advanced Functional Materials, 2022, 32, .	7.8	34
8836	A quick peek at solar cells and a closer insight at perovskite solar cells. Egyptian Journal of Petroleum, 2021, 30, 53-63.	1.2	4
8837	Thermodynamics of Light Management in Near-Field Thermophotovoltaics. Physical Review Applied, 2021, 16, .	1.5	13

#	Article	IF	CITATIONS
8838	energy storage: System modeling and design. International Journal of Energy Research, 2022, 46, 5731-5744.	2.2	4
8839	Highly mobile hot holes in Cs <sub>2</sub> AgBiBr <sub>6</sub> double perovskite. Science Advances, 2021, 7, eabj9066.	4.7	21
8840	Physics of Nanostructure Design for Infrared Detectors. , 0, , .		0
8841	Evaluating the Electronic Structure of Coexisting Excitonic and Multiexcitonic States in Periodic Systems: Significance for Singlet Fission. Journal of Chemical Theory and Computation, 2022, 18, 394-405.	2.3	4
8842	Fill Factor Assessment in Hole Selective Layer Free Carbon Electrodeâ€Based Perovskite Solar Cells with 15.5% Certified Power Conversion Efficiency. Solar Rrl, 2022, 6, .	3.1	14
8843	A Review on the Effects of ZnO Nanowire Morphology on the Performance of Interpenetrating Bulk Heterojunction Quantum Dot Solar Cells. Nanomaterials, 2022, 12, 114.	1.9	5
8844	Bandgap Correction and Spin-Orbit Coupling Induced Absorption Spectra of Dimethylammonium Lead Iodide for Solar Cell Absorber. Frontiers in Energy Research, 2021, 9, .	1.2	1
8845	Structural, elastic, electronic and optical investigations of fluoride-perovskite NaBeF <sub>3</sub> : first-principles calculations. Philosophical Magazine, 2022, 102, 634-649.	0.7	5
8846	Toward Highâ€Performance Semitransparent Organic Photovoltaics with Narrowâ€Bandgap Donors and Nonâ€Fullerene Acceptors. Advanced Energy Materials, 2022, 12, .	10.2	45
8847	Fineâ€Tuning Batch Factors of Polymer Acceptors Enables a Binary Allâ€Polymer Solar Cell with High Efficiency of 16.11%. Advanced Energy Materials, 2022, 12, .	10.2	52
8848	Inverse design and realization of an optimized photonic multilayer for thermophotovoltaics. OSA Continuum, 2021, 4, 3254.	1.8	2
8849	Role of zinc tin oxide passivation layer at back electrode interface in improving efficiency of Cu2ZnSn(S,Se)4 solar cells. Superlattices and Microstructures, 2022, 163, 107133.	1.4	4
8850	Cerium-based lead-free chalcogenide perovskites for photovoltaics. Physical Review B, 2021, 104, .	1.1	6
8851	Design Perspective and Theoretical Analysis of Performance Parameters on CZTS Solar Cell. , 2021, , .		0
8852	Application of bromide-iodide lead perovskite thin film as a copper-free back contact layer for CdTe solar cells. Solar Energy, 2021, 230, 832-842.	2.9	3
8853	The first principle study of structural, mechanical, electronic and optical properties of double halide perovskite K <sub>2</sub> Bl <sub>6</sub> (B = Ti, Zr and Hf). Molecular Physics, 0, , .	0.8	3
8854	Recent Progress of Critical Interface Engineering for Highly Efficient and Stable Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	78
8855	Highly Efficient All-Polymer Solar Cells from a Dithieno[3,2- <i>f</i> :2′,3′- <i>h</i> ]quinoxaline-Based Wide Band Gap Donor. Macromolecules, 2021, 54, 11468-11477.	2.2	19

# 8856	ARTICLE Reaching the Ultimate Efficiency of Solar Energy Harvesting with a Nonreciprocal Multijunction Solar Cell Nano Letters 2022 22 448-452	IF 4.5	CITATIONS
8857	Fabrication and Characterization of DSSC/Si Tandem Solar Cell with PEDOT:PSS/ITO Buffer Layer. Journal of Solar Energy Research Updates, 0, 7, .	0.0	0
8858	GeSe photovoltaics: doping, interfacial layer and devices. Faraday Discussions, 0, 239, 250-262.	1.6	6
8859	Multi-ExcitonÂProperties OfÂInp/Zns Core-Shell Quantum Dots. SSRN Electronic Journal, 0, , .	0.4	Ο
8860	Pressure-induced polymerization and bandgap-adjustment of TPEPA. RSC Advances, 2022, 12, 11996-12001.	1.7	1
8861	A review on monolithic perovskite/c-Si tandem solar cells: progress, challenges, and opportunities. Journal of Materials Chemistry A, 2022, 10, 10811-10828.	5.2	11
8862	Evolution of high efficiency passivated emitter and rear contact (PERC) solar cells. , 2022, , 63-129.		0
8863	An energetics assessment of benzo[ <i>a</i> ]tetracene and benzo[ <i>a</i> ]pyrene as triplet–triplet annihilation emitters. Molecular Systems Design and Engineering, 2022, 7, 889-898.	1.7	2
8864	Fundamental study on thermoradiative energy conversion for space applications. Journal of Thermal Science and Technology, 2022, 17, 22-00051-22-00051.	0.6	1
8865	Optimized carrier extraction at interfaces for 23.6% efficient tin–lead perovskite solar cells. Energy and Environmental Science, 2022, 15, 2096-2107.	15.6	172
8866	Extrinsic Doping of Inkâ€Based Cu(In,Ga)(S,Se) <sub>2</sub> â€Absorbers for Photovoltaic Applications. Advanced Energy Materials, 2022, 12, .	10.2	13
8867	Spectral Dependence of Photovoltaic Cell Conversion Efficiency for Monochromatic Radiation. , 0, 2022, 1-19.		1
8868	Radiative cooling of solar cells with micro-grating photonic cooler. Renewable Energy, 2022, 191, 662-668.	4.3	45
8869	Homogenization of Optical Field in Nanocrystal-Embedded Perovskite Composites. ACS Energy Letters, 2022, 7, 1657-1671.	8.8	4
8870	Suppressing the Effect of the Wetting Layer through AlAs Capping in InAs/GaAs QD Structures for Solar Cells Applications. Nanomaterials, 2022, 12, 1368.	1.9	8
8871	Scaling Considerations for Organic Photovoltaics for Indoor Applications. Solar Rrl, 2022, 6, .	3.1	11
8872	Perovskite–organic tandem solar cells with indium oxide interconnect. Nature, 2022, 604, 280-286.	13.7	181
8873	Enhanced hydrothermal heterogeneous deposition with surfactant additives for efficient Sb2S3 solar cells. Chemical Engineering Journal, 2022, 446, 136474.	6.6	18

#	Article	IF	CITATIONS
8874	Recent Advances in Luminescent Downconversion: New Materials, Techniques, and Applications in Solar Cells. Advanced Optical Materials, 2022, 10, .	3.6	11
8875	Buried Interface Modification in Perovskite Solar Cells: A Materials Perspective. Advanced Energy Materials, 2022, 12, .	10.2	87
8876	Theoretical Investigation of the Role of Anion and Trivalent Cation Substitution in the Physical Properties of Lead-Free Zero-Dimensional Perovskites. Journal of Physical Chemistry C, 2022, 126, 7245-7255.	1.5	8
8877	Recombination and mobility analysis of voltage preserved type-A InP multiple quantum well GaInP solar cell. Indian Journal of Physics, 2022, 96, 4119-4130.	0.9	11
8878	Light Management in Perovskite Photovoltaic Solar Cells: A Perspective. Advanced Energy Materials, 2022, 12, .	10.2	17
8879	Computational evolution of high-performing unfused non-fullerene acceptors for organic solar cells. Journal of Chemical Physics, 2022, 156, 174107.	1.2	9
8880	Detailed balance analysis of vertical GaAs nanowire array solar cells: exceeding the Shockley Queisser limit. Optics Express, 2022, 30, 16145.	1.7	2
8881	Toward Efficiency Limits of Crystalline Silicon Solar Cells: Recent Progress in Highâ€Efficiency Silicon Heterojunction Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	41
8882	Optical absorption and stability enhancement in mixed lead, tin, and germanium hybrid halide perovskites for photovoltaic applications. Vacuum, 2022, 201, 111106.	1.6	8
8883	Solutionâ€Processed Waferâ€Scale Ag <sub>2</sub> S Thin Films: Synthesis and Excellent Charge Transport Properties. Advanced Functional Materials, 2022, 32, .	7.8	3
8884	Pseudohalide Anions to Suppress Oxidative Degradation for Efficient Formamidinium-Based Sn–Pb Halide Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 18302-18312.	4.0	16
8885	Ab initio study on electronic and optical properties of Cu2NiGeS4 for photovoltaic applications. Solar Energy, 2022, 237, 333-339.	2.9	5
8886	Numerical investigation of silicon heterojunction solar cell with zinc selenide as electron-selective and nickel oxide as hole-selective contacts. Optical Materials, 2022, 127, 112328.	1.7	4
8887	MCRT-FDTD investigation of the solar-plasmonic-electrical conversion for uniform irradiation in a spectral splitting CPVT system. Applied Energy, 2022, 315, 119054.	5.1	4
8888	CHAPTER 4. p-Type Molecular Materials for Organic Solar Cells. RSC Nanoscience and Nanotechnology, 0, , 109-153.	0.2	0
8889	CHAPTER 9. Hybrid Solar Cells. RSC Nanoscience and Nanotechnology, 0, , 298-340.	0.2	0
8890	Quantum Dots for Type III Photovoltaics. RSC Nanoscience and Nanotechnology, 2017, , 436-471.	0.2	1
8891	CHAPTER 14. Charge Dynamics in Colloidal Quantum Dots: Recombination, Trapping and Multiple Exciton Generation. RSC Nanoscience and Nanotechnology, 0, , 472-507.	0.2	0

#	Article	IF	CITATIONS
8899	Lab and Team Project Development for Engineering Problem Solving using MATLAB, with Emphasis on Solar Power and Engineering for Sustainability. , 0, , .		1
8900	Thermodynamics of solar energy converters. , 0, , .		1
8912	(Bi <sub><i>x</i></sub> Sb <sub>1â^'<i>x</i></sub> ) <sub>2</sub> Se <sub>3</sub> thin films for short wavelength infrared region solar cells. Journal of Materials Chemistry C, 2022, 10, 8702-8710.	2.7	4
8914	Robust hole transport material with interface anchors enhances the efficiency and stability of inverted formamidinium–cesium perovskite solar cells with a certified efficiency of 22.3%. Energy and Environmental Science, 2022, 15, 2567-2580.	15.6	46
8915	The Anomalous Process in Singlet Fission Kinetic Model with Time-Dependent Coeffcient. SSRN Electronic Journal, 0, , .	0.4	0
8916	Tandem organic solar cells with 18.67% efficiency <i>via</i> careful subcell design and selection. Journal of Materials Chemistry A, 2022, 10, 11238-11245.	5.2	18
8917	Band gap tunable quaternary PbxCd1-xS1-ySey quantum dot-sensitized solar cells with an efficiency of 9.24% under 1% Sun. Sustainable Energy and Fuels, 0, , .	2.5	1
8918	Silicon Solar Photovoltaics: Slow Ascent to Exponential Growth. Women in Engineering and Science, 2022, , 221-243.	0.2	3
8919	Investigating the Role of Copper in Arsenic Doped Cd(Se,Te) Photovoltaics. SSRN Electronic Journal, 0, , .	0.4	0
8920	Rapid thermal annealing process for Se thin-film solar cells. Faraday Discussions, 0, 239, 317-327.	1.6	10
8921	Loss Analysis of High-Efficiency Perovskite/Si Tandem Solar Cells for Large Market Applications. Energy and Power Engineering, 2022, 14, 167-180.	0.5	1
8922	Efficient and Stable FAâ€Rich Perovskite Photovoltaics: From Material Properties to Device Optimization. Advanced Energy Materials, 2022, 12, .	10.2	16
8923	çj基-钙钛矿åå±,å¤é~³èf½ç"µæ±çš"å‰ç®jç†ç−ç•¥. Chinese Science Bulletin, 2022, , .	0.4	1
8924	Discovery of Pb-free hybrid organic–inorganic 2D perovskites using a stepwise optimization strategy. Npj Computational Materials, 2022, 8, .	3.5	9
8925	Prediction of nature of band gap of perovskite oxides (ABO3) using a machine learning approach. Journal of Materiomics, 2022, 8, 937-948.	2.8	11
8926	Numerical Simulation of 30% Efficient Lead-Free Perovskite CsSnGeI3-Based Solar Cells. Materials, 2022, 15, 3229.	1.3	25
8927	Monolithic perovskite/c-Si tandem solar cell: Progress on numerical simulation. , 2022, 1, .		5
8928	Oxygen vacancy-induced Al2TiO5 –based multifunctional ceramic composites: Electrochemical and optical properties. Journal of Electroceramics, 0, , 1.	0.8	1

#	Article	IF	CITATIONS
8929	Influence of Cr Ion Implantation on Physical Properties of CuO Thin Films. International Journal of Molecular Sciences, 2022, 23, 4541.	1.8	6
8930	Detailed Balance-Limiting Efficiency of Solar Cells with Dual Intermediate Bands Based on InAs/InGaAs Quantum Dots. Photonics, 2022, 9, 290.	0.9	3
8931	Effect of Citric Acid Amount in the Synthesis of LiGa5O8:Cr3+ Nano-Phosphor. Russian Journal of Physical Chemistry A, 2022, 96, S139-S144.	0.1	1
8932	Improved Thermoelectric–Photovoltaic Performance of Ag <sub>2</sub> Se Originating from a Halogenation-Induced Wider Band Gap and Low Crystal Symmetry. ACS Applied Energy Materials, 2022, 5, 6019-6031.	2.5	6
8933	Impact of Precursor Concentration on Perovskite Crystallization for Efficient Wide-Bandgap Solar Cells. Materials, 2022, 15, 3185.	1.3	12
8934	Structural and Electronic Effect Driven Distortions in Visible Light Absorbing Polar Materials <i>A</i> Ta <sub>2</sub> V <sub>2</sub> O <sub>11</sub> ( <i>A</i> = Sr, Pb). Journal of Physical Chemistry C, 2022, 126, 8047-8055.	1.5	0
8935	First-principles investigation of the role of Cr in the electronic properties of the two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mrow><mml:msub><mml:mi>Mo</mml:mi><mml:r and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi> Bhysical Poview Materials 2022 6</mml:mrow></mml:math></mml:r </mml:msub></mml:mrow></mml:math 	ni øx9 /mm	l:nøi>
8936	An Optoelectronic thermometer based on microscale infrared-to-visible conversion devices. Light: Science and Applications, 2022, 11, 130.	7.7	22
8937	An Ab Initio Study of Clusters as Building Blocks for Crystals: From Prussian Blue Analogs to Hybrid Perovskites. Physica Status Solidi (B): Basic Research, 2022, 259, .	0.7	1
8938	Quantum dots-sensitized solar cells: a review on strategic developments. Bulletin of Materials Science, 2022, 45, .	0.8	13
8939	Analysis of Band Alignment Engineering and Interface Defects on a GaAs/GaSb Heterostructure Solar Cell. Physica Status Solidi (A) Applications and Materials Science, 0, , 2200063.	0.8	1
8940	High-Efficiency Crystalline Silicon-Based Solar Cells Using Textured TiO2 Layer and Plasmonic Nanoparticles. Nanomaterials, 2022, 12, 1589.	1.9	5
8941	Basic understanding of perovskite solar cells and passivation mechanism. AIP Advances, 2022, 12, .	0.6	13
8942	Advancement of stannite Cu <sub>2</sub> CoSnS <sub>4</sub> thin films deposited by sol gel dip-coating route. Physica Scripta, 2022, 97, 065815.	1.2	6
8943	4â€Hydrazinobenzoicâ€Acid Antioxidant for Highâ€Efficiency Sn–Pb Alloyed Perovskite Solar Cells. Energy Technology, 2022, 10, .	1.8	10
8944	Optical Simulation Study of Perovskite/CIGS Tandem Solar Cells With Reduced Graphene Oxide Layers. Frontiers in Photonics, 2022, 3, .	1.1	0
8945	Nonreciprocal infrared absorption via resonant magneto-optical coupling to InAs. Science Advances, 2022, 8, eabm4308.	4.7	58
8946	Developing the Next-Generation Perovskite/Si Tandems: Toward Efficient, Stable, and Commercially Viable Photovoltaics. ACS Applied Materials & Interfaces, 2022, 14, 34262-34268.	4.0	9

#	Article	IF	CITATIONS
8947	10.24% Efficiency of Flexible Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Solar Cells by Preâ€Evaporation Selenization Technique. Small, 2022, 18, e2201347.	5.2	28
8948	Thin film absorber selection to pair with silicon for 1-Sun tandem photovoltaics. Solar Energy, 2022, 238, 178-188.	2.9	1
8949	Asymmetric electron acceptor enables highly luminescent organic solar cells with certified efficiency over 18%. Nature Communications, 2022, 13, 2598.	5.8	113
8950	Impact of aerosols on photovoltaic energy production using a spectrally resolved model chain: Case study of southern West Africa. Renewable Energy, 2022, , .	4.3	3
8951	Magnetic field effects on singlet fission dynamics. Trends in Chemistry, 2022, 4, 528-539.	4.4	14
8952	Determination of critical total secondary phase densities in CZTS and investigation of their effects on the perovskite solar cell performance with CZTS as an HTL. Optical Materials, 2022, 128, 112453.	1.7	3
8953	Singlet fission photovoltaics: Progress and promising pathways. Chemical Physics Reviews, 2022, 3, .	2.6	24
8954	Photovoltaic/photo-electrocatalysis integration for green hydrogen: A review. Energy Conversion and Management, 2022, 261, 115648.	4.4	48
8955	Effect of thermal radiation entropy on the outdoor efficiency limit of single-junction silicon solar cells. Solar Energy Materials and Solar Cells, 2022, 242, 111763.	3.0	2
8956	Enhanced performance of GeSe thin-film solar cells via bifacial charge transport materials design. Vacuum, 2022, 201, 111119.	1.6	4
8957	A synergistic effect of NaYF4:Yb,Er@NaGdF4:Nd@SiO2 upconversion nanoparticles and TiO2 hollow spheres to enhance photovoltaic performance of dye-sensitized solar cells. Electrochimica Acta, 2022, 421, 140435.	2.6	21
8958	Theoretical analysis and experimental research of photon-enhanced thermionic emission solar energy converters with InN photocathode. Solar Energy Materials and Solar Cells, 2022, 242, 111766.	3.0	8
8959	Photovoltaic efficiency at maximum power of a quantum dot molecule. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 442, 128179.	0.9	1
8960	Review on two-terminal and four-terminal crystalline-silicon/perovskite tandem solar cells; progress, challenges, and future perspectives. Energy Reports, 2022, 8, 5820-5851.	2.5	24
8961	An efficient and stable lead-free organic–inorganic tin iodide perovskite for photovoltaic device: Progress and challenges. Energy Reports, 2022, 8, 5753-5763.	2.5	14
8962	Terahertz Detection with Optically Gated Halide Perovskites. ACS Photonics, 2022, 9, 1663-1670.	3.2	2
8963	Ambient Airâ€Processed Wideâ€Bandgap Perovskite Solar Cells with Wellâ€Controlled Film Morphology for Fourâ€Terminal Tandem Application. Solar Rrl, 2022, 6, .	3.1	4
8964	Cadmium Sulphide Thin Film with ZnO:Bi Buffer Layer for Heterojunction Solar Cell Window Layer Applications. Integrated Ferroelectrics, 2022, 225, 124-138.	0.3	1

#	Article	IF	CITATIONS
8965	High-Efficiency p-n Homojunction Perovskite and CIGS Tandem Solar Cell. Crystals, 2022, 12, 703.	1.0	5
8966	Hydrogenâ€Induced Nonradiative Recombination in Allâ€Inorganic CsPbI <sub>3</sub> Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	6
8967	Ab-initio study of formamidinium lead halide (FAPbX3, XÂ=ÂBr, Cl) perovskite's monolayers. Materials Today: Proceedings, 2022, 67, 20-24.	0.9	0
8968	Photoelectronic properties for heteroatom derivatives of graphdiyne monolayer sheet. Journal of Physics and Chemistry of Solids, 2022, 167, 110793.	1.9	0
8969	An overview of the pressure- and strain-induced changes in the structural and optoelectronic properties of organometal halide perovskites. Solar Energy, 2022, 239, 198-220.	2.9	4
8972	Photoluminescence study of Cu <sub>2</sub> ZnSnS <sub>4</sub> thin film solar cells. Physica Status Solidi C: Current Topics in Solid State Physics, 2017, 14, .	0.8	7
8973	Plastic Solar Cells. , 2012, , 405-446.		0
8974	Analysis of the Metallic Intermediate Band in Cr-doped AgGaS <sub>2</sub> Semiconductor for the Photovoltaic Application. Key Engineering Materials, 0, 920, 172-178.	0.4	0
8975	Efficient passivation on halide perovskite by tailoring the organic molecular functional groups: First-principles investigation. Applied Surface Science, 2022, 597, 153716.	3.1	6
8976	A review on high performance photovoltaic cells and strategies for improving their efficiency. Frontiers in Energy, 2022, 16, 548-580.	1.2	3
8977	Modeling Energy Gap of Doped Tin (II) Sulfide Metal Semiconductor Nanocatalyst Using Genetic Algorithm-Based Support Vector Regression. Journal of Nanomaterials, 2022, 2022, 1-13.	1.5	2
8978	Performance Improvement of Perovskite Solar Cells by Interactions between Nanoâ€Sized Quantum Dots and Perovskite. Advanced Functional Materials, 2022, 32, .	7.8	10
8979	Suppressing Halide Segregation in Wide-Band-Gap Mixed-Halide Perovskite Layers through Post-Hot Pressing. ACS Applied Materials & Interfaces, 2022, , .	4.0	4
8980	Indoor light harvesting lead-free 2-aminothiazolium bismuth iodide solar cells. Sustainable Energy and Fuels, 2022, 6, 3179-3186.	2.5	7
8981	A study of quenching approaches to optimize ultrasonic spray coated perovskite layers scalable for PV. EPJ Photovoltaics, 2022, 13, 12.	0.8	2
8982	Organic Photovoltaic Cells: Opportunities and Challenges. Materials Horizons, 2022, , 499-550.	0.3	1
8983	Nanophotonics for Perovskite Solar Cells. Advanced Photonics Research, 2022, 3, .	1.7	15
8984	Efficient Light Harvesting in Thick Perovskite Solar Cells Processed on Industry-Applicable Random Pyramidal Textures. ACS Applied Energy Materials, 2022, 5, 6700-6708.	2.5	9

#	Article	IF	CITATIONS
8985	High efficiency and more functions bring a bright future for organic photovoltaic cells. Science Bulletin, 2022, 67, 1300-1303.	4.3	8
8986	Simulation of a New CZTS Solar Cell Model with ZnO/CdS Core-Shell Nanowires for High Efficiency. Crystals, 2022, 12, 772.	1.0	0
8987	Evidence of Hot Charge Carrier Transfer in Hybrid CsPbBr <sub>3</sub> /Functionalized Graphene. ChemNanoMat, 2022, 8, .	1.5	11
8988	Optical Enhancement of Fluorineâ€Doped Tin Oxide Thin Films using Infrared Picosecond Direct Laser Interference Patterning. Advanced Engineering Materials, 2022, 24, .	1.6	9
8989	Efficient interconnecting layers in monolithic all-perovskite tandem solar cells. Energy and Environmental Science, 2022, 15, 3152-3170.	15.6	26
8990	Regulating phase separation and molecular stacking by introducing siloxane to small-molecule donors enables high efficiency all-small-molecule organic solar cells. Energy and Environmental Science, 2022, 15, 2937-2947.	15.6	33
8991	Tailoring Luminescent Solar Concentrators for High-Performance Flexible Double-Junction III-V Photovoltaics. SSRN Electronic Journal, 0, , .	0.4	0
8992	Solar Perovskite Technologies. , 2022, , .		1
8993	High <b>e</b> fficiency perovskite solar cells with PTAA hole transport layer enabled by PMMA:F4-TCNQ buried interface layer. Journal of Materials Chemistry C, 2022, 10, 9714-9722.	2.7	8
8994	Electrical properties of zinc nitride and zinc tin nitride semiconductor thin films toward photovoltaic applications. High Temperature Materials and Processes, 2022, 41, 343-352.	0.6	3
8995	Control of Polaronic Behavior and Carrier Lifetimes via Metal and Anion Alloying in Chalcogenide Perovskites. Journal of Physical Chemistry Letters, 2022, 13, 4955-4962.	2.1	7
8996	Tunable Photovoltaics: Adapting Solar Cell Technologies to Versatile Applications. Advanced Energy Materials, 2022, 12, .	10.2	27
8997	Downconversion Materials for Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	18
8998	Airâ€Degradation Mechanisms in Mixed Leadâ€Tin Halide Perovskites for Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	15
9000	A comprehensive review on recent advancements in cooling of solar photovoltaic systems using phase change materials. International Journal of Low-Carbon Technologies, 2022, 17, 768-783.	1.2	31
9001	Controlling Intrinsic Quantum Confinement in Formamidinium Lead Triiodide Perovskite through Cs Substitution. ACS Nano, 2022, 16, 9640-9650.	7.3	8
9002	Tailoring Excitonic and Optoelectronic Properties of Transition Metal Dichalcogenide Bilayers. Journal of Physical Chemistry C, 2022, 126, 9173-9184.	1.5	10
9003	Realization of axially defined GaInP/InP/InAsP triple-junction photovoltaic nanowires for high-performance solar cells. Materials Today Energy, 2022, 27, 101050.	2.5	11

#	Article	IF	CITATIONS
9004	Engineering the Nonâ€Radiative Recombination of Mixedâ€Halide Perovskites with Optimal Bandgap for Indoor Photovoltaics. Small, 2022, 18, .	5.2	13
9005	Hot-carrier multi-junction solar cells: A synergistic approach. Applied Physics Letters, 2022, 120, .	1.5	4
9006	Triple-junction solar cells with 39.5% terrestrial and 34.2% space efficiency enabled by thick quantum well superlattices. Joule, 2022, 6, 1121-1135.	11.7	67
9007	Overcoming the temperature effect on a single junction and intermediate band solar cells using an optical filter and energy selective contacts. Optical and Quantum Electronics, 2022, 54, .	1.5	3
9008	Antiperovskite Sr <sub>3</sub> MN and Ba <sub>3</sub> MN (MÂ=ÂSb or Bi) as promising photovoltaic absorbers for thinâ€film solar cells: A firstâ€principles study. Journal of the American Ceramic Society, 2022, 105, 5807-5816.	1.9	6
9009	Recent progress in organic solar cells (Part II device engineering). Science China Chemistry, 2022, 65, 1457-1497.	4.2	157
9010	Developing Yâ€Branched Polymer Acceptor with 3D Architecture to Reconcile Between Crystallinity and Miscibility Yielding >15%AEfficient Allâ€Polymer Solar Cells. Advanced Science, 2022, 9, .	5.6	15
9011	Over 24% efficient MA-free CsxFA1â^'xPbX3 perovskite solar cells. Joule, 2022, 6, 1344-1356.	11.7	58
9012	Pressure-Enhanced Photocurrent in One-Dimensional SbSI via Lone-Pair Electron Reconfiguration. Materials, 2022, 15, 3845.	1.3	6
9013	Optimized photoelectric conversion properties of PbS <sub> x </sub> Se <sub>1â^'x </sub> -QD/MoS <sub>2</sub> -NT 0D–1D mixed-dimensional van der Waals heterostructures. New Journal of Physics, 2022, 24, 063012.	1.2	6
9014	The Rise and Future of Discrete Organic–Inorganic Hybrid Nanomaterials. ACS Physical Chemistry Au, 2022, 2, 364-387.	1.9	12
9016	Probing the electronic, optical and transport properties of halide double perovskites Rb2InSb(Cl,Br)6 for solar cells and thermoelectric applications. Journal of Solid State Chemistry, 2022, 312, 123262.	1.4	10
9017	Parallel versus Twisted Pentacenes: Conformational Impact on Singlet Fission. Journal of Physical Chemistry Letters, 2022, 13, 5094-5100.	2.1	7
9018	Hot-carrier multijunction solar cells: sensitivity and resilience to nonidealities. Journal of Photonics for Energy, 2022, 12, .	0.8	0
9019	Theoretical insight into the enhancement of longer-wavelength light absorption in silicon solar cell with multilevel impurities. Results in Optics, 2022, 8, 100250.	0.9	5
9020	Theoretical Demonstration of Hot-Carrier Operation in an Ultrathin Solar Cell. Physical Review Applied, 2022, 17, .	1.5	4
9021	Nonreciprocal photonic management for photovoltaic conversion: design and fundamental efficiency limits. Journal of Photonics for Energy, 2022, 12, .	0.8	6
9022	Diffuse Solar Microâ€Concentrators Using Dielectric Total Internal Reflection with Tunable Side and Top Profiles. Energy Technology, 2022, 10, .	1.8	1

# 9023	ARTICLE 2D lead free Ruddlesden-Popper phase perovskites as efficient photovoltaic materials: A first-principles investigation. Computational Materials Science, 2022, 211, 111545	IF 1.4	CITATIONS
9024	Modulating the molecular orientation of linear benzodifuran-based isomeric polymers by exchanging the positions of chlorine and fluorine atoms. Nano Energy, 2022, 99, 107413.	8.2	27
9025	Perovskite-based tandem solar cells: Device architecture, stability, and economic perspectives. Renewable and Sustainable Energy Reviews, 2022, 165, 112553.	8.2	16
9026	Triplet energy transfer between inorganic nanocrystals and organic molecules. Journal of Photochemistry and Photobiology, 2022, 11, 100128.	1.1	5
9029	Theory of Graded-Bandgap Thin-Film Solar Cells. Synthesis Lectures on Electromagnetics, 2021, , .	0.5	5
9032	Design of potential singlet fission chromophores based on diketofurofuran: an alternative to diketopyrrolopyrrole. Journal of Materials Chemistry C, 2022, 10, 10404-10411.	2.7	3
9033	Avoiding Shading Losses in Concentrator Photovoltaics Using a Soft-Imprinted Cloaking Geometry. IEEE Journal of Photovoltaics, 2022, 12, 1116-1127.	1.5	5
9034	Solution-Processed Quantum-Dot Solar Cells. Springer Handbooks, 2022, , 1215-1266.	0.3	2
9035	Emerging trends in sulfide and selenide-based low-cost thin film solar cells. , 2022, , 195-242.		1
9036	Heat-shedding with photonic structures: radiative cooling and its potential. Journal of Materials Chemistry C, 2022, 10, 9915-9937.	2.7	15
9037	Dye-Sensitized Solar Cells. Springer Handbooks, 2022, , 1137-1214.	0.3	1
9038	The high open-circuit voltage of perovskite solar cells: a review. Energy and Environmental Science, 2022, 15, 3171-3222.	15.6	181
9039	Defect Control Based on Interfacial Passivation Via Post-Treatment of 1-Ethylpyridine Hydrobromide for Achieving Efficient and Stable Perovskite Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
9040	Exciton Transport and Interfacial Charge Transfer in Semiconductor Nanocrystals and Heterostructures. Springer Handbooks, 2022, , 985-1012.	0.3	1
9041	Solar Fuels Devices: Multi-Scale Modeling and Device Design Guidelines. Springer Handbooks, 2022, , 965-983.	0.3	1
9042	Photoluminescence assessment of materials for solar cell absorbers. Faraday Discussions, 0, 239, 112-129.	1.6	10
9043	Broad-band sensitized visible up-conversion in Y <sub>2</sub> Mg <sub>3</sub> Ge <sub>3</sub> O <sub>12</sub> :Ni <sup>2+</sup> ,Er <sup>3+</sup> ,Nb <sup phosphors. Materials Advances, 2022, 3, 6050-6061.</sup 	⊃> <b>5.6</b> <td>1&gt;6</td>	1>6
9044	Low temperature (Zn,Sn)O deposition for reducing interface open-circuit voltage deficit to achieve highly efficient Se-free Cu(In,Ga)S <sub>2</sub> solar cells. Faraday Discussions, 0, 239, 328-338.	1.6	3

#	Article	IF	CITATIONS
9045	Optical Design and Optimization of Bp/C-Si Tandem Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
9046	Optimizing the positions of quantum dot layers to increase the light absorption in quantum dot solar cells with light trapping structure. , 2022, , .		0
9047	PREPARATION OF CZTS THIN FILM EMPLOYING RAPID THERMAL PROCESSING METHOD. , 0, , .		0
9048	Sulfide Chalcopyrite Solar Cells––Are They the Same as Selenides with a Wider Bandgap?. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	1.2	5
9050	Dielectric-dependent hybrid functional calculations on the electronic band gap of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mn>3</mml:mn><mml:mi>d</mml:mi> transition metal doped <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:msub><mml:mi>SnS</mml:mi><mml:mn>2and their anticel preparation. Bhypical Baying B 2022, 105</mml:mn></mml:msub></mml:math </mml:math 	1.1 n> <td>5 msub&gt;</td>	5 msub>
9051	Visible-Light-Activated Enhanced Shift Current Bulk Photovoltaic Effect in Lead-Free Oxychalcogenide Perovskites: Emergence of Fully Inorganic Photovoltaic Materials. Journal of Physical Chemistry C, 2022, 126, 10258-10265.	1.5	2
9052	Appropriate third monovalent Aâ€site cation incorporation in formamidinium cesium lead iodide for defect passivation and efficiency improvement in perovskite solar cells. International Journal of Energy Research, 2022, 46, 15571-15588.	2.2	5
9054	Enhanced solar photocurrent using a quantum-dot molecule. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 2047.	0.9	2
9056	Defectâ€induced current coupling in multiâ€junction solar cells revealed by absolute electroluminescence imaging. Progress in Photovoltaics: Research and Applications, 0, , .	4.4	1
9057	Understanding the Electronic Structure and Optical Properties of Vacancy-Ordered Double Perovskite A <sub>2</sub> BX <sub>6</sub> for Optoelectronic Applications. Energy & Fuels, 2022, 36, 7065-7074.	2.5	18
9058	Improvement of power conversion efficiency of Cu2ZnSn(S,Se)4 solar cells by Al doped CdS. Physica B: Condensed Matter, 2022, 643, 414083.	1.3	4
9059	Integration of single layer graphene into CZTS thin film solar cells. Journal of Alloys and Compounds, 2022, 920, 166041.	2.8	5
9061	Van der Waals Epitaxial Growth for High Performance Organicâ€Free Perovskite Solar Cell: Experimental and Theoretical Insights. Advanced Materials Interfaces, 2022, 9, .	1.9	4
9062	High-Efficiency Electron Transport Layer-Free Perovskite/GeTe Tandem Solar Cell: Numerical Simulation. Crystals, 2022, 12, 878.	1.0	8
9063	Inelastic thermoelectric transport and fluctuations in mesoscopic systems. Advances in Physics: X, 2022, 7, .	1.5	8
9064	Dual effect of NH4F additive in the hydrothermal deposition of antimony selenosulfide thin film for high-performance solar cells. Science China Materials, 2022, 65, 3411-3417.	3.5	11
9065	Optical studies and validation of multidimensional hybrid metamaterial embedded light trapping structure for p-Si/n-ZnO based thin c-Si solar cell. Materials Research Innovations, 0, , 1-8.	1.0	0
9066	Hot-carrier dynamics and transport in Ill–V heterostructures for photovoltaic applications. Journal of Photonics for Energy, 2022, 12,	0.8	2

#	Article	IF	CITATIONS
9067	Estimation of annual energy generation of perovskite/crystalline Si tandem solar cells with different configurations in central part of Japan. Renewable Energy, 2022, 195, 896-905.	4.3	1
9068	Exploring optimal multimode vibronic pathways in singlet fission of azaborine analogues of perylene. Photochemical and Photobiological Sciences, 2022, 21, 1689-1700.	1.6	1
9069	Electron Transfer at Quantum Dot–Metal Oxide Interfaces for Solar Energy Conversion. ACS Nanoscience Au, 2022, 2, 367-395.	2.0	3
9070	Optical Metasurfaces for Energy Conversion. Chemical Reviews, 2022, 122, 15082-15176.	23.0	52
9071	Solar Energy in Space Applications: Review and Technology Perspectives. Advanced Energy Materials, 2022, 12, .	10.2	68
9072	Bananaâ€shaped electron acceptors with an electronâ€rich core fragment and 3D packing capability. , 2023, 5, .		22
9073	Singlet Fission Materials for Photovoltaics: From Small Molecules to Macromolecules. Macromolecular Rapid Communications, 2022, 43, .	2.0	8
9074	Inverse Design of Hybrid Organic–Inorganic Perovskites with Suitable Bandgaps via Proactive Searching Progress. ACS Omega, 2022, 7, 21583-21594.	1.6	14
9075	Role of built-in potential over ETL/perovskite interface on the performance of HTL-free perovskite solar cells. Optical Materials, 2022, 129, 112517.	1.7	12
9076	Computational modeling for the design of new fluorescent organic compounds based on both diketopyrrolopyrrole and nitrobenzofurazan moieties. Journal of Molecular Liquids, 2022, 360, 119550.	2.3	13
9077	A qualitative study of SnSe thin film solar cells using SCAPS 1D and comparison with experimental results: A pathway towards 22.69% efficiency. Solar Energy Materials and Solar Cells, 2022, 244, 111835.	3.0	12
9078	Structural, Electronic, and Optical Properties of Ga-Based Lead-Free Mixed-Halide Perovskites Cs3Gal6-xBrx (0 ≤ ≤6) for Solar Cell Applications: A DFT Study. Physica B: Condensed Matter, 2022, 640, 414085.	1.3	1
9079	Luminescent coupling and efficiency of bifacial GaAs/Si tandem solar cells. Solar Energy Materials and Solar Cells, 2022, 245, 111800.	3.0	2
9080	Numerical investigation of the Cu2O solar cell with double electron transport layers and a hole transport layer. Optical Materials, 2022, 131, 112642.	1.7	1
9081	Optimization of the substrate temperature of narrow bandgap CIS solar cells by three stage coevaporation process. Materials Science in Semiconductor Processing, 2022, 149, 106879.	1.9	2
9082	Thermal evaporation–deposited hexagonal CdS buffer layer with improved quality, enlarged band gap, and reduced band gap offset to boost performance of Sb2(S,Se)3 solar cells. Journal of Alloys and Compounds, 2022, 920, 165885.	2.8	8
9083	Electronic Structure, Optical and Thermoelectric Properties of Al1-Xinxn and Ga1-Xinxn Alloys. SSRN Electronic Journal, 0, , .	0.4	0
9084	Linking microscale morphologies to localised performance in singlet fission quantum dot photon multiplier thin films. Journal of Materials Chemistry C, 2022, 10, 11192-11198.	2.7	3

# 9085	ARTICLE Preparation and performance of g-C3N4/CuS film as counter electrode for quantum dot sensitized solar cells. Processing and Application of Ceramics, 2022, 16, 167-174.	IF 0.4	Citations 0
9086	Rare-earth-activated phosphors for energy-efficient solar cell. , 2022, , 347-364.		1
9087	Silicon-based spectrally selective emitters with good high-temperature stability on stepped metasurfaces. Nanoscale, 2022, 14, 10816-10822.	2.8	7
9088	Efficient Indoor Light Harvesting With Map(I <sub>0.8</sub> Br <sub>0.2</sub> ) <sub>3</sub> Solar Modules and Na-Ion Battery. SSRN Electronic Journal, 0, , .	0.4	0
9089	Solar Light Energy: A Photovoltaic Cell. Green Energy and Technology, 2022, , 51-63.	0.4	1
9091	Recent advances in dopant-free organic hole-transporting materials for efficient, stable and low-cost perovskite solar cells. Energy and Environmental Science, 2022, 15, 3630-3669.	15.6	58
9092	Stabilizing wide-bandgap halide perovskites through hydrogen bonding. Science China Chemistry, 2022, 65, 1650-1660.	4.2	9
9093	Design and numerical simulation of highly efficient mixedâ€organic cation mixedâ€metal cation perovskite solar cells. International Journal of Energy Research, 2022, 46, 15654-15664.	2.2	5
9094	Coupled Electronic and Anharmonic Structural Dynamics for Carrier Selfâ€Trapping in Photovoltaic Antimony Chalcogenides. Advanced Science, 2022, 9, .	5.6	16
9095	Nonlinear optical response, theoretical efficiencies, and high photosensitivity of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3â^x</sub> Cl <sub>x</sub> thin films for photonic applications. AIP Advances, 2022, 12, 065126.	0.6	0
9096	Coâ€designing alloy compositions of CdSe <sub>y</sub> Te <sub>1â€y</sub> absorbers and Mg <sub>x</sub> Zn <sub>1â€x</sub> O contacts to increase solar cell efficiency. Solar Rrl, 0, , .	3.1	1
9097	Optimum coupling of photovoltaic devices and Peltier coolers for improved performance and stability. International Journal of Sustainable Energy, 2022, 41, 1667-1693.	1.3	3
9098	Numerical Simulation and Design Optimization of Highly Efficient Lead-free Perovskite/c-Si Tandem Solar Cell. , 2022, , .		0
9099	Effect of the Thickness on Photoelectric Parameters of a Textured Silicon Solar Cell. Journal of Surface Investigation, 2022, 16, 416-420.	0.1	6
9100	The Dawn of Metadevices: From Contemporary Designs to Exotic Applications. Advanced Devices & Instrumentation, 2022, 2022, .	4.0	32
9101	Structural and optical characteristics of antimony selenosulfide thin films prepared by two-step method. Journal of the Korean Physical Society, 2022, 81, 278-284.	0.3	3
9102	Effect of Nanoscale Confinement on Ultrafast Dynamics of Singlet Fission in TIPSâ€Pentacene. ChemPhysChem, 2022, 23, .	1.0	1
9103	Chalcogenide Perovskites (ABS <sub>3</sub> ; A = Ba, Ca, Sr; B = Hf, Sn): An Emerging Class of Semiconductors for Optoelectronics. Journal of Physical Chemistry Letters, 2022, 13, 6439-6446.	2.1	9

#	Article	IF	Citations
9104	Synthesis and Luminescence Characterization of Downconversion and Downshifting Phosphor for Efficiency Enhancement of Solar Cells: Perspectives and Challenges. ACS Applied Electronic Materials, 2022, 4, 3354-3391.	2.0	9
9105	Nonequilibrium Hot-Carrier Transport in Type-II Multiple Quantum Wells for Solar-Cell Applications. Physical Review Applied, 2022, 18, .	1.5	1
9106	Physical limits in electromagnetism. Nature Reviews Physics, 2022, 4, 543-559.	11.9	22
9107	Cascade and hybrid processes for co-generating solar-based fuels and electricity via combining spectral splitting technology and membrane reactor. Renewable Energy, 2022, 196, 782-799.	4.3	10
9108	Numerical modeling of ultra-thin CuSbS <sub>2</sub> heterojunction solar cell with TiO <sub>2</sub> electron transport and CuAlO <sub>2</sub> :Mg BSF layers. Optical Materials Express, 2022, 12, 2954.	1.6	16
9109	Metal element doping in Cs(Pb1Ââ^'ÂDE)Br3 for solar cell materials. Chemical Engineering Journal Advances, 2022, 12, 100364.	2.4	1
9110	A-site cation influence on the conduction band of lead bromide perovskites. Nature Communications, 2022, 13, .	5.8	9
9111	First-Principles Prediction of Structural, Elastic, Mechanical, and Electronic Properties of Cu2ZnSnS4 under Pressure. ECS Journal of Solid State Science and Technology, 0, , .	0.9	1
9112	Double Heterojunction Crystalline Silicon Solar Cells: From Doped Silicon to Dopant-Free Passivating Contacts. Photonics, 2022, 9, 477.	0.9	0
9113	Future Research Directions in Perovskite Solar Cells: Exquisite Photon Management and Thermodynamic Phase Stability. Advanced Materials, 2023, 35, .	11.1	7
9114	Growth, characterization, and photovoltaic application of copper oxide thin films. Thin Solid Films, 2022, 757, 139381.	0.8	6
9115	Solution Processable Direct Bandgap Copperâ€Silverâ€Bismuth Iodide Photovoltaics: Compositional Control of Dimensionality and Optoelectronic Properties. Advanced Energy Materials, 2022, 12, .	10.2	17
9116	Revisiting the lodine Vacancy Surface Defects to Rationalize Passivation Strategies in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2022, 13, 6694-6700.	2.1	15
9117	Deep learning for development of organic optoelectronic devices: efficient prescreening of hosts and emitters in deep-blue fluorescent OLEDs. Npj Computational Materials, 2022, 8, .	3.5	9
9118	The role of crystal packing on the optical response of trialkyltetrelethynyl acenes. Journal of Chemical Physics, 2022, 157, .	1.2	3
9119	Spectral Splitting Solar Cells Constructed with InGaP/GaAs Two-Junction Subcells and Infrared PbS Quantum Dot/ZnO Nanowire Subcells. ACS Energy Letters, 2022, 7, 2477-2485.	8.8	7
9120	Biomimetic high-flux proton pump constructed with asymmetric polymeric carbon nitride membrane. Nano Research, 2023, 16, 18-24.	5.8	4
9121	Comment on $\hat{a} \in \mathbb{C}$ Thermodynamic bounds on work extraction from photocells and photosynthesis $\hat{a} \in \mathbb{C}$ European Physical Journal: Special Topics, 0, , .	1.2	0

#	Article	IF	CITATIONS
9122	Can Organic Solar Cells Beat the Near-Equilibrium Thermodynamic Limit?. Journal of Physical Chemistry Letters, 2022, 13, 6514-6519.	2.1	2
9123	Atomistic Mechanism of Surface-Defect Passivation: Toward Stable and Efficient Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2022, 13, 6686-6693.	2.1	12
9124	Investigating the performance characteristics of low concentrated photovoltaic systems utilizing a beam splitting device under variable cutoff wavelengths. Renewable Energy, 2022, 196, 375-389.	4.3	8
9125	The use of 2-Mercaptobenzothiazole as a new co-adsorbent in dye-sensitized solar cells. Optical Materials, 2022, 131, 112658.	1.7	5
9126	Recent advances and impact of phase change materials on solar energy: A comprehensive review. Journal of Energy Storage, 2022, 53, 105200.	3.9	46
9127	Reducing electrical losses of textured monolithic perovskite/silicon tandem solar cells by tailoring nanocrystalline silicon tunneling recombination junction. Solar Energy Materials and Solar Cells, 2022, 245, 111868.	3.0	5
9128	Highly confined spectrally selective absorber-emitter for effective solar thermophotovoltaics. Solar Energy Materials and Solar Cells, 2022, 245, 111878.	3.0	6
9129	The anomalous process in singlet fission kinetic model with time-dependent coefficient. Physica B: Condensed Matter, 2022, 643, 414167.	1.3	0
9130	Modeling of Perovskite-Silicon Tandem Solar Cells: A TCAD-based Approach. , 2020, , .		1
9131	Microscopic principles of chemical engineering after fossil fuels. , 2022, 1, 222-229.		1
9132	Revealing the <scp>groundâ€state</scp> geometry, optoelectronic, mechanical and thermodynamic behaviors, and efficiency of formamidinium mixed halide perovskites for solar cell applications. International Journal of Energy Research, 2022, 46, 17556-17575.	2.2	2
9133	Computational analysis to study the effect of selenization on ZrS <sub>2</sub> /CZTS heterostructure performance. Engineering Research Express, 2022, 4, 035026.	0.8	1
9134	Efficient Idealâ€Bandgap Tin–Lead Alloyed Inorganic Perovskite Solar Cells Enabled by Structural Dimension Engineering. Advanced Optical Materials, 2022, 10, .	3.6	3
9135	Polar methylammonium organic cations detune state coupling and extend hot-carrier lifetime in lead halide perovskites. CheM, 2022, 8, 3051-3063.	5.8	4
9136	Core-shell quantum dots: A review on classification, materials, application, and theoretical modeling. Journal of Alloys and Compounds, 2022, 924, 166508.	2.8	32
9137	Organic Solar Cell With Efficiency Over 20% and <i>V</i> <sub>OC</sub> Exceeding 2.1ÂV Enabled by Tandem With Allâ€Inorganic Perovskite and Thermal Annealingâ€Free Process. Advanced Science, 2022, 9, .	5.6	27
9138	Interplay of Kinetic and Thermodynamic Reaction Control Explains Incorporation of Dimethylammonium Iodide into CsPbI <sub>3</sub> . ACS Energy Letters, 2022, 7, 2745-2752.	8.8	11
9139	New Carbazole-Based Sensitizers for p-Type DSSCs: Impact of the Position of Acceptor Units on Device Performance. Journal of Physical Chemistry C, 2022, 126, 12383-12390.	1.5	3

#	Article	IF	CITATIONS
9140	Phase‣table Wideâ€Bandgap Perovskites for Fourâ€Terminal Perovskite/Silicon Tandem Solar Cells with Over 30% Efficiency. Small, 2022, 18, .	5.2	18
9141	Photophysics of Dibenzo[ <i>a</i> ,l]pentacene upon Monomer to Thin Film Transformation: Enhanced Visible Light Absorption and Ultrafast Singlet Fission. Journal of Physical Chemistry C, 2022, 126, 12082-12090.	1.5	2
9142	Energy <i>Versus</i> Electron Transfer: Managing Excited-State Interactions in Perovskite Nanocrystal–Molecular Hybrids. Chemical Reviews, 2022, 122, 12475-12494.	23.0	50
9143	Investigating the role of copper in arsenic doped Cd(Se,Te) photovoltaics. Solar Energy Materials and Solar Cells, 2022, 246, 111886.	3.0	6
9144	Mg2Si is the new black: Introducing a black silicide with >95% average absorption at 200–1800Ânm wavelengths. Applied Surface Science, 2022, 602, 154321.	3.1	3
9145	Structural, Electrical and Optical Properties of CuO Thin Films Obtained by Reactive Magnetron Sputtering. East European Journal of Physics, 2021, , 76-85.	0.1	0
9146	Low-Lying Excited States of Diphenylpolyenes and its Derivatives in Singlet Fission: A Density Matrix Renomalization Group Study. SSRN Electronic Journal, 0, , .	0.4	0
9147	The effect of multiple ion substitutions on halide ion migration in perovskite solar cells. Materials Advances, 2022, 3, 7918-7924.	2.6	9
9148	GaAs/GaInP nanowire solar cell on Si with state-of-the-art <i>V</i> <sub>oc</sub> and quasi-Fermi level splitting. Nanoscale, 0, , .	2.8	5
9149	Spectral properties and photophysical processes of <i>meso</i> styryl substituent triphenylamine-porphyrin derivatives. Journal of Porphyrins and Phthalocyanines, 2022, 26, 469-484.	0.4	2
9150	Collection of photocarriers in intermediate band solar cells: experiments and equivalent circuit analysis. Journal of Photonics for Energy, 2022, 12, .	0.8	2
9151	Progress on strategies to control the built-in electric field of perovskite solar cells. Chinese Science Bulletin, 2023, 68, 39-52.	0.4	2
9152	Efficiency Enhancement of Thermophotovoltaic Cells With Different Design Configurations Using Existing Photon Recycling Technologies. Frontiers in Energy Research, 0, 10, .	1.2	1
9153	Surface Re-Engineering of Perovskites with Buckybowls to Boost the Inverted-Type Photovoltaics. Journal of the American Chemical Society, 2022, 144, 13839-13850.	6.6	25
9154	Ionâ€Implantation in Titaniaâ€Based Plasmonic Photoâ€anodes: A Review. Advanced Materials Interfaces, 2022, 9, .	1.9	4
9155	Micro/Nanostructures for Light Trapping in Monocrystalline Silicon Solar Cells. Journal of Nanomaterials, 2022, 2022, 1-40.	1.5	8
9156	Data-driven design of high-performance MASnxPb1-xI3 perovskite materials by machine learning and experimental realization. Light: Science and Applications, 2022, 11, .	7.7	19
9157	Perovskite Solar Cells: A Review of the Recent Advances. Coatings, 2022, 12, 1089.	1.2	49

#	Article	IF	CITATIONS
9158	Cuprous Oxide Thin Films Implanted with Chromium Ions—Optical and Physical Properties Studies. International Journal of Molecular Sciences, 2022, 23, 8358.	1.8	1
9159	Isogenous Acceptor Strategy Enables Highly Efficient Ternary Organic Solar Cells via Synergistic Morphology Regulation and Charge Recombination Reduction. Solar Rrl, 2022, 6, .	3.1	6
9160	Cu <sub>2</sub> ZnSnS <sub>4</sub> thin-film solar cells by a closed tube sulfurization under saturated sulfur vapor pressure. Japanese Journal of Applied Physics, 0, , .	0.8	0
9161	Current status of n-type SnS: paving the way for SnS homojunction solar cells. JPhys Energy, 2022, 4, 042002.	2.3	12
9162	The principles, design and applications of fused-ring electron acceptors. Nature Reviews Chemistry, 2022, 6, 614-634.	13.8	163
9163	Morphology and Crystal Structure of Cu2NiSn(S,Se)4 Thin Films Obtained by an Electrodeposition-Annealing Process. Coatings, 2022, 12, 1198.	1.2	3
9164	Coevaporation Stabilizes Tin-Based Perovskites in a Single Sn-Oxidation State. Nano Letters, 2022, 22, 7112-7118.	4.5	3
9165	Suppressing Bulk and Interfacial Recombination Losses in Sn–Pb Perovskites for Efficient Printable Lowâ€Bandgap Photovoltaic Devices. Solar Rrl, 0, , 2200619.	3.1	3
9166	Renewed Prospects for Organic Photovoltaics. Chemical Reviews, 2022, 122, 14180-14274.	23.0	323
9167	A Sensitizer of Purpose: Generating Triplet Excitons with Semiconductor Nanocrystals. ACS Materials Au, 2022, 2, 641-654.	2.6	12
9168	The influence of the water flow lens system on the operating characteristics of monocrystalline and amorphous Siâ€solar cells for outdoor and indoor use: The photovoltaic improvement. Environmental Progress and Sustainable Energy, 2023, 42, .	1.3	3
9169	Dye-Sensitized Multiple Exciton Generation in Lead Sulfide Quantum Dots. Journal of the American Chemical Society, 2022, 144, 15855-15861.	6.6	8
9170	Unveiling the fundamental physical properties of Cu2-Na ZnSnX4 (X = S, Se) alloys for solar cell applications: a theoretical investigation. Journal of Materials Research and Technology, 2022, 20, 2680-2688.	2.6	2
9171	Direct Exciton Harvesting from a Bound Triplet Pair. Advanced Materials, 2022, 34, .	11.1	7
9172	Efficient Charge Dissociation of Triplet Excitons in Bulk Heterojunction Solar Cells. ACS Applied Energy Materials, 2022, 5, 10815-10824.	2.5	8
9173	Controlling the Spin Exchange Energy through Charge Transfer for Triplet State Management in Organic Semiconductors. Chemistry of Materials, 2022, 34, 7095-7105.	3.2	1
9174	Fill Factor Losses and Deviations from the Superposition Principle in Lead Halide Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	22
9175	Recent Advances in CsPb <i>X</i> <sub>3</sub> Perovskite Solar Cells: Focus on Crystallization Characteristics and Controlling Strategies. Advanced Energy Materials, 2023, 13, .	10.2	27

#	Article	IF	CITATIONS
9176	Solar Energy Conversion Efficiency, Growth Mechanism and Design of Ill–V Nanowire-Based Solar Cells: Review. , 0, , .		0
9177	Overview and Outlook on Graphene and Carbon Nanotubes in Perovskite Photovoltaics from Singleâ€Junction to Tandem Applications. Advanced Functional Materials, 2022, 32, .	7.8	14
9178	A convenient method for assessing steady-state carrier density and lifetime in solar cell materials using pulse excitation measurements. Journal of Chemical Physics, 2022, 157, .	1.2	3
9179	Influence of Copper Composition on Cu <sub>2</sub> BaSn(S,Se) <sub>4</sub> Solution-Deposited Films and Photovoltaic Devices with Over 5% Efficiency. ACS Applied Energy Materials, 2022, 5, 10645-10656.	2.5	12
9180	Performance Enhancement of Crystal Silicon Solar Cell by a CsPbBr <sub>3</sub> –Cs <sub>4</sub> PbBr <sub>6</sub> Perovskite Quantum Dot @ZnO/Ethylene Vinyl Acetate Copolymer Downshifting Composite Film. Solar Rrl, 2022, 6, .	3.1	12
9181	BTO-Coupled CIGS Solar Cells with High Performances. Materials, 2022, 15, 5883.	1.3	4
9182	Photoexcitations in the Hubbard model: Generalized Loschmidt amplitude analysis of impact ionization in small clusters. Physical Review B, 2022, 106, .	1.1	1
9183	Preparation of Spinel Form Co <sub>3</sub> O <sub>4</sub> and CoO <sub>2</sub> Thin Film at Low Temperature by Electrochemical Method as a Thin Film Oxide Layer. ECS Journal of Solid State Science and Technology, 2022, 11, 081014.	0.9	3
9184	Optical readout of singlet fission biexcitons in a heteroacene with photoluminescence detected magnetic resonance. Journal of Chemical Physics, 2022, 157, .	1.2	6
9185	Unveiling the effect of 2D silagraphene structural diversity on electronic properties: DFT, DOS, and ELF studies. Journal of Molecular Modeling, 2022, 28, .	0.8	0
9186	Interface engineering of antimony selenide solar cells: a review on the optimization of energy band alignments. JPhys Energy, 2022, 4, 044002.	2.3	13
9187	Machine-learning assisted design principle search for singlet fission: an example study of cibalackrot. Npj Computational Materials, 2022, 8, .	3.5	7
9188	Integrated Idealâ€Bandgap Perovskite/Bulkâ€Heterojunction Solar Cells with Efficiencies > 24%. Advanced Materials, 2022, 34, .	11.1	23
9189	Fabrication and Characterization of P-Type Semiconducting Copper Oxide-Based Thin-Film Photoelectrodes for Solar Water Splitting. Coatings, 2022, 12, 1206.	1.2	3
9190	Prospects of Photovoltaic Technology. Engineering, 2023, 21, 28-31.	3.2	11
9191	The Effect of Absorber Stoichiometry on the Stability of Widegap (Ag,Cu)(In,Ga)Se <sub>2</sub> Solar Cells. Physica Status Solidi (B): Basic Research, 2022, 259,	0.7	6
9192	Surface ion exchange and targeted passivation with cesium fluoride for enhancing the efficiency and stability of perovskite solar cells. Applied Physics Letters, 2022, 121, .	1.5	10
9193	Nonreciprocal Thermal Photonics for Energy Conversion and Radiative Heat Transfer. Physical Review Applied, 2022, 18, .	1.5	33

# 9194	ARTICLE Reducing Optical Reflection Loss for Perovskite Solar Cells Via Printable Mesoporous SiO <sub>2</sub> Antireflection Coatings. Advanced Functional Materials, 2022, 32, .	IF 7.8	CITATIONS
9195	Openâ€circuit voltage, fill factor, and heterojunction band offset in semiconductor diode solar cells. EcoMat, 2022, 4, .	6.8	10
9196	Introducing a comprehensive physics-based modelling framework for tandem and other PV systems. Solar Energy Materials and Solar Cells, 2022, 247, 111944.	3.0	3
9197	Computational Modelling and Optimization of a Methylammoniumâ€free Perovskite and Gaâ€free Chalcogenide Tandem Solar Cell with an Efficiency above 25 %. ChemistrySelect, 2022, 7, .	0.7	1
9198	Influence of Fe/Zn content on the structural, and optical properties of nontoxic and earth-abundant Cu2ZnxFe1 â^' xSnS4 (x = 0, 0.25, 0.5, 0.75 and 1) compounds. Journal of Materials Science: M Electronics, 2022, 33, 20604-20615.	latterials in	2
9199	Artificial photosynthetic monolithic devices using voltage-matched perovskite/silicon tandem photovoltaic modules. Journal of Applied Physics, 2022, 132, .	1.1	5
9200	Detailed study of dimensioning and simulating a grid-connected PV power station and analysis of its environmental and economic effect, case study. Modeling Earth Systems and Environment, 2023, 9, 53-61.	1.9	11
9201	Back-contact perovskite solar cell fabrication via microsphere lithography. Nano Energy, 2022, 102, 107695.	8.2	1
9202	Origin of Broadband Emission and Large Stokes Shift in Antimony Trisulfide. Journal of Physical Chemistry Letters, 0, , 8026-8032.	2.1	2
9203	A Manyâ€Body Perturbation Theory Approach to Energy Band Alignment at the Crystalline Tetracene–Silicon Interface. Advanced Theory and Simulations, 2022, 5, .	1.3	1
9204	Doping of Sb into Cu2ZnSn(S,Se)4 absorber layer via Se&Sb2Se3 co-selenization strategy for enhancing open-circuit voltage of kesterite solar cells. Frontiers in Chemistry, 0, 10, .	1.8	3
9205	Enhancement in photovoltaic performance of CZTS Thin-film solar cells through varying stacking order and sulfurization time. Journal of Materials Science: Materials in Electronics, 2022, 33, 20121-20133.	1.1	5
9206	Perovskite superlattices with efficient carrier dynamics. Nature, 2022, 608, 317-323.	13.7	66
9207	Role of Intrinsic Defects in Enhancing the Photoabsorption Capability of CuZn <sub>2</sub> AlSe <sub>4</sub> . ACS Omega, 0, , .	1.6	0
9208	From Salt to Electronics: Heteroepitaxy and GaAs Solar Cells. Advanced Materials Interfaces, 0, , 2201148.	1.9	0
9209	Influence of Cathode Materials on the Efficiency of PTB7:PC <sub>70</sub> BM Bulk Heterojunction Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	0.8	2
9210	Electric Field and Its Effect on Hot Carriers in InGaAs Valley Photovoltaic Devices. IEEE Journal of Photovoltaics, 2022, 12, 1175-1183.	1.5	1
9211	Modelling tandem/multi-junction hybrid perovskite–organic solar cells: A combined drift–diffusion and kinetic Monte Carlo study. Solar Energy, 2022, 243, 193-202.	2.9	3

#	Article	IF	CITATIONS
9212	Performance Enhancement of Inclined Core-Shell Nanowire Solar Cells Using Multivariable Optimization. Solar Energy, 2022, 243, 443-453.	2.9	4
9213	Cu2ZnSnS4 QDs anchored 2-D few-layer graphene bridge enhanced photo induced charge carrier transport behavior for high efficient kesterite photovoltaic cell. Optical Materials, 2022, 132, 112775.	1.7	1
9214	The role of material defects in the photocatalytic CO2 reduction: Interfacial properties, thermodynamics, kinetics and mechanism. Journal of CO2 Utilization, 2022, 64, 102175.	3.3	11
9215	Diode model of nonuniform irradiation treatment to predict multiscale solar-electrical conversion for the concentrating plasmonic photovoltaic system. Applied Energy, 2022, 324, 119698.	5.1	1
9216	First-principles studies on electronic and optical properties of formate-doped organic-inorganic perovskites MAPbI3. Solar Energy Materials and Solar Cells, 2022, 246, 111941.	3.0	5
9217	Gain and loss energy generation of perovskite/sc-Si tandem solar cells with series and parallel configurations compared with sc-Si solar cell under real environmental factors based on detailed balance limit. Optical Materials, 2022, 132, 112789.	1.7	0
9218	Study on improving the efficiency of crystalline silicon photovoltaic module with down-conversion chlorophyll film. Optical Materials, 2022, 132, 112821.	1.7	2
9219	Theoretic efficiency limit and design criteria of solar photovoltaics with high visual perceptibility. Applied Energy, 2022, 324, 119761.	5.1	5
9220	An efficient Cr-doping strategy to optimize the solution-processed Cu2ZnSn(S,Se)4 solar cells for better optoelectronic performance. Journal of Alloys and Compounds, 2022, 924, 166476.	2.8	5
9221	Dion-Jacobson phase lead-free halide (PDA)MX4 (M=Sn/Ge; X=I/Br/Cl) perovskites: A first-principles theory. Journal of Solid State Chemistry, 2022, 315, 123449.	1.4	2
9222	Sensitizer effects on DSSC performance under pan-illumination conditions. Journal of Photochemistry and Photobiology A: Chemistry, 2022, 433, 114201.	2.0	3
9223	Estimation of performance limit for bifacial single-junction solar cell. Optics and Laser Technology, 2022, 156, 108500.	2.2	1
9224	Band gap tunning to enhance photovoltaic response in NaNbO3-based bulk ferroelectrics. Scripta Materialia, 2022, 221, 114976.	2.6	8
9225	Review of nanomaterials impact on improving the performance of dye-sensitized and perovskite solar cells. Optical and Quantum Electronics, 2022, 54, .	1.5	6
9226	Polaron mobility modulation by bandgap engineering in black phase α-FAPbI3. Journal of Energy Chemistry, 2023, 76, 175-180.	7.1	7
9227	Fabrication and characterization of ZnO/Se1-xTex solar cells. Frontiers of Optoelectronics, 2022, 15, .	1.9	6
9228	Optical Properties of Synthesized Hexagonal CdTe Nanoparticles Having Hexagonal Phase: Density Functional Theory‧upported Calculation of Bandgap and Density of States. Physica Status Solidi (B): Basic Research, 2023, 260, .	0.7	2
9229	Atomic structure, electronic structure and optical absorption of inorganic perovskite compounds Cs2SnI6-nXn (XÂ=ÂF, Cl, br; nÂ=Â0Ââ^¼Â6): A first-principles study. Solar Energy, 2022, 245, 25-36.	2.9	5

#	Article	IF	CITATIONS
9230	Designing limiting-efficiency BaSi <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">altimg="si184.svg" display="inline" id="d1e1122"&gt;<mml:msub><mml:mrow /&gt;<mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:mrow </mml:msub></mml:math> solar cells by device simulation and computational material screening. Solar Energy, 2022, 245, 136-145.	2.9	8
9231	Bandgap graded perovskite solar cell for above 30% efficiency. Optik, 2022, 269, 169891.	1.4	13
9232	Preparation and characterization of vanadium-implanted silicon for intermediate band solar cell applications. Optical Materials, 2022, 133, 112987.	1.7	1
9233	Performance limitation of Cu2FeSnS4 solar cell: Understanding impact of density of defect states. Optical Materials, 2022, 133, 112885.	1.7	3
9234	Analysis of structural stability and optoelectronic properties of new direct band gap halide double perovskites <mml:math <br="" altimg="si12.svg" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline" id="d1e946"&gt;<mml:mrow><mml:mi>C</mml:mi><mml:msub><mml:mrow><mml:mi>s</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math>	0.9 <mml:mrc< td=""><td>1 sw&gt;<mml:mn< td=""></mml:mn<></td></mml:mrc<>	1 sw> <mml:mn< td=""></mml:mn<>
9235	Solid State Communications, 2022, 355, 114928. Multi-exciton properties of InP/ZnS core-shell quantum dots. Physica B: Condensed Matter, 2022, 646, 414354.	1.3	1
9236	Correlation between detailed balance limit and actual environmental factors for perovskite/crystalline Si tandem solar cells with different structures. Materials Science in Semiconductor Processing, 2022, 152, 107085.	1.9	2
9237	Hydrostatic pressure-tuning of photoelectric properties of perovskite Cs2SeI6 through first-principles investigation. Materials Today Communications, 2022, 33, 104435.	0.9	1
9238	Improved GaInP/GaAs/GaInAs inverted metamorphic triple-junction solar cells by reduction of Zn diffusion in the top subcell. Solar Energy Materials and Solar Cells, 2022, 248, 112000.	3.0	3
9239	Effects of short-range order on phase equilibria and opto-electronic properties of ternary alloy ZnxCd1-xTe. Solar Energy Materials and Solar Cells, 2022, 248, 111971.	3.0	1
9240	Synthesis and optimization of SnS absorber layer by spin-coating process and Taguchi approach. Materials Chemistry and Physics, 2022, 292, 126774.	2.0	3
9241	Enhance the photoconversion efficiency of carbon-based perovskite solar cells through the synergetic effect of upconversion nanoparticles Li doped NaYbF4:Ho3+ and 2D g-C3N4. Materials Today Communications, 2022, 33, 104513.	0.9	4
9242	Direct band gap double perovskite halide Cs2ScInCl6 for optoelectronic applications—A first principle study. Computational Condensed Matter, 2022, 33, e00736.	0.9	1
9243	Numerical simulation on the impurity photovoltaic (IPV) effect in c-Si wafer-based dual-heterojunction solar cell. Materials Today Communications, 2022, 33, 104442.	0.9	3
9244	Semitransparent polymer solar cell/triboelectric nanogenerator hybrid systems: Synergistic solar and raindrop energy conversion for window-integrated applications. Nano Energy, 2022, 103, 107776.	8.2	13
9245	Heterocyclic-based photoactive materials. , 2023, , 219-296.		0
9246	An acceptor with an asymmetric and extended conjugated backbone for high-efficiency organic solar cells with low nonradiative energy loss. Journal of Materials Chemistry A, 2022, 10, 16714-16721.	5.2	17
9247	Hole transport free carbon-based high thermal stability CsPbI <sub>1.2</sub> Br <sub>1.8</sub> solar cells with an amorphous InGaZnO <sub>4</sub> electron transport layer. Physical Chemistry Chemical Physics, 2022, 24, 18896-18904.	1.3	2

#	Article	IF	CITATIONS
9248	Improved Voc in Narrow-Bandgap Cuinse2 Solar Cells with Al2o3 Passivation Local Contact. SSRN Electronic Journal, 0, , .	0.4	0
9249	Numerical Simulation on the Impurity Photovoltaic (Ipv) Effect in C-Si Wafer-Based Dual-Heterojunction Solar Cell. SSRN Electronic Journal, 0, , .	0.4	0
9250	Solution-processed next generation thin film solar cells for indoor light applications. Energy Advances, 2022, 1, 761-792.	1.4	15
9251	The effect of caesium alloying on the ultrafast structural dynamics of hybrid organic–inorganic halide perovskites. Journal of Materials Chemistry A, 2022, 10, 22408-22418.	5.2	6
9252	Bulk and interfacial engineering of Ta <sub>3</sub> N <sub>5</sub> nanotube arrays by Sn( <scp>iv</scp> ) doping, proper passivation and co-catalysts for efficient solar water oxidation. Catalysis Science and Technology, 0, , .	2.1	0
9253	Modulation of electronic bandgaps and subsequent implications on SQ efficiencies <i>via</i> strain engineering in ultrathin SnX (X = S, Se) nanowires. Journal of Materials Chemistry C, 0, , .	2.7	0
9254	Beyond Lambertian light trapping for large-area silicon solar cells: fabrication methods. Opto-Electronic Advances, 2022, 5, 210086-210086.	6.4	14
9255	Strain Regulating Mechanical Stability and Photoelectric Properties of Ch3nh3pbi3 Containing the Asymmetric Ch3nh3 Cations. SSRN Electronic Journal, 0, , .	0.4	0
9256	A Comparison of Spectrum-Splitting Configurations for High-Efficiency Photovoltaic Systems With Perovskite Cells. IEEE Journal of Photovoltaics, 2022, 12, 1477-1486.	1.5	1
9257	Ultra-Thin Plasmonic Optoelectronic Devices. Advances in Sustainability Science and Technology, 2022, , 219-271.	0.4	2
9258	Spiers Memorial Lecture: Next generation chalcogenide-based absorbers for thin-film solar cells. Faraday Discussions, 0, 239, 9-37.	1.6	10
9259	Electroluminescence analysis of silicon interdigitated back contact solar cells with a front surface selective band offset barrier. EPJ Photovoltaics, 2022, 13, 16.	0.8	0
9260	A highly contorted push–pull naphthalenediimide dimer and evidence of intramolecular singlet exciton fission. Chemical Science, 2022, 13, 11506-11512.	3.7	9
9261	Recent progress of lead-free bismuth-based perovskite materials for solar cell applications. Journal of Materials Chemistry C, 2022, 10, 16629-16656.	2.7	13
9262	Anti-perovskite carbides Ca <sub>6</sub> CSe <sub>4</sub> and Sr <sub>6</sub> CSe <sub>4</sub> for photovoltaics with similar optoelectronic properties to MAPbI <sub>3</sub> . Journal of Materials Chemistry A, 2022, 10, 21540-21550.	5.2	3
9263	Preparation of band-gap-grading Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> thin-film solar cells by post-sulfo-selenization treatment. Journal of Materials Chemistry C, 2022, 10, 15638-15646.	2.7	6
9264	Application of ultrafast infrared spectroscopy in elucidating electronic processes in materials. , 2022, , 609-647.		0
9265	Perovskite photocatalysis: realizing long-lived charge-separated states at the interface of CsPbBr <sub>3</sub> nanocrystals and functionalized ferrocene molecules. Journal of Materials Chemistry A, 2022, 10, 21112-21123.	5.2	10

#	Article	IF	CITATIONS
9266	Optoelectronic simulation of a four-terminal all-inorganic CsPbI <sub>3</sub> /CZTSSe tandem solar cell with high power conversion efficiency. Physical Chemistry Chemical Physics, 2022, 24, 22746-22755.	1.3	0
9267	Oxides for Photovoltaic Applications. Advances in Sustainability Science and Technology, 2022, , 179-218.	0.4	0
9268	Emerging Metal-Halide Perovskite Materials for Enhanced Solar Cells and Light-Emitting Applications. Engineering Materials, 2022, , 45-85.	0.3	1
9269	Electronic structure, defect properties, and optimization of the band gap of the earth-abundant and low-toxicity photovoltaic absorber Cu <sub>3</sub> SbS <sub>4</sub> . Physical Chemistry Chemical Physics, 2022, 24, 25258-25269.	1.3	3
9270	Controllable (H K 1) Preferred Orientation of Sb2s3 Thin Films Fabricated by Pulse Electrodeposition. SSRN Electronic Journal, 0, , .	0.4	0
9271	Enhanced Current Generation in Quantum-Dot Intermediate Band Solar Cells Through Optimizing the Position of Quantum Dot Layers. SSRN Electronic Journal, 0, , .	0.4	0
9272	W <sub>4</sub> PCl <sub>11</sub> monolayer: an unexplored 2D material with moderate direct bandgap and strong visible-light absorption for highly efficient solar cells. Nanoscale, 2022, 14, 12386-12394.	2.8	4
9273	Low-Lying Excited States of Diphenylpolyenes and its Derivatives in Singlet Fission: A Density Matrix Renomalization Group Study. SSRN Electronic Journal, 0, , .	0.4	0
9274	Diagnosis and Breakeven Analysis of GaInNAs Subcell Incorporated in Monolithic Lattice-Matched Five-Junction Solar Cell. IEEE Journal of Photovoltaics, 2022, 12, 1487-1494.	1.5	0
9275	High efficiency (>20%) and stable inverted perovskite solar cells: current progress and future challenges. Journal of Materials Chemistry C, 2022, 10, 12908-12928.	2.7	10
9276	Decreasing toxicity and increasing photoconversion efficiency by Sn-substitution of Pb in 5-ammonium valeric acid-based two-dimensional hybrid perovskite materials. Physical Chemistry Chemical Physics, 2022, 24, 23226-23235.	1.3	3
9277	Efficient singlet fission in an orthogonal anthracene dimer film. Materials Chemistry Frontiers, 2022, 6, 3016-3022.	3.2	1
9278	First principles predictionAofAstructural,AmechanicalAandAoptoelectronicApropertiesAofAlead-freeAdoubleAperovskites A2SeX6A(A=Rb,AK;AX=Cl,ABr,AI). SSRN Electronic Journal, 0, , .	0.4	1
9279	Effect of Post-thermal Annealing on the Structural, Morphological, and Optical Properties of RF-sputtered In2S3 Thin Films. Gazi University Journal of Science, 0, , .	0.6	0
9280	Investigation of Ag(Ga,In)Se2 as thin-film solar cell absorbers: A first-principles study. Science China: Physics, Mechanics and Astronomy, 2022, 65, .	2.0	5
9281	Inheriting Sb <sub>2</sub> Se <sub>3</sub> Nanorods on Sb <sub>2</sub> S <sub>3</sub> Nanorod Arrays for Effective Light Harvesting and Charge Extraction in Solar Cells. ACS Applied Nano Materials, 2022, 5, 16082-16093.	2.4	4
9282	Influence of Mn2+ ions on the structure and spectral properties of BaY2F8: Yb3+/Ho3+ phosphors. Journal of Materials Science: Materials in Electronics, 2022, 33, 21148-21160.	1.1	2
9283	Singlet fission and its application in organic solar cells. Journal of Semiconductors, 2022, 43, 080201.	2.0	0

#	Article	IF	CITATIONS
9284	Investigation of Electron Transport Material-Free Perovskite/CIGS Tandem Solar Cell. Energies, 2022, 15, 6326.	1.6	11
9285	A Review of Metal-Free Organic Halide Perovskite: Future Directions for the Next Generation of Solar Cells. Energy & Fuels, 2022, 36, 10702-10720.	2.5	18
9286	Regulating the Crystallization Kinetics and Lattice Strain of Lead-Free Perovskites with Perovskite Quantum Dots. ACS Energy Letters, 2022, 7, 3251-3259.	8.8	11
9287	Pivotal Routes for Maximizing Semitransparent Perovskite Solar Cell Performance: Photon Propagation Management and Carrier Kinetics Regulation. Advanced Materials, 2023, 35, .	11.1	11
9289	Epitaxial growth of SiGe films by annealing Al–Ge alloyed pastes on Si substrate. Scientific Reports, 2022, 12, .	1.6	2
9290	Efficient Nearâ€Infrared PbS Quantum Dot Solar Cells Employing Hydrogenated In <sub>2</sub> O <sub>3</sub> Transparent Electrode. Small, 2022, 18, .	5.2	11
9291	Bulk Photovoltaic Effect in 2D Materials for Solarâ€Power Harvesting. Advanced Optical Materials, 2022, 10, .	3.6	28
9292	Ultrathin Self-Assembly Two-Dimensional Metal–Organic Framework Films as Hole Transport Layers in Ideal-Bandgap Perovskite Solar Cells. ACS Energy Letters, 2022, 7, 3362-3369.	8.8	18
9293	Machineâ€Learning Modeling for Ultraâ€Stable Highâ€Efficiency Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	23
9294	Carrier Multiplication in Transition Metal Dichalcogenides Beyond Threshold Limit. Advanced Science, 2022, 9, .	5.6	3
9295	X-ray vision of Cu(In,Ga)Se <sub>2</sub> : from the Ga/In ratio to solar-cell performance. JPhys Energy, 2022, 4, 045007.	2.3	1
9296	Device Modeling and Optimization for an Efficient Two-Terminal Perovskite Tandem Solar Cell. Journal of Electronic Materials, 2022, 51, 6603-6613.	1.0	4
9297	Electrical barriers and their elimination by tuning (Zn,Mg)O buffer composition in Cu(In,Ga)S <sub>2</sub> solar cells: systematic approach to achieve over 14% power conversion efficiency. JPhys Energy, 2022, 4, 045005.	2.3	2
9298	Investigation of the fundamental working mechanism for high-performance Sb2(S1â^'xSex)3 solar cells. European Physical Journal Plus, 2022, 137, .	1.2	6
9299	Electronâ€radiation effect on Freonâ€gasâ€ŧreated <scp>CdTe</scp> solar cells. International Journal of Energy Research, 0, , .	2.2	0
9300	Comparative architecture in monolithic perovskite/silicon tandem solar cells. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	2.0	3
9301	How to get high-efficiency lead chalcogenide quantum dot solar cells?. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	2.0	4
9302	Synergistic high efficiency and low energy loss of all-small-molecule organic solar cells based on benzotriazole-based ï€-bridge unit. Science China Materials, 2022, 65, 3382-3391.	3.5	6

#	Article	IF	CITATIONS
9303	Sequential Passivation for Leadâ€Free Tin Perovskite Solar Cells with High Efficiency. Angewandte Chemie - International Edition, 2022, 61, .	7.2	22
9304	Does non-reciprocity break the Shockley–Queisser limit in single-junction solar cells?. Applied Physics Letters, 2022, 121, .	1.5	4
9305	Electrical Properties of the Baseâ€Substrate Junction in Freestanding Coreâ€Shell Nanowires. Advanced Materials Interfaces, 2022, 9, .	1.9	1
9306	Charge Transfer Dynamics at the Interface of CsPbX <sub>3</sub> Perovskite Nanocrystalâ€Acceptor Complexes: A Femtosecond Transient Absorption Spectroscopy Study. Laser and Photonics Reviews, 2022, 16, .	4.4	7
9307	Nonreciprocal Solar Thermophotovoltaics. Physical Review Applied, 2022, 18, .	1.5	7
9308	Design and theoretical study of a metamaterial absorber-emitter pair matched with a low-bandgap PV cell for an STPV system. Optical and Quantum Electronics, 2022, 54, .	1.5	0
9309	Top Stack Optimization for Cu <sub>2</sub> BaSn(S, Se) <sub>4</sub> Photovoltaic Cell Leads to Improved Device Power Conversion Efficiency beyond 6%. Advanced Energy Materials, 2022, 12, .	10.2	9
9310	Performance analysis of WSe2 solar cell with Cu2O hole transport layer by optimization of electrical and optical properties. Journal of Computational Electronics, 2022, 21, 1373-1385.	1.3	3
9311	Geometric and doping effects on radiative recombination in thin-film near-field energy converters. AIP Advances, 2022, 12, 095006.	0.6	1
9312	Low-intensity low-temperature (LILT) solar cells for deep space missions. Applied Physics A: Materials Science and Processing, 2022, 128, .	1.1	0
9313	Lead Halide Perovskite Quantum Dots for Photovoltaics and Photocatalysis: A Review. ACS Applied Nano Materials, 2022, 5, 14092-14132.	2.4	18
9314	Control of Hot Carrier Cooling in Lead Halide Perovskites by Point Defects. Journal of the American Chemical Society, 2022, 144, 18126-18134.	6.6	15
9315	Parallel triplet formation pathways in a singlet fission material. Nature Communications, 2022, 13, .	5.8	13
9316	Technology evolution of the photovoltaic industry: Learning from history and recent progress. Progress in Photovoltaics: Research and Applications, 2023, 31, 1194-1204.	4.4	9
9317	Formation of Culn <sub>(1–<i>x</i>)</sub> Ga <sub><i>x</i></sub> S <sub>2</sub> Thin Films through a Solution Approach: Nonlinear Variation of Fermi Energy and Band Gap Bowing. Langmuir, 2022, 38, 11909-11916.	1.6	2
9318	Theoretical modeling and ultra-thin design for multi-junction solar cells with a light-trapping front surface and its application to InGaP/GaAs/InGaAs 3-junction. Optics Express, 2022, 30, 35202.	1.7	0
9319	Homogeneous CuGaSe2 growth by the CuPRO process with In-Situ AgBr treatment. Thin Solid Films, 2022, 762, 139488.	0.8	2
9320	Electric Power and Current Collection in Semiconductor Devices with Suppressed Electron–Hole Recombination. ACS Energy Letters, 2022, 7, 3557-3563.	8.8	3

#	Article	IF	CITATIONS
9321	Toward Hot Carrier Extraction in Intervalley Photovoltaic Devices. ACS Applied Energy Materials, 2022, 5, 11159-11166.	2.5	1
9322	Improving the Air Resistance of the Precursor Solution for Ambient-Air Coating of an Sn–Pb Perovskite Film with Superior Photovoltaic Performance. ACS Applied Materials & Interfaces, 2022, 14, 43362-43371.	4.0	10
9323	Proper Understanding of the Natures of Electric Charges and Magnetic Flux. , 0, , .		2
9324	Slot-Die Coated Triple-Halide Perovskites for Efficient and Scalable Perovskite/Silicon Tandem Solar Cells. ACS Energy Letters, 2022, 7, 3600-3611.	8.8	29
9325	Research Progress on Singlet Fission in Acenes and Their Derivatives. Photonics, 2022, 9, 689.	0.9	3
9326	Diode Factor in Solar Cells with Metastable Defects and Back Contact Recombination. Advanced Energy Materials, 0, , 2202076.	10.2	5
9327	Trapped-Hydrogen-Induced Energy Loss in Tin-Based Hybrid Perovskite Solar Cells. Physical Review Applied, 2022, 18, .	1.5	1
9328	Thermally Regulated Energy Loss in Dion–Jacobson Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	5
9329	Recent advances in bulk-heterojunction solar cells: a review. EPJ Applied Physics, 2022, 97, 81.	0.3	8
9330	Sequential Passivation for Leadâ€Free Tin Perovskite Solar Cells with High Efficiency. Angewandte Chemie, 2022, 134, .	1.6	14
9331	First-principles study of optoelectronic and thermoelectronic properties of the ScAgC half-Heusler compound. Physica Scripta, 2022, 97, 105711.	1.2	3
9332	Postâ€deposition annealing and interfacial atomic layer deposition buffer layers of Sb <sub>2</sub> Se <sub>3</sub> /CdS stacks for reduced interface recombination and increased openâ€circuit voltages. Progress in Photovoltaics: Research and Applications, 2023, 31, 203-219.	4.4	4
9333	Great Influence of Organic Cation Motion on Charge Carrier Dynamics in Metal Halide Perovskite Unraveled by Unsupervised Machine Learning. Journal of Physical Chemistry Letters, 2022, 13, 8537-8545.	2.1	10
9334	Dually Modified Wide-Bandgap Perovskites by Phenylethylammonium Acetate toward Highly Efficient Solar Cells with Low Photovoltage Loss. ACS Applied Materials & Interfaces, 2022, 14, 43246-43256.	4.0	3
9335	Recent progress in defect engineering for kesterite solar cells. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	2.0	4
9336	Organicâ€Free and Leadâ€Free Perovskite Solar Cells with Efficiency over 11%. Advanced Energy Materials, 2022, 12, .	10.2	30
9337	Perovskites: Emergence of highly efficient thirdâ€generation solar cells. International Journal of Energy Research, 2022, 46, 21856-21883.	2.2	13
9338	Selectively harvesting nonâ€visible photons in hybrid solar lighting systems for power generation in buildings. Energy Technology, 0, , .	1.8	0

#	Article	IF	CITATIONS
9339	Delayed response to the photovoltaic performance in a double quantum dot photocell with spatially correlated fluctuation. Chinese Physics B, 0, , .	0.7	0
9340	Recent Development in Sensitizers for Lanthanide-Doped Upconversion Luminescence. Chemical Reviews, 2022, 122, 15998-16050.	23.0	56
9341	(NH4)2S-induced improvement of interfacial wettability for high-quality heterojunctions to boost the chloride-assembled CZTSSe solar cells. Journal of Chemical Physics, 2022, 157, .	1.2	3
9342	Characterizations of MoS2 nanosphere fabricated using vacuum thermal evaporation at steady and rapid heating. Materials Today: Proceedings, 2023, 75, 10-15.	0.9	1
9343	Ecotoxicity and Sustainability of Emerging Pbâ€Based Photovoltaics. Solar Rrl, 2022, 6, .	3.1	6
9344	Growth Dynamics of SnSe Thin Films on Annealing of Precursor Layers Stacked by Multisource Sequential Elemental Layer Deposition. Integrated Ferroelectrics, 2022, 230, 120-137.	0.3	0
9345	Leveraging machine learning to harness non-parabolic effects in semiconductor heterostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2023, 146, 115513.	1.3	2
9346	Hole-Transport Layer-Free Tin-Based Perovskite Solar Cells: Improving Their Performance from a Simulation Perspective. ECS Journal of Solid State Science and Technology, 2022, 11, 103001.	0.9	1
9347	Evaluating the performance of Cs2PtI6â^'xBrx for photovoltaic and photocatalytic applications using first-principles study and SCAPS-1D simulation. Heliyon, 2022, 8, e10808.	1.4	7
9348	Interdot Lead Halide Excess Management in PbS Quantum Dot Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	7
9349	Design of New Ternary Nitrides for Photovoltaic Applications via High-Throughput Calculations. Journal of Physical Chemistry C, 2022, 126, 17398-17405.	1.5	1
9350	Reflection and lattice mismatch loss analysis in Sb <sub>2</sub> Se <sub>3</sub> solar cells. Semiconductor Science and Technology, 2022, 37, 115006.	1.0	1
9351	All-perovskite two-terminal tandem solar cell with 32.3% efficiency by numerical simulation. Materials Today Sustainability, 2022, 20, 100241.	1.9	10
9352	Enhancement of hot carrier effect and signatures of confinement in terms of thermalization power in quantum well solar cell. Journal Physics D: Applied Physics, 2022, 55, 475102.	1.3	3
9353	Plant microbial fuel cells from the perspective of photovoltaics: Efficiency, power, and applications. Renewable and Sustainable Energy Reviews, 2022, 169, 112953.	8.2	7
9354	Strain regulating mechanical stability and photoelectric properties of CH3NH3PbI3 containing the asymmetric CH3NH3 cations. Materials Today Communications, 2022, 33, 104527.	0.9	1
9355	Synthesis and investigation of solution-processed Bi-doped Cu2ZnSn(S, Se)4 thin-film solar cells. Solar Energy Materials and Solar Cells, 2022, 248, 112030.	3.0	5
9356	An innovative design of arrays-interpenetrated CZTSSe/MoO3 back interfacial contacts for improving the solar cell performance. Solar Energy Materials and Solar Cells, 2022, 248, 112034.	3.0	8
#		IC	CITATIONS
------	--	------	-----------
π	Impact of loss mechanisms on performances of perovskite solar cells. Physica B: Condensed Matter,	1.9	CHAHONS
9357	2022, 647, 414363.	1.3	0
9358	Revealing the structure and physical properties of Ba-based phosphide compounds: A theoretical study. Materials Chemistry and Physics, 2022, 292, 126833.	2.0	3
9359	TiO2 nanorods with CdS quantum dots for optical applications. , 0, , 167-178.		1
9360	Theoretical Screening of Lead-Free Hybrid Organic–Inorganic Halide Double Perovskites for Solar Cells. Journal of Materials Chemistry C, 0, , .	2.7	1
9361	Defect engineering in antimony selenide thin film solar cells. Energy Advances, 2023, 2, 12-33.	1.4	15
9362	Origin of photovoltaic losses in selenium solar cells with open-circuit voltages approaching 1 V. Journal of Materials Chemistry A, 2022, 10, 24199-24207.	5.2	10
9363	Benzonitrile-functionalized non-fullerene acceptors for organic solar cells with low non-radiative loss. Journal of Materials Chemistry C, 2022, 10, 17174-17181.	2.7	4
9364	The Holy Triangle of Science, Technology and Industry for Photovoltaic Solar Energy Conversion. Lecture Notes in Energy, 2022, , 51-80.	0.2	0
9365	Discovering the desirable physical properties of arsenic compounds AB <sub>2</sub> As <sub>2</sub> and their alloys: a theoretical study. Physical Chemistry Chemical Physics, 2022, 24, 26288-26296.	1.3	7
9366	Rare-earth-incorporated ternary Ce <sub><i>x</i></sub> Cd <sub>1â^'<i>x</i></sub> S quantum dot-sensitized solar cells. RSC Advances, 2022, 12, 31093-31101.	1.7	7
9367	First principles crystal structure prediction. , 2022, , .		0
9368	Recent advances in triplet–triplet annihilation upconversion and singlet fission, towards solar energy applications. Energy and Environmental Science, 2022, 15, 4982-5016.	15.6	32
9369	First-principles investigation of potential water-splitting photocatalysts and photovoltaic materials based on Janus transition-metal dichalcogenide/WSe <sub>2</sub> heterostructures. RSC Advances, 2022, 12, 31518-31524.	1.7	1
9370	Revealing ultrafast vibronic dynamics of tetracene molecules with sub-8-fs UV impulsive Raman spectroscopy. Physical Chemistry Chemical Physics, 0, , .	1.3	0
9371	Combining two-photon photoemission and transient absorption spectroscopy to resolve hot carrier cooling in 2D perovskite single crystals: the effect of surface layer. Journal of Materials Chemistry C, 2022, 10, 16751-16760.	2.7	2
9372	Theoretical prediction and design for chalcogenide-quantum-dot/TiO <sub>2</sub> heterojunctions for solar cell applications. RSC Advances, 2022, 12, 29375-29384.	1.7	2
9373	Overview and loss analysis of III–V single-junction and multi-junction solar cells. EPJ Photovoltaics, 2022, 13, 22.	0.8	7
9374	Towards Highly Efficient Cesium Titanium Halide Based Lead-Free Double Perovskites Solar Cell by Optimizing the Interface Layers. Nanomaterials, 2022, 12, 3435.	1.9	8

#	Δρτιςι ε	IF	CITATIONS
" 9375	Br Vacancy Defects Healed Perovskite Indoor Photovoltaic Modules with Certified Power Conversion Efficiency Exceeding 36%. Advanced Science, 2022, 9, .	5.6	18
9376	Singlet Fission and Aromaticity. Journal of Physical Chemistry A, 2022, 126, 8049-8057.	1.1	5
9377	Indirect Band Gap Semiconductors for Thin-Film Photovoltaics: High-Throughput Calculation of Phonon-Assisted Absorption. Journal of the American Chemical Society, 2022, 144, 19872-19883.	6.6	22
9378	Monolithic perovskite/black-silicon tandems based on tunnel oxide passivated contacts. Joule, 2022, 6, 2644-2661.	11.7	31
9379	Generalized modelling of photoluminescence transients. Physica Status Solidi (B): Basic Research, 0, , .	0.7	1
9380	Thermodynamic Limits of Photon-Multiplier Luminescent Solar Concentrators. , 2022, 1, .		2
9381	Surface Doping Boosts Triplet Generation Yield in Perovskite‣ensitized Upconversion. Advanced Optical Materials, 2023, 11, .	3.6	9
9382	Silver–Bismuth Halide Double Salts for Leadâ€Free Photovoltaics: Insights from Symmetryâ€Based Modeling. Solar Rrl, 2022, 6, .	3.1	9
9383	Narrow bandgap ferroelectric [KNbO3](1-x)-[BaCo1/2Nb1/2O3-Î]x solid solution for bulk photovoltaic cell. Materials Chemistry and Physics, 2023, 293, 126943.	2.0	1
9384	Integrated 4-Terminal All-Inorganic Perovskite Tandem Solar Cell with Open-Circuit Voltage Exceeding 2.1 V for Water Splitting. ACS Energy Letters, 2022, 7, 4215-4223.	8.8	15
9385	Revealing the output power potential of bifacial monolithic all-perovskite tandem solar cells. ELight, 2022, 2, .	11.9	26
9386	Formation and Optical Characteristics of Tm,Yb-Codoped ZnO Nanowires Towards Improvement of Photovoltaic Conversion Efficiency Via Downconversion. Zairyo/Journal of the Society of Materials Science, Japan, 2022, 71, 811-818.	0.1	0
9387	Charge generation in organic solar cells: Journey toward 20% power conversion efficiency. Aggregate, 2022, 3, .	5.2	15
9388	Constructing Microcavity for Perovskite Laser Power Converter: A Theoretical Study. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	0.8	4
9389	Novel broad spectral response perovskite solar cells: A review of the current status and advanced strategies for breaking the theoretical limit efficiency. Journal of Materials Science and Technology, 2023, 140, 33-57.	5.6	5
9390	Snâ€Based Perovskite Halides for Electronic Devices. Advanced Science, 2022, 9, .	5.6	12
9391	Efficient Hot Electron Capture in CuPc/MoSe <sub>2</sub> Heterostructure Assisted by Intersystem Crossing. Nano Letters, 2022, 22, 8463-8469.	4.5	3
9392	A Switchable One ompound Diode. Advanced Materials, 2023, 35, .	11.1	4

#	Article	IF	CITATIONS
9393	Superior aggregation, morphology and photovoltaic performance enabled by fine tuning of fused electron-deficient units in polymer donors. Journal of Energy Chemistry, 2023, 77, 19-26.	7.1	2
9394	Numerical Simulation and Optimization of n-Al-ZnO/n-CdS/p-CIGS/p-Si/p-MoOx/Mo Tandem Solar Cell. Silicon, 2023, 15, 2125-2135.	1.8	4
9395	Numerical Study on the Effect of ZrS <sub>2</sub> on CZTSSe Photovoltaic Device Using SCAPS 1-D. IOP Conference Series: Materials Science and Engineering, 2022, 1263, 012005.	0.3	2
9396	Highly efficient photocatalytic overall water splitting in two-dimensional van der Waals MoS <sub>2</sub> /Hf <sub>2</sub> CO <sub>2</sub> heterostructure. Journal Physics D: Applied Physics, 2023, 56, 035501.	1.3	5
9397	Heterojunctions fabricated by surface activated bonding–dependence of their nanostructural and electrical characteristics on thermal process. Japanese Journal of Applied Physics, 2022, 61, 120101.	0.8	2
9398	Influence of Cd, S and Na atoms on photoluminescence in tin sulfide thin films. Japanese Journal of Applied Physics, 0, , .	0.8	0
9399	Modeling of a Sn-Based HTM-Free Perovskite Solar Cell Using a One-Dimensional Solar Cell Capacitance Simulator Tool. Transactions of Tianjin University, 2023, 29, 62-72.	3.3	9
9400	Efficient Tin (II) Fluorideâ€Free Formamidinium Tin Triiodide Perovskite Solar Cells via Composition and Additive Engineering. Solar Rrl, 2022, 6, .	3.1	4
9401	Inkjetâ€Printing Controlled Phase Evolution Boosts the Efficiency of Hole Transport Material Free and Carbonâ€Based CsPbBr <sub>3</sub> Perovskite Solar Cells Exceeding 9%. Energy and Environmental Materials, 0, , .	7.3	2
9402	Tunable goniopolarity of graphenelike boron layers in metal diborides. Physical Review B, 2022, 106, .	1.1	4
9403	Transport mechanisms in hyperdoped silicon solar cells. Semiconductor Science and Technology, 0, , .	1.0	0
9404	A chiral lead-free tin(IV)-based halide organic-inorganic semiconductor with dielectric switching and phase transition. Chinese Chemical Letters, 2023, 34, 107980.	4.8	20
9405	Low-lying excited states of Diphenylpolyenes and its derivatives in singlet fission: A Density Matrix Renormalization Group study. Computational and Theoretical Chemistry, 2022, 1217, 113918.	1.1	3
9406	A novel clean hydrogen production system combining cascading solar spectral radiation and copper-chlorine cycle: Modeling and analysis. Journal of Cleaner Production, 2022, 380, 135036.	4.6	4
9407	First-principles study of physical properties of Zn1-xCdxTe, Zn1-xHgxTe, and Cd1-xHgxTe ternary alloys. Chemical Physics, 2022, , 111755.	0.9	0
9408	Characterization of Sb2Te3 thin films prepared by electrochemical technique. Journal of Physics and Chemistry of Solids, 2023, 172, 111095.	1.9	3
9409	Unveiling of efficiency limit to fabricate high-performance PbSe quantum dot solar cells. Solar Energy, 2022, 247, 432-440.	2.9	1
9410	The Shockley–Queisser limit and the conversion efficiency of silicon-based solar cells. Results in Optics, 2022, 9, 100320.	0.9	6

		Deec			0
21	'NR	KFF(	ION		ι
1		NLPC		пап	

#	Article	IF	CITATIONS
9411	Enhanced current generation in quantum-dot intermediate band solar cells through optimizing the position of quantum dot layers. Optical Materials: X, 2022, 16, 100207.	0.3	1
9412	Poly(p-phenylene vinylene) incorporated into carbon nanostructures. Journal of Nanoparticle Research, 2022, 24, .	0.8	3
9413	Cementitious materials as promising radiative coolers for solar cells. IScience, 2022, 25, 105320.	1.9	3
9414	Efficient indoor light harvesting with CH3NH3Pb(10.8Br0.2)3 solar modules and sodium-ion battery. Cell Reports Physical Science, 2022, 3, 101123.	2.8	5
9415	Take it to the Carnot limit: Perspectives and thermodynamics of dual-cell electrochemical heat engines. Energy Conversion and Management, 2022, 271, 116315.	4.4	6
9416	Atomic layer deposition and other thin film deposition techniques: from principles to film properties. Journal of Materials Research and Technology, 2022, 21, 2481-2514.	2.6	26
9418	CuO:Se composite films and its photovoltaic application. Materials Today Communications, 2022, 33, 104848.	0.9	1
9419	Photo-dynamics in 2D materials: Processes, tunability and device applications. Physics Reports, 2022, 993, 1-70.	10.3	4
9420	Theoretical study of the structural, electronic and optical properties of the t-Se1-xTex system for x = 0.03, 0.04 and 0.08 and for these systems containing a defect in the dihedral angle. Physica B: Condensed Matter, 2023, 648, 414349.	1.3	0
9421	Cation and anion mutations in kesterites: A way to flexible band gap energy tuning. Solar Energy Materials and Solar Cells, 2023, 249, 112044.	3.0	1
9422	Designing new halide double perovskite materials Rb2AgGaX6 (X: Br, Cl) with direct band gaps and high power conversion efficiency. Journal of Solid State Chemistry, 2023, 317, 123698.	1.4	5
9423	High-Throughput screening quaternary kesterite Cu2ABS4 (AÂ=ÂDivalent metals; BÂ=ÂTetravalent metals) photovoltaic materials. Computational Materials Science, 2023, 216, 111817.	1.4	0
9424	Broadband solar absorption by chromium metasurface for highly efficient solar thermophotovoltaic systems. Renewable and Sustainable Energy Reviews, 2023, 171, 113005.	8.2	22
9425	Defect control based on interfacial passivation via post-treatment of 1-ethylpyridine hydrobromide for achieving efficient and stable perovskite solar cells. Applied Surface Science, 2023, 608, 155042.	3.1	2
9426	A DFT study on the stability and optoelectronic properties of Pb/Sn/Ge-based MA <sub>2</sub> B(SCN) <sub>2</sub> 1 <sub>2</sub> perovskites. New Journal of Chemistry, 0, , .	1.4	0
9427	Effects of sub-picosecond direct laser interference patterning on the optoelectronic properties of fluorine-doped tin oxide thin films. Journal of Materials Chemistry C, O, , .	2.7	3
9428	Copper oxide nanostructured thin films processed by SILAR for optoelectronic applications. RSC Advances, 2022, 12, 32853-32884.	1.7	9
9429	Application of Radiative Cooling. Energy and Environment Research in China, 2022, , 93-141.	2.3	0

#	Article	IF	CITATIONS
9430	Optoelectronic functionality and photovoltaic performance of Sr-doped tetragonal CH3NH3PbI3: A first-principles study. Physica B: Condensed Matter, 2023, 649, 414453.	1.3	1
9431	Trends in opto-electronic properties of MgxZn1-xSnN2 using first principles methods. Materials Chemistry and Physics, 2023, 294, 126995.	2.0	1
9432	The structural, mechanical, and optoelectronic properties of Cu2-II-Sn-VI4 (II = Mg, Zn, Cd; VI = S, Se): A DFT study. Materials Science in Semiconductor Processing, 2023, 154, 107207.	1.9	1
9433	Tuning the electronic and optical properties of BaNiO <sub>3</sub> via Fe substitution: a first-principles study. , 2022, , .		0
9434	Study of Degradation of Cu(In,Ga)Se <sub>2</sub> Solar Cell Parameters Due to Temperature. , 2022, , .		1
9435	Evaluation of Auger Limited Behavior in Thermoradiative Cells. , 2022, , .		Ο
9436	Monte Carlo evaluation of multijunction solar systems in tandem and 4-terminal configurations. , 2022, , .		1
9437	Simulation of High open-circuit voltage Perovskite/CIGS-GeTe tandem cell. , 2022, , .		3
9438	External Quantum Efficiency and Device Reflectance of CIGS PV for Terrestrial and Space Based Applications. , 2022, , .		0
9439	Characterizing the Back-Contact Interface of Bi-Facial Poly-Crystalline CdTe Devices Using Transmission Electron Microscopy. , 2022, , .		0
9440	Optimization of the Selenization Temperature on the Mn-Substituted Cu2ZnSn(S,Se)4 Thin Films and Its Impact on the Performance of Solar Cells. Nanomaterials, 2022, 12, 3994.	1.9	0
9441	Efficiency enhancement of solar cells using multi-layer interdiffused InGaAs/ GaAs quantum dots: A numerical approach. , 2022, , 207445.		1
9442	Computational analysis of mixed cation mixed halide-based perovskite solar cell using SCAPS-1D software. Heliyon, 2022, 8, e11428.	1.4	3
9443	Indoor photovoltaic energy harvesting based on semiconducting ï€-conjugated polymers and oligomeric materials toward future IoT applications. Polymer Journal, 2023, 55, 297-316.	1.3	15
9444	Computational Probing of Tin-Based Lead-Free Perovskite Solar Cells: Effects of Absorber Parameters and Various Electron Transport Layer Materials on Device Performance. Materials, 2022, 15, 7859.	1.3	10
9445	Metal-Free Interconnecting Layer for Monolithic Perovskite/Organic Tandem Solar Cells with Enhanced Outdoor Stability. ACS Applied Energy Materials, 2022, 5, 14035-14044.	2.5	4
9446	Hybrid Photovoltaic/Thermoelectric Systems for Round-the-Clock Energy Harvesting. Molecules, 2022, 27, 7590.	1.7	5
9447	Passive Radiative Cooling of Silicon Solar Modules with Photonic Silica Microcylinders. ACS Photonics, 2022, 9, 3831-3840.	3.2	9

#	Article	IF	CITATIONS
9448	What's Next for Organic Solar Cells? The Frontiers and Challenges. Advanced Energy and Sustainability Research, 2023, 4, .	2.8	9
9449	Correlating the perovskite/polymer multi-mode reactions with deep-level traps in perovskite solar cells. Joule, 2022, 6, 2849-2868.	11.7	29
9450	High-temperature post-annealing effect on the device performance of B-doped p-type BaSi <sub>2</sub> /n-Si heterojunction solar cells grown by molecular beam epitaxy. Japanese Journal of Applied Physics, 0, , .	0.8	0
9451	Quantitative modeling, optimization, and verification of 63Ni-powered betavoltaic cells based on three-dimensional ZnO nanorod arrays. Nuclear Science and Techniques/Hewuli, 2022, 33, .	1.3	8
9452	Optical design and optimization of BP/c-Si tandem solar cells. Optics Communications, 2022, , 129123.	1.0	0
9453	Efficient inorganic <scp>CsPbI<sub>2</sub>Br</scp> perovskite indoor photovoltaics demonstrated via slower crystallization by incorporated dimethylammonium iodide. EcoMat, 2023, 5, .	6.8	3
9454	Advances in Photovoltaic Technologies from Atomic to Device Scale. Photonics, 2022, 9, 837.	0.9	1
9455	Structural and Photophysical Properties of Guanidinium–Iodideâ€Treated Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	7
9456	Comb-shaped Sb <sub>2</sub> S <sub>3</sub> nanorod arrays on ZnO nanofibers for thin-film photovoltaics. AIP Advances, 2022, 12, 115119.	0.6	0
9457	Overcoming the performance limitation of Cs <sub>2</sub> AgBiBr <sub>6</sub> double perovskites using bifacial photovoltaic design. Energy Technology, 0, , .	1.8	0
9458	Ge QDs in $\hat{I}\pm$ -GeOx nano-films grown by two stage process based on Rf-magnetron sputtering. MRS Advances, 0, , .	0.5	0
9459	Effect of annealing temperature on the microstructural and optical properties of newly developed (Ag,Cu)2Zn(Sn,Ge)Se4 thin films. Applied Physics A: Materials Science and Processing, 2022, 128, .	1.1	3
9460	Hybrid thermoelectric-photovoltaic solar harvesters: technological and economic issues. Japanese Journal of Applied Physics, 2023, 62, SD0801.	0.8	2
9461	A Simple Metamaterial for High-Performance Spectrum-Selective Absorption in the Visible Region. Symmetry, 2022, 14, 2402.	1.1	1
9462	Big Data in a Nano World: A Review on Computational, Data-Driven Design of Nanomaterials Structures, Properties, and Synthesis. ACS Nano, 2022, 16, 19873-19891.	7.3	13
9463	An asymmetric low concentrator and spectral splitting approach to bifacial fourâ€ŧerminal photovoltaic modules. Progress in Photovoltaics: Research and Applications, 0, , .	4.4	1
9464	Prospect of near-infrared quantum dots in the development of tandem solar cells: Detail charge balance study. Materials Today: Proceedings, 2022, , .	0.9	0
9465	Near field and far field plasmonic enhancements with bilayers of different dimensions AgNPs@DLC for improved current density in silicon solar. Scientific Reports, 2022, 12, .	1.6	5

#	Anticus	IE	CITATIONS
#	Photothermal investigation for optimizing a lattice strain relaxation condition of InGaAs/GaAsP	IF 1 9	2
9400	Applied Physics, 2023, 56, 045101.	1.5	3
9467	Solar Cells. Springer Handbooks, 2023, , 699-745.	0.3	0
9468	Effect of gallium proportion on the structural, optical, and electrical properties of the CuIn1-xGaxSe2 compound. International Journal of Advanced Manufacturing Technology, 0, , .	1.5	0
9469	Pure 2D Perovskite Formation by Interfacial Engineering Yields a High Open ircuit Voltage beyond 1.28 V for 1.77â€eV Wideâ€Bandgap Perovskite Solar Cells. Advanced Science, 2022, 9, .	5.6	21
9470	Carbon Nanotubes for Solar Cells and Photovoltaics. , 2022, , 1419-1449.		0
9471	Influence of anti-reflection coatings on double GaAs/Si heterojunction layers in Si solar cells. Semiconductor Science and Technology, 0, , .	1.0	0
9472	On the Stability of Potential Photovoltaic Absorber In <sub>5</sub> S <sub>4</sub> . Journal of Physical Chemistry C, 2022, 126, 19971-19977.	1.5	1
9473	A holistic and state-of-the-art review of nanotechnology in solar cells. Sustainable Energy Technologies and Assessments, 2022, 54, 102864.	1.7	6
9474	A Critical Review on the Progress of Kesterite Solar Cells: Current Strategies and Insights. Advanced Energy Materials, 2023, 13, .	10.2	46
9475	Light transfer through bubble-filled electrolyte for solar water splitting. Sustainable Energy and Fuels, 2023, 7, 448-460.	2.5	5
9476	Effect of charge selective contacts on the quasi Fermi level splitting of CuGa <sub>3</sub> Se <sub>5</sub> thin film photocathodes for hydrogen evolution and methylviologen reduction. , 2023, 1, 74-83.		6
9477	High resolution and time resolved photoemission spectroscopy for developing more efficient materials to reduce energy consumption and increase renewable energy production. EPJ Web of Conferences, 2022, 273, 01013.	0.1	0
9478	Solar Cells. , 2022, , 143-158.		0
9479	First-principles study of structural, electronic, elastic and optical properties of alkali lead iodides MPbI3 (M = Li, Na, K). Ukrainian Journal of Physical Optics, 2023, 24, 1-21.	9.7	1
9480	Innovative back-contact for <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">altimg="si1.svg"&gt;<mml:mrow><mml:mi>S</mml:mi><mml:msub><mml:mi>b</mml:mi><mml:mn>2</mml:mn> thin film solar cells. Solar Energy, 2023, 249, 414-423.</mml:msub></mml:mrow></mml:math>	:/r <b>ara</b> l:msu	b2 <mml:mi< td=""></mml:mi<>
9481	Synthesis and characterization of Cu-sandwiched Sb2Se3 thin films and numerical simulation of p-Sb2Se3/n-ZnSe heterojunction solar cell. Optical Materials, 2023, 135, 113289.	1.7	2
9482	A novel highly stable two-dimensional boron phase with promising potentials in energy fields. Journal of Materials Chemistry A, 2023, 11, 828-837.	5.2	2
9483	Environment-friendly copper-based chalcogenide thin film solar cells: status and perspectives. Materials Horizons, 2023, 10, 313-339.	6.4	11

#	Article	IF	CITATIONS
9484	Spectral-splitting concentrator agrivoltaics for higher hybrid solar energy conversion efficiency. Energy Conversion and Management, 2023, 276, 116567.	4.4	7
9485	Integrated silicon-based spectral reshaping intermediate structures for high performance solar thermophotovoltaics. Solar Energy, 2023, 249, 227-232.	2.9	4
9486	Synthesis and optical characterization of lead-free phenylenediammonium bismuth halide perovskites: a long charge carrier lifetime in phenylenediammonium bismuth iodide. Journal of Materials Chemistry C, 2022, 11, 223-234.	2.7	0
9487	Efficient NIR quantum cutting of Eu3+/Yb3+ co-doped LiLa(PO3)4 for luminescent solar concentrators. Optical Materials, 2023, 135, 113365.	1.7	0
9488	Review on the promising roles of alkali metals toward highly efficient perovskite light-emitting diodes. Journal of Materials Chemistry C, 2023, 11, 2011-2025.	2.7	3
9489	Harnessing multiple generated excitons from intermolecular singlet fission of perylene–monoimides in a p-type dye-sensitized solar cell. Solar Energy, 2023, 250, 1-9.	2.9	3
9490	The race between complicated multiple cation/anion compositions and stabilization of FAPbI <sub>3</sub> for halide perovskite solar cells. Journal of Materials Chemistry C, 2023, 11, 2449-2468.	2.7	3
9491	Suppressing interface recombination in CZTSSe solar cells by simple selenization with synchronous interface gradient doping. Nanoscale, 2022, 15, 185-194.	2.8	8
9492	Sb2Se3 heterostructure solar cells: Techniques to improve efficiency. Solar Energy, 2023, 249, 174-182.	2.9	13
9493	The progress and efficiency of CsPbI <sub>2</sub> Br perovskite solar cells. Journal of Materials Chemistry C, 2023, 11, 426-455.	2.7	9
9494	The effect of CuZn+ZnCu defect complex on Cu2ZnSnS4 thin film solar cell: A density functional theory study. Materials Chemistry and Physics, 2023, 296, 127192.	2.0	1
9495	Photocurrent generation and charge transport mechanism study in solution-processed CZTS thin films. Optik, 2023, 272, 170381.	1.4	1
9496	Straddling type sandwiched absorber based solar cell structure. Optik, 2023, 272, 170354.	1.4	7
9497	Degradation analysis of highly UV-resistant down-shifting layers for silicon-based PV module applications. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2023, 288, 116207.	1.7	2
9498	Interface engineering of organic hole transport layer with facile molecular doping for highly efficient perovskite solar cells. Journal of Power Sources, 2023, 556, 232428.	4.0	3
9499	Improved mobility and photovoltaic performance of two-dimensional Ruddlesdenâ^Popper (ThMA)2(MA)2M3I10 perovskites applied in perovskite solar cells. Journal of Alloys and Compounds, 2023, 937, 168464.	2.8	3
9500	Development of a metal-assisted chemical etching method to improve light-capture in monocrystalline silicon solar cells. Solar Energy Materials and Solar Cells, 2023, 251, 112143.	3.0	4
9501	Phase stability and optoelectronic properties of lead-free CsSn1â^'Ge I3 mixed halide perovskites: A first-principles study. Journal of Physics and Chemistry of Solids, 2023, 174, 111183.	1.9	0

#	Article	IF	CITATIONS
9502	Challenges and improvement pathways to develop quasi-1D (Sb1-xBix)2Se3-based materials for optically tuneable photovoltaic applications. Towards chalcogenide narrow-bandgap devices. Solar Energy Materials and Solar Cells, 2023, 251, 112150.	3.0	3
9503	On current technology for light absorber materials used in highly efficient industrial solar cells. Renewable and Sustainable Energy Reviews, 2023, 173, 113027.	8.2	9
9504	Influence of core-twisted structure on singlet fission in perylenediimide film. Journal of Photochemistry and Photobiology A: Chemistry, 2023, 438, 114473.	2.0	3
9505	Sb <sub>2</sub> Se <sub>3</sub> : a possible future for thin-film photovoltaics?. EPJ Web of Conferences, 2022, 268, 00006.	0.1	1
9506	Ultra-lightweight and flexible inverted metamorphic four junction solar cells for space applications. EPJ Photovoltaics, 2022, 13, 25.	0.8	1
9507	Carbon Nanotubes for Energy Conversion and Storage. , 2022, , 1369-1390.		0
9508	Performance Analysis of Perovskite Solar Cell by Considering Temperature Effect on Physical Parameters of the Absorber Layer. , 2022, , .		1
9509	Efficient Design Paradigm for Harvesting Solar Energy: Dynamic Tunability of Heating/Cooling Mode Using Advanced Nanotechnology. ACS Symposium Series, 0, , 233-261.	0.5	2
9510	Current Status of the Open-Circuit Voltage of Kesterite CZTS Absorber Layers for Photovoltaic Applications—Part I, a Review. Materials, 2022, 15, 8427.	1.3	6
9511	Zero Bias Operation: Photodetection Behaviors Obtained by Emerging Materials and Device Structures. Micromachines, 2022, 13, 2089.	1.4	3
9512	Innovative PV Technologies for reducing electricity costs. IOP Conference Series: Materials Science and Engineering, 2022, 1265, 012002.	0.3	1
9513	Classification of properties and their relation to chemical bonding: Essential steps toward the inverse design of functional materials. Science Advances, 2022, 8, .	4.7	15
9514	Stress testing the bulk photovoltaic effect. Nature Nanotechnology, 0, , .	15.6	0
9515	Improved opto-electro-mechanical properties of Cs2TeBr6 double perovskite by Ge doping. Journal of Applied Physics, 2022, 132, .	1.1	1
9516	Design of the Smallest Intramolecular Singlet Fission Chromophore with the Fastest Singlet Fission. Journal of Physical Chemistry Letters, 2022, 13, 11076-11085.	2.1	6
9517	On the Optical Properties of the Cu2ZnSn[S1â^'xSex]4 System in the IR Range. Trends in Sciences, 2023, 20, 4058.	0.2	8
9518	Tunable bulk photovoltaic effect in strained <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt; <mml:mi>γ </mml:mi>  -GeSe. Physical Review B, 2022, 106, .</mml:math 	1.1	0
9519	Tailoring Luminescent Solar Concentrators for Highâ€Performance Flexible Doubleâ€Junction IIIâ€V Photovoltaics. Advanced Functional Materials, 2023, 33, .	7.8	4

		CITATION RE	PORT	
#	Article		IF	CITATIONS
9520	The Electronic Disorder Landscape of Mixed Halide Perovskites. ACS Energy Letters, 202	23, 8, 250-258.	8.8	10
9521	COMSOL multiphysics-based modeling approach to solar cell development. Internation Modern Physics B, 0, , .	al Journal of	1.0	0
9522	Silicene/GaAs van der Waals heterostructure for optoelectronic applications. Journal of Science, 2022, 57, 21324-21338.	Materials	1.7	2
9523	Charge-transfer states in photosynthesis and organic solar cells. Frontiers in Photonics,	0, 3, .	1.1	2
9524	Improving intrinsic stability for perovskite/silicon tandem solar cells. Science China: Phy Mechanics and Astronomy, 2023, 66, .	sics,	2.0	7
9525	Optical, Morphological and Structural Properties of Hybrid CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Perovskite Thin Films Deposited Spin-Coating Process. , 2022, , .	via a Single Step		0
9526	Pentacenones as Divergent Intermediates to Unsymmetrically Substituted Pentacenes: Crystallographic Analysis. Journal of Organic Chemistry, 2022, 87, 16236-16249.	Synthesis and	1.7	0
9527	Impact ionization processes in a photodriven Mott insulator: Influence of phononic diss Physical Review B, 2022, 106, .	ipation.	1.1	3
9528	Enhanced Photon Harvesting in Wedge Tandem Solar Cell. Advanced Theory and Simula 2200632.	ations, O, ,	1.3	0
9529	Recent Applications of Antireflection Coatings in Solar Cells. Photonics, 2022, 9, 906.		0.9	13
9530	Plenty of Room on the Top: Pathways and Spectroscopic Signatures of Singlet Fission fi Singlet States. Journal of Physical Chemistry Letters, 2022, 13, 11086-11094.	°om Upper	2.1	3
9531	Performance analysis of n-TiO2/p-Cu2O, n-TiO2/p-WS2/p-Cu2O, and n-TiO2/p-WS2 hete cells through numerical modelling. Environmental Science and Pollution Research, 2023 98718-98731.	erojunction solar , 30,	2.7	5
9532	Sulfur-Vacancy Passivation via Selenium Doping in Sb <sub>2</sub> S <sub>3</sub> Sol Functional Theory Analysis. Journal of Physical Chemistry C, 2022, 126, 20786-20792.	ar Cells: Density	1.5	4
9533	Halogen's effect on the photoelectric properties of two-dimensional organic–inorgan perovskite (MTEA)2MAPb2X7 (X = Cl, Br, I) with a Ruddlesden–Popper structure. App 2022, 121, .	ic hybrid lied Physics Letters,	1.5	5
9534	Composition–Property Mapping in Bromide-Containing Tin Perovskite Using High-Pur Materials. ACS Applied Energy Materials, 2022, 5, 14789-14798.	ity Starting	2.5	3
9535	Vitamins as Active Agents for Highly Emissive and Stable Nanostructured Halide Perovs Composites Fabricated by Additive Manufacturing. Advanced Functional Materials, 202	kite Inks and 3D 3, 33, .	7.8	4
9536	Cataloguing MoSi <sub>2</sub> N <sub>4</sub> and WSi <sub>2</sub> N <sub>4Heterostructures: An Exceptional Material Platform for Excitonic Solar Cell Applications Materials Interfaces, 2023, 10, .</sub>	> van der Waals . Advanced	1.9	24
9537	Investigation of quantum dot luminescent solar concentrator single, double and triple s ray tracing simulation study (FG-6:LO2). Ceramics International, 2022, , .	tructures: A	2.3	0

#	Article	IF	CITATIONS
9538	Towards B-doped p-BaSi <sub>2</sub> films on Si substrates by co-sputtering of BaSi <sub>2</sub> , Ba, and B-doped Si targets. Japanese Journal of Applied Physics, 2023, 62, SD1010.	0.8	4
9539	Oxygen Content Modulation Toward Highly Efficient Sb <sub>2</sub> Se <sub>3</sub> Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 55691-55699.	4.0	7
9540	Defect Passivation by Pyridine-Carbazole Molecules for Efficient and Stable Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 15819-15827.	2.5	6
9541	On the Cooperative Origin of Solvent-Enhanced Symmetry-Breaking Charge Transfer in a Covalently Bound Tetracene Dimer Leading to Singlet Fission. Journal of the American Chemical Society, 2022, 144, 23492-23504.	6.6	7
9542	Fluctuations at Metal Halide Perovskite Grain Boundaries Create Transient Trap States: Machine Learning Assisted Ab Initio Analysis. ACS Applied Materials & Interfaces, 2022, 14, 55753-55761.	4.0	13
9543	Analytical Model of InP QWs for Efficiency Improvement in GaInP/Si Dual Junction Solar Cell. Physica Status Solidi (A) Applications and Materials Science, 2023, 220, .	0.8	7
9544	Defects Passivation via Potassium Iodide Postâ€Treatment for Antimony Selenosulfide Solar Cells with Improved Performance. Advanced Functional Materials, 2023, 33, .	7.8	13
9545	On the photovoltaic effect asymmetry in ferroelectrics. Journal of Physics Condensed Matter, 2023, 35, 094001.	0.7	3
9546	Impact of Operating Temperature and Solar Concentration on the Conversion Efficiency of InGaP/InGaAs/Ge Hybrid Triple-Junction Solar Cell. Brazilian Journal of Physics, 2023, 53, .	0.7	0
9547	WanTiBEXOS: A Wannier based Tight Binding code for electronic band structure, excitonic and optoelectronic properties of solids. Computer Physics Communications, 2023, 285, 108636.	3.0	4
9548	Dual Ligand Capped Quantum Dots Improving Loading Amount for High-Efficiency Quantum Dot-Sensitized Solar Cells. ACS Energy Letters, 2023, 8, 647-656.	8.8	9
9549	ON THE PERFORMANCE LIMITS FOR MONO CRYSTALLINE SILICON SOLAR CELLS: A COMPARATIVE STUDY. MuÄŸla Journal of Science and Technology, 0, , .	0.1	0
9550	Strainâ€Enhanced Photovoltaic Effect in MoTe <sub>2</sub> . Laser and Photonics Reviews, 2023, 17, .	4.4	5
9552	Transâ€spatial Structure Additive Passivated Sn(II) for Highâ€efficiency CsSnI <sub>3</sub> Perovskite Solar Cells Fabricated in Humid Air. ChemNanoMat, 0, , .	1.5	0
9553	Solar utilization beyond photosynthesis. Nature Reviews Chemistry, 2023, 7, 91-105.	13.8	54
9554	Natural Product Additive with Multifunctional Groups Enhancing the Efficiency and Stability of Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	1
9555	Optimizing the photovoltaic effect in one-dimensional single-wall carbon nanotube @ MoS <sub>2</sub> van der Waals heteronanotubes. Journal of Applied Physics, 2022, 132, 234304.	1.1	0
9556	On the reliability of the collective coordinate method to simulate metasurfaces with correlated disorder used for light management. Journal of the Optical Society of America B: Optical Physics, 2023, 40, B8.	0.9	0

		CITATION REPC	DRT	
#	Article	I	F	CITATIONS
9557	Synergistic Surface Modification of Tin–Lead Perovskite Solar Cells. Advanced Materials, 202	3, 35, . 1	1.1	22
9558	20%-efficient polycrystalline Cd(Se,Te) thin-film solar cells with compositional gradient near the front junction. Nature Communications, 2022, 13, .	f	5.8	23
9559	Selfâ€Assembled Amphiphilic Monolayer for Efficient and Stable Wideâ€Bandgap Perovskite Sc Advanced Energy Materials, 2023, 13, .	lar Cells. 1	.0.2	19
9560	Feedback between radiation and transport in photovoltaics. Progress in Photovoltaics: Research Applications, 0, , .	n and 4	I.4	ο
9561	Strain Induces Ferromagnetism in a Janus Transition Metal Dichalcogenides: CrSTe-1H Monolay Journal of Electronic Materials, 2023, 52, 1036-1049.	er. 1	.0	3
9562	Device Performance of Emerging Photovoltaic Materials (Version 3). Advanced Energy Materials 13, .	s, 2023, 1	.0.2	63
9563	Reducing Voltage Losses of Organic Solar Cells against Energetics Modifications by Thermal Str Journal of Physical Chemistry Letters, 2022, 13, 11974-11981.	'ess. 2	2.1	0
9564	Solar Solutions for the Future. , 0, , .			0
9565	Understanding bulk photovoltaic effect in type-II Weyl semimetal Td-WTe2 using polarization dependent photocurrent measurement. Applied Physics Letters, 2022, 121, .	1	5	1
9566	Printable high-efficiency organic ionic photovoltaic materials discovered by high-throughput first-principle calculations. IScience, 2022, 25, 105639.	1	.9	0
9567	Slowing the hot arrier cooling by an organic small molecule in perovskite solar cells. EcoMat, 5, .	. 2023, 6	5.8	4
9568	Hybrid perovskites under pressure: Present and future directions. Journal of Applied Physics, 20	22, 132, 1	.1	4
9569	Focused Ion Beam Engineering of Carbon Nanotubes for Optical Rectenna Applications. ACS Ap Nano Materials, 2022, 5, 18537-18544.	pplied 2	2.4	3
9570	Atomically thin interlayer phase from first principles enables defect-free incommensurate SnO <sub>2</sub> /CdTe interface. Applied Physics Reviews, 2022, 9, 041411.	5	5.5	1
9571	Metal Halide Perovskite Alloy: Fundamental, Optoelectronic Properties and Applications. Advan Photonics Research, 2023, 4, .	ced 1	7	4
9572	Exploring the Effect of Selenidation Time on the Ni-Doped Cu2ZnSn(S,Se)4 Solar Cell. Nanomat 2022, 12, 4311.	erials, 1	.9	3
9573	Heavy pnictogen chalcohalides for efficient, stable, and environmentally friendly solar cell applications. Nanotechnology, 2023, 34, 142001.	1	3	6
9574	Multiple Exciton Generation Solar Cells: Numerical Approaches of Quantum Yield Extraction and Limiting Efficiencies. Energies, 2023, 16, 993.	l Its	6	2

#	Article	IF	CITATIONS
9575	Sustainable and environmentally viable perovskite solar cells. EcoMat, 2023, 5, .	6.8	9
9576	Design and analysis of lead-free perovskite-CZTSSe based tandem solar cell. Optical and Quantum Electronics, 2023, 55, .	1.5	17
9577	Numerical analysis in thermal management of high concentrated photovoltaic systems with spray cooling approach: A comprehensive parametric study. Solar Energy, 2023, 250, 150-167.	2.9	11
9578	TOPcon route with quantum wells in GaInP/Si dual junction cell for efficiency enhancement. Solar Energy, 2023, 250, 409-417.	2.9	11
9579	Performance of Monolithic Two―and Threeâ€Terminal Perovskite/Silicon Tandem Solar Cells Under Varying Illumination Conditions. Solar Rrl, 2023, 7, .	3.1	6
9580	Photovoltaics. Graduate Texts in Physics, 2022, , 119-165.	0.1	0
9581	Janus β-Te <sub>2</sub> X (X = S, Se) monolayers for efficient excitonic solar cells and photocatalytic water splitting. Journal of Materials Chemistry C, 2023, 11, 1173-1183.	2.7	15
9582	A refractory metal-based photonic narrowband emitter for thermophotovoltaic energy conversion. Journal of Materials Chemistry C, 2023, 11, 1988-1994.	2.7	3
9583	Numerical Study on the Effect of Dual Electron Transport Layer in Improving the Performance of Perovskite–Perovskite Tandem Solar Cells. Advanced Theory and Simulations, 2023, 6, .	1.3	6
9585	Versatile Processability by Breaking the Symmetrical Chemical Structure of Nonfullerene Acceptors. Solar Rrl, 0, , 2201012.	3.1	1
9586	Light control with Weyl semimetals. ELight, 2023, 3, .	11.9	25
9587	Open-circuit voltage loss in perovskite quantum dot solar cells. Nanoscale, 2023, 15, 3713-3729.	2.8	6
9588	Cooperative passivation of perovskite solar cells by alkyldimethylammonium halide amphiphiles. Joule, 2023, 7, 183-200.	11.7	7
9589	Advances in Luminescent Glass Research Towards High-End Applications. Advances in Material Research and Technology, 2023, , 169-212.	0.3	0
9590	Incorporation of Stokes shifting dyes into a Si-based photovoltaic thermal system. MRS Bulletin, 0, , .	1.7	0
9591	Coupling oxygen vacancy gradient distribution and flexoelectric effects for enhanced photovoltaic performance in bismuth ferrite films. Inorganic Chemistry Frontiers, 2023, 10, 1315-1327.	3.0	2
9592	Influence of transition metal defects on electronic and magnetic properties of bulk silicon: Ab-initio simulation. Materials Today Communications, 2023, 34, 105415.	0.9	5
9593	High-throughput identification of materials for silicon tandem solar cells. Sustainable Energy and Fuels, 0, , .	2.5	0

#	Article	IF	CITATIONS
9594	Fast intersystem crossing in the tetracene dimers as a source of "dark―state. AIP Advances, 2023, 13, 015102.	0.6	0
9595	A Polymer Lost in the Shuffle: The Perspective of Poly(para)phenylenes. Macromolecular Chemistry and Physics, 2023, 224, .	1.1	1
9596	Improvement of monodispersity of PbS quantum dots by filtration with organic solvent-resistant polyamide hollow fiber membranes. Japanese Journal of Applied Physics, 0, , .	0.8	0
9597	Magnetic proximity enabled bulk photovoltaic effects in van der Waals heterostructures. Physical Review Research, 2023, 5, .	1.3	3
9598	Doping Limits of Phosphorus, Arsenic, and Antimony in CdTe. Journal of Physical Chemistry Letters, 2023, 14, 273-278.	2.1	7
9599	Bulk Incorporation with 4â€Methylphenethylammonium Chloride for Efficient and Stable Methylammoniumâ€Free Perovskite and Perovskiteâ€Silicon Tandem Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	14
9600	Triplet Excitons and Associated Efficiencyâ€Limiting Pathways in Organic Solar Cell Blends Based on (Nonâ€) Halogenated PBDBâ€T and Yâ€5eries. Advanced Functional Materials, 2023, 33, .	7.8	11
9601	Ultrafast carrier dynamics and layer-dependent carrier recombination rate in InSe. Nanoscale, 0, , .	2.8	0
9602	Non-toxic solution processed Cu2ZnSn(SSe)4 thin films for photovoltaic Applications: A review. Materials Today: Proceedings, 2023, , .	0.9	1
9603	First-principles calculations to investigate pressure-driven electronic phase transition of lead-free halide perovskites KMCl3 (MÂ=ÂGe, Sn) for superior optoelectronic performance. Results in Physics, 2023, 44, 106212.	2.0	10
9604	REDUCING NON-RADIATIVE VOLTAGE LOSSES IN ORGANIC SOLAR CELLS USING MOLECULAR ENCAPSULATION. Materials Chemistry Frontiers, 0, , .	3.2	2
9605	Insights into the relationship between ferroelectric and photovoltaic properties in CsGel <sub>3</sub> for solar energy conversion. RSC Advances, 2023, 13, 1955-1963.	1.7	4
9606	Structural, electronic and optical properties of fluorinated bilayer silicene. Optical Materials, 2023, 136, 113418.	1.7	4
9607	Substitution effect by selenium and tellurium elements on electronic structures, optical and thermoelectric features of FeS2: DFTÂ+ÂU. Computational and Theoretical Chemistry, 2023, 1220, 114019.	1.1	1
9608	Insights into the application of carbon materials in heterojunction solar cells. Materials Science and Engineering Reports, 2023, 152, 100711.	14.8	6
9609	Impact of the ZnS layer position in a stacked precursor film on the properties of CZTS films grown on flexible molybdenum substrates. Optical Materials, 2023, 136, 113423.	1.7	4
9610	Surface-modification-induced synergies of crystal growth and defect passivation toward CsPbI2Br solar cells with efficiency exceeding 17%. Chemical Engineering Journal, 2023, 457, 141300.	6.6	6
9611	Lead acetate as a superior lead source enables highly efficient and stable all-inorganic lead-tin perovskite solar cells. Chemical Engineering Journal, 2023, 457, 141246.	6.6	6

#	Article	IF	CITATIONS
9612	Sb2(SxSe1-x)3 thin films by electrodeposition: Role of deposition potential on the formation of the solid solution and photovoltaic performance via device simulation. Current Applied Physics, 2023, 47, 44-53.	1.1	2
9613	Cmc21-CdO: Emerging direct band gap semiconductor with ultrahigh mobility and enhanced visible-light optical absorptions. Physica B: Condensed Matter, 2023, 652, 414645.	1.3	1
9614	Reducing sputter damage-induced recombination losses during deposition of the transparent front-electrode for monolithic perovskite/silicon tandem solar cells. Solar Energy Materials and Solar Cells, 2023, 252, 112180.	3.0	7
9615	Recent progress inÂbifacialÂperovskite solar cells. Applied Physics A: Materials Science and Processing, 2023, 129, .	1.1	8
9616	Mixed Sulfur/Selenium Anions Weaken Electron-Vibrational Interaction in Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Photoabsorber. Journal of Physical Chemistry Letters, 2023, 14, 107-115.	2.1	1
9617	Design of Selective TPV Thermal Emitters Based on Bayesian Optimization Nesting Simulated Annealing. Energies, 2023, 16, 416.	1.6	1
9618	Quantitative Singlet Fission in Solution-Processable Dithienohexatrienes. Journal of the American Chemical Society, 2022, 144, 23516-23521.	6.6	4
9619	Twenty-Two Percent Efficient Pb-Free All-Perovskite Tandem Solar Cells Using SCAPS-1D. Nanomaterials, 2023, 13, 96.	1.9	5
9620	Thin Films Processed by SILAR Method. , 0, , .		1
9621	Interfacial electronic and vacancy defect engineering coupling of the Z-scheme CsSnBr <sub>3</sub> /SnS <sub>2</sub> heterostructure for photovoltaic performance: a hybrid DFT study. Journal of Materials Chemistry A, 2023, 11, 4758-4768.	5.2	5
9623	Quantum dots-based solar cells: Futuristic green technology to accomplish the energy crisis. , 2023, , 157-188.		1
9624	Room Temperature Operation of a Quantum Ratchet Intermediate Band Solar Cell. Solar Rrl, 2023, 7, .	3.1	2
9625	Nonpolar and Ultra-long-chain Ligand to Modify the Perovskite Interface toward High-Efficiency and Stable Wide Bandgap Perovskite Solar Cells. ACS Applied Energy Materials, 2023, 6, 1731-1740.	2.5	2
9626	Inverse Design of Tetracene Polymorphs with Enhanced Singlet Fission Performance by Property-Based Genetic Algorithm Optimization. Chemistry of Materials, 2023, 35, 1373-1386.	3.2	7
9627	Defect-Stabilized Tin-Based Perovskite Solar Cells Enabled by Multifunctional Molecular Additives. Chemistry of Materials, 2023, 35, 1148-1158.	3.2	8
9628	Bulk Photovoltaic Current Mechanisms in All-Inorganic Perovskite Multiferroic Materials. Nanomaterials, 2023, 13, 429.	1.9	5
9629	Tandem organic solar cells with efficiency over 19% via the careful subcell design and optimization. Science China Chemistry, 0, , .	4.2	3
9630	Challenges and Progress in Leadâ€Free Halide Double Perovskite Solar Cells. Solar Rrl, 2023, 7,	3.1	36

	Сітатіс	on Report	
#	Article	IF	Citations
9631	Free-Space Diffused Light Collimation and Concentration. ACS Photonics, 2023, 10, 508-517.	3.2	1
9632	The voltage loss in organic solar cells. Journal of Semiconductors, 2023, 44, 010202.	2.0	3
9633	Interface Engineering by Intermediate Hydrogen Plasma Treatment Using Dc-PECVD for Silicon Heterojunction Solar Cells. ACS Applied Electronic Materials, 0, , .	2.0	4
9634	ls Cu <sub>3–<i>x</i></sub> P a Semiconductor, a Metal, or a Semimetal?. Chemistry of Materials, 2023, 35, 1259-1272.	3.2	6
9635	Mechanism, properties and applications of phosphors. , 2023, , 33-45.		0
9636	Electronic and optical properties of leadâ€free double perovskites A <sub>2</sub> BCl <sub>6</sub> (A = Rb, Cs; B = Si, Ge, Sn) for solar cell applications: A systematic computational study. J Physical Organic Chemistry, 2023, 36, .	ournal <b>af.</b> 9	3
9637	Solar cell efficiency enhancement by modeling the downconversion and downshifting of functional materials. , 2023, , 157-185.		0
9638	Photoelectrochemical Fabrication of CuO-Cu <sub>2</sub> O Nanocomposite Semiconductors by High-Frequency Potential-Switching in Copper(II)-Tartrate Complex Aqueous Solution and the Energy Band Structures. Journal of the Electrochemical Society, 2023, 170, 032505.	1.3	1
9639	Silverâ€Alloyed Lowâ€Bandgap CuInSe <sub>2</sub> Solar Cells for Tandem Applications. Solar Rrl, 2023, 7	<sup>7</sup> , 3.1	7
9640	Dragon Mimic Shape Facilitate Ultrahighâ€Performance Flexible Allâ€Perovskite Tandem Solar Cells. Solar Rrl, 2023, 7, .	3.1	1
9641	The Role of <i>M</i> <sup>3+</sup> Substitutional Doping ( <i>M</i> = In, Sb, Bi) in the Passivation of the α-CsPbI <sub>3</sub> (100) Surface. Journal of Physical Chemistry C, 2023, 127, 1713-1721.	1.5	7
9642	Perovskite solar cells on the horizon for space power systems. , 2023, , 175-195.		0
9643	Structural effects on halide perovskite properties. , 2023, , 57-89.		0
9644	å‰ç"µåŠå⁻¼ä¼ä¼2"ææ–™çš"ç†è®ºè®¾è®¡. Chinese Science Bulletin, 2023, , .	0.4	0
9645	Tuning the Photoelectric Properties of Perovskite Materials Using Mg/Ge/Si and Br Double-Doped to FASnl <sub>3</sub> . Journal of Physical Chemistry C, 2023, 127, 2215-2222.	1.5	6
9646	Quantum dots synthesis for photovoltaic cells. , 2023, , 67-98.		0
9647	Smart nanomaterials and three-dimensional printing for flexible solar cell applications. , 2023, , 389-411.		1
9648	Unveiling the Role of H <sub>2</sub> Plasma for Efficient InP Solar Cells. Solar Rrl, 2023, 7, .	3.1	6

ARTICLE IF CITATIONS Controllable CO<sub>2</sub> Reduction or Hydrocarbon Oxidation Driven by Entire Solar via Silver 5.2 3 9649 Quantum Dots Direct Photocatalysis. Small, 2023, 19, . The Physics of Twin Boundary Termination in Cu(In, Ga)Se<sub>2</sub> Absorbers. Solar Rrl, 2023, 7, . 3.1 Recent studies of the photovoltaic device enhancement via multifunctional luminescent 9651 0.8 0 down-shifting films. Japanese Journal of Applied Physics, 2023, 62, SE0802. Investigation of thickness dependent efficiency of CsPbX3 (X = I, Br) absorber layer for perovskite 1.9 solar cells. Journal of Physics and Chemistry of Solids, 2023, 176, 111264. Ab-inito simulation of the structural, electronic and optical properties for the vacancy-ordered 9653 double perovskites ATil (A = Cs or NH); a time-dependent density functional theory study. Journal of 1.9 4 Physics and Chemistry of Solids, 2023, 176, 111262. Controllable (h k 1) preferred orientation of Sb2S3 thin films fabricated by pulse electrodeposition. Solar Energy Materials and Solar Cells, 2023, 253, 112208. 9654 3.0 Materials for Photovoltaics., 2012, , 558-591. 9655 0 Characteristics analysis and development trend overview of solar cells., 2022, , . 9656 Modification of back interfacial contact with MoO<sub>3</sub> laver <i>in situ</i> 9657 Na<sub>2</sub>S aqueous solution for efficient kesterite CZTSSe solar cells. Journal of Materials 2.7 5 Chemistry C, 2023, 11, 4634-4644. Magnesium: properties and rich chemistry for new material synthesis and energy applications. 18.7 Chemical Society Reviews, 2023, 52, 2145-2192. Quantum dots as photon down-conversion materials., 2023, , 247-264. 9659 1 Symmetry breaking: an efficient structure design of nonfullerene acceptors to reduce the energy loss 2.7 9660 in organić solar cells. Journal of Materials Chemistry C, 2023, 11, 5257-5270. Optoelectronic performance of perovskite Cs<sub>2</sub>KMI<sub>6</sub> (M = Ga, In) based on high-throughput screening and first-principles calculations. Physical Chemistry Chemical Physics, 9661 1.3 4 2023, 25, 11484-11492. Modulating intermolecular interactions by collaborative material design to realize THF-processed organic photovoltaic with 1.3 V open-circuit voltage. Energy and Environmental Science, 2023, 16, 2199-2211. 9662 15.6 Controlling Vertical Composition Gradients in Sn-Pb Mixed Perovskite Solar Cells via Solvent 9663 0.6 0 Engineering. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2023, , 202302210710. Non-toxic CuInS2 quantum dot sensitized solar cell with functionalized thermoplast polyurethane 9664 1.8 gel electrolytes. Polymer, 2023, 269, 125708. Enhanced photovoltaic properties of halide perovskites due to multi-centered X–B–X bonding and p–p 9665 1.1 0 orbital coupling. Journal of Applied Physics, 2023, 133, 115701. Bayesian optimization of hydrogen plasma treatment in silicon quantum dot multilayer and application to solar cells., 2023, 18, .

CITATION REPORT

#	Article	IF	CITATIONS
9667	Atomic structure, stability, and dissociation of dislocations in cadmium telluride. International Journal of Plasticity, 2023, 163, 103552.	4.1	7
9668	Photoexcitation of perovskite precursor solution to induce high-valent iodoplumbate species for wide bandgap perovskite solar cells with enhanced photocurrent. Scientific Reports, 2023, 13, .	1.6	3
9669	Machine Learning-Aided Band Gap Engineering of BaZrS <sub>3</sub> Chalcogenide Perovskite. ACS Applied Materials & Interfaces, 2023, 15, 18962-18972.	4.0	8
9670	Enhanced Silicon Photovoltaic Efficiency by Solar Light Spectral Modulation via Photonically Tuned Porphyrin–Iron Oxide Hybrid Thin Films. Energy Technology, 2023, 11, .	1.8	0
9671	Disentangling the effect of the hole-transporting layer, the bottom, and the top device on the fill factor in monolithic CICSe-perovskite tandem solar cells by using spectroscopic and imaging tools. JPhys Energy, 2023, 5, 024014.	2.3	0
9672	Thermodynamic Performance of Hot-Carrier Solar Cells: A Quantum Transport Model. Physical Review Applied, 2023, 19, .	1.5	2
9673	Review—Exploring Technological Innovations of Doped Rare Earth Materials. ECS Journal of Solid State Science and Technology, 2023, 12, 047006.	0.9	2
9674	Brief Outlook on Top Cell Absorber of Siliconâ€Based Tandem Solar Cells. Solar Rrl, 2023, 7, .	3.1	2
9675	Multi-scale multi-physic coupled investigation on the matching and trade-off of conversion and storage of optical, thermal, electrical, and chemical energy in a hybrid system based on a novel full solar spectrum utilization strategy. Energy Conversion and Management, 2023, 283, 116940.	4.4	2
9676	Prediction of photogalvanic effect enhancement in Janus transition metal dichalcogenide monolayers induced by spontaneous curling. Applied Surface Science, 2023, 619, 156730.	3.1	8
9677	Effects of hydrogen on trap neutralization in BaSi2 with interstitial silicon atoms. Thin Solid Films, 2023, 773, 139823.	0.8	1
9678	Viability of intermediate band solar cells based on InAs/GaAs submonolayer quantum dots and the role of surface reconstruction. Solar Energy Materials and Solar Cells, 2023, 254, 112281.	3.0	0
9679	Sb-doped β-SrZrS3 as a low-toxic and low-priced absorber for intermediate band solar cells: A first-principles investigation. Physica B: Condensed Matter, 2023, 658, 414839.	1.3	1
9680	Recent advances and applications of ionic liquids-based photonic materials. Applied Materials Today, 2023, 32, 101808.	2.3	1
9681	Integration of rough RTP absorbers into CIGS-perovskite monolithic tandems by NiOx(:Cu)+SAM Hole-transporting Bi-layers. Solar Energy Materials and Solar Cells, 2023, 254, 112248.	3.0	10
9682	CdTe-based thin film photovoltaics: Recent advances, current challenges and future prospects. Solar Energy Materials and Solar Cells, 2023, 255, 112289.	3.0	45
9683	Color-temperature performance of perovskite solar cells under indoor illumination. Solar Energy Materials and Solar Cells, 2023, 254, 112284.	3.0	5
9684	A BP3-AlP3 heterobilayer for the bifunctional photocatalysis of CO2 reduction. Applied Surface Science, 2023, 621, 156890.	3.1	5

#	Article	IF	CITATIONS
9685	Potential of low-cost inorganic CaFeO3 as transporting material for efficient perovskite solar cells. Materials Today Communications, 2023, 35, 105956.	0.9	3
9686	Photovoltaic characteristics of ultrathin Cs2CuBiCl6 halide double perovskite based solar cell: theoretical studies. Optik, 2023, 281, 170820.	1.4	1
9687	Optimization of Sn defects through multiple coordination effect to realize stable Sn–Pb mixed perovskite solar cells. Solar Energy Materials and Solar Cells, 2023, 254, 112283.	3.0	3
9688	Development and validation of a concise and anisotropic irradiance model for bifacial photovoltaic modules. Renewable Energy, 2023, 209, 442-452.	4.3	6
9689	In-situ X-ray diffraction analysis of SiGe liquid phase growth on Si using Al–Ge paste. Materials Chemistry and Physics, 2023, 301, 127639.	2.0	1
9690	xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"> <mml:msub><mml:mrow /&gt;<mml:mn>2</mml:mn></mml:mrow </mml:msub> CoCeS <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si33.svg"&gt;<mml:msub><mml:mrow /&gt;<mml:mn>4</mml:mn></mml:mrow </mml:msub> for photovoltaic conversion and photocatalytic</mml:math 	2.7	4
9691	applications. Materials Research Bulletin, 2023, 164, 112235. Improving loading of CdS/CdSe co-sensitized quantum dots to enhance the performance of solar cells by voltage-assisted SILAR deposition. Solar Energy Materials and Solar Cells, 2023, 255, 112293.	3.0	3
9692	Study on carrier dynamics of perovskite solar cells via transient absorption. Journal of Alloys and Compounds, 2023, 952, 170051.	2.8	3
9693	Room-Temperature 15% Efficient Mid-Infrared HgTe Colloidal Quantum Dot Photodiodes. ACS Applied Materials & Interfaces, 2023, 15, 19163-19169.	4.0	6
9694	A Review of Transition Metal Sulfides as Counter Electrodes for Dye-Sensitized and Quantum Dot-Sensitized Solar Cells. Materials, 2023, 16, 2881.	1.3	4
9695	Facile hydrothermally synthesized nanosheets-based Cu0.06-xNi0.03Sn0.03+xS0.12 flower for optoelectronic and dielectric applications. , 2023, 3, 100030.		1
9696	Pressure-induced tuning of structure and electronic properties in lead-free hybrid halide perovskite HC(NH2)2SnI3 for photovoltaic solar cells. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2023, 293, 116468.	1.7	2
9697	How to minimize voltage and fill factor losses to achieve over 20% efficiency lead chalcogenide quantum dot solar cells: Strategies expected through numerical simulation. Applied Energy, 2023, 341, 121124.	5.1	1
9699	Efficiency Approaching 26% in Triple Cation Mixed Halide Perovskite Solar Cells by Numerical Simulation. IEEE Journal of Photovoltaics, 2023, 13, 242-249.	1.5	5
9700	8.5-Micron Infrared Response in Flexoelectric Bi2Te3 Thin Film Cells. , 2022, , .		0
9701	Theoretical research and simulation of GaAs nanowire arrays in reflection-type photon-enhanced thermionic emission solar converters. Solar Energy, 2023, 251, 295-305.	2.9	3
9702	Conversion efficiency improvement of ELO GaAs solar cell, deposited on water soluble sacrificial buffer. Surface and Coatings Technology, 2023, 456, 129282.	2.2	3
9703	Photochemical Upconversion. Annual Review of Physical Chemistry, 2023, 74, 145-168.	4.8	13

		CITATION RE	EPORT	
#	Article		IF	CITATIONS
9704	Noise Spectroscopy: A Tool to Understand the Physics of Solar Cells. Energies, 2023, 1	6, 1296.	1.6	3
9705	Impact of zinc structural on the photovoltaic Properties of iron Pyrite. Heliyon, 2023, 9	9, e13248.	1.4	1
9706	Sb2Se3 Polycrystalline Thin Films Grown on Different Window Layers. Coatings, 2023,	13, 338.	1.2	2
9707	Energy Loss Analysis of Twoâ€Terminal Tandem PV Systems under Realistic Operating Conditions—Revealing the Importance of Fill Factor Gains. Solar Rrl, 2023, 7, .		3.1	1
9708	Design and optimization of four-terminal mechanically stacked and optically coupled silicon/perovskite tandem solar cells with over 28% efficiency. Heliyon, 2023, 9, e1347	7.	1.4	6
9709	QSPR modeling for the prediction of the triplet yield of singlet fission materials. Journa Chemical Society, 2023, 27, 101614.	l of Saudi	2.4	0
9710	Experimental and theoretical EBIC analysis for grain boundary and CdS/Cu (In, Ga)Se <s (in,="" cu="" ga)se<sub="" heterointerface="" in="">2 solar cells. Progress in Photovoltaics: Re Applications, 2023, 31, 678-689.</s>	sub>2 search and	4.4	3
9711	Polarons in perovskite solar cells: effects on photovoltaic performance and stability. JPI 2023, 5, 024002.	nys Energy,	2.3	6
9712	Study of Optoelectronic Features in Polar and Nonpolar Polymorphs of the Oxynitride Semiconductor InSnO <sub>2</sub> N. Journal of Physical Chemistry Letters, 2023, 14	Tin-Based , 1548-1555.	2.1	2
9713	Maximizing Electric Power through Spectralâ€Splitting Photovoltaicâ€Thermoelectric I Integrated with Radiative Cooling. Advanced Science, 2023, 10, .	Hybrid System	5.6	5
9714	Computational mining of GeH-based Janus Ill–VI van der Waals heterostructures for applications. Physical Chemistry Chemical Physics, 2023, 25, 6674-6683.	solar cell	1.3	0
9715	Investigation of High-Efficiency and Stable Carbon-Perovskite/Silicon and Carbon-Perov Tandem Solar Cells. Energies, 2023, 16, 1676.	/skite/CIGS-GeTe	1.6	10
9716	Brief history and scope of phosphor. , 2023, , 3-32.			0
9717	Overview of High-efficiency Multi-junction Solar Cells and Discussion about Roles of Su Interface and Defects. Vacuum and Surface Science, 2023, 66, 97-102.	ırface,	0.0	0
9718	A Simulation Study of Hybrid Carrier Selective Passivating Contacts for n-Silicon Solar	Cells. , 2022, , .		0
9719	Light Harvesting Enhanced by Quantum Ratchet States. , 2023, 2, .			1
9720	First-principles calculations to investigate structure and fundamental physical properti (MÂ=ÂMg, Zn, Cd) and their alloys. Journal of Materials Research and Technology, 202	es of BaM2As2 3, 23, 3284-3293.	2.6	3
9721	Bifacial Thermophotovoltaic Energy Conversion. ACS Photonics, 2023, 10, 683-690.		3.2	6

#	Article	IF	CITATIONS
9722	Direct wafer-bonded two terminal GaAsP/Si dual junction solar cell with 19.80% efficiency. , 2022, , .		0
9723	Space―and Postâ€Flight Characterizations of Perovskite and Organic Solar Cells. Solar Rrl, 2023, 7, .	3.1	2
9724	Modeling and simulation of the influence of quantum dots density on solar cell properties. European Physical Journal Plus, 2023, 138, .	1.2	7
9725	Improved performance of Cd-free CZTS thin-film solar cells by using CZTS <sub>0.4</sub> Se <sub>0.6</sub> BSF layer. Journal of Physics: Conference Series, 2023, 2418, 012002.	0.3	1
9726	Modulation of Alkyl Chain Length on the Thiazole Side Group Enables Over 17% Efficiency in All‧mallâ€Molecule Organic Solar Cells. Advanced Functional Materials, 2023, 33, .	7.8	18
9727	Enhanced Fill Factor and Power Conversion Efficiency of Single Oxide Ferroelectric Photovoltaic Devices with Designed Nanostructures. Advanced Functional Materials, 0, , 2213178.	7.8	2
9728	Suppressing Nonradiative Recombination by Electron-Donating Substituents in 2D Conjugated Triphenylamine Polymers toward Efficient Perovskite Optoelectronics. Nano Letters, 2023, 23, 1954-1960.	4.5	7
9729	Multiâ€Bandgap Quantum Dots Ensemble for Nearâ€Infrared Photovoltaics. Energy Technology, 0, , 2201375.	1.8	0
9730	Evaluation of Performance Parameters of 2T Perovskite/Si Tandem Solar Cells. , 2022, , .		0
9731	Study of the Bandgap and Crystal Structure of Cu4TiSe4: Theory vs. Experiment. Crystals, 2023, 13, 331.	1.0	1
9732	Synthesis, Characterization and Singlet Fission Behaviors of Heteroatomâ€Doped Polycyclic Aromatic Hydrocarbons with ( <i>β, β</i> ) Connected Furan/Thiophene Ring. Chemistry - A European Journal, 2023, 29, .	1.7	2
9733	First Demonstration of Top Contact-Free Perovskite/Silicon Two-Terminal Tandem Solar Cells for Overcoming the Current Density Hurdle. ACS Applied Energy Materials, 2023, 6, 2687-2697.	2.5	1
9734	Design and Simulation of Cs <sub>2</sub> BiAgI <sub>6</sub> Double Perovskite Solar Cells with Different Electron Transport Layers for Efficiency Enhancement. Energy & Fuels, 2023, 37, 3957-3979.	2.5	88
9735	Deposition of Cu <sub>2</sub> ZnSnS <sub>4</sub> layers by a novel single flash thermal evaporator from mixture element powder. Journal of Taibah University for Science, 2023, 17, .	1.1	Ο
9736	High-throughput screening of hybrid quaternary halide perovskites for optoelectronics. Journal of Materials Chemistry A, 2023, 11, 6465-6473.	5.2	2
9737	Numerical simulation of the effect of gradual substitution of sulfur with selenium or tin with germanium in Cu2ZnSnS4 absorber layer on kesterite solar cell efficiency. , 2023, 20, 165-175.		2
9738	Reinforcing the efficiency and stability of perovskite solar cells using a cesium sulfate additive. Journal of Materials Science: Materials in Electronics, 2023, 34, .	1.1	0
9739	lssues of phase segregation in wide-bandgap perovskites. Materials Chemistry Frontiers, 2023, 7, 1896-1911.	3.2	4

ARTICLE IF CITATIONS Sustainability evaluations on material consumption for terawattâ€scale manufacturing of siliconâ€based 9740 4.4 7 tandem solar cells. Progress in Photovoltaics: Research and Applications, 2023, 31, 1442-1454. Dualâ€Absorber Thinâ€Film Solar Cell: A Highâ€Efficiency Design. Physica Status Solidi (A) Applications and 9741 0.8 Materials Science, 2023, 220, . Device Optimization of a Pb-Free All Perovskite Tandem Solar Cell with 29.59% Power Conversion 9742 0.31 Efficiency. IOP Conference Series: Materials Science and Engineering, 2023, 1278, 012005. Design and numerical characterization of high-performance all-perovskite multi-junction solar cells. 9743 1.4 Optik, 2023, 277, 170714. Development of different characterizations of sprayed Cu2ZnSnS4 thin films: a review. Optical and 9744 1.52 Quantum Electronics, 2023, 55, . Revisiting the Ferroelectric Photovoltaic Properties of Vertical BiFeO<sub>3</sub> Capacitors: A 9745 4.0 Comprehensive Study. ACS Applied Materials & amp; Interfaces, 2023, 15, 12070-12077. Effects of impact ionization and Auger recombination on hot-carrier solar cells and hot-carrier 9746 0.8 1 photocatalysts. Japanese Journal of Applied Physics, 2023, 62, SK1003. Photogeneration of Spin Quintet Tripletâ€"Triplet Excitations in DNA-Assembled Pentacene Stacks. 6.6 Journal of the American Chemical Society, 2023, 145, 5431-5438. Facet Engineering for Decelerated Carrier Cooling in Polyhedral Perovskite Nanocrystals. Nano 9748 4.5 6 Letters, 2023, 23, 1946-1953. Laser-Patterned Alumina Mask and Mask-Less Dry Etch of Si for Light Trapping with Photonic Crystal 9749 1.4 Structures. Micromachines, 2023, 14, 550. Metrology of thin-film photodetectors., 2023, , 1-36. 9750 0 Electron Transfer Dynamics from CsPbBr<sub>3</sub> Nanocrystals to Au<sub>144</sub> Clusters. ACS Physical Chemistry Au, 2023, 3, 348-357. 9752 Fluorescence., 2023, , 245-329. 0 Tuning Perovskite Surface Polarity via Dipole Moment Engineering for Efficient Hole-Transport-Layer-Free Sn–Pb Mixed-Perovskite Solar Cells. ACS Applied Materials & amp; Interfaces, 2023, 15, 15321-15331. 4.0 Fabrication of an ultrathin PEG-modified PEDOT:PSS HTL for high-efficiency Sn–Pb perovskite solar cells by an eco-friendly solvent etching technique. Journal of Materials Chémistry A, 2023, 11, 9754 5.29 7246-7255. State-of-the-Art Techniques on Asymmetrical Perylene Diimide Derivatives: Efficient Electron-Transport Materials for Perovskite Solar Cells. Journal of Physical Chemistry C, 2023, 127, 5114-5124. Interface Engineering for Highly Efficient Organic Solar Cells. Advanced Materials, 0, , . 9756 11.1 40 Improved Crystallization of Lead Halide Perovskite in Twoâ€Step Growth Method by Polymerâ€Assisted

CITATION REPORT

"Slowâ€Release Effect― Small Methods, 2023, 7, .

		CITATION R	EPORT	
#	Article		IF	CITATIONS
9758	Shift current photovoltaic efficiency of 2D materials. Npj Computational Materials, 202	3, 9, .	3.5	8
9759	Simulation for the Effect of Singlet Fission Mechanism of Tetracene on Perovskite Solar Energies, 2023, 16, 2428.	Cell.	1.6	0
9760	Synthesis of angular-shaped naphthodithiophenediimide and its donor–acceptor cop nonvolatile polymer additives for organic solar cells. Journal of Materials Chemistry A, 2 7572-7583.	olymers as 023, 11,	5.2	11
9761	Physical vapor deposition of Yb-doped Cs2AgSbBr6 films. Journal of Vacuum Science ar B:Nanotechnology and Microelectronics, 2023, 41, .	id Technology	0.6	1
9762	Photophysical characterization of a ruthenium-based tetrameric pentacene complex. Jo Porphyrins and Phthalocyanines, 2023, 27, 686-693.	urnal of	0.4	1
9763	Sub-bandgap near-infrared photovoltaic response in Au/Al2O3/n-Si metal–insulatorâ€ structure by plasmon-enhanced internal photoemission. , 2023, 18, .	"semiconductor		1
9764	Singlet Fission in Perylene Monoimide Single Crystals and Polycrystalline Films. Journal Chemistry Letters, 2023, 14, 2573-2579.	of Physical	2.1	4
9765	Native point defects in antiperovskite Ba <sub>3</sub> SbN: a promising semiconducto photovoltaics. Physical Chemistry Chemical Physics, 2023, 25, 9800-9806.	r for	1.3	2
9766	Ameliorating Properties of Perovskite and Perovskite–Silicon Tandem Solar Cells via N Antireflection Coating Model. Advanced Electronic Materials, 2023, 9, .	<i>l</i> esoporous	2.6	3
9767	Intramolecular singlet fission and triplet exciton harvesting in tetracene oligomers for s conversion. Journal of Materials Chemistry A, 2023, 11, 8515-8539.	olar energy	5.2	5
9768	Perspective on near-field radiative heat transfer. Applied Physics Letters, 2023, 122, .		1.5	10
9769	A comprehensive photovoltaic study on tungsten disulfide (WS2) buffer layer based Co Heliyon, 2023, 9, e14438.	ITe solar cell.	1.4	3
9770	Design guides for artificial photosynthetic devices consisting of voltage-matched perov tandem solar-cell modules and electrochemical reactor modules. Japanese Journal of Ap 2023, 62, SK1018.	skite/silicon plied Physics,	0.8	1
9771	Design of BPEA-based derivatives with high singlet fission performance: a theoretical performance is the performance in the performance is preserved as the performance is the performance is preserved as the performance is a second performance in the performance is preserved as the performance is a second performance is preserved as the performance	erspective.	1.3	1
9772	Reduced 0.418 V <i>V</i> <sub>OC</sub> -deficit of 1.73 eV wide-bandgap perovskite s by dual chlorides for efficient all-perovskite tandems. Energy and Environmental Science 2080-2089.	solar cells assisted e, 2023, 16,	15.6	16
9773	Atomic Model for Alkali Metal-Doped Tin–Lead Mixed Perovskites: Insight from Quan Journal of Physical Chemistry Letters, 2023, 14, 2878-2885.	tum Dynamics.	2.1	5
9774	Dynamic modulation of thermal emission—A Tutorial. Journal of Applied Physics, 2023	3, 133, .	1.1	11
9775	Energy Conversion Efficiency of the Bulk Photovoltaic Effect. , 2023, 2, .			4

#	Article	IF	CITATIONS
9777	Intrinsic Advantage of Fusedâ€Ring Nonfullerene Acceptorâ€Based Organic Solar Cells to Reduce Voltage Loss. Physica Status Solidi (A) Applications and Materials Science, 2023, 220, .	0.8	1
9778	Passivation of Grain Boundaries and Defects in CZTSSe Solar Cells by In Situ Na Doping. Solar Rrl, 2023, 7, .	3.1	4
9779	Optical and morphological properties of Ge-incorporated polycrystalline Sb2Se3 thin-film for photovoltaic applications. Optical Materials, 2023, 138, 113668.	1.7	0
9780	SiGe quantum wells implementation in Si based nanowires for solar cells applications. Digest Journal of Nanomaterials and Biostructures, 2023, 18, 327-342.	0.3	0
9781	Modeling and simulations of Si1-x Gex based solar cells. , 2023, , 103-148.		0
9782	Adaptation of the Solar Spectrum to Improve the use of Sunlight: A Critical Review on Techniques, Applications, and Current Trends. Advanced Sustainable Systems, 2023, 7, .	2.7	3
9783	Surface energy and surface stability of cesium tin halide perovskites: a theoretical investigation. Physical Chemistry Chemical Physics, 2023, 25, 10583-10590.	1.3	4
9784	Singlet Fission Driven by Excitedâ€State Intramolecular Proton Transfer (ESIPT+SF): A (TD)DFT Study. ChemPhotoChem, 2023, 7, .	1.5	1
9785	Carrier Dynamics of Efficient Triplet Harvesting in AgBiS <sub>2</sub> /Pentacene Singlet Fission Solar Cells. Advanced Science, 0, , 2300177.	5.6	1
9786	RAINBOW Organic Solar Cells: Implementing Spectral Splitting in Lateral Multiâ€Junction Architectures. Advanced Materials, 0, , .	11.1	4
9787	Synthesis in ambient air of LaVxFe1â^'xO3 compounds by the sol-gel method: Structural and optical studies. Journal of Alloys and Compounds, 2023, 949, 169761.	2.8	0
9788	Temperature-dependent UV-Vis dielectric functions of BaTiO <sub>3</sub> across ferroelectric-paraelectric phase transition. Optics Express, 2023, 31, 12357.	1.7	1
9789	Cross-fertilized biomimetic structures achieved through nanosphere lithography on an ultrathin wafer for flexible black c-Si SHJ solar cells. Materials Today Chemistry, 2023, 29, 101446.	1.7	0
9790	Mid-gap trap state-mediated dark current in organic photodiodes. Nature Photonics, 2023, 17, 368-374.	15.6	32
9791	Enhanced Carrier Diffusion Enables Efficient Back ontact Perovskite Photovoltaics. Angewandte Chemie - International Edition, 2023, 62, .	7.2	1
9792	Over 18% efficiency ternary all-polymer solar cells with high photocurrent and fill factor. Matter, 2023, 6, 1542-1554.	5.0	13
9793	Enhanced Carrier Diffusion Enables Efficient Backâ€Contact Perovskite Photovoltaics. Angewandte Chemie, 0, , .	1.6	0
9794	Nanomaterials for Energy Harvesting. Nanomaterials, 2023, 13, 1154.	1.9	3

#	Article	IF	CITATIONS
9795	Key Parameters and Thresholds Values for Obtaining High Performance Perovskite Solar Cells Indoors from Full Br Compositional and Bandgap Engineering. ACS Applied Energy Materials, 2023, 6, 10215-10224.	2.5	5
9796	Optoelectronic materials utilizing hot excitons or hot carriers: from mechanism to applications. Journal of Materials Chemistry C, 2023, 11, 7937-7956.	2.7	3
9797	Intermediate Phase Engineering with 2,2â€Azodi(2â€Methylbutyronitrile)Âfor Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2023, 35, .	11.1	18
9798	Performance Improvement of Thin-Film Solar Cells Using 1D Photonic Structures Optimized by Genetic Algorithm. Applied Solar Energy (English Translation of Geliotekhnika), 2022, 58, 601-608.	0.2	4
9799	An Overview of Lead, Tin, and Mixed Tin–Leadâ€Based ABI <sub>3</sub> Perovskite Solar Cells. Advanced Energy and Sustainability Research, 2023, 4, .	2.8	12
9800	Status and perspectives of transparent conductive oxide films for silicon heterojunction solar cells. Materials Today Nano, 2023, 22, 100329.	2.3	1
9801	Crystalline silicon solar cells with thin polyâ€5iO <sub>x</sub> carrierâ€selective passivating contacts for perovskite/câ€5i tandem applications. Progress in Photovoltaics: Research and Applications, 2023, 31, 877-887.	4.4	1
9802	Triplet Separation after the Fastest Intramolecular Singlet Fission in the Smallest Chromophore. Journal of Chemical Theory and Computation, 2023, 19, 2092-2101.	2.3	4
9803	High-performance vertical field-effect organic photovoltaics. Nature Communications, 2023, 14, .	5.8	6
9804	Perovskite organic tandem solar cell: A design towards improved efficiency. Materials Today: Proceedings, 2023, , .	0.9	4
9805	Application of Bis-Adducts of Phenyl-C61 Butyric Acid Methyl Ester in Promoting the Open-Circuit Voltage of Indoor Organic Photovoltaics. Materials, 2023, 16, 2613.	1.3	0
9806	Conversion efficiency of strained wurtzite InxGa1â^'x N/ZnSnN2 core/shell quantum dot solar cells under external electric field. Optoelectronics Letters, 2023, 19, 144-150.	0.4	2
9807	Holistic yield modeling, top-down loss analysis, and efficiency potential study of thin-film solar modules. Communications Physics, 2023, 6, .	2.0	0
9808	Analysis of EBIC time-variation using 2D simulation including charge states in V <sub>Se</sub> –V <sub>Cu</sub> divacancy complex. Japanese Journal of Applied Physics, 2023, 62, SK1017.	0.8	0
9809	Multi-step photon upconversion in quantum-dot-based solar cells with a double-heterointerface structure. Journal of Applied Physics, 2023, 133, 124503.	1.1	0
9810	Screening Efficient Tandem Organic Solar Cells with Machine Learning and Genetic Algorithms. Journal of Physical Chemistry C, 2023, 127, 6179-6191.	1.5	4
9811	Suppressed phase segregation for triple-junction perovskite solar cells. Nature, 2023, 618, 74-79.	13.7	55
9812	Near-Field Thermophotovoltaic Energy Conversion: Progress and Opportunities. Physical Review Applied, 2023, 19, .	1.5	9

#	Article	IF	CITATIONS
9813	Laterally Grown Strain-Engineered Semitransparent Perovskite Solar Cells with 16.01% Efficiency. ACS Applied Materials & Interfaces, 2023, 15, 17994-18005.	4.0	6
9814	Efficiency enhancement of CZTSe solar cells based on <i>in situ</i> K-doped precursor. Journal of Materials Chemistry A, 2023, 11, 9085-9096.	5.2	3
9815	ImprovingÂinterface quality forÂ1-cm2 all-perovskite tandem solar cells. Nature, 2023, 618, 80-86.	13.7	110
9816	Bayesian-optimized infrared grating for tailoring thermal emission to boost thermophotovoltaic performance. Journal of Applied Physics, 2023, 133, .	1.1	1
9817	High performance flexible Sn-Pb mixed perovskite solar cells enabled by a crosslinking additive. Npj Flexible Electronics, 2023, 7, .	5.1	6
9818	Investigation on Thermal and Electrical Performance of Late-Model Plate-and-Tube in Water-Based PVT-PCM Collectors. Sustainability, 2023, 15, 5988.	1.6	3
9819	Rubidium Iodide Reduces Recombination Losses in Methylammoniumâ€Free Tin‣ead Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	16
9820	19.31% binary organic solar cell and low non-radiative recombination enabled by non-monotonic intermediate state transition. Nature Communications, 2023, 14, .	5.8	146
9821	Photovoltaic Systems through the Lens of Material-Energy-Water Nexus. Energies, 2023, 16, 3174.	1.6	0
9822	3D Solar Harvesting and Energy Generation via Multilayers of Transparent Porphyrin and Iron Oxide Thin Films. Energies, 2023, 16, 3173.	1.6	4
9823	Sn-Based Perovskite Solar Cells towards High Stability and Performance. Micromachines, 2023, 14, 806.	1.4	8
9824	Evaluation of a proposed barium di-silicide tandem solar cell using TCAD numerical simulation. Optical and Quantum Electronics, 2023, 55, .	1.5	2
9825	Coherent-Phonon-Driven Hot-Carrier Effect in a Superlattice Solar Cell. Physical Review Applied, 2023, 19, .	1.5	0
9826	Hot carrier extraction from 2D semiconductor photoelectrodes. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, .	3.3	6
9827	Dithieno[3,2â€ <i>f</i> :2′,3′â€ <i>h</i> ]quinoxalineâ€Based Photovoltaic–Thermoelectric Dualâ€Function Energyâ€Harvesting Wideâ€Bandgap Polymer and its Backbone Isomer. Small, 2023, 19, .	al 5.2	8
9828	Triplet–triplet annihilation mediated photon upconversion solar energy systems. Materials Chemistry Frontiers, 2023, 7, 2297-2315.	3.2	10
9829	Shift Current in Molecular Crystals Possessing Charge-Transfer Characteristics. Physical Review Applied, 2023, 19, .	1.5	1
9830	Investigation of MoSâ,,/Perovskite/WSeâ,, on Si Tandem Structure of Solar Cell. , 2022, , .		0

#	Article	IF	CITATIONS
9831	Bandgap engineered 1.48 eV GaAs <sub>0.95</sub> P <sub>0.05</sub> solar cell with enhanced efficiency using double BSF layer. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2023, 14, 015010.	0.7	2
9832	Organic ligands/dyes as photon-downshifting materials for clean energy. , 2023, , 265-280.		0
9833	Fill Factor Loss in a Recombination Junction for Monolithic Tandem Solar Cells. ACS Applied Energy Materials, 0, , .	2.5	0
9834	Lead-free Metal Halide Perovskites for Solar Energy. , 2023, , 189-222.		0
9835	Highâ€Efficiency Wideâ€Bandgap Perovskite Solar Cells for Laser Energy Transfer Underwater. Energy Technology, 2023, 11, .	1.8	2
9836	Nonradiative Recombination Dominates Voltage Losses in Cu(In,Ga)Se <sub>2</sub> Solar Cells Fabricated using Different Methods. Solar Rrl, 2023, 7, .	3.1	1
9837	Effect of introducing Al2O3 as a tunnelling layer into p-CBTS/n-CdS heterojunction solar cells. Journal of Computational Electronics, 2023, 22, 897-905.	1.3	4
9838	Enhanced efficiency of DSSCs by co-sensitizing dyes with complementary absorption spectra. Journal of Photochemistry and Photobiology A: Chemistry, 2023, 442, 114758.	2.0	3
9839	Solventâ€Assisted Hydrothermal Deposition Approach for Highlyâ€Efficient Sb <sub>2</sub> (S,Se) <sub>3</sub> Thinâ€Film Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	22
9840	Insights into the Efficiency Improvement for CZTSSe Solar Cells with over 12% Efficiency via Ga Incorporation. Advanced Functional Materials, 2023, 33, .	7.8	5
9841	Nanocrystalline gallium nitride electron transport layer for cesium lead bromide photovoltaic power converter in blue light optical wireless power transmission. Japanese Journal of Applied Physics, 2023, 62, SK1035.	0.8	2
9842	Elusive excited states identified from cutting-edge molecular movies. Nature, 2023, 616, 255-256.	13.7	1
9843	Towards a CdTe Solar Cell Efficiency Promotion: The Role of ZnO:Al and CuSCN Nanolayers. Nanomaterials, 2023, 13, 1335.	1.9	5
9844	Spectral Downshifting and Passivation Effects Using 2D Perovskite (OAm) <sub>2</sub> SnBr <sub>4</sub> Films to Enhance the Properties of Si Nanowire Solar Cells. ACS Applied Energy Materials, 0, , .	2.5	1
9845	Prospects for Tin-Containing Halide Perovskite Photovoltaics. , 2023, 1, 69-82.		8
9846	Wide-bandgap perovskites for multijunction solar cells: improvement of crystalline quality of Cs <sub>0.1</sub> FA <sub>0.9</sub> Pbl <sub>1.4</sub> Br <sub>1.6</sub> by using lead thiocyanate. Journal of Materials Chemistry A, 2023, 11, 10254-10266.	5.2	4
9847	Nonreciprocal Photovoltaics: The Path to Conversion of Entire Power-Beam Exergy. , 0, , .		0
9848	Comprehensive Understanding of Fluorination-Performance Relationship: The Best-Performed A-D-A-Type Acceptors. Fundamental Research, 2023, , .	1.6	3

#	Article	IF	CITATIONS
9849	Review of Luminescence-Based Light Spectrum Modifications Methods and Materials for Photovoltaics Applications. Materials, 2023, 16, 3112.	1.3	3
9850	Cost versus environment? Combined life cycle, technoâ€economic, and circularity assessment of silicon― and perovskiteâ€based photovoltaic systems. Journal of Industrial Ecology, 2023, 27, 993-1007.	2.8	0
9851	Lowâ€Dimensional 2â€ŧhiopheneethylammonium Lead Halide Capping Layer Enables Efficient Singleâ€Junction Methylamineâ€Free Wideâ€Bandgap and Tandem Perovskite Solar Cells. Advanced Functional Materials, 2023, 33, .	7.8	6
9852	Dependence of photoluminescence on sulfurization temperature of Cu2SnS3 thin films. Applied Physics A: Materials Science and Processing, 2023, 129, .	1.1	0
9853	Rotatable Skeleton for the Alleviation of Thermally Accumulated Defects in Inorganic Perovskite Solar Cells. ACS Energy Letters, 2023, 8, 2284-2291.	8.8	7
9854	Topological Transitions Enhance the Performance of Twisted Thermophotovoltaic Systems. Physical Review Applied, 2023, 19, .	1.5	5
9855	Growing Cu <sub>2</sub> ZnSnS <sub>4</sub> Thin Film at Low Temperature Using a New Improved Configuration of Closeâ€Ðistance CVD Technique. Crystal Research and Technology, 0, , .	0.6	0
9856	Bandgap Analysis of InAs/InGaN Quantum Dot Intermediate Band Solar Cell (QDIBSC). , 2023, , .		0
9857	Radio-wave Effect on Singlet Fission in Polycrystalline Tetracene near Zero Magnetic Field. Journal of Physical Chemistry Letters, 0, , 3907-3911.	2.1	0
9858	All-Perovskite Tandem Solar Cells: From Certified 25% and Beyond. Energies, 2023, 16, 3519.	1.6	3
9859	Development of Hetero-Junction Silicon Solar Cells with Intrinsic Thin Layer: A Review. Coatings, 2023, 13, 796.	1.2	1
9860	Dodecahedron CsPbBr <sub>3</sub> Perovskite Nanocrystals Enable Facile Harvesting of Hot Electrons and Holes. Journal of Physical Chemistry Letters, 2023, 14, 3953-3960.	2.1	2
9861	Performance optimization of In(Ga)As quantum dot intermediate band solar cells. , 2023, 18, .		2
9862	Maximizing uninterrupted solar electricity in spectral-splitting photovoltaic-thermal systems integrated with CO2 battery. Journal of Energy Storage, 2023, 66, 107402.	3.9	2
9863	Sensitized Singlet Fission in Rigidly Linked Axial and Peripheral Pentacene-Subphthalocyanine Conjugates. Journal of the American Chemical Society, 2023, 145, 9548-9563.	6.6	9
9879	Selected Applications of Nanomaterials. , 2014, , 369-419.		0
9897	Surface Passivation of FAPbl <sub>3</sub> -Rich Perovskite with Cesium Iodide Outperforms Bulk Incorporation. ACS Energy Letters, 2023, 8, 2456-2462.	8.8	14
9917	CulnxGa1-xS2 absorber material for thin-film solar cells. , 2023, , 239-261.		0

#	Article	IF	CITATIONS
9924	AI for Nanomaterials Development in Clean Energy and Carbon Capture, Utilization and Storage (CCUS). ACS Nano, 2023, 17, 9763-9792.	7.3	5
9931	Nanofluids-based optical filtering for photovoltaic/thermal system. , 2023, , 93-142.		1
9948	Analytical Modeling ofÂMulti-junction Solar Cell Using SiSn Alloy. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2023, , 460-471.	0.2	0
9958	Tandem cells for unbiased photoelectrochemical water splitting. Chemical Society Reviews, 2023, 52, 4644-4671.	18.7	17
9999	Recent progress in the development of high-efficiency inverted perovskite solar cells. NPG Asia Materials, 2023, 15, .	3.8	38
10000	Minimizing the Interface-Driven Losses in Inverted Perovskite Solar Cells and Modules. ACS Energy Letters, 2023, 8, 2532-2542.	8.8	14
10006	Photovoltaic Performance of FAPbI <sub>3</sub> Perovskite Is Hampered by Intrinsic Quantum Confinement. ACS Energy Letters, 2023, 8, 2543-2551.	8.8	2
10016	Contemplation of Photocatalysis Through Machine Learning. , 2023, , 221-232.		0
10023	Insights into the kinetics and self-assembly order of small-molecule organic semiconductor/quantum dot blends during blade coating. Nanoscale Horizons, 2023, 8, 1090-1097.	4.1	1
10026	5 Theoretische Grenzen der Wandlung solarer Strahlung. , 2023, , 45-74.		0
10028	8 Konzepte zur Erhöhung der Ausbeute. , 2023, , 231-263.		0
10029	Grundlegende Prinzipien der Photovoltaik. , 2023, , 75-154.		0
10030	(Photo-)electrochemical reactions on semiconductor surfaces, part B: III-V surfaces–atomic and electronic structure. , 2024, , 120-156.		0
10038	Fourth-generation solar cells: a review. Energy Advances, 2023, 2, 1239-1262.	1.4	8
10051	Below the Urbach Edge: Solar Cell Loss Analysis Based on Full External Quantum Efficiency Spectra. ACS Energy Letters, 2023, 8, 3221-3227.	8.8	3
10062	A new spin on impact ionization. Nature Materials, 0, , .	13.3	0
10075	A critical review on rational composition engineering in kesterite photovoltaic devices: self-regulation and mutual synergy. Journal of Materials Chemistry A, 2023, 11, 16494-16518.	5.2	4
10078	Optimizing Solar Photovoltaic Cells. , 2023, , 1-18.		0

#	Article	IF	CITATIONS
10095	Silicon Nanowires/Graphene Oxide Heterojunction for Photovoltaics Application. Materials Horizons, 2023, , 185-206.	0.3	0
10107	A Comprehensive Survey of Silicon Thin-film Solar Cell: Challenges and Novel Trends. Plasmonics, 2024, 19, 1-20.	1.8	0
10122	Applications of Upconversion Nanoparticles for Solar Cells. Progress in Optical Science and Photonics, 2023, , 339-367.	0.3	1
10133	Dimension-dependent intrinsic point defect characteristic of binary photovoltaic materials. Materials Chemistry Frontiers, 0, , .	3.2	1
10135	Specific applications of the lanthanides. , 2023, , 649-741.		0
10159	Advancement of transition metal dichalcogenides for solar cells: a perspective. Journal of Materials Chemistry A, 2023, 11, 19845-19853.	5.2	1
10162	Three-dimensional lead iodide perovskites based on complex ions. Materials Advances, 0, , .	2.6	0
10175	Disentangle electronic, structural, and spin dynamics using transient extreme ultraviolet spectroscopy. Journal of Materials Chemistry C, 2023, 11, 12128-12146.	2.7	0
10179	Rational design and recent advancements of addictives engineering in ASnI <sub>3</sub> tin-based perovskite solar cells: insights from experiments and computational. Sustainable Energy and Fuels, 2023, 7, 5198-5223.	2.5	0
10183	Aggregation behaviour of pyrene-based luminescent materials, from molecular design and optical properties to application. Chemical Society Reviews, 2023, 52, 6715-6753.	18.7	26
10210	Prospects of copper–bismuth chalcogenide absorbers for photovoltaics and photoelectrocatalysis. Journal of Materials Chemistry A, 2023, 11, 22087-22104.	5.2	3
10225	DFT predictions of the electronic, phonon, optical, and thermoelectric characteristics of CaCu2S2. MRS Communications, 0, , .	0.8	0
10229	Refractory plasmonic materials. , 2024, , 139-161.		0
10234	Graphene quantum dots as game-changers in solar cell technology: a review of synthetic processes and performance enhancement. Carbon Letters, 2024, 34, 445-475.	3.3	1
10238	Fundamental Limits to Near-Field Optical Response. Springer Series in Optical Sciences, 2023, , 25-85.	0.5	1
10281	An Overview of Concentrated Photovoltaic Technology. Lecture Notes in Networks and Systems, 2023, , 145-159.	0.5	0
10289	Solar-based hybrid energy systems. , 2024, , 167-191.		0
10312	An investigation of inorganic ETL materials for carbon-based HTL-free perovskite solar cell. , 2023, , .		0

#	Article	IF	CITATIONS
10317	Renewable energy for a sustainable future. , 2024, , 1-36.		0
10328	Optical Simulations of Perovskite/Perovskite Tandem Solar Cells. , 2023, , .		0
10339	Cu <sub>2</sub> ZnSnS <sub>4</sub> monograin layer solar cells for flexible photovoltaic applications. Journal of Materials Chemistry A, O, , .	5.2	1
10412	Remote Sensing-Based Estimation of Potential Solar PV Power Output Considering the Effects of High Temperature, Dust and Precipitation: Case of the Philippines. , 2023, , .		0
10427	Additive effect on hot carrier cooling in a hybrid perovskite. Chemical Communications, 0, , .	2.2	0
10428	CdZnTe thin films as proficient absorber layer candidates in solar cell devices: a review. Energy Advances, 2023, 2, 1980-2005.	1.4	1
10434	Submonolayer InAs Quantum Dot Based Solar Cell: A New Approach Towards Intermediate Band Solar Cell. , 2023, , 406-432.		0
10470	Overview: Photovoltaic Solar Cells, Science, Materials, Artificial Intelligence, Nanotechnology and State of the Art. Engineering Materials, 2024, , 27-67.	0.3	0
10504	Co-Sputtered Sn-Doped ZnO Thin Film n-Type Layers for Incorporation into CdTe Based Photovoltaics. , 2023, , .		0
10506	Carrier Dynamics in AlxGa <sub>1-x</sub> As/InAs-Based Photon Up-Conversion Solar Cells with a Doubled-Heterointerface. , 2023, , .		0
10507	Theoretical Performance Analysis for Thermo-Radiative Assisted Photovoltaic (TRAPâ,,¢) Cell Operating in Outer Space. , 2023, , .		0
10508	SCAPS-ID Simulations of CdTe Based Solar Cells with an Amorphous Silicon-Based Back Buffer. , 2023, , .		0
10509	Characterizing TeO <sub>2</sub> Formation in CdTe Devices Using Transmission Electron Microscopy. , 2023, , .		0
10528	Performance Limits of Transition Metal Dichalcogenide Solar Cells. , 2023, , .		0
10530	Recent progress in all-inorganic tin-based perovskite solar cells: a review. Science China Chemistry, 0, , .	4.2	0
10540	An Overview of Solar Cell Technologies Toward the Next-Generation Agrivoltaics. Green Energy and Technology, 2024, , 69-129.	0.4	0
10544	Advancements in radiation resistance and reinforcement strategies of perovskite solar cells in space applications. Journal of Materials Chemistry A, 2024, 12, 1910-1922.	5.2	0
10587	Transformational Propulsion for Fast In-Space Transits. , 2024, , .		0

#	Article	IF	CITATIONS
10588	An open-cage bis[60]fulleroid as an electron transport material for tin halide perovskite solar cells. Chemical Communications, 2024, 60, 2172-2175.	2.2	0
10590	Developments in Dye-Sensitized Solar Cells - An Overview. , 2024, , .		0
10598	Applications of nonreciprocity to practical devices. , 2024, , 397-452.		0
10611	Superalkali halide perovskites with suitable direct band gaps for photovoltaic applications. Nanoscale, 2024, 16, 5130-5136.	2.8	0
10619	Slot-die coating of formamidinium-cesium mixed halide perovskites in ambient conditions with FAAc additive. MRS Communications, 2024, 14, 215-221.	0.8	0
10620	Tandem solar cells based on quantum dots. Materials Chemistry Frontiers, 2024, 8, 1792-1807.	3.2	0
10622	Passive Cooling Method for Photovoltaic Panel. , 2023, , .		0
10628	Performance Enhancement of CZTS/ZTO based Solar Cell through Sequential Optimization of Parameters. , 2023, , .		0
10630	Upconversion as a spear carrier for tuning photovoltaic efficiency. Materials Advances, 2024, 5, 1783-1802.	2.6	0
10638	C-si Passivated Contact Solar Cell With Optimized Efficiency Of 23.50% In AM1.5G Environment. , 2023, , .		0
10658	Solids and energy. , 2024, , 259-290.		0
10663	Computational Approaches to Optimizing Perovskite Solar Cell Performance. , 2023, , .		0
10668	Nanocoatings for Energy Generation and Conservation of Solar Cells. Advances in Chemical and Materials Engineering Book Series, 2024, , 88-115.	0.2	0
10690	Photovoltaic devices: dye sensitized and perovskite solar cells. , 2024, , 175-195.		0
10700	Relaxation Dynamics of Free Carriers. Graduate Texts in Physics, 2024, , 121-162.	0.1	0
10702	Light-Absorbing Devices. Graduate Texts in Physics, 2024, , 539-554.	0.1	0
10703	Multiple Exciton Generation in MoS2 Nanostructures: A Density Functional Theory Study. Springer Proceedings in Materials, 2024, , 397-405.	0.1	0