Yanfa Yan

List of Publications by Year
in descending order

503 papers	44,762 citations	1463 107 h-index	2385 198 g-index
522 all docs	522 docs citations	522 times ranked	30943 citing authors

#	Article	IF	Citations
1	Unusual defect physics in CH3NH3PbI3 perovskite solar cell absorber. Applied Physics Letters, 2014, 104, .	3.3	2,142
2	Unique Properties of Halide Perovskites as Possible Origins of the Superior Solar Cell Performance. Advanced Materials, 2014, 26, 4653-4658.	21.0	1,735
3	Efficient and stable emission of warm-white light from lead-free halide double perovskites. Nature, 2018, 563, 541-545.	27.8	1,451
4	Halide perovskite materials for solar cells: a theoretical review. Journal of Materials Chemistry A, 2015, 3, 8926-8942.	10.3	1,114
5	Low-Temperature Solution-Processed Tin Oxide as an Alternative Electron Transporting Layer for Efficient Perovskite Solar Cells. Journal of the American Chemical Society, 2015, 137, 6730-6733.	13.7	1,045
6	Understanding the physical properties of hybrid perovskites for photovoltaic applications. Nature Reviews Materials, 2017, 2, .	48.7	927
7	Carrier lifetimes of >1 Î¼s in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. Science, 2019, 364, 475-479.	12.6	781
8	An organic-inorganic perovskite ferroelectric with large piezoelectric response. Science, 2017, 357, 306-309.	12.6	744
9	Thin-Film Preparation and Characterization of Cs₃Sb₂I₉: A Lead-Free Layered Perovskite Semiconductor. Chemistry of Materials, 2015, 27, 5622-5632.	6.7	653
10	Leadâ€Free Inverted Planar Formamidinium Tin Triiodide Perovskite Solar Cells Achieving Power Conversion Efficiencies up to 6.22%. Advanced Materials, 2016, 28, 9333-9340.	21.0	636
11	Low-bandgap mixed tinâ€“lead iodide perovskite absorbers with long carrier lifetimes for all-perovskite tandem solar cells. Nature Energy, 2017, 2, .	39.5	634
12	Band Edge Electronic Structure of BiVO₄: Elucidating the Role of the Bi s and V d Orbitals. Chemistry of Materials, 2009, 21, 547-551.	6.7	624
13	From Lead Halide Perovskites to Leadâ€Free Metal Halide Perovskites and Perovskite Derivatives. Advanced Materials, 2019, 31, e1803792.	21.0	621
14	Nanostructured Fe₃O₄/SWNT Electrode: Binderâ€Free and Highâ€Rate Liâ€Ion Anode. Advanced Materials, 2010, 22, E145-9.	21.0	556
15	Searching for promising new perovskite-based photovoltaic absorbers: the importance of electronic dimensionality. Materials Horizons, 2017, 4, 206-216.	12.2	553
16	Perovskite ink with wide processing window for scalable high-efficiency solar cells. Nature Energy, 2017, 2, .	39.5	499
17	Employing Lead Thiocyanate Additive to Reduce the Hysteresis and Boost the Fill Factor of Planar Perovskite Solar Cells. Advanced Materials, 2016, 28, 5214-5221.	21.0	487
18	Parity-Forbidden Transitions and Their Impact on the Optical Absorption Properties of Lead-Free Metal Halide Perovskites and Double Perovskites. Journal of Physical Chemistry Letters, 2017, 8, 2999-3007.	4.6	441

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19	Oxide perovskites, double perovskites and derivatives for electrocatalysis, photocatalysis, and photovoltaics. Energy and Environmental Science, 2019, 12, 442-462.	30.8	433
20	Bandgap Engineering of Leadâ€Free Double Perovskite Cs₂AgBiBr₆ through Trivalent Metal Alloying. Angewandte Chemie - International Edition, 2017, 56, 8158-8162.	13.8	425
21	Efficient two-terminal all-perovskite tandem solar cells enabled by high-quality low-bandgap absorber layers. Nature Energy, 2018, 3, 1093-1100.	39.5	422
22	Microstructure and Pseudocapacitive Properties of Electrodes Constructed of Oriented NiO-TiO₂ Nanotube Arrays. Nano Letters, 2010, 10, 4099-4104.	9.1	417
23	Interface engineering in planar perovskite solar cells: energy level alignment, perovskite morphology control and high performance achievement. Journal of Materials Chemistry A, 2017, 5, 1658-1666.	10.3	364
24	Control of Doping by Impurity Chemical Potentials: Predictions forp-Type ZnO. Physical Review Letters, 2001, 86, 5723-5726.	7.8	362
25	Fabrication of Efficient Low-Bandgap Perovskite Solar Cells by Combining Formamidinium Tin Iodide with Methylammonium Lead Iodide. Journal of the American Chemical Society, 2016, 138, 12360-12363.	13.7	362
26	Efficient hole-blocking layer-free planar halide perovskite thin-film solar cells. Nature Communications, 2015, 6, 6700.	12.8	358
27	Ultrathin Coatings on Nano-LiCoO₂for Li-Ion Vehicular Applications. Nano Letters, 2011, 11, 414-418.	9.1	357
28	Trifluoroacetate induced small-grained CsPbBr3 perovskite films result in efficient and stable light-emitting devices. Nature Communications, 2019, 10, 665.	12.8	350
29	Effective Carrierâ€Concentration Tuning of SnO₂ Quantum Dot Electronâ€Selective Layers for Highâ€Performance Planar Perovskite Solar Cells. Advanced Materials, 2018, 30, e1706023.	21.0	333
30	Direct Growth of Highly Mismatched Type II ZnO/ZnSe Core/Shell Nanowire Arrays on Transparent Conducting Oxide Substrates for Solar Cell Applications. Advanced Materials, 2008, 20, 3248-3253.	21.0	330
31	Thin-Film Deposition and Characterization of a Sn-Deficient Perovskite Derivative Cs₂SnI₆. Chemistry of Materials, 2016, 28, 2315-2322.	6.7	329
32	Band structure engineering of semiconductors for enhanced photoelectrochemical water splitting: The case of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>TiO</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:msu Physical Review B, 2010, 82, .	3.2	300
33	Doping of ZnO by group-IB elements. Applied Physics Letters, 2006, 89, 181912.	3.3	275
34	The 2020 photovoltaic technologies roadmap. Journal Physics D: Applied Physics, 2020, 53, 493001.	2.8	274
35	Thermodynamic Stability and Defect Chemistry of Bismuthâ€Based Leadâ€Free Double Perovskites. ChemSusChem, 2016, 9, 2628-2633.	6.8	273
36	Efficient sky-blue perovskite light-emitting diodes via photoluminescence enhancement. Nature Communications, 2019, 10, 5633.	12.8	267

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37	Grain-Boundary-Enhanced Carrier Collection in CdTe Solar Cells. Physical Review Letters, 2014, 112, 156103.	7.8	258
38	Progress in Theoretical Study of Metal Halide Perovskite Solar Cell Materials. Advanced Energy Materials, 2017, 7, 1701136.	19.5	257
39	Reducing Saturationâ€Current Density to Realize Highâ€Efficiency Lowâ€Bandgap Mixed Tinâ€“Lead Halide Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803135.	19.5	255
40	Intrinsic Instability of Cs₂In(I)M(III)X₆ (M = Bi, Sb; X = Halogen) Double Perovskites: A Combined Density Functional Theory and Experimental Study. Journal of the American Chemical Society, 2017, 139, 6054-6057.	13.7	253
41	Superior Photovoltaic Properties of Lead Halide Perovskites: Insights from First-Principles Theory. Journal of Physical Chemistry C, 2015, 119, 5253-5264.	3.1	246
42	Electrodeposited Aluminum-Doped Î±-Fe₂O₃ Photoelectrodes: Experiment and Theory. Chemistry of Materials, 2010, 22, 510-517.	6.7	240
43	Anomalous Alloy Properties in Mixed Halide Perovskites. Journal of Physical Chemistry Letters, 2014, 5, 3625-3631.	4.6	231
44	Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS. Joule, 2019, 3, 1734-1745.	24.0	227
45	TiO₂â€“ZnS Cascade Electron Transport Layer for Efficient Formamidinium Tin Iodide Perovskite Solar Cells. Journal of the American Chemical Society, 2016, 138, 14998-15003.	13.7	220
46	Four-Terminal All-Perovskite Tandem Solar Cells Achieving Power Conversion Efficiencies Exceeding 23%. ACS Energy Letters, 2018, 3, 305-306.	17.4	219
47	Metastable Dion-Jacobson 2D structure enables efficient and stable perovskite solar cells. Science, 2022, 375, 71-76.	12.6	216
48	Effects of organic cations on the defect physics of tin halide perovskites. Journal of Materials Chemistry A, 2017, 5, 15124-15129.	10.3	213
49	Low-temperature plasma-enhanced atomic layer deposition of tin oxide electron selective layers for highly efficient planar perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 12080-12087.	10.3	210
50	Possible Approach to Overcome the Doping Asymmetry in Wideband Gap Semiconductors. Physical Review Letters, 2007, 98, 135506.	7.8	204
51	Cooperative tin oxide fullerene electron selective layers for high-performance planar perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 14276-14283.	10.3	204
52	Comparative study of the luminescence and intrinsic point defects in the kesterite Cu<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>ZnSnS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>4</mml:mn></mml:msub></mml:math>and chalcopyrite Cu(In,Ga)Se<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow	3.2	202
53	A layered Na_{1âˆ’x}Ni_yFe_{1âˆ’y}O₂double oxide oxygen evolution reaction electrocatalyst for highly efficient water-splitting. Energy and Environmental Science, 2017, 10, 121-128.	30.8	201
54	Electrochemical effects of ALD surface modification on combustion synthesized LiNi1/3Mn1/3Co1/3O2 as a layered-cathode material. Journal of Power Sources, 2011, 196, 3317-3324.	7.8	198

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55	Growth and characterization of radio frequency magnetron sputter-deposited zinc stannate, Zn2SnO4, thin films. Journal of Applied Physics, 2002, 92, 310-319.	2.5	194
56	Electrically Benign Behavior of Grain Boundaries in Polycrystalline<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>CuInSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Films. Physical Review Letters, 2007, 99, 235504.	7.8	192
57	Evaluation of Nitrogen Doping of Tungsten Oxide for Photoelectrochemical Water Splitting. Journal of Physical Chemistry C, 2008, 112, 5213-5220.	3.1	191
58	Understanding and Eliminating Hysteresis for Highly Efficient Planar Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700414.	19.5	190
59	Synergistic Effects of Lead Thiocyanate Additive and Solvent Annealing on the Performance of Wide-Bandgap Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1177-1182.	17.4	190
60	Atomistic Mechanism of Broadband Emission in Metal Halide Perovskites. Journal of Physical Chemistry Letters, 2019, 10, 501-506.	4.6	190
61	Electrical doping in halide perovskites. Nature Reviews Materials, 2021, 6, 531-549.	48.7	189
62	Doping asymmetry in wideâ€bandgap semiconductors: Origins and solutions. Physica Status Solidi (B): Basic Research, 2008, 245, 641-652.	1.5	187
63	Effects of annealing temperature of tin oxide electron selective layers on the performance of perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 24163-24168.	10.3	186
64	Effective band gap narrowing of anatase TiO2 by strain along a soft crystal direction. Applied Physics Letters, 2010, 96, .	3.3	185
65	Simple descriptor derived from symbolic regression accelerating the discovery of new perovskite catalysts. Nature Communications, 2020, 11, 3513.	12.8	184
66	Reconfiguring the band-edge states of photovoltaic perovskites by conjugated organic cations. Science, 2021, 371, 636-640.	12.6	184
67	Reducing Hysteresis and Enhancing Performance of Perovskite Solar Cells Using Lowâ€Temperature Processed Yâ€Doped SnO₂ Nanosheets as Electron Selective Layers. Small, 2017, 13, 1601769.	10.0	183
68	Unipolar self-doping behavior in perovskite CH3NH3PbBr3. Applied Physics Letters, 2015, 106, .	3.3	181
69	Improving the Performance of Formamidinium and Cesium Lead Triiodide Perovskite Solar Cells using Lead Thiocyanate Additives. ChemSusChem, 2016, 9, 3288-3297.	6.8	178
70	Origin of High Electronic Quality in Structurally Disordered CH₃NH₃PbI₃ and the Passivation Effect of Cl and O at Grain Boundaries. Advanced Electronic Materials, 2015, 1, 1500044.	5.1	175
71	Alloying and Defect Control within Chalcogenide Perovskites for Optimized Photovoltaic Application. Chemistry of Materials, 2016, 28, 821-829.	6.7	175
72	Structural, magnetic, and electronic properties of the Co-Fe-Al oxide spinel system: Density-functional theory calculations. Physical Review B, 2007, 76, .	3.2	168

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73	Life Cycle Assessment (LCA) of perovskite PV cells projected from lab to fab. Solar Energy Materials and Solar Cells, 2016, 156, 157-169.	6.2	168
74	Low-bandgap mixed tinâ€“lead iodide perovskites with reduced methylammonium for simultaneous enhancement of solar cell efficiency and stability. Nature Energy, 2020, 5, 768-776.	39.5	165
75	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.	16.0	162
76	Efficient fully-vacuum-processed perovskite solar cells using copper phthalocyanine as hole selective layers. Journal of Materials Chemistry A, 2015, 3, 23888-23894.	10.3	161
77	Water Vapor Treatment of Low-Temperature Deposited SnO₂ Electron Selective Layers for Efficient Flexible Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 2118-2124.	17.4	161
78	Enhancing the photo-currents of CdTe thin-film solar cells in both short and long wavelength regions. Applied Physics Letters, 2014, 105, .	3.3	159
79	Roadmap on solar water splitting: current status and future prospects. Nano Futures, 2017, 1, 022001.	2.2	159
80	Excess charge-carrier induced instability of hybrid perovskites. Nature Communications, 2018, 9, 4981.	12.8	159
81	Evolution of defects during the degradation of metal halide perovskite solar cells under reverse bias and illumination. Nature Energy, 2022, 7, 65-73.	39.5	158
82	Mechanisms of Electron-Beam-Induced Damage in Perovskite Thin Films Revealed by Cathodoluminescence Spectroscopy. Journal of Physical Chemistry C, 2015, 119, 26904-26911.	3.1	153
83	Achieving a high open-circuit voltage in inverted wide-bandgap perovskite solar cells with a graded perovskite homojunction. Nano Energy, 2019, 61, 141-147.	16.0	152
84	Highly Sensitive Lowâ€Bandgap Perovskite Photodetectors with Response from Ultraviolet to the Nearâ€Infrared Region. Advanced Functional Materials, 2017, 27, 1703953.	14.9	148
85	Enhanced photoelectrochemical responses of ZnO films through Ga and N codoping. Applied Physics Letters, 2007, 91, .	3.3	144
86	Metalâ€“Organic Framework-Derived CoWP@C Composite Nanowire Electrocatalyst for Efficient Water Splitting. ACS Energy Letters, 2018, 3, 1434-1442.	17.4	141
87	Electronic, structural, and magnetic effects of 3d transition metals in hematite. Journal of Applied Physics, 2010, 107, .	2.5	135
88	Engineering Grain Boundaries in Cu₂ZnSnSe₄ for Better Cell Performance: A Firstâ€Principle Study. Advanced Energy Materials, 2014, 4, 1300712.	19.5	135
89	A facile solvothermal growth of single crystal mixed halide perovskite CH₃NH₃Pb(Br_{1â^'x}Cl_x)₃. Chemical Communications, 2015, 51, 7820-7823.	4.1	135
90	Photovoltaic Properties of Two-Dimensional (CH₃NH₃)₂Pb(SCN)₂I₂ Perovskite: A Combined Experimental and Density Functional Theory Study. Journal of Physical Chemistry Letters, 2016, 7, 1213-1218.	4.6	135

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91	Double-Hole-Mediated Coupling of Dopants and Its Impact on Band Gap Engineering in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>TiO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2011, 106, 066801.	7.8	134
92	Lowâ€Bandgap Mixed Tinâ€Lead Perovskites and Their Applications in Allâ€Perovskite Tandem Solar Cells. Advanced Functional Materials, 2019, 29, 1808801.	14.9	133
93	Quasicrystals as cluster aggregates. Nature Materials, 2004, 3, 759-767.	27.5	131
94	Arylammonium-Assisted Reduction of the Open-Circuit Voltage Deficit in Wide-Bandgap Perovskite Solar Cells: The Role of Suppressed Ion Migration. ACS Energy Letters, 2020, 5, 2560-2568.	17.4	131
95	Stable and efficient CdS/Sb2Se3 solar cells prepared by scalable close space sublimation. Nano Energy, 2018, 49, 346-353.	16.0	130
96	Conformal Surface Coatings to Enable High Volume Expansion Liâ€Ion Anode Materials. ChemPhysChem, 2010, 11, 2124-2130.	2.1	126
97	Band-Engineered Bismuth Titanate Pyrochlores for Visible Light Photocatalysis. Journal of Physical Chemistry C, 2010, 114, 10598-10605.	3.1	126
98	Annealing-free efficient vacuum-deposited planar perovskite solar cells with evaporated fullerenes as electron-selective layers. Nano Energy, 2016, 19, 88-97.	16.0	125
99	Self-Powered All-Inorganic Perovskite Microcrystal Photodetectors with High Detectivity. Journal of Physical Chemistry Letters, 2018, 9, 2043-2048.	4.6	123
100	Carrier control in Snâ€“Pb perovskites via 2D cation engineering for all-perovskite tandem solar cells with improved efficiency and stability. Nature Energy, 2022, 7, 642-651.	39.5	121
101	Effects of Atomic Layer Deposition of Al2O3 on the Li[Li0.20Mn0.54Ni0.13Co0.13]O2 Cathode for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2011, 158, A1298.	2.9	119
102	Efficient and Stable Red Perovskite Lightâ€Emitting Diodes with Operational Stability >300 h. Advanced Materials, 2021, 33, e2008820.	21.0	119
103	Unraveling the Impact of Halide Mixing on Perovskite Stability. Journal of the American Chemical Society, 2019, 141, 3515-3523.	13.7	116
104	Enhancement of photoelectrochemical response by aligned nanorods in ZnO thin films. Journal of Power Sources, 2008, 176, 387-392.	7.8	115
105	Synthesis of band-gap-reduced p-type ZnO films by Cu incorporation. Journal of Applied Physics, 2007, 102, .	2.5	114
106	Thermally evaporated methylammonium tin triiodide thin films for lead-free perovskite solar cell fabrication. RSC Advances, 2016, 6, 90248-90254.	3.6	114
107	Dithieno[3,2â€b:2â€²,3â€²â€d]pyrrolâ€Cored Hole Transport Material Enabling Over 21% Efficiency Dopantâ€Free Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1904300.	14.9	114
108	A Multi-functional Molecular Modifier Enabling Efficient Large-Area Perovskite Light-Emitting Diodes. Joule, 2020, 4, 1977-1987.	24.0	111

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109	Structural and compositional dependence of the CdTexSe1âˆ’x alloy layer photoactivity in CdTe-based solar cells. Nature Communications, 2016, 7, 12537.	12.8	108
110	Dithieno[3,2â€b:2â€²,3â€²â€d]pyrrole Cored pâ€Type Semiconductors Enabling 20â€‰% Efficiency Dopantâ€Free Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 13717-13721.	13.8	108
111	Grain-Boundary Physics in PolycrystallineCuInSe2Revisited: Experiment and Theory. Physical Review Letters, 2006, 96, 205501.	7.8	106
112	Crystal and electronic structures of Cu<i>x</i>S solar cell absorbers. Applied Physics Letters, 2012, 100, .	3.3	105
113	Environmental analysis of perovskites and other relevant solar cell technologies in a tandem configuration. Energy and Environmental Science, 2017, 10, 1874-1884.	30.8	104
114	Self-powered CsPbBr3 nanowire photodetector with a vertical structure. Nano Energy, 2018, 53, 880-886.	16.0	104
115	Effect of Copassivation of Cl and Cu on CdTe Grain Boundaries. Physical Review Letters, 2008, 101, 155501.	7.8	103
116	Narrow-Bandgap Mixed Lead/Tin-Based 2D Dionâ€"Jacobson Perovskites Boost the Performance of Solar Cells. Journal of the American Chemical Society, 2020, 142, 15049-15057.	13.7	103
117	Oxygenated CdS Buffer Layers Enabling High Openâ€Circuit Voltages in Earthâ€Abundant Cu₂BaSnS₄ Thinâ€Film Solar Cells. Advanced Energy Materials, 2017, 7, 1601803.	19.5	102
118	Efficient planar perovskite solar cells using room-temperature vacuum-processed C₆₀ electron selective layers. Journal of Materials Chemistry A, 2015, 3, 17971-17976.	10.3	100
119	Atomic structure of the quasicrystal Al72Ni20Co8. Nature, 2000, 403, 266-267.	27.8	99
120	Trigonal Cu₂-II-Sn-VI₄ (II = Ba, Sr and VI = S, Se) quaternary compounds for earth-abundant photovoltaics. Physical Chemistry Chemical Physics, 2016, 18, 4828-4834.	2.8	94
121	Density-functional theory study of the effects of atomic impurity on the band edges of monoclinic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>WO</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:ms Physical Review B, 2008, 77, .	3.2	93
122	Electronic structure of ZnO:GaN compounds: Asymmetric bandgap engineering. Physical Review B, 2008, 78, .	3.2	93
123	Direct Imaging of Local Chemical Disorder and Columnar Vacancies in Ideal Decagonal Al-Ni-Co Quasicrystals. Physical Review Letters, 1998, 81, 5145-5148.	7.8	92
124	ZnO nanocoral structures for photoelectrochemical cells. Applied Physics Letters, 2008, 93, 163117.	3.3	92
125	Electrochemical deposition of copper oxide nanowires for photoelectrochemical applications. Journal of Materials Chemistry, 2010, 20, 6962.	6.7	91
126	Manipulating Crystallization of Organolead Mixed-Halide Thin Films in Antisolvent Baths for Wide-Bandgap Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 2232-2237.	8.0	91

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127	Room-temperature fabrication of a delafossite CuCrO₂hole transport layer for perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 469-477.	10.3	91
128	Chemical Origin of the Stability Difference between Copper(I)â€•and Silver(I)â€Based Halide Double Perovskites. Angewandte Chemie - International Edition, 2017, 56, 12107-12111.	13.8	89
129	One-step facile synthesis of a simple carbazole-cored hole transport material for high-performance perovskite solar cells. Nano Energy, 2017, 40, 163-169.	16.0	89
130	Wide-bandgap, low-bandgap, and tandem perovskite solar cells. Semiconductor Science and Technology, 2019, 34, 093001.	2.0	89
131	Characteristics of In-Substituted CZTS Thin Film and Bifacial Solar Cell. ACS Applied Materials & Interfaces, 2014, 6, 21118-21130.	8.0	85
132	Stable Organicâ€"Inorganic Perovskite Solar Cells without Holeâ€Conductor Layer Achieved via Cell Structure Design and Contact Engineering. Advanced Functional Materials, 2016, 26, 4866-4873.	14.9	84
133	Probing the origins of photodegradation in organicâ€"inorganic metal halide perovskites with time-resolved mass spectrometry. Sustainable Energy and Fuels, 2018, 2, 2460-2467.	4.9	84
134	Photoelectrochemical Properties of N-Incorporated ZnO Films Deposited by Reactive RF Magnetron Sputtering. Journal of the Electrochemical Society, 2007, 154, B956.	2.9	81
135	Mitigating ion migration in perovskite solar cells. Trends in Chemistry, 2021, 3, 575-588.	8.5	81
136	From atomic structure to photovoltaic properties in CdTe solar cells. Ultramicroscopy, 2013, 134, 113-125.	1.9	80
137	Perovskiteâ€"a Perfect Top Cell for Tandem Devices to Break the Sâ€"Q Limit. Advanced Science, 2019, 6, 1801704.	11.2	80
138	Direct Imaging of Clâ€•and Cuâ€Induced Shortâ€Circuit Efficiency Changes in CdTe Solar Cells. Advanced Energy Materials, 2014, 4, 1400454.	19.5	79
139	Chemical Origin of the Stability Difference between Copper(I)â€•and Silver(I)â€Based Halide Double Perovskites. Angewandte Chemie, 2017, 129, 12275-12279.	2.0	79
140	Metal Halide Scintillators with Fast and Selfâ€Absorptionâ€Free Defectâ€Bound Excitonic Radioluminescence for Dynamic Xâ€Ray Imaging. Advanced Functional Materials, 2021, 31, 2007921.	14.9	78
141	Fatigue behavior of planar CH3NH3PbI3 perovskite solar cells revealed by light on/off diurnal cycling. Nano Energy, 2016, 27, 509-514.	16.0	76
142	Efficient and Stable Nonfullereneâ€Graded Heterojunction Inverted Perovskite Solar Cells with Inorganic Ga₂O₃ Tunneling Protective Nanolayer. Advanced Functional Materials, 2018, 28, 1804128.	14.9	76
143	Electronic, Energetic, and Chemical Effects of Intrinsic Defects and Fe-Doping of CoAl₂O₄: A DFT+<i>U</i>Study. Journal of Physical Chemistry C, 2008, 112, 12044-12050.	3.1	75
144	Origin of electronic and optical trends in ternary<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>In</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:msub conducting oxides<mml:math xmlns. Physical Review B, 2009, 79, .	3.2	74

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145	Extremely Durable Highâ€Rate Capability of a LiNi_{0.4}Mn_{0.4}Co_{0.2}O₂ Cathode Enabled with Singleâ€Walled Carbon Nanotubes. Advanced Energy Materials, 2011, 1, 58-62.	19.5	74
146	Quantitative analysis of time-resolved microwave conductivity data. Journal Physics D: Applied Physics, 2017, 50, 493002.	2.8	74
147	Fabrication and characterization of high-efficiency CdTe-based thin-film solar cells on commercial SnO2:F-coated soda-lime glass substrates. Thin Solid Films, 2013, 549, 30-35.	1.8	73
148	Recombination by grain-boundary type in CdTe. Journal of Applied Physics, 2015, 118, .	2.5	73
149	A Novel Codoping Approach for Enhancing the Performance of LiFePO₄ Cathodes. Advanced Energy Materials, 2012, 2, 1028-1032.	19.5	72
150	Viability of Lead-Free Perovskites with Mixed Chalcogen and Halogen Anions for Photovoltaic Applications. Journal of Physical Chemistry C, 2016, 120, 6435-6441.	3.1	72
151	Predictions for p-Type CH₃NH₃PbI₃ Perovskites. Journal of Physical Chemistry C, 2014, 118, 25350-25354.	3.1	71
152	Synthesis and Characterization of Boron-Doped Single-Wall Carbon Nanotubes Produced by the Laser Vaporization Technique. Chemistry of Materials, 2006, 18, 2558-2566.	6.7	69
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