Uwe Rau

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/8868968/publications.pdf

Version: 2024-02-01

399	17,230	11646	21539
papers	citations	70 h-index	114 g-index

435	435	435	10906
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	How Thin Practical Silicon Heterojunction Solar Cells Could Be? Experimental Study under 1â€‰Sun and under Indoor Illumination. Solar Rrl, 2022, 6, 2100594.	5.8	12
2	Dielectric Junction: Electrostatic Design for Charge Carrier Collection in Solar Cells. Solar Rrl, 2022, 6, 2100720.	5.8	7
3	A route towards highâ€efficiency silicon heterojunction solar cells. Progress in Photovoltaics: Research and Applications, 2022, 30, 384-392.	8.1	22
4	Batteries to Keep Solarâ€Driven Water Splitting Running at Night: Performance of a Directly Coupled System. Solar Rrl, 2022, 6, .	5.8	6
5	Multilayer Capacitances: How Selective Contacts Affect Capacitance Measurements of Perovskite Solar Cells. , 2022, 1, .		23
6	Prediction of Limits of Solarâ€toâ€Hydrogen Efficiency from Polarization Curves of the Electrochemical Cells. Solar Rrl, 2022, 6, 2100783.	5.8	3
7	Effect of Doping, Photodoping, and Bandgap Variation on the Performance of Perovskite Solar Cells. Advanced Optical Materials, 2022, 10, .	7.3	10
8	Device Performance of Emerging Photovoltaic Materials (Version 1). Advanced Energy Materials, 2021, 11, 2002774.	19.5	93
9	Low-resistivity p-type a-Si:H/AZO hole contact in high-efficiency silicon heterojunction solar cells. Applied Surface Science, 2021, 542, 148749.	6.1	26
10	Influence of Oxygen on Sputtered Titaniumâ€Doped Indium Oxide Thin Films and Their Application in Silicon Heterojunction Solar Cells. Solar Rrl, 2021, 5, 2000501.	5.8	15
11	Highâ€quality amorphous silicon thin films for tunnel oxide passivating contacts deposited at over 150 nm/min. Progress in Photovoltaics: Research and Applications, 2021, 29, 16-23.	8.1	3
12	Defect tolerant device geometries for lead-halide perovskites. Materials Advances, 2021, 2, 3655-3670.	5.4	17
13	Design of deterministic light-trapping structures for thin silicon heterojunction solar cells. Optics Express, 2021, 29, 7410.	3.4	2
14	Improved Infrared Light Management with Transparent Conductive Oxide/Amorphous Silicon Back Reflector in Highâ€Efficiency Silicon Heterojunction Solar Cells. Solar Rrl, 2021, 5, 2000576.	5.8	17
15	Reply to â€˜Ideal solar cell efficienciesâ€™. Nature Photonics, 2021, 15, 165-166.	31.4	7
16	Quantifying the Absorption Onset in the Quantum Efficiency of Emerging Photovoltaic Devices. Advanced Energy Materials, 2021, 11, 2100022.	19.5	61
17	Interface Optimization via Fullerene Blends Enables Openâ€Circuit Voltages of 1.35ÂV in CH₃NH₃Pb(I_{0.8}Br_{0.2})₃ Solar Cells. Advanced Energy Materials, 2021, 11, 2003386.	19.5	57
18	Quantum Transport across Amorphous-Crystalline Interfaces in Tunnel Oxide Passivated Contact Solar Cells: Direct versus Defect-Assisted Tunneling. Chinese Physics Letters, 2021, 38, 036301.	3.3	3

#	Article	IF	Citations
19	Understanding Transient Photoluminescence in Halide Perovskite Layer Stacks and Solar Cells. Advanced Energy Materials, 2021, 11, 2003489.	19.5	117
20	A silicon carbide-based highly transparent passivating contact for crystalline silicon solar cells approaching efficiencies of 24%. Nature Energy, 2021, 6, 529-537.	39.5	87
21	Transparent-conductive-oxide-free front contacts for high-efficiency silicon heterojunction solar cells. Joule, 2021, 5, 1535-1547.	24.0	34
22	Achieving a high Short Circuit Current Density of 40.9 mA/cmÂ² for Two-Side Contacted Silicon Heterojunction Solar Cells by using SiC-based Transparent Passivating Contacts. , 2021, , .		0
23	Function Analysis of the Phosphine Gas Flow for n-Type Nanocrystalline Silicon Oxide Layer in Silicon Heterojunction Solar Cells. ACS Applied Energy Materials, 2021, 4, 7544-7551.	5.1	8
24	Storage batteries in photovoltaicâ€“electrochemical device for solar hydrogen production. Journal of Power Sources, 2021, 509, 230367.	7.8	17
25	Consistent Interpretation of Electrical and Optical Transients in Halide Perovskite Layers and Solar Cells. Advanced Energy Materials, 2021, 11, 2102290.	19.5	25
26	Device Performance of Emerging Photovoltaic Materials (Version 2). Advanced Energy Materials, 2021, 11, .	19.5	66
27	How to Report Record Openâ€Circuit Voltages in Leadâ€Halide Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902573.	19.5	153
28	Optimization of Transparent Passivating Contact for Crystalline Silicon Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 46-53.	2.5	16
29	Efficient Area Matched Converter Aided Solar Charging of Lithium Ion Batteries Using High Voltage Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 431-439.	5.1	29
30	Luminescence Analysis of Charge-Carrier Separation and Internal Series-Resistance Losses in <mml:math 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 ETQq0 0 0 rgBT /Overlo	3.8	26
31	Solar Cells. Physical Review Applied, 2020, 14, . Bifunctional CoFeVO_x Catalyst for Solar Water Splitting by using Multijunction and Heterojunction Silicon Solar Cells. Advanced Materials Technologies, 2020, 5, 2000592.	5.8	13
32	Phosphorus Catalytic Doping on Intrinsic Silicon Thin Films for the Application in Silicon Heterojunction Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 56615-56621.	8.0	5
33	From room to roof: How feasible is direct coupling of solar-battery power unit under variable irradiance?. Solar Energy, 2020, 206, 732-740.	6.1	21
34	Development of Conductive SiCx:H as a New Hydrogenation Technique for Tunnel Oxide Passivating Contacts. ACS Applied Materials & Interfaces, 2020, 12, 29986-29992.	8.0	2
35	A Biasâ€Free, Standâ€Alone, and Scalable Photovoltaicâ€“Electrochemical Device for Solar Hydrogen Production. Advanced Sustainable Systems, 2020, 4, 2000070.	5.3	16
36	Effect of reabsorption and photon recycling on photoluminescence spectra and transients in lead-halide perovskite crystals. JPhys Materials, 2020, 3, 025003.	4.2	20

#	Article	IF	Citations
37	Impact of Laser Treatment on Hydrogenated Amorphous Silicon Properties. Advanced Engineering Materials, 2020, 22, 1901437.	3.5	2
38	Front contact optimization for rear-junction SHJ solar cells with ultra-thin n-type nanocrystalline silicon oxide. Solar Energy Materials and Solar Cells, 2020, 209, 110471.	6.2	31
39	Transparent silicon carbide/tunnel SiO₂ passivation for câ€Si solar cell front side: Enabling J_{sc} > 42 mA/cm² and iV_{oc} of 742 mV. Progress in Photovoltaics: Research and Applications, 2020, 28, 321-327.	8.1	16
40	What is a deep defect? Combining Shockley-Read-Hall statistics with multiphonon recombination theory. Physical Review Materials, 2020, 4, .	2.4	38
41	How solar cell efficiency is governed by the Î±Î¼Ï„ product. Physical Review Research, 2020, 2, .	3.6	17
42	In Situ-Doped Silicon Thin Films for Passivating Contacts by Hot-Wire Chemical Vapor Deposition with a High Deposition Rate of 42 nm/min. ACS Applied Materials & Interfaces, 2019, 11, 30493-30499.	8.0	6
43	Guide for the perplexed to the Shockleyâ€“Queisser model for solar cells. Nature Photonics, 2019, 13, 501-505.	31.4	153
44	Charge Carrier Collection and Contact Selectivity in Solar Cells. Advanced Materials Interfaces, 2019, 6, 1900252.	3.7	39
45	Influence of Room Temperature Sputtered Al-Doped Zinc Oxide on Passivation Quality in Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 1485-1491.	2.5	16
46	Solar hydrogen production: a bottom-up analysis of different photovoltaicâ€“electrolysis pathways. Sustainable Energy and Fuels, 2019, 3, 801-813.	4.9	39
47	Poly-Si/SiOx/c-Si passivating contact with 738â€‰mV implied open circuit voltage fabricated by hot-wire chemical vapor deposition. Applied Physics Letters, 2019, 114, .	3.3	15
48	Geometrical Light Trapping in Thin c-Si Solar Cells beyond Lambertian Limit. , 2019, , .		1
49	Open-Circuit Voltages Exceeding 1.26 V in Planar Methylammonium Lead Iodide Perovskite Solar Cells. ACS Energy Letters, 2019, 4, 110-117.	17.4	296
50	Application of Raman spectroscopy for depth-dependent evaluation of the hydrogen concentration of amorphous silicon. Thin Solid Films, 2018, 653, 223-228.	1.8	10
51	Quantitative analysis of the transient photoluminescence of CH₃NH₃PbI₃/PC₆₁BM heterojunctions by numerical simulations. Sustainable Energy and Fuels, 2018, 2, 1027-1034.	4.9	103
52	Wet-Chemical Preparation of Silicon Tunnel Oxides for Transparent Passivated Contacts in Crystalline Silicon Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 14259-14263.	8.0	27
53	Bandgap Fluctuations Observed by EL in Various Cu(In,Ga)(Se,S)₂ PV Modules. IEEE Journal of Photovoltaics, 2018, 8, 272-277.	2.5	5
54	Impact of Small Phonon Energies on the Charge-Carrier Lifetimes in Metal-Halide Perovskites. Journal of Physical Chemistry Letters, 2018, 9, 939-946.	4.6	88

#	Article	IF	Citations
55	What Makes a Good Solar Cell?. Advanced Energy Materials, 2018, 8, 1703385.	19.5	167
56	Development of a Transparent Passivated Contact as a Front Side Contact for Silicon Heterojunction Solar Cells. , 2018, , .		6
57	How Contact Layers Control Shunting Losses from Pinholes in Thin-Film Solar Cells. Journal of Physical Chemistry C, 2018, 122, 27263-27272.	3.1	22
58	Application of Room Temperature Sputtered Al-doped Zinc Oxide in Silicon Heterojunction Solar Cells. , 2018, , .		3
59	Efficient light trapping in silicon heterojunction solar cells via nanoimprint periodic texturing. , 2018, , .		0
60	Cu(In,Ga)Se 2 Thin-Film Solar Cells. , 2018, , 371-418.		3
61	Optical design of spectrally selective interlayers for perovskite/silicon heterojunction tandem solar cells. Optics Express, 2018, 26, A750.	3.4	39
62	Statistics of the Auger Recombination of Electrons and Holes via Defect Levels in the Band Gapâ€"Application to Lead-Halide Perovskites. ACS Omega, 2018, 3, 8009-8016.	3.5	55
63	Linking structural properties with functionality in solar cell materials â€“ the effective mass and effective density of states. Sustainable Energy and Fuels, 2018, 2, 1550-1560.	4.9	15
64	Wide gap microcrystalline silicon carbide emitter for amorphous silicon oxide passivated heterojunction solar cells. Japanese Journal of Applied Physics, 2017, 56, 022302.	1.5	7
65	Decreasing Radiative Recombination Coefficients via an Indirect Band Gap in Lead Halide Perovskites. Journal of Physical Chemistry Letters, 2017, 8, 1265-1271.	4.6	57
66	Bandgap imaging in Cu(In,Ga)Se₂photovoltaic modules by electroluminescence. Progress in Photovoltaics: Research and Applications, 2017, 25, 184-191.	8.1	3
67	Manipulating the Net Radiative Recombination Rate in Lead Halide Perovskite Films by Modification of Light Outcoupling. Journal of Physical Chemistry Letters, 2017, 8, 5084-5090.	4.6	51
68	Selection Metric for Photovoltaic Materials Screening Based on Detailed-Balance Analysis. Physical Review Applied, 2017, 8, .	3.8	51
69	Compatibility study towards monolithic self-charging power unit based on all-solid thin-film solar module and battery. Journal of Power Sources, 2017, 365, 303-307.	7.8	17
70	Performance stability of photovoltaic modules in different climates. Progress in Photovoltaics: Research and Applications, 2017, 25, 968-981.	8.1	28
71	Approaching Solarâ€Grade aâ€Si:H for Photovoltaic Applications via Atmospheric Pressure CVD Using a Trisilaneâ€Derived Liquid Precursor. Solar Rrl, 2017, 1, 1700030.	5.8	5
72	Efficiency Potential of Photovoltaic Materials and Devices Unveiled by Detailed-Balance Analysis. Physical Review Applied, 2017, 7, .	3.8	252

#	Article	IF	Citations
73	Microscopic Perspective on Photovoltaic Reciprocity in Ultrathin Solar Cells. Physical Review Letters, 2017, 118, 247702.	7.8	34
74	Illumination intensity and spectrum-dependent performance of thin-film silicon single and multijunction solar cells. Solar Energy Materials and Solar Cells, 2017, 159, 427-434.	6.2	28
75	Determination and Modeling of Injection Dependent Series Resistance in CIGS Solar Cells. , 2017, , .		1
76	Detailed balance analysis of photovoltaic materials and devices. , 2017, , .		0
77	Investigating PV-battery 3-terminal Integration Concept as a Self-sustaining Power Solution. , 2017, , .		0
78	Understanding the energy yield of photovoltaic modules in different climates by linear performance loss analysis of the module performance ratio. IET Renewable Power Generation, 2017, 11, 558-565.	3.1	34
79	Impact of Periodicity of Inverted Pyramids on Anti-reflection and Light-trapping Properties in Silicon Heterojunction Solar Cells. , 2017, , .		1
80	Prototyping of nanophotonic grating back contacts for light trapping in planar silicon solar cells. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1949-1954.	1.8	3
81	Modeling and practical realization of thin film siliconâ€based integrated solar water splitting devices. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1738-1746.	1.8	24
82	Mechanism for crystalline Si surface passivation by the combination of SiO₂ tunnel oxide and Âµc-SiC:H thin film. Physica Status Solidi - Rapid Research Letters, 2016, 10, 233-236.	2.4	8
83	Analysis of Cu(In,Ga)Se2thin-film modules by electro-modulated luminescence. Journal of Applied Physics, 2016, 119, 095704.	2.5	10
84	Determination of PV outdoor parameters for thin film modules. , 2016, , .		0
85	Detailed balance analysis of photovoltaic materials and devices. , 2016, , .		1
86	Imaging photocurrent collection losses in solar cells. Applied Physics Letters, 2016, 109, .	3.3	8
87	Collected photocurrent imaging of CIGS solar cells via electro-modulated luminescence under different illumination conditions. , 2016, , .		0
88	A detailed analysis of visible defects formed in commercial silicon thin-film modules during outdoor exposure. , 2016, , .		1
89	Calculation of the TCO sheet resistance in thin film modules using electroluminescence imaging. , 2016, , .		3
90	Photon Tunneling in Tandem Solar Cells With Intermediate Reflector. IEEE Journal of Photovoltaics, 2016, 6, 597-603.	2.5	3

#	Article	IF	Citations
91	Impact of Photon Recycling on the Open-Circuit Voltage of Metal Halide Perovskite Solar Cells. ACS Energy Letters, 2016, 1, 731-739.	17.4	130
92	Effects of Thermochemical Treatment on CuSbS₂ Photovoltaic Absorber Quality and Solar Cell Reproducibility. Journal of Physical Chemistry C, 2016, 120, 18377-18385.	3.1	67
93	Extracting Information about the Electronic Quality of Organic Solar-Cell Absorbers from Fill Factor and Thickness. Physical Review Applied, 2016, 6, .	3.8	50
94	Development towards cell-to-cell monolithic integration of a thin-film solar cell and lithium-ion accumulator. Journal of Power Sources, 2016, 327, 340-344.	7.8	33
95	Field Emission at Grain Boundaries: Modeling the Conductivity in Highly Doped Polycrystalline Semiconductors. Physical Review Applied, 2016, 5, .	3.8	24
96	Reciprocity between Charge Injection and Extraction and Its Influence on the Interpretation of Electroluminescence Spectra in Organic Solar Cells. Physical Review Applied, 2016, 5, .	3.8	36
97	Post passivation light trapping back contacts for silicon heterojunction solar cells. Nanoscale, 2016, 8, 18726-18733.	5.6	8
98	Upscaling of integrated photoelectrochemical water-splitting devices to large areas. Nature Communications, 2016, 7, 12681.	12.8	101
99	Beyond Bulk Lifetimes: Insights into Lead Halide Perovskite Films from Time-Resolved Photoluminescence. Physical Review Applied, 2016, 6, .	3.8	194
100	Pronounced Surface Band Bending of Thin-Film Silicon Revealed by Modeling Core Levels Probed with Hard X-rays. ACS Applied Materials & Interfaces, 2016, 8, 17685-17693.	8.0	7
101	Photoelectrochemical application of thinâ€film silicon tripleâ€junction solar cell in batteries. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1926-1931.	1.8	16
102	Multijunction Si photocathodes with tunable photovoltages from 2.0 V to 2.8 V for light induced water splitting. Energy and Environmental Science, 2016, 9, 145-154.	30.8	156
103	Influence of the operating temperature on the performance of silicon based photoelectrochemical devices for water splitting. Materials Science in Semiconductor Processing, 2016, 42, 142-146.	4.0	17
104	Light-induced degradation of adapted quadruple junction thin film silicon solar cells for photoelectrochemical water splitting. Solar Energy Materials and Solar Cells, 2016, 145, 142-147.	6.2	27
105	Preparation and measurement of highly efficient aâ€Si:H single junction solar cells and the advantages of Î¼câ€Si_x:H nâ€layers. Progress in Photovoltaics: Research and Applications, 2015, 23, 939-948.	8.1	43
106	Angular dependence of light trapping in nanophotonic thin-film solar cells. Optics Express, 2015, 23, A1575.	3.4	10
107	Thermography and electroluminescence imaging of scribing failures in Cu(In,Ga)Se₂ thin film solar modules. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2877-2888.	1.8	6
108	Shunt mitigation in ZnO:Al/i-ZnO/CdS/Cu(In,Ga)Se₂solar modules by the i-ZnO/CdS buffer combination. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 541-546.	1.8	13

#	Article	IF	Citations
109	Defect Diagnostics of Scribing Failures and Cu-Rich Debris in Cu(In,Ga)Se<inline-formula><tex-math>$_2$ </tex-math></inline-formula> Thin-Film Solar Modules With Electroluminescence and Thermography. IEEE Journal of Photovoltaics, 2015, 5, 1179-1187.	2.5	7
110	Photon tunneling in tandem solar cells. , 2015, , .		0
111	Nanoscale investigation of polarization-dependent light coupling to individual waveguide modes of nanophotonic thin-film solar cells. , 2015, , .		0
112	Thermal Repair of Incomplete Back Contact Insulation (P1) in Cu(In,Ga)Se2 Photovoltaic Thin-Film Modules. Journal of Solar Energy Engineering, Transactions of the ASME, 2015, 137, .	1.8	0
113	A new 2D model for the electrical potential in a cell stripe in thinâ€film solar modules including local defects. Progress in Photovoltaics: Research and Applications, 2015, 23, 331-339.	8.1	7
114	Advanced large area characterization of thin-film solar modules by electroluminescence and thermography imaging techniques. Solar Energy Materials and Solar Cells, 2015, 135, 35-42.	6.2	52
115	Analysis of the light-induced degradation of differently matched tandem solar cells with and without an intermediate reflector using the Power Matching Method. Solar Energy Materials and Solar Cells, 2015, 143, 1-8.	6.2	4
116	Direct analysis of the current density vs. voltage curves of a CdTe module during outdoor exposure. Solar Energy, 2015, 113, 88-100.	6.1	7
117	Application and modeling of an integrated amorphous silicon tandem based device for solar water splitting. Solar Energy Materials and Solar Cells, 2015, 140, 275-280.	6.2	49
118	Solar water splitting with earth-abundant materials using amorphous silicon photocathodes and Al/Ni contacts as hydrogen evolution catalyst. Chemical Physics Letters, 2015, 638, 25-30.	2.6	24
119	Nanoscale Investigation of Polarization-Dependent Light Coupling to Individual Waveguide Modes in Nanophotonic Thin-Film Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1523-1527.	2.5	3
120	Electric properties and carrier multiplication in breakdown sites in multi-crystalline silicon solar cells. Journal of Applied Physics, 2015, 117, 205703.	2.5	1
121	Electrical Repair of Incomplete Back Contact Insulation (P1) in Cu(In,Ga)Se<inline-formula><tex-math>$_2$</tex-math></inline-formula> Photovoltaic Thin-Film Modules. IEEE Journal of Photovoltaics, 2015, 5, 1197-1205.	2.5	2
122	Coupling Incident Light to Guided Modes in Thin-Film Tandem Solar Cells With Intermediate Reflector. IEEE Journal of Photovoltaics, 2015, 5, 3-8.	2.5	3
123	Cu(In,Ga)Se₂ AND RELATED SOLAR CELLS. Series on Photoconversion of Solar Energy, 2014, , 245-305.	0.2	3
124	a-Si:H/Âµc-Si:H tandem junction based photocathodes with high open-circuit voltage for efficient hydrogen production. Journal of Materials Research, 2014, 29, 2605-2614.	2.6	34
125	Photocurrent collection efficiency mapping of a silicon solar cell by a differential luminescence imaging technique. Applied Physics Letters, 2014, 105, .	3.3	24
126	Optimizing the geometry of plasmonic reflection grating back contacts for improved light trapping in prototype amorphous silicon thin-film solar cells. Proceedings of SPIE, 2014, , .	0.8	0

#	Article	IF	Citations
127	Disordered nanophotonic light management in thin-film photovoltaics. , 2014, , .		0
128	Advancing tandem solar cells by spectrally selective multilayer intermediate reflectors. Optics Express, 2014, 22, A1270.	3.4	26
129	Direct analysis of the current-voltage curves of outdoor-degrading modules. , 2014, , .		0
130	On the impact of defects in solar modules and the interaction between monolithically interconnected cells. , 2014, , .		0
131	Small-signal lock-in thermography at the maximum power point of an a-Si solar mini-module. Physica Status Solidi - Rapid Research Letters, 2014, 8, 894-897.	2.4	2
132	Degradation of tandem solar cells: Separating matching effects from Staebler-Wronski Effect using the Power-Matching-Method. , 2014, , .		1
133	On the geometry of plasmonic reflection grating back contacts for light trapping in prototype amorphous silicon thin-film solar cells. Journal of Photonics for Energy, 2014, 5, 057004.	1.3	12
134	Development of Thin Film Amorphous Silicon Tandem Junction Based Photocathodes Providing High Open-Circuit Voltages for Hydrogen Production. International Journal of Photoenergy, 2014, 2014, 1-10.	2.5	37
135	Deposition of intrinsic hydrogenated amorphous silicon for thin-film solar cells - a comparative study for layers grown statically by RF-PECVD and dynamically by VHF-PECVD. Progress in Photovoltaics: Research and Applications, 2014, 22, 198-207.	8.1	5
136	Solutionâ€Based Silicon in Thinâ€Film Solar Cells. Advanced Energy Materials, 2014, 4, 1301871.	19.5	31
137	Disorder improves nanophotonic light trapping in thin-film solar cells. Applied Physics Letters, 2014, 104, .	3.3	52
138	Optically active defects in SiC, SiOx single layers and SiC/SiOx hetero-superlattices. Solar Energy Materials and Solar Cells, 2014, 129, 3-6.	6.2	3
139	On the thermodynamics of light trapping in solar cells. Nature Materials, 2014, 13, 103-104.	27.5	23
140	Impact of doped microcrystalline silicon oxide layers on crystalline silicon surface passivation. Canadian Journal of Physics, 2014, 92, 758-762.	1.1	10
141	Nanoscale Observation of Waveguide Modes Enhancing the Efficiency of Solar Cells. Nano Letters, 2014, 14, 6599-6605.	9.1	34
142	Thermodynamics of light management in photovoltaic devices. Physical Review B, 2014, 90, .	3.2	163
143	Effect of localized states on the reciprocity between quantum efficiency and electroluminescence in Cu(In,Ga)Se2 and Si thin-film solar cells. Solar Energy Materials and Solar Cells, 2014, 129, 95-103.	6.2	26
144	Novel series connection concept for thin film solar modules. Progress in Photovoltaics: Research and Applications, 2013, 21, 972-979.	8.1	14

#	Article	IF	Citations
145	Analysis of short circuit current gains by an antiâ€reflective textured cover on silicon thin film solar cells. Progress in Photovoltaics: Research and Applications, 2013, 21, 1672-1681.	8.1	70
146	Cu(In,Ga)Se2 Thin-Film Solar Cells. , 2013, , 261-304.		4
147	Microcrystalline siliconâ€“oxygen alloys for application in silicon solar cells and modules. Solar Energy Materials and Solar Cells, 2013, 119, 134-143.	6.2	103
148	Effect of light soaking on the electro- and photoluminescence of Cu(In,Ga)Se2 solar cells. Applied Physics Letters, 2013, 103, .	3.3	14
149	Plasmonic back contacts with non-ordered Ag nanostructures for light trapping in thin-film silicon solar cells. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2013, 178, 630-634.	3.5	15
150	Transient phenomena in Cu(In,Ga)Se2 solar modules investigated by electroluminescence imaging. Thin Solid Films, 2013, 535, 307-310.	1.8	16
151	Electrical characterization of P3 isolation lines patterned with a UV laser incident from the film side on thin-film silicon solar cells. Solar Energy Materials and Solar Cells, 2013, 108, 87-92.	6.2	6
152	Energy yield of thin-film PV modules and the relevance of low irradiance, spectral and temperature effects. , 2013, , .		0
153	Local junction voltages and radiative ideality factors of a-Si:H solar modules determined by electroluminescence imaging. Materials Research Society Symposia Proceedings, 2013, 1536, 105-111.	0.1	1
154	Matching of Silicon Thin-Film Tandem Solar Cells for Maximum Power Output. International Journal of Photoenergy, 2013, 2013, 1-7.	2.5	33
155	Optimized amorphous silicon oxide buffer layers for silicon heterojunction solar cells with microcrystalline silicon oxide contact layers. Journal of Applied Physics, 2013, 113, 134501.	2.5	52
156	Quantitative evaluation method for electroluminescence images of aâ€Si:H thinâ€film solar modules. Physica Status Solidi - Rapid Research Letters, 2013, 7, 627-630.	2.4	14
157	Wide Gap Microcrystalline Silicon Oxide Emitter for a-SiO_x:H/c-Si Heterojunction Solar Cells. Japanese Journal of Applied Physics, 2013, 52, 122304.	1.5	38
158	Measurement and modeling of reverse biased electroluminescence in multi-crystalline silicon solar cells. Journal of Applied Physics, 2013, 114, .	2.5	9
159	Analysis of the series resistance in pin-type thin-film silicon solar cells. Journal of Applied Physics, 2013, 113, .	2.5	21
160	Electroluminescence of Cu(In,Ga)Se2 solar cells and modules. Materials Research Society Symposia Proceedings, 2013, 1538, 133-144.	0.1	0
161	Spectrally selective intermediate reflectors for tandem thin-film silicon solar cells. , 2013, , .		5
162	Analysis of sub-stoichiometric hydrogenated silicon oxide films for surface passivation of crystalline silicon solar cells. Journal of Applied Physics, 2012, 112, 054905.	2.5	37

#	Article	IF	Citations
163	Superposition and Reciprocity in the Electroluminescence and Photoluminescence of Solar Cells. IEEE Journal of Photovoltaics, 2012, 2, 169-172.	2.5	60
164	Annealing induced defects in SiC, SiO_x single layers, and SiC/SiO_x heteroâ€superlattices. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1960-1964.	1.8	7
165	Modelling of photo- and electroluminescence of hydrogenated microcrystalline silicon solar cells. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1963-1967.	0.8	12
166	Defect passivation by hydrogen reincorporation for silicon quantum dots in SiC/SiOx hetero-superlattice. Journal of Non-Crystalline Solids, 2012, 358, 2145-2149.	3.1	20
167	Optical simulations of microcrystalline silicon solar cells applying plasmonic reflection grating back contacts. Journal of Photonics for Energy, 2012, 2, 027002.	1.3	18
168	Simulations of geometry effects and loss mechanisms affecting the photon collection in photovoltaic fluorescent collectors. EPJ Photovoltaics, 2012, 3, 30101.	1.6	7
169	Silicon heterojunction solar cell with amorphous silicon oxide buffer and microcrystalline silicon oxide contact layers. Physica Status Solidi - Rapid Research Letters, 2012, 6, 193-195.	2.4	49
170	Cu(In,Ga)Se2 Thin-Film Solar Cells. , 2012, , 323-371.		3
171	Field-dependent exciton dissociation in organic heterojunction solar cells. Physical Review B, 2012, 85, .	3.2	33
172	3D photonic crystal intermediate reflectors for enhanced light-trapping in tandem solar cells. , 2012, , .		0
173	Plasmonic Reflection-Grating Back Contacts for Light Trapping in Thin-Film Silicon Solar Cells. , 2012, , .		0
174	Understanding junction breakdown in multicrystalline solar cells. Journal of Applied Physics, 2011, 109, .	2.5	111
175	Silicon quantum dot formation in SiC/SiOx hetero-superlattice. Energy Procedia, 2011, 10, 249-254.	1.8	17
176	Design of nanostructured plasmonic back contacts for thin-film silicon solar cells. Optics Express, 2011, 19, A1219.	3.4	93
177	Threeâ€Dimensional Photonic Crystal Intermediate Reflectors for Enhanced Lightâ€Trapping in Tandem Solar Cells. Advanced Materials, 2011, 23, 3896-3900.	21.0	58
178	Photonic Crystal Intermediate Reflector in Micromorph Tandem Solar Cells. , 2011, , .		1
179	Characterization and simulation of a-Si:H/Î¼c-Si:H tandem solar cells. Solar Energy Materials and Solar Cells, 2011, 95, 3318-3327.	6.2	78
180	Recombination via tail states in polythiophene:fullerene solar cells. Physical Review B, 2011, 83, .	3.2	345

#	Article	IF	Citations
181	Investigation of laser scribing of a-Si:H from the film side for solar modules using a UV laser with ns pulses. Applied Physics A: Materials Science and Processing, 2011, 105, 355-362.	2.3	8
182	Ray tracing for the optics at nanoâ€textured ZnOâ€“air and ZnOâ€“silicon interfaces. Progress in Photovoltaics: Research and Applications, 2011, 19, 724-732.	8.1	13
183	Structure and electronic properties of Î¼c-SiC:H for photovoltaic applications. Journal of Physics: Conference Series, 2011, 326, 012019.	0.4	10
184	Plasmonic reflection grating back contacts for microcrystalline silicon solar cells. Applied Physics Letters, 2011, 99, .	3.3	122
185	Optical simulations and prototyping of microcrystalline silicon solar cells with integrated plasmonic reflection grating back contacts. Proceedings of SPIE, 2011, , .	0.8	1
186	3D photonic crystals for photon management in solar cells. , 2010, , .		1
187	Inverted-opal photonic crystals for ultra light-trapping in solar cells. Proceedings of SPIE, 2010, , .	0.8	1
188	Ray tracing analysis of light scattering properties of randomly nano-textured ZnO films. , 2010, , .		1
189	Quantitative electroluminescence analysis of resistive losses in Cu(In, Ga)Se2 thin-film modules. Solar Energy Materials and Solar Cells, 2010, 94, 979-984.	6.2	85
190	Reverse biased electroluminescence spectroscopy of crystalline silicon solar cells with high spatial resolution. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2597-2600.	1.8	21
191	Annealing studies of substoichiometric amorphous SiOxlayers for c-Si surface passivation. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, NA-NA.	0.8	7
192	Localized plasmonic losses at metal back contacts of thin-film silicon solar cells. , 2010, , .		18
193	Enhanced light trapping in thin amorphous silicon solar cells by directionally selective optical filters. , 2010, , .		1
194	Enhanced light trapping in thin-film solar cells by a directionally selective filter. Optics Express, 2010, 18, A133.	3.4	30
195	Efficiency limits of Si/SiO2 quantum well solar cells from first-principles calculations. Journal of Applied Physics, 2009, 105, 104511.	2.5	40
196	Electroluminescence imaging of Cu(In,Ga)Se₂ thin film modules. Materials Research Society Symposia Proceedings, 2009, 1165, 1.	0.1	6
197	Evaluation of electron beam induced current profiles of Cu(In,Ga)Se2 solar cells with different Ga-contents. Thin Solid Films, 2009, 517, 2357-2359.	1.8	21
198	Grain boundaries in Cu(In,â€‰Ga)(Se,â€‰S)2 thin-film solar cells. Applied Physics A: Materials Science and Processing, 2009, 96, 221-234.	2.3	158

#	Article	IF	Citations
199	Reciprocity between electroluminescence and quantum efficiency used for the characterization of silicon solar cells. Progress in Photovoltaics: Research and Applications, 2009, 17, 394-402.	8.1	86
200	Modeling charge carrier collection in multiple exciton generating PbSe quantum dots. Thin Solid Films, 2009, 517, 2438-2442.	1.8	6
201	Efficiency Limits of Organic Bulk Heterojunction Solar Cells. Journal of Physical Chemistry C, 2009, 113, 17958-17966.	3.1	215
202	Mobility dependent efficiencies of organic bulk heterojunction solar cells: Surface recombination and charge transfer state distribution. Physical Review B, 2009, 80, .	3.2	94
203	Material development for dye solar modules: results from an integrated approach. Progress in Photovoltaics: Research and Applications, 2008, 16, 489-501.	8.1	66
204	Theoretical and experimental analysis of photonic structures for fluorescent concentrators with increased efficiencies. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2811-2821.	1.8	52
205	Directional selectivity and ultraâ€lightâ€trapping in solar cells. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2831-2843.	1.8	57
206	Detailed balance and reciprocity in solar cells. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2737-2751.	1.8	112
207	Preface: phys. stat. sol. (a) 205/12. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2735-2736.	1.8	3
208	Note on the interpretation of electroluminescence images using their spectral information. Solar Energy Materials and Solar Cells, 2008, 92, 1621-1627.	6.2	40
209	Charge separation in excitonic and bipolar solar cells â€" A detailed balance approach. Thin Solid Films, 2008, 516, 7144-7148.	1.8	11
210	Electro-optical modeling of bulk heterojunction solar cells. Journal of Applied Physics, 2008, 104, .	2.5	67
211	Detailed balance theory of excitonic and bulk heterojunction solar cells. Physical Review B, 2008, 78, .	3.2	99
212	Internal voltages in GaInPâˆ•GaInAsâˆ•Ge multijunction solar cells determined by electroluminescence measurements. Applied Physics Letters, 2008, 92, .	3.3	136
213	Rugate filter for light-trapping in solar cells. Optics Express, 2008, 16, 9332.	3.4	62
214	Efficient light trapping scheme by periodic and quasi-random light trapping structures. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	2
215	Optimization of Rugate filters for ultra light-trapping in solar cells. , 2008, , .		0
216	Enhanced Light-trapping in Solar Cells by Directional Selective Optical Filters. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	0

#	Article	IF	Citations
217	Loss Mechanisms in Photovoltaic Fluorescent Collectors. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	0
218	Quantification of Light Trapping Using a Reciprocity Between Electroluminescent Emission and Photovoltaic Action in a Solar Cell. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	3
219	Influence of base pressure and atmospheric contaminants on a-Si:H solar cell properties. Journal of Applied Physics, 2008, 104, 094507.	2.5	25
220	Numerical simulation of carrier collection and recombination at grain boundaries in Cu(In,Ga)Se2 solar cells. Journal of Applied Physics, 2008, 103, .	2.5	71
221	Finite mobility effects on the radiative efficiency limit of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>p</mml:mi><mml:mi>n</mml:mi></mml:mrow></mml:math>-junction solar cells. Physical Review B, 2008, 77, .	3.2	64
222	Geometry effects on photon collection in photovoltaic fluorescent collectors. , 2008, , .		3
223	Directional selectivity and light-trapping in solar cells. Proceedings of SPIE, 2008, , .	0.8	4
224	Electroluminescence analysis of high efficiency Cu(In,Ga)Se2 solar cells. Journal of Applied Physics, 2007, 102, 104510.	2.5	93
225	Can Grain Boundaries Improve the Performance of Cu(In,Ga)Se2 Solar Cells?. Materials Research Society Symposia Proceedings, 2007, 1012, 1.	0.1	0
226	Electroluminescence from Cu(In,Ga)Se2 Thin-film Solar Cells. Materials Research Society Symposia Proceedings, 2007, 1012, 1.	0.1	1
227	Resistive Losses at c-Si/a-Si:H/ZnO Contacts for Heterojunction Solar Cells. Materials Research Society Symposia Proceedings, 2007, 989, 4.	0.1	0
228	Recombination and resistive losses at ZnOâˆ•a-Si:Hâˆ•c-Si interfaces in heterojunction back contacts for Si solar cells. Journal of Applied Physics, 2007, 102, .	2.5	23
229	Reciprocity relation between photovoltaic quantum efficiency and electroluminescent emission of solar cells. Physical Review B, 2007, 76, .	3.2	956
230	Light absorption and emission in semiconductors with band gap fluctuationsâ€”A study on Cu(In,Ga)Se2 thin films. Journal of Applied Physics, 2007, 101, 113519.	2.5	106
231	Carrier collection in Cu(In,Ga)Se2 solar cells with graded band gaps and transparent ZnO:Al back contacts. Solar Energy Materials and Solar Cells, 2007, 91, 689-695.	6.2	43
232	Characterization of the CdS/Cu(In,Ga)Se2 interface by electron beam induced currents. Thin Solid Films, 2007, 515, 6163-6167.	1.8	32
233	Comparative study of electroluminescence from Cu(In,Ga)Se2 and Si solar cells. Thin Solid Films, 2007, 515, 6238-6242.	1.8	96
234	Time constants of open circuit voltage relaxation in Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2007, 515, 6243-6245.	1.8	10

#	Article	IF	Citations
235	High quality baseline for high efficiency, Cu(In1â^'x,Gax)Se2 solar cells. Progress in Photovoltaics: Research and Applications, 2007, 15, 507-519.	8.1	175
236	Improvement of photon collection in Cu(In,Ga)Se2 solar cells and modules by fluorescent frequency conversion. Thin Solid Films, 2007, 515, 5964-5967.	1.8	38
237	Influence of Cu content on electronic transport and shunting behavior of Cu(In,Ga)Se2 solar cells. Journal of Applied Physics, 2006, 99, 014906.	2.5	109
238	Glass Frit Sealed Dye Solar Modules with Adaptable Screen Printed Design. , 2006, , .		4
239	Collection and conversion properties of photovoltaic fluorescent collectors with photonic band stop filters. , 2006, , .		12
240	20Â·5% efficient silicon solar cell with a low temperature rear side process using laser-fired contacts. Progress in Photovoltaics: Research and Applications, 2006, 14, 653-662.	8.1	39
241	Low-temperature a-Si:H/ZnO/Al back contacts for high-efficiency silicon solar cells. Solar Energy Materials and Solar Cells, 2006, 90, 1345-1352.	6.2	60
242	Texture and electronic activity of grain boundaries in Cu(In,Ga)Se2 thin films. Applied Physics A: Materials Science and Processing, 2006, 82, 1-7.	2.3	87
243	Collection Properties of Photovoltaic Fluorescent Systems - Simulations and Experiments. , 2006, , .		1
244	Spatial inhomogeneities in Cu(In,Ga)Se2 solar cells analyzed by an electron beam induced voltage technique. Journal of Applied Physics, 2006, 100, 124501.	2.5	23
245	Anodizing Method Yielding Multiple Porous Seed Layers for the Epitaxial Growth of Monocrystalline Si Films. Journal of the Electrochemical Society, 2006, 153, C133.	2.9	3
246	Response to â€œComment on â€˜Efficiency limits of photovoltaic fluorescent collectorsâ€™ [Appl. Phys. Lett. 87, 171101 (2005)]â€• Applied Physics Letters, 2006, 88, 176102.	3.3	7
247	Formation of transparent and ohmic ZnO:Al/MoSe2 contacts for bifacial Cu(In,Ga)Se2 solar cells and tandem structures. Thin Solid Films, 2005, 480-481, 67-70.	1.8	80
248	Influence of built-in voltage in optimized extremely thin absorber solar cells. Thin Solid Films, 2005, 480-481, 447-451.	1.8	8
249	Efficiency limitations of polycrystalline thin film solar cells: case of Cu(In,Ga)Se2. Thin Solid Films, 2005, 480-481, 399-409.	1.8	223
250	Numerical simulation of grain boundary effects in Cu(In,Ga)Se2 thin-film solar cells. Thin Solid Films, 2005, 480-481, 8-12.	1.8	59
251	A multi-diode model for spatially inhomogeneous solar cells. Thin Solid Films, 2005, 487, 14-18.	1.8	21
252	Modeling of spatially inhomogeneous solar cells by a multi-diode approach. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 2920-2927.	1.8	61

#	Article	IF	Citations
253	Cu(In,Ga)Se2 thin-film solar cells. , 2005, , 303-349.		2
254	Characterization of a-Si:Hâˆ•c-Si interfaces by effective-lifetime measurements. Journal of Applied Physics, 2005, 98, 093711.	2.5	49
255	Band gap fluctuations in Cu(In,Ga)Se₂ thin films. Materials Research Society Symposia Proceedings, 2005, 865, 1641.	0.1	5
256	Efficiency limits of photovoltaic fluorescent collectors. Applied Physics Letters, 2005, 87, 171101.	3.3	109
257	Texture of Cu(In,Ga)Se2thin films and nanoscale cathodoluminescence. Journal of Physics Condensed Matter, 2004, 16, S85-S89.	1.8	30
258	Highly resistive Cu(In,Ga)Se2 absorbers for improved low-irradiance performance of thin-film solar cells. Thin Solid Films, 2004, 451-452, 160-165.	1.8	24
259	Minority carrier collection in CuGaSe2 solar cells. Thin Solid Films, 2004, 451-452, 430-433.	1.8	8
260	Modeling extremely thin absorber solar cells for optimized design. Progress in Photovoltaics: Research and Applications, 2004, 12, 573-591.	8.1	79
261	Resistive limitations to spatially inhomogeneous electronic losses in solar cells. Applied Physics Letters, 2004, 85, 6010-6012.	3.3	81
262	Radiative efficiency limits of solar cells with lateral band-gap fluctuations. Applied Physics Letters, 2004, 84, 3735-3737.	3.3	209
263	Diffusion-limited transport of I[sub 3][sup â^'] through nanoporous TiO[sub 2]-polymer gel networks. Journal of Chemical Physics, 2004, 121, 11374.	3.0	27
264	Closed-form expression for the current/ voltage characteristics of pin solar cells. Applied Physics A: Materials Science and Processing, 2003, 77, 865-871.	2.3	29
265	Influence of heterointerfaces on the performance of Cu(In,Ga)Se2 solar cells with CdS and In(OHx,Sy) buffer layers. Thin Solid Films, 2003, 431-432, 330-334.	1.8	35
266	Consequence of 3-MeV electron irradiation on the photovoltaic output parameters of Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2003, 431-432, 453-456.	1.8	14
267	Compositional trends of defect energies, band alignments, and recombination mechanisms in the Cu(In,Ga)(Se,S)2 alloy system. Thin Solid Films, 2003, 431-432, 158-162.	1.8	59
268	Influence of the selenium flux on the growth of Cu(In,Ga)Se2 thin films. Thin Solid Films, 2003, 431-432, 31-36.	1.8	77
269	High band gap Cu(In,Ga)Se2 solar cells and modules prepared with in-line co-evaporation. Thin Solid Films, 2003, 431-432, 543-547.	1.8	17
270	Fermi level pinning at CdS/Cu(In,Ga)(Se,S)2 interfaces: effect of chalcopyrite alloy composition. Journal of Physics and Chemistry of Solids, 2003, 64, 1591-1595.	4.0	79

#	Article	IF	Citations
271	Influence of the Built-in Voltage on the Fill Factor of Dye-Sensitized Solar Cells. Journal of Physical Chemistry B, 2003, 107, 13258-13261.	2.6	69
272	Reply to Comments on â€œElectronic Transport in Dye-Sensitized Nanoporous TiO2Solar CellsComparison of Electrolyte and Solid-State Devicesâ€• On the Photovoltaic Action in pn-Junction and Dye-Sensitized Solar Cells. Journal of Physical Chemistry B, 2003, 107, 13547-13550.	2.6	22
273	Method to extract diffusion length from solar cell parametersâ€”Application to polycrystalline silicon. Journal of Applied Physics, 2003, 93, 5447-5455.	2.5	37
274	Diffusion Limitations to I[sub 3][sup â^’]/I[sup â^’] Electrolyte Transport Through Nanoporous TiO[sub 2] Networks. Electrochemical and Solid-State Letters, 2003, 6, E11.	2.2	40
275	Electronic Transport in Dye-Sensitized Nanoporous TiO2Solar CellsComparison of Electrolyte and Solid-State Devices. Journal of Physical Chemistry B, 2003, 107, 3556-3564.	2.6	126
276	Analysis of recombination centers in epitaxial silicon thin-film solar cells by temperature-dependent quantum efficiency measurements. Applied Physics Letters, 2003, 82, 2637-2639.	3.3	15
277	Illumination-induced recovery of Cu(In,Ga)Se2 solar cells after high-energy electron irradiation. Applied Physics Letters, 2003, 82, 1410-1412.	3.3	10
278	Cu(In,Ga)Se2 Thin-Film Solar Cells. , 2003, , 367-413.		3
279	A Simple Method to Extract the Diffusion Length from the Output Parameters of Solar Cells - Application to Polycrystalline Silicon. Solid State Phenomena, 2003, 93, 399-404.	0.3	3
280	Cathodoluminescence Studies of Cu(In,Ga)Se₂ Thin-Films. Solid State Phenomena, 2003, 93, 133-140.	0.3	2
281	Modification of Cu(In, Ga)Se2 Surface by Treatment in Cadmium Solutions. Materials Research Society Symposia Proceedings, 2003, 763, 8171.	0.1	2
282	Role of Surface Band Gap Widening in Cu(In, Ga)(Se, S)2 Thin-Films for the Photovoltaic Performance of ZnO/CdS/Cu(In, Ga)(Se, S)2 Heterojunction Solar Cells. Materials Research Society Symposia Proceedings, 2003, 763, 881.	0.1	4
283	Spectral dependence and Hall effect of persistent photoconductivity in polycrystalline Cu(In,Ga)Se2 thin films. Journal of Applied Physics, 2002, 91, 5093-5099.	2.5	48
284	Control of secondary phase segregations during CuGaSe2 thin-film growth. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 1247-1253.	2.1	12
285	Composition dependence of defect energies and band alignments in the Cu(In1â^’xGax)(Se1â^’ySy)2 alloy system. Journal of Applied Physics, 2002, 91, 1391-1399.	2.5	111
286	Interdependence of absorber composition and recombination mechanism in Cu(In,Ga)(Se,S)2 heterojunction solar cells. Applied Physics Letters, 2002, 80, 2598-2600.	3.3	248
287	Electrical characterisation of dye sensitised nanocrystalline TiO2 solar cells with liquid electrolyte and solid-state organic hole conductor. Thin Solid Films, 2002, 403-404, 242-246.	1.8	34
288	Optimization and characterization of amorphous/crystalline silicon heterojunction solar cells. Progress in Photovoltaics: Research and Applications, 2002, 10, 1-13.	8.1	131

#	Article	IF	Citations
289	Role of the CdS buffer layer as an active optical element in Cu(In,Ga)Se2 thin-film solar cells. Progress in Photovoltaics: Research and Applications, 2002, 10, 457-463.	8.1	71
290	Defect generation in Cu(In,Ga)Se2 heterojunction solar cells by high-energy electron and proton irradiation. Journal of Applied Physics, 2001, 90, 650-658.	2.5	98
291	High-Energy Electron and Proton Irradiation of Cu(In,Ga)Se₂Heterojunction Solar Cells. Materials Research Society Symposia Proceedings, 2001, 668, 1.	0.1	6
292	Band alignments in the Cu(In,Ga)(S,Se) 2 alloy system determined from deep-level defect energies. Applied Physics A: Materials Science and Processing, 2001, 73, 769-772.	2.3	24
293	Influence of the Ga-content on the bulk defect densities of Cu(In,Ga)Se2. Thin Solid Films, 2001, 387, 71-73.	1.8	192
294	CuGaSe2-based superstrate solar cells. Thin Solid Films, 2001, 387, 74-76.	1.8	12
295	Back surface band gap gradings in Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2001, 387, 11-13.	1.8	140
296	Electronic properties of ZnO/CdS/Cu(In,Ga)Se2 solar cells â€" aspects of heterojunction formation. Thin Solid Films, 2001, 387, 141-146.	1.8	221
297	Radiation resistance of Cu(In,Ga)Se2 solar cells under 1-MeV electron irradiation. Thin Solid Films, 2001, 387, 228-230.	1.8	54
298	Classification of metastabilities in the electrical characteristics of ZnO/CdS/Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2001, 387, 147-150.	1.8	78
299	The role of structural properties and defects for the performance of Cu-chalcopyrite-based thin-film solar cells. Physica B: Condensed Matter, 2001, 308-310, 1081-1085.	2.7	32
300	Electrical characterization of Cu(In,Ga)Se2 thin-film solar cells and the role of defects for the device performance. Solar Energy Materials and Solar Cells, 2001, 67, 137-143.	6.2	108
301	Sodium induced secondary phase segregations in CuGaSe2 thin films. Journal of Crystal Growth, 2001, 233, 13-21.	1.5	19
302	A new approach to high-efficiency solar cells by band gap grading in Cu(In,Ga)Se2 chalcopyrite semiconductors. Solar Energy Materials and Solar Cells, 2001, 67, 145-150.	6.2	206
303	Structural and Electronic Properties of Polycrystalline Cu(In,Ga)(S,Se)₂ Alloys. Materials Research Society Symposia Proceedings, 2001, 668, 1.	0.1	13
304	Two-Dimensional Simulations of Microcrystalline Silicon Solar Cells. Solid State Phenomena, 2001, 80-81, 311-316.	0.3	7
305	Device Analysis of Cu(In,Ga)Se₂Heterojunction Solar Cells - Some Open Questions. Materials Research Society Symposia Proceedings, 2001, 668, 1.	0.1	31
306	Grain Boundary Recombination in Thin-Film Silicon Solar Cells. Solid State Phenomena, 2001, 80-81, 299-304.	0.3	20

#	Article	IF	Citations
307	Cu(In,Ga)Se₂ SOLAR CELLS. Series on Photoconversion of Solar Energy, 2001, , 277-345.	0.2	30
308	Defect annealing in Cu(In,Ga)Se2 heterojunction solar cells after high-energy electron irradiation. Applied Physics Letters, 2001, 79, 2922-2924.	3.3	47
309	Open Circuit Voltage Limitations in CuIn1-xGaxSe2 Thin-Film Solar Cells - Dependence on Alloy Composition. Physica Status Solidi A, 2000, 179, R7-R8.	1.7	69
310	Photogeneration and carrier recombination in graded gap Cu(In, Ga)Se/sub 2/ solar cells. IEEE Transactions on Electron Devices, 2000, 47, 2249-2254.	3.0	55
311	Electronically active defects in CuGaSe 2 -based heterojunction solar cells. Thin Solid Films, 2000, 361-362, 415-419.	1.8	7
312	Electronic loss mechanisms in chalcopyrite based heterojunction solar cells. Thin Solid Films, 2000, 361-362, 298-302.	1.8	118
313	Interface redox engineering of Cu(In,Ga)Se 2 â€“ based solar cells: oxygen, sodium, and chemical bath effects. Thin Solid Films, 2000, 361-362, 353-359.	1.8	96
314	Influence of sodium on the growth of polycrystalline Cu(In,Ga)Se 2 thin films. Thin Solid Films, 2000, 361-362, 161-166.	1.8	173
315	Influence of damp heat on the electrical properties of Cu(In,Ga)Se 2 solar cells. Thin Solid Films, 2000, 361-362, 283-287.	1.8	48
316	Recombination and Resistive Losses in Amorphous Silicon / Crystalline Silicon Heterojunction Solar Cells. Materials Research Society Symposia Proceedings, 2000, 609, 1311.	0.1	5
317	Role of Defects and Defect Metastabilities for the Performance and Stability of Cu(In,Ga)Se2Based Solar Cells. Japanese Journal of Applied Physics, 2000, 39, 389.	1.5	6
318	Stability Issues of Cu(In,Ga)Se2-Based Solar Cells. Journal of Physical Chemistry B, 2000, 104, 4849-4862.	2.6	235
319	Electronic properties of CuGaSe2-based heterojunction solar cells. Part II. Defect spectroscopy. Journal of Applied Physics, 2000, 87, 594-602.	2.5	96
320	Electronic properties of CuGaSe2-based heterojunction solar cells. Part I. Transport analysis. Journal of Applied Physics, 2000, 87, 584-593.	2.5	313
321	Charge carrier transport via defect states inCu(In,Ga)Se2thin films andCu(In,Ga)Se2/CdS/ZnOheterojunctions. Physical Review B, 2000, 61, 16052-16059.	3.2	16
322	Recombination mechanisms in amorphous silicon/crystalline silicon heterojunction solar cells. Journal of Applied Physics, 2000, 87, 2639-2645.	2.5	113
323	Heterojunctions for Polycrystalline Silicon Solar Cells. Solid State Phenomena, 1999, 67-68, 571-576.	0.3	6
324	Air-Annealing Effects on Polycrystalline Cu(In,Ga)Se₂ Heterojunctions. Solid State Phenomena, 1999, 67-68, 409-414.	0.3	20

#	Article	IF	Citations
325	Injection and Collection Diffusion Lengths of Polycrystalline Thin-Film Solar Cells. Solid State Phenomena, 1999, 67-68, 81-88.	0.3	17
326	An Analytical Model for Rectifying Contacts on Polycrystalline Semiconductors. Solid State Phenomena, 1999, 67-68, 553-558.	0.3	2
327	Effective diffusion lengths for minority carriers in solar cells as determined from internal quantum efficiency analysis. Journal of Applied Physics, 1999, 85, 3634-3637.	2.5	25
328	Electronic properties of Cu(In,Ga)Se 2 heterojunction solar cells-recent achievements, current understanding, and future challenges. Applied Physics A: Materials Science and Processing, 1999, 69, 131-147.	2.3	522
329	Cu(In,Ga)Se2 Solar Cells: Device Stability Based on Chemical Flexibility. Advanced Materials, 1999, 11, 957-961.	21.0	103
330	Two-dimensional simulation of thin-film silicon solar cells with innovative device structures. Progress in Photovoltaics: Research and Applications, 1999, 7, 85-100.	8.1	3
331	Cu(In,Ga)Se2 solar cells with a ZnSe buffer layer: interface characterization by quantum efficiency measurements. Progress in Photovoltaics: Research and Applications, 1999, 7, 423-436.	8.1	58
332	Tunneling-enhanced recombination in Cu(In,â€ŠGa)Se2 heterojunction solar cells. Applied Physics Letters, 1999, 74, 111-113.	3.3	137
333	Oxygenation and air-annealing effects on the electronic properties of Cu(In,Ga)Se2 films and devices. Journal of Applied Physics, 1999, 86, 497-505.	2.5	174
334	Phase segregation, Cu migration and junction formation in Cu(In,ÂGa)Se2. EPJ Applied Physics, 1999, 6, 131-139.	0.7	121
335	A model for the open circuit voltage relaxation in Cu(In,Ga)Se2heterojunction solar cells. EPJ Applied Physics, 1999, 8, 43-52.	0.7	34
336	Cu(In,Ga)Se2 Solar Cells: Device Stability Based on Chemical Flexibility. Advanced Materials, 1999, 11, 957-961.	21.0	5
337	Quantum efficiency and admittance spectroscopy on Cu(In,Ga)Se2 solar cells. Solar Energy Materials and Solar Cells, 1998, 50, 79-85.	6.2	13
338	Model for electronic transport in Cu(In,Ga)Se2 solar cells. Progress in Photovoltaics: Research and Applications, 1998, 6, 407-421.	8.1	190
339	Impact of Na and S incorporation on the electronic transport mechanisms of Cu(In, Ga)Se2 solar cells. Solid State Communications, 1998, 107, 59-63.	1.9	65
340	Metastable electrical transport in Cu(In,Ga)Se2 thin films and ZnO/CdS/Cu(In,Ga)Se2 heterostructures. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 245, 489-493.	2.1	39
341	The detailed balance principle and the reciprocity theorem between photocarrier collection and dark carrier distribution in solar cells. Journal of Applied Physics, 1998, 84, 6412-6418.	2.5	33
342	Persistent photoconductivity in Cu(In,Ga)Se2 heterojunctions and thin films prepared by sequential deposition. Applied Physics Letters, 1998, 73, 223-225.	3.3	95

#	Article	IF	Citations
343	Defects in Cu(In, Ga) Se2 semiconductors and their role in the device performance of thin-film solar cells. Progress in Photovoltaics: Research and Applications, 1997, 5, 121-130.	8.1	69
344	Influence of Na and S incorporation on the electronic transport properties of Cu(In,Ga)Se/sub 2/ solar cells. , 1996, , .		8
345	Numerical simulation of innovative device structures for silicon thin-film solar cells. , 1996, , .		6
346	Recovery of scaler time-delay systems from time series. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 211, 345-349.	2.1	42
347	Dielectric spectroscopy of relaxation processes in Cu(In,Ga)Se/sub 2/ solar cells. , 1996, , .		2
348	Analysis of internal quantum efficiency and a new graphical evaluation scheme. Solid-State Electronics, 1995, 38, 1009-1015.	1.4	26
349	Internal quantum efficiency of thin epitaxial silicon solar cells. Applied Physics Letters, 1995, 66, 1261-1263.	3.3	19
350	Direct observation of a scaling effect on effective minority carrier lifetimes. Journal of Applied Physics, 1994, 76, 4168-4172.	2.5	28
351	Schottky Contacts on Silicon. Springer Series in Electrophysics, 1994, , 89-148.	0.2	8
352	Silicon solar cell of 16.8 Î¼m thickness and 14.7% efficiency. Applied Physics Letters, 1993, 62, 2998-3000.	3.3	44
353	Band offset variations at Ge/GaAs (100) interfaces. Applied Physics Letters, 1993, 62, 261-263.	3.3	20
354	On Negative Differential Resistance and Spontaneous Dissipative Structure Formation in the Electric Break-Down of p-Ge at Low Temperatures. NATO ASI Series Series B: Physics, 1993, , 261-268.	0.2	0
355	An oscillation mechanism of semiconductor breakdown due to magnetic field induced transverse motion of current filaments. Semiconductor Science and Technology, 1992, 7, B486-B487.	2.0	1
356	The Ideality of Spatially Inhomogeneous Schottky Contacts. Materials Research Society Symposia Proceedings, 1992, 260, 245.	0.1	12
357	Barrier Inhomogeneities at Schottky Contacts: Curved Richardson Plots, Idealities, and Flat Band Barriers. Materials Research Society Symposia Proceedings, 1992, 260, 311.	0.1	6
358	Barrier Inhomogeneities Dominating Low-Frequency Excess Noise of Schottky Contacts. Materials Research Society Symposia Proceedings, 1992, 260, 305.	0.1	6
359	Dynamics of current filaments inpâ€type germanium under the influence of a transverse magnetic field. Journal of Applied Physics, 1991, 70, 232-235.	2.5	24
360	On the Scaling of Type-1 Intermittency in a Semiconductor Experiment. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1991, 46, 1012-1014.	1.5	5

#	Article	IF	Citations
361	Reconstruction of traveling waves in semi-insulating GaAs. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 152, 356-360.	2.1	9
362	Resonant imaging of a critical dynamical state in the low-temperature electric transport of p-Ge. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 153, 385-389.	2.1	5
363	Evidence of Type-III Intermittency in the Electric Breakdown of p -Type Germanium. Europhysics Letters, 1991, 14, 1-6.	2.0	24
364	Classification of spontaneous oscillations at the onset of avalanche breakdown inp-type germanium. Physical Review B, 1991, 43, 2255-2262.	3.2	40
365	Spatio â€" Temporal Correlations in Semiconductors. , 1991, , 145-176.		5
366	First Evidence of Self-Organized Criticality in the Impact Ionization Breakdown of Semiconductors. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1990, 45, 835-836.	1.5	0
367	Observation of a Large-Scale Sheetlike Current Filament in a Thinn-GaAs Layer. Journal of the Physical Society of Japan, 1990, 59, 420-423.	1.6	22
368	Electron-beam induced instability during filamentary current transport inn-GaAs. European Physical Journal B, 1990, 81, 53-58.	1.5	18
369	Circuit-limited oscillation at the onset of avalanche breakdown in semiconductors. Physics Letters, Section A: General, Atomic and Solid State Physics, 1990, 147, 229-233.	2.1	11
370	Nascent states of current filamentation in semiconductors governed by negative differential resistance. Solid State Communications, 1990, 73, 369-372.	1.9	4
371	Self-Organized Critical Behaviour in the Low-Temperature Impact Ionization Breakdown of p-Ge. Europhysics Letters, 1990, 12, 423-428.	2.0	18
372	Nonequilibrium phase transition in the electronic transport ofp-type germanium at low temperatures. Physical Review B, 1990, 42, 9019-9024.	3.2	11
373	Nucleation and growth of current filaments in semiconductors. Journal of Applied Physics, 1990, 67, 1412-1416.	2.5	24
374	Impact ionization avalanche breakdown in short crystal regions ofpâ€Ge. Journal of Applied Physics, 1990, 67, 2980-2984.	2.5	16
375	Critical Dynamics near the Onset of Spontaneous Oscillations in p -Germanium. Europhysics Letters, 1989, 9, 743-748.	2.0	21
376	Symmetry-breaking pattern formation in semiconductor physics: Spatio-temporal current structures during avalanche breakdown. Computers and Mathematics With Applications, 1989, 17, 467-473.	2.7	1
377	Impact ionization breakdown in p-germanium samples with very short contact distances. Solid-State Electronics, 1989, 32, 1197-1200.	1.4	2
378	Imaging of spatio-temporal structures in semiconductors. Solid-State Electronics, 1989, 32, 1365-1369.	1.4	22

#	Article	IF	Citations
379	Classification of current instabilities during low-temperature breakdown in germanium. Applied Physics A: Solids and Surfaces, 1989, 48, 155-160.	1.4	29
380	Characteristic Relaxation Times of Low-temperature Semiconductor Breakdown Kinetics. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1989, 44, 629-632.	1.5	2
381	Cryoelectronic Application of a Hybrid Device Concept Based on Semiconducting and Superconducting Components. , 1989, , 575-578.		0
382	SYMMETRY-BREAKING PATTERN FORMATION IN SEMICONDUCTOR PHYSICS: SPATIO-TEMPORAL CURRENT STRUCTURES DURING AVALANCHE BREAKDOWN. , 1989, , 467-473.		0
383	Spatio-temporal instabilities in the electric breakdown of p-germanium. Solid-State Electronics, 1988, 31, 817-820.	1.4	21
384	Determination of electric transport properties in the pre- and post-breakdown regime ofp-germanium. European Physical Journal B, 1988, 72, 225-233.	1.5	30
385	Switching behavior of current filaments inp-germanium connected in parallel. European Physical Journal B, 1988, 71, 305-310.	1.5	9
386	Hall-effect measurements during low-temperature avalanche breakdown of p-germanium. Philosophical Magazine Letters, 1988, 57, 311-314.	1.2	2
387	A MINIATURIZED APPROACH TO THE CRYOELECTRONIC MAGNETIC FIELD EFFECT TRANSISTOR. Journal De Physique Colloque, 1988, 49, C4-637-C4-639.	0.2	1
388	SPATIO-TEMPORAL INSTABILITIES IN THE ELECTRIC BREAKDOWN OF P-GERMANIUM. , 1988, , 817-820.		0
389	Notizen: Comparison Between a Generic Reaction- Diffusion Model and a Synergetic Semiconductor System. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1987, 42, 655-656.	1.5	14
390	Exemplary locking sequence during self-generated quasiperiodicity of extrinsic germanium. Physics Letters, Section A: General, Atomic and Solid State Physics, 1987, 124, 335-339.	2.1	27
391	Optimization of the back contact geometry for high efficiency solar cells. , 0, , .		2
392	Modelling of the electronic transport in multijunction solar cells. , 0, , .		1
393	New aspects of phase segregation and junction formation in CulnSe/sub 2/. , 0, , .		3
394	Metastable changes of the electrical transport properties of Cu(In,Ga)Se/sub 2/. , 0, , .		3
395	Transport analysis for polycrystalline silicon solar cells on glass substrates. , 0, , .		6
396	Radiation induced defects in Cu(In,Ga)Se/sub 2/ solar cells-comparison of electron and proton irradiation. , 0, , .		0

#	Article	IF	Citations
397	Illumination-enhanced annealing of electron-irradiated Cu(In,Ga)Se/sub 2/ solar cells. , 0, , .		0
398	Damage-free Ablation Process for Back-contacted Silicon Heterojunction Solar Cells. Journal of Laser Micro Nanoengineering, 0, , .	0.1	0
399	Optical Optimization Potential of Transparentâ€Passivated Contacts in Silicon Solar Cells. Solar Rrl, 0, , 2101050.	5.8	4