Bernd Rech

List of Publications by Year
in descending order

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314 papers	18,510 citations	16437 64 h-index	14197 128 g-index
322 all docs	322 docs citations	322 times ranked	13256 citing authors

#	Article	IF	Citations
1	Hybrid Perovskite Degradation from an Optical Perspective: A Spectroscopic Ellipsometry Study from the Deep Ultraviolet to the Middle Infrared. Advanced Optical Materials, 2022, 10, 2101553.	3.6	10
2	Highâ€Throughput Aging System for Parallel Maximum Power Point Tracking of Perovskite Solar Cells. Energy Technology, 2022, 10, .	1.8	11
3	Field Effect Passivation in Perovskite Solar Cells by a LiF Interlayer. Advanced Energy Materials, 2022, 12, .	10.2	53
4	Bi-functional interfaces by poly(ionic liquid) treatment in efficient pin and nip perovskite solar cells. Energy and Environmental Science, 2021, 14, 4508-4522.	15.6	76
5	27.9% Efficient Monolithic Perovskite/Silicon Tandem Solar Cells on Industry Compatible Bottom Cells. Solar Rrl, 2021, 5, 2100244.	3.1	59
6	Coâ€Evaporated 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
7	Revisiting the Determination of the Valence Band Maximum and Defect Formation in Halide Perovskites for Solar Cells: Insights from Highly Sensitive Nearâ€“UV Photoemission Spectroscopy. ACS Applied Materials & Interfaces, 2021, 13, 43540-43553.	4.0	20
8	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
9	The Doping Mechanism of Halide Perovskite Unveiled by Alkaline Earth Metals. Journal of the American Chemical Society, 2020, 142, 2364-2374.	6.6	132
10	Tailored Nanostructures for Light Management in Silicon Heterojunction Solar Cells. Solar Rrl, 2020, 4, 2000484.	3.1	11
11	Co-Evaporated p-i-n Perovskite Solar Cells beyond 20% Efficiency: Impact of Substrate Temperature and Hole-Transport Layer. ACS Applied Materials & Interfaces, 2020, 12, 39261-39272.	4.0	79
12	Monolithic perovskite/silicon tandem solar cell with >29% efficiency by enhanced hole extraction. Science, 2020, 370, 1300-1309.	6.0	1,120
13	Ion Migrationâ€Induced Amorphization and Phase Segregation as a Degradation Mechanism in Planar Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000310.	10.2	103
14	On the Origin of the Ideality Factor in Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000502.	10.2	175
15	Toward High Solar Cell Efficiency with Low Material Usage: 15% Efficiency with 14â€‰Î¼m Polycrystalline Silicon on Glass. Solar Rrl, 2020, 4, 2000058.	3.1	12
16	Analysis of Surface Passivation and Laser Firing on Thin-Film Silicon Solar Cells Via Light-Beam Induced Current. IEEE Journal of Photovoltaics, 2020, 10, 1246-1253.	1.5	3
17	Proton Radiation Hardness of Perovskite Tandem Photovoltaics. Joule, 2020, 4, 1054-1069.	11.7	104
18	Interface Molecular Engineering for Laminated Monolithic Perovskite/Silicon Tandem Solar Cells with 80.4% Fill Factor. Advanced Functional Materials, 2019, 29, 1901476.	7.8	43

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19	On the Relation between the Openâ€Circuit Voltage and Quasiâ€Fermi Level Splitting in Efficient Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1901631.	10.2	275
20	Laser firing in silicon heterojunction interdigitated back contact architecture for low contact resistance. Solar Energy Materials and Solar Cells, 2019, 203, 110201.	3.0	5
21	21.6%-Efficient Monolithic Perovskite/Cu(In,Ga)Se₂ Tandem Solar Cells with Thin Conformal Hole Transport Layers for Integration on Rough Bottom Cell Surfaces. ACS Energy Letters, 2019, 4, 583-590.	8.8	155
22	High open circuit voltages in pin-type perovskite solar cells through strontium addition. Sustainable Energy and Fuels, 2019, 3, 550-563.	2.5	57
23	Highly efficient monolithic perovskite silicon tandem solar cells: analyzing the influence of current mismatch on device performance. Sustainable Energy and Fuels, 2019, 3, 1995-2005.	2.5	208
24	All-Thin-Film Tandem Cells Based on Liquid Phase Crystallized Silicon and Perovskites. IEEE Journal of Photovoltaics, 2019, 9, 621-628.	1.5	10
25	Mixtures of Dopant-Free Spiro-OMeTAD and Water-Free PEDOT as a Passivating Hole Contact in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 9172-9181.	4.0	28
26	Analysis of Surface Passivation and Laser Firing via Light-Beam Induced Current Measurements. , 2019, , .		1
27	Conformal monolayer contacts with lossless interfaces for perovskite single junction and monolithic tandem solar cells. Energy and Environmental Science, 2019, 12, 3356-3369.	15.6	519
28	Impact of Dielectric Layers on Liquid-Phase Crystallized Silicon Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 30-37.	1.5	14
29	Progress in and potential of liquid phase crystallized silicon solar cells. Solar Energy, 2018, 175, 75-83.	2.9	12
30	Electronic structure of indium-tungsten-oxide alloys and their energy band alignment at the heterojunction to crystalline silicon. Applied Physics Letters, 2018, 112, .	1.5	6
31	Optical characterization and bandgap engineering of flat and wrinkle-textured FA0.83Cs0.17Pb(I1â€“xBrx)3 perovskite thin films. Journal of Applied Physics, 2018, 123, .	1.1	25
32	Liquid phase crystallized silicon â€“ A holistic absorber quality assessment. Solar Energy Materials and Solar Cells, 2018, 181, 2-8.	3.0	4
33	Potential of interdigitated back-contact silicon heterojunction solar cells for liquid phase crystallized silicon on glass with efficiency above 14%. Solar Energy Materials and Solar Cells, 2018, 174, 187-195.	3.0	43
34	Influence of the precursor layer composition and deposition processes on the electronic quality of liquid phase crystallized silicon absorbers. Progress in Photovoltaics: Research and Applications, 2018, 26, 524-532.	4.4	6
35	Observation of PbI<inf>2</inf> Residuals after P2 Nanosecond Laser Ablation of Perovskite Absorber Layers. , 2018, , .		2
36	Textured interfaces in monolithic perovskite/silicon tandem solar cells: advanced light management for improved efficiency and energy yield. Energy and Environmental Science, 2018, 11, 3511-3523.	15.6	281

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37	Mitigating optical losses in crystalline silicon thin-film solar cells on glass. , 2018, , .		1
38	Honeycomb micro-textures for light trapping in multi-crystalline silicon thin-film solar cells. Optics Express, 2018, 26, A498.	1.7	13
39	Cs_xFA_{1â€“x}Pb(I_{1â€“y}Br_y)₃ Perovskite Compositions: the Appearance of Wrinkled Morphology and its Impact on Solar Cell Performance. Journal of Physical Chemistry C, 2018, 122, 17123-17135.	1.5	42
40	Passivation of Liquidâ€Phase Crystallized Silicon With PECVDâ€SiN_x and PECVDâ€SiN_x/SiO_x. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800239.	0.8	1
41	Evidence of PbI₂-Containing Debris Upon P2 Nanosecond Laser Patterning of Perovskite Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1244-1251.	1.5	13
42	Crystalline silicon solar cells with tetracene interlayers: the path to silicon-singlet fission heterojunction devices. Materials Horizons, 2018, 5, 1065-1075.	6.4	92
43	Defect Dynamics in Proton Irradiated CH₃NH₃PbI₃ Perovskite Solar Cells. Advanced Electronic Materials, 2017, 3, 1600438.	2.6	96
44	Perovskite solar cells: On top of commercial photovoltaics. Nature Energy, 2017, 2, .	19.8	103
45	Efficient Light Management by Textured Nanoimprinted Layers for Perovskite Solar Cells. ACS Photonics, 2017, 4, 1232-1239.	3.2	103
46	It Takes Two to Tangoâ€"Double-Layer Selective Contacts in Perovskite Solar Cells for Improved Device Performance and Reduced Hysteresis. ACS Applied Materials & Interfaces, 2017, 9, 17245-17255.	4.0	107
47	Nondestructive Probing of Perovskite Silicon Tandem Solar Cells Using Multiwavelength Photoluminescence Mapping. IEEE Journal of Photovoltaics, 2017, 7, 1081-1086.	1.5	24
48	Silicon Solar Cells on Glass with Power Conversion Efficiency above 13% at Thickness below 15 Micrometer. Scientific Reports, 2017, 7, 873.	1.6	32
49	Determination of the complex refractive index and optical bandgap of CH3NH3PbI3 thin films. Journal of Applied Physics, 2017, 121, .	1.1	38
50	Optimized Metallization for Interdigitated Back Contact Silicon Heterojunction Solar Cells. Solar Rrl, 2017, 1, 1700021.	3.1	12
51	Interface Engineering for Liquidâ€Phase Crystallizedâ€Silicon Solar Cells on Glass. Solar Rrl, 2017, 1, 1700015.	3.1	10
52	Nanocrystalline silicon emitter optimization for Si-HJ solar cells: Substrate selectivity and CO₂plasma treatment effect. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1532958.	0.8	36
53	Passivation at the interface between liquidâ€phase crystallized silicon and silicon oxynitride in thin film solar cells. Progress in Photovoltaics: Research and Applications, 2017, 25, 515-524.	4.4	8
54	ITO-free metallization for interdigitated back contact silicon heterojunction solar cells. Energy Procedia, 2017, 124, 379-383.	1.8	4

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55	Smooth anti-reflective three-dimensional textures for liquid phase crystallized silicon thin-film solar cells on glass. Scientific Reports, 2017, 7, 2658.	1.6	25
56	Correlation between Electronic Defect States Distribution and Device Performance of Perovskite Solar Cells. Advanced Science, 2017, 4, 1700183.	5.6	117
57	Influence of the Frontside Charge Inversion Layer on the Minority Carrier Collection in Backside Contacted Liquid Phase Crystallized Silicon on Glass Solar Cells. Solar Rrl, 2017, 1, 1700100.	3.1	1
58	Periodic and Random Substrate Textures for Liquid-Phase Crystallized Silicon Thin-Film Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 85-90.	1.5	8
59	Analysis of Local Minority Carrier Diffusion Lengths in Liquid-Phase Crystallized Silicon Thin-Film Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 32-36.	1.5	7
60	NIEL DOSE Analysis on Triple Junction Cells 30% Efficient and Related Single Junctions. , 2017, , .		3
61	Scale Up Designs for Hand-Held Light-Weight TPV DC Power Supply. , 2017, , .		0
62	Combining tailor-made textures for light in-coupling and light trapping in liquid phase crystallized silicon thin-film solar cells. Optics Express, 2017, 25, A467.	1.7	10
63	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
64	Investigation of Structural and Electronic Properties of CH3NH3PbI3 Stabilized by Varying Concentrations of Poly(Methyl Methacrylate) (PMMA). Coatings, 2017, 7, 115.	1.2	8
65	Multi-Objective Optimization for Color-Tunability and Transparency in Colloidal Quantum Dot Solar Cells. , 2017, , .		0
66	Benefits of a thermal drift during atomic layer deposition of Al2O3 for C-Si passivation. , 2017, , .		3
67	Aluminium metallisation for interdigitated back-contact silicon heterojunction solar cells. Japanese Journal of Applied Physics, 2017, 56, 08MB22.	0.8	4
68	Improved Light Management in Crystalline Silicon Thin-Film Solar Cells by Advanced Nano-Texture Fabrication. , 2017, , .		1
69	Angle-Resolved Reflectivity Analysis of Textured Substrates for Liquid-Phase Crystallized Silicon Thin-Film Solar Cells. , 2016, , .		0
70	Imprinted Nanostructures for Light Management in Crystalline Silicon Thin-Film Solar Cells on Glass. , 2016, , .		1
71	Interdigitated backâ€contact heterojunction solar cell concept for liquid phase crystallized thinâ€film silicon on glass. Progress in Photovoltaics: Research and Applications, 2016, 24, 716-724.	4.4	17
72	Enhanced stability of P3HT/polyâ€crystalline Si thin film hybrid solar cells. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1904-1908.	0.8	4

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73	Improvement of the homogeneity of high mobility In₂O₃:H films by sputtering through a mesh electrode studied by Monte Carlo simulation and thin film analysis. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2310-2316.	0.8	3
74	In situ graphene doping as a route toward efficient perovskite tandem solar cells. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1989-1996.	0.8	11
75	Interface passivation of liquidâ€phase crystallized silicon on glass studied with highâ€frequency capacitanceâ€“voltage measurements. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1697-1704.	0.8	10
76	Backside contacted solar cells with heterojunction emitters and laser fired absorber contacts for crystalline silicon on glass. , 2016, , .		1
77	Diffusion length of photo-generated charge carriers in layers and powders of CH3NH3PbI3 perovskite. Applied Physics Letters, 2016, 109, .	1.5	33
78	Back- and Front-side Texturing for Light-management in Perovskite / Silicon-heterojunction Tandem Solar Cells. Energy Procedia, 2016, 102, 43-48.	1.8	14
79	Optimization of PECVD process for ultra-thin tunnel SiO<inf>x</inf> film as passivation layer for silicon heterojunction solar cells. , 2016, , .		4
80	Optical Properties of Smooth Anti-reflective Three-dimensional Textures for Silicon Thin-film Solar Cells. Energy Procedia, 2016, 102, 27-35.	1.8	2
81	Wafer Surface Tuning for a-Si:H/Î¼c-Si:H/c-Si Triple Junction Solar Cells for Application in Water Splitting. Energy Procedia, 2016, 102, 126-135.	1.8	10
82	Facing the challenge of liquid phase crystallizing silicon on textured glass substrates. , 2016, , .		1
83	Analysis of local minority carrier diffusion lengths in liquid phase crystallized silicon thin-film solar cells. , 2016, , .		1
84	Sinusoidal nanotextures for light management in silicon thin-film solar cells. Nanoscale, 2016, 8, 8722-8728.	2.8	28
85	Towards optical optimization of planar monolithic perovskite/silicon-heterojunction tandem solar cells. Journal of Optics (United Kingdom), 2016, 18, 064012.	1.0	82
86	Advantageous light management in Cu(In,Ga)Se2 superstrate solar cells. Solar Energy Materials and Solar Cells, 2016, 150, 76-81.	3.0	24
87	Liquid phase crystallized silicon on glass: Technology, material quality and back contacted heterojunction solar cells. Japanese Journal of Applied Physics, 2016, 55, 04EA04.	0.8	40
88	Radiation Hardness and Selfâ€Healing of Perovskite Solar Cells. Advanced Materials, 2016, 28, 8726-8731.	11.1	195
89	Unravelling the low-temperature metastable state in perovskite solar cells by noise spectroscopy. Scientific Reports, 2016, 6, 34675.	1.6	32
90	Crystalline silicon on glassâ€”interface passivation and absorber material quality. Progress in Photovoltaics: Research and Applications, 2016, 24, 1499-1512.	4.4	19

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91	Oxygen vacancies in tungsten oxide and their influence on tungsten oxide/silicon heterojunction solar cells. Solar Energy Materials and Solar Cells, 2016, 158, 77-83.	3.0	129
92	Architectures for scalable integrated photo driven catalytic devices-A concept study. International Journal of Hydrogen Energy, 2016, 41, 20823-20831.	3.8	14
93	Optimization of the post-deposition annealing process of high-mobility In2O3:H for photovoltaic applications. Thin Solid Films, 2016, 599, 78-83.	0.8	25
94	Screen-Printed Metallization Concepts for Large-Area Back-Contact Back-Junction Silicon Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 374-383.	1.5	10
95	A mixed-cation lead mixed-halide perovskite absorber for tandem solar cells. Science, 2016, 351, 151-155.	6.0	2,514
96	Monolithic perovskite/silicon-heterojunction tandem solar cells processed at low temperature. Energy and Environmental Science, 2016, 9, 81-88.	15.6	536
97	Numerical Optical Optimization of Planar Monolithic Perovskite-Silicon Tandem Solar Cells. , 2016, , .		0
98	Valence band alignment and hole transport in amorphous/crystalline silicon heterojunction solar cells. Applied Physics Letters, 2015, 107, 013902.	1.5	47
99	Properties of Liquid Phase Crystallized Interdigitated Back-contact Solar Cells on Glass. Energy Procedia, 2015, 77, 487-492.	1.8	8
100	Silicon heterojunction solar cells with nanocrystalline Silicon Oxide emitter: Insights into charge carrier transport. , 2015, , .		1
101	Grazing incidence X-ray fluorescence analysis of buried interfaces in periodically structured crystalline silicon thin-film solar cells. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 529-534.	0.8	8
102	Valence band offset in heterojunctions between crystalline silicon and amorphous silicon (sub)oxides (a-SiOx:H, 0 < x < 2). Applied Physics Letters, 2015, 106, .	1.5	34
103	Nanoimprint-textured Glass Superstrates for Light Trapping in Crystalline Silicon thin-film Solar Cells. Energy Procedia, 2015, 84, 118-126.	1.8	4
104	Liquid phase crystallized silicon solar cells on glass: Material quality and device design. , 2015, , .		2
105	Evaluation of screen-printed metallization concepts for large-area BC-BJ solar cells. , 2015, , .		2
106	Influence of Barrier and Doping Type on the Open-Circuit Voltage of Liquid Phase-Crystallized Silicon Thin-Film Solar Cells on Glass. IEEE Journal of Photovoltaics, 2015, 5, 1001-1005.	1.5	22
107	Silicon Heterojunction Solar Cells With Nanocrystalline Silicon Oxide Emitter: Insights Into Charge Carrier Transport. IEEE Journal of Photovoltaics, 2015, 5, 1601-1605.	1.5	25
108	p-type microcrystalline silicon oxide emitter for silicon heterojunction solar cells allowing current densities above 40â€‰mA/cm2. Applied Physics Letters, 2015, 106, .	1.5	93

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109	Hybrid Organic/Inorganic Thinâ€Film Multijunction Solar Cells Exceeding 11% Power Conversion Efficiency. Advanced Materials, 2015, 27, 1262-1267.	11.1	40
110	Quadruple-junction solar cells and modules based on amorphous and microcrystalline silicon with high stable efficiencies. Japanese Journal of Applied Physics, 2015, 54, 08KB03.	0.8	33
111	Balance of optical, structural, and electrical properties of textured liquid phase crystallized Si solar cells. Journal of Applied Physics, 2015, 117, .	1.1	22
112	Perovskite Solar Cells with Large-Area CVD-Graphene for Tandem Solar Cells. Journal of Physical Chemistry Letters, 2015, 6, 2745-2750.	2.1	170
113	Towards monocrystalline silicon thin films grown on glass by liquid phase crystallization. Solar Energy Materials and Solar Cells, 2015, 140, 86-91.	3.0	34
114	PECVD-AlOx/SiNx passivation stacks on wet chemically oxidized silicon: Constant voltage stress investigations of charge dynamics and interface defect states. Solar Energy Materials and Solar Cells, 2015, 135, 49-56.	3.0	30
115	Preferential {100} grain orientation in 10 micrometer-thick laser crystallized multicrystalline silicon on glass. Thin Solid Films, 2015, 576, 68-74.	0.8	26
116	High mobility In2O3:H as contact layer for a-Si:H/c-Si heterojunction and Î¼c-Si:H thin film solar cells. Thin Solid Films, 2015, 594, 316-322.	0.8	24
117	Temperature Dependence of the Band Gap of CH₃NH₃PbI₃ Stabilized with PMMA: A Modulated Surface Photovoltage Study. Journal of Physical Chemistry C, 2015, 119, 23968-23972.	1.5	59
118	Nanocrystalline Silicon Oxide Emitters for Silicon Hetero Junction Solar Cells. Energy Procedia, 2015, 77, 304-310.	1.8	16
119	Liquid-Phase Crystallized Silicon Solar Cells on Glass: Increasing the Open-Circuit Voltage by Optimized Interlayers for n- and p-Type Absorbers. IEEE Journal of Photovoltaics, 2015, 5, 1757-1761.	1.5	14
120	Analysis of photo-current potentials and losses in thin film crystalline silicon solar cells. Solar Energy Materials and Solar Cells, 2015, 143, 457-466.	3.0	37
121	The Influence of ITO Dopant Density on J-V Characteristics of Silicon Heterojunction Solar Cells: Experiments and Simulations. Energy Procedia, 2015, 77, 725-732.	1.8	37
122	Double-side textured liquid phase crystallized silicon thin-film solar cells on imprinted glass. Solar Energy Materials and Solar Cells, 2015, 135, 2-7.	3.0	39
123	Implications of TCO Topography on Intermediate Reflector Design for a-Si/Î¼c-Si Tandem Solar Cellsâ€"Experiments and Rigorous Optical Simulations. IEEE Journal of Photovoltaics, 2014, 4, 10-15.	1.5	17
124	Solution-processed amorphous silicon surface passivation layers. Applied Physics Letters, 2014, 105, 122113.	1.5	13
125	PECVD-AlOx/SiNx Passivation Stacks on Silicon: Effective Charge Dynamics and Interface Defect State Spectroscopy. Energy Procedia, 2014, 55, 845-854.	1.8	31
126	Silicon Thin-Film Solar Cells on Glass With Open-Circuit Voltages Above 620 mV Formed by Liquid-Phase Crystallization. IEEE Journal of Photovoltaics, 2014, 4, 1496-1501.	1.5	47

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127	PECVD Intermediate and Absorber Layers Applied in Liquid-Phase Crystallized Silicon Solar Cells on Glass Substrates. IEEE Journal of Photovoltaics, 2014, 4, 1343-1348.	1.5	26
128	Micro-contacting of single and periodically arrayed columnar silicon structures by focused ion beam techniques. Applied Physics Letters, 2014, 104, 242104.	1.5	1
129	Field-effect passivation and degradation analyzed with photoconductance decay measurements. Applied Physics Letters, 2014, 104, 193504.	1.5	4
130	Improved conversion efficiency of aâ€Si:H/Âµcâ€Si:H thinâ€film solar cells by using annealed Alâ€doped zinc oxide as front electrode material. Progress in Photovoltaics: Research and Applications, 2014, 22, 1285-1291.	4.4	24
131	Impact of dislocations and dangling bond defects on the electrical performance of crystalline silicon thin films. Applied Physics Letters, 2014, 105, .	1.5	19
132	Very thin, highlyâ€conductive ZnO:Al front electrode on textured glass as substrate for thinâ€film silicon solar cells. Physica Status Solidi - Rapid Research Letters, 2014, 8, 44-47.	1.2	10
133	Crack formation and Zn diffusion in high-temperature processed poly-Si/ZnO:Al stacks. Thin Solid Films, 2014, 566, 83-87.	0.8	3
134	Comparative study of backside reflectors on a-Si:H/Âµc-Si:H thin film solar cells. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2078-2081.	0.8	2
135	EMIL: The energy materials in situ laboratory Berlin. , 2014, , .		4
136	Material properties of high-mobility TCOs and application to solar cells. Proceedings of SPIE, 2014, , .	0.8	1
137	Investigation of Band Tailing in Sputtered ZnO:Al Thin Films Regarding Structural Properties and Impurities. Materials Research Society Symposia Proceedings, 2014, 1699, 1.	0.1	0
138	A comparison of scattering and non-scattering anti-reflection designs for back contacted polycrystalline thin film silicon solar cells in superstrate configuration. , 2014, , .		2
139	Comparison of TMB and B2H6 as Precursors for Emitter Doping in High Efficiency Silicon Hetero Junction Solar Cells. Energy Procedia, 2014, 60, 123-128.	1.8	12
140	Potential of high-mobility sputtered zinc oxide as front contact for high efficiency thin film silicon solar cells. Thin Solid Films, 2014, 555, 138-142.	0.8	7
141	Metastable Defect Formation at Microvoids Identified as a Source of Light-Induced Degradation in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>a</mml:mi><mml:mtext>â^’</mml:mtext><mml:mi>Si</mml:mi><mml:mo>:</mml:mo><mml:mi mathvariant="normal">H</mml:mi></mml:mrow></mml:math>. Physical Review Letters, 2014, 112, 066403.	2.9	67
142	Conversion efficiency and process stability improvement of electron beam crystallized thin film silicon solar cells on glass. Solar Energy Materials and Solar Cells, 2014, 123, 13-16.	3.0	49
143	Solutionâ€Processed Crystalline Silicon Thinâ€Film Solar Cells. Advanced Materials Interfaces, 2014, 1, 1300046.	1.9	17
144	Advanced Metallization Concepts for p-type Silicon Metal-Wrap-Through (MWT) Solar Cells. Energy Technology, 2014, 2, 34-42.	1.8	2

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145	Equilibrium shapes of polycrystalline silicon nanodots. Journal of Applied Physics, 2014, 115, 074304.	1.1	11
146	Advanced microhole arrays for light trapping in thin film silicon solar cells. Solar Energy Materials and Solar Cells, 2014, 125, 298-304.	3.0	6
147	Annealing related changes in nearâ€edge absorption and structural properties of Alâ€doped ZnO thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 1468-1471.	0.8	0
148	Towards wafer quality crystalline silicon thin-film solar cells on glass. Solar Energy Materials and Solar Cells, 2014, 128, 190-197.	3.0	105
149	The influence of space charge regions on effective charge carrier lifetime in thin films and resulting opportunities for materials characterization. Journal of Applied Physics, 2013, 113, 044510.	1.1	3
150	Chemical interaction at the buried silicon/zinc oxide thin-film solar cell interface as revealed by hard X-ray photoelectron spectroscopy. Journal of Electron Spectroscopy and Related Phenomena, 2013, 190, 309-313.	0.8	6
151	Technological status of polycrystalline silicon thin-film solar cells on glass. Solar Energy Materials and Solar Cells, 2013, 119, 306-308.	3.0	15
152	Approach for a Simplified Fabrication Process for IBC-SHJ Solar Cells with High Fill Factors. Energy Procedia, 2013, 38, 732-736.	1.8	9
153	Achievements and challenges in thin film silicon module production. Solar Energy Materials and Solar Cells, 2013, 119, 196-203.	3.0	32
154	Defect annealing processes for polycrystalline silicon thin-film solar cells. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2013, 178, 670-675.	1.7	14
155	Directional growth and crystallization of silicon thin films prepared by electron-beam evaporation on oblique and textured surfaces. Journal of Crystal Growth, 2013, 367, 126-130.	0.7	28
156	p-Type a-Si:H/ZnO:Al and Î¼c-Si:H/ZnO:Al Thin-Film Solar Cell Structuresâ€"A Comparative Hard X-Ray Photoelectron Spectroscopy Study. IEEE Journal of Photovoltaics, 2013, 3, 483-487.	1.5	4
157	Polycrystalline silicon heterojunction thin-film solar cells on glass exhibiting 582mV open-circuit voltage. Solar Energy Materials and Solar Cells, 2013, 115, 7-10.	3.0	50
158	Polycrystalline silicon thin-film solar cells: Status and perspectives. Solar Energy Materials and Solar Cells, 2013, 119, 112-123.	3.0	141
159	An effective medium approach for modeling polycrystalline silicon thin film solar cells. Solar Energy Materials and Solar Cells, 2013, 117, 152-160.	3.0	7
160	Atomic Structure of Interface States in Silicon Heterojunction Solar Cells. Physical Review Letters, 2013, 110, 136803.	2.9	29
161	Optical properties and Limits of a Large-Area Periodic Nanophotonic Light Trapping Design for Polycrystalline Silicon Thin Film Solar Cells. Materials Research Society Symposia Proceedings, 2013, 1493, 59-64.	0.1	2
162	Impact of the transparent conductive oxide work function on injection-dependent a-Si:H/c-Si band bending and solar cell parameters. Journal of Applied Physics, 2013, 113, .	1.1	55

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163	A novel light trapping concept for liquid phase crystallized poly-Si thin-film solar cells on periodically nanoimprinted glass substrates. , 2013, , .		5
164	Identification of intraâ€grain and grain boundary defects in polycrystalline Si thin films by electron paramagnetic resonance. Physica Status Solidi - Rapid Research Letters, 2013, 7, 959-962.	1.2	16
165	Nanophotonic light trapping in 3-dimensional thin-film silicon architectures. Optics Express, 2013, 21, A42.	1.7	21
166	FEM-based optical modeling of silicon thin-film tandem solar cells with randomly textured interfaces in 3D. Proceedings of SPIE, 2013, , .	0.8	4
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