Christophe Ballif

List of Publications by Year
in descending order

550 papers	29,217 citations	4146 87 h-index	7160 153 g-index
562 all docs	562 docs citations	562 times ranked	19032 citing authors

#	Article	IF	Citations
1	Organometallic Halide Perovskites: Sharp Optical Absorption Edge and Its Relation to Photovoltaic Performance. Journal of Physical Chemistry Letters, 2014, 5, 1035-1039.	4.6	2,153
2	Fully textured monolithic perovskite/silicon tandem solar cells with 25.2% power conversion efficiency. Nature Materials, 2018, 17, 820-826.	27.5	1,046
3	High-efficiency Silicon Heterojunction Solar Cells: A Review. Green, 2012, 2, 7-24.	0.4	725
4	Complex Refractive Index Spectra of CH₃NH₃PbI₃ Perovskite Thin Films Determined by Spectroscopic Ellipsometry and Spectrophotometry. Journal of Physical Chemistry Letters, 2015, 6, 66-71.	4.6	491
5	Light Trapping in Solar Cells: Can Periodic Beat Random?. ACS Nano, 2012, 6, 2790-2797.	14.6	480
6	Current Losses at the Front of Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2012, 2, 7-15.	2.5	479
7	Efficient silicon solar cells with dopant-free asymmetric heterocontacts. Nature Energy, 2016, 1, .	39.5	461
8	Efficient Monolithic Perovskite/Silicon Tandem Solar Cell with Cell Area >1 cm². Journal of Physical Chemistry Letters, 2016, 7, 161-166.	4.6	448
9	Raising the one-sun conversion efficiency of IIIâ€“V/Si solar cells to 32.8% for two junctions andÂ35.9% for three junctions. Nature Energy, 2017, 2, .	39.5	424
10	Silicon heterojunction solar cell with passivated hole selective MoOx contact. Applied Physics Letters, 2014, 104, .	3.3	363
11	22.5% efficient silicon heterojunction solar cell with molybdenum oxide hole collector. Applied Physics Letters, 2015, 107, .	3.3	360
12	Efficient Near-Infrared-Transparent Perovskite Solar Cells Enabling Direct Comparison of 4-Terminal and Monolithic Perovskite/Silicon Tandem Cells. ACS Energy Letters, 2016, 1, 474-480.	17.4	332
13	Perovskite/Silicon Tandem Solar Cells: Marriage of Convenience or True Love Story? â€“ An Overview. Advanced Materials Interfaces, 2018, 5, 1700731.	3.7	321
14	Transparent Electrodes for Efficient Optoelectronics. Advanced Electronic Materials, 2017, 3, 1600529.	5.1	310
15	Organicâ€“inorganic halide perovskite/crystalline silicon four-terminal tandem solar cells. Physical Chemistry Chemical Physics, 2015, 17, 1619-1629.	2.8	308
16	Infrared light management in high-efficiency silicon heterojunction and rear-passivated solar cells. Journal of Applied Physics, 2013, 113, .	2.5	270
17	Nanomoulding of transparent zinc oxide electrodes for efficient light trapping in solar cells. Nature Photonics, 2011, 5, 535-538.	31.4	265
18	Measurement of the Bending Strength of Vaporâ^'Liquidâ^'Solid Grown Silicon Nanowires. Nano Letters, 2006, 6, 622-625.	9.1	258

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19	CH_3NH_3PbI_3 perovskite / silicon tandem solar cells: characterization based optical simulations. Optics Express, 2015, 23, A263.	3.4	258
20	Silver thick-film contacts on highly doped n-type silicon emitters: Structural and electronic properties of the interface. Applied Physics Letters, 2003, 82, 1878-1880.	3.3	257
21	Efficient Monolithic Perovskite/Perovskite Tandem Solar Cells. Advanced Energy Materials, 2017, 7, 1602121.	19.5	255
22	Model for a-Si:H/c-Si interface recombination based on the amphoteric nature of silicon dangling bonds. Physical Review B, 2007, 76, .	3.2	238
23	Improved amorphous/crystalline silicon interface passivation by hydrogen plasma treatment. Applied Physics Letters, 2011, 99, .	3.3	238
24	Transition between grain boundary and intragrain scattering transport mechanisms in boron-doped zinc oxide thin films. Applied Physics Letters, 2007, 90, 142107.	3.3	230
25	Sputtered rear electrode with broadband transparency for perovskite solar cells. Solar Energy Materials and Solar Cells, 2015, 141, 407-413.	6.2	223
26	In situ silicon oxide based intermediate reflector for thin-film silicon micromorph solar cells. Applied Physics Letters, 2007, 91, .	3.3	219
27	Highâ€Efficiency Amorphous Silicon Solar Cell on a Periodic Nanocone Back Reflector. Advanced Energy Materials, 2012, 2, 628-633.	19.5	212
28	Raman Spectroscopy of Organicâ€“Inorganic Halide Perovskites. Journal of Physical Chemistry Letters, 2015, 6, 401-406.	4.6	206
29	Opto-electronic properties of rough LP-CVD ZnO:B for use as TCO in thin-film silicon solar cells. Thin Solid Films, 2007, 515, 8558-8561.	1.8	202
30	Damage at hydrogenated amorphous/crystalline silicon interfaces by indium tin oxide overlayer sputtering. Applied Physics Letters, 2012, 101, .	3.3	200
31	Improved Optics in Monolithic Perovskite/Silicon Tandem Solar Cells with a Nanocrystalline Silicon Recombination Junction. Advanced Energy Materials, 2018, 8, 1701609.	19.5	192
32	Relation between substrate surface morphology and microcrystalline silicon solar cell performance. Journal of Non-Crystalline Solids, 2008, 354, 2258-2262.	3.1	190
33	>21% Efficient Silicon Heterojunction Solar Cells on n- and p-Type Wafers Compared. IEEE Journal of Photovoltaics, 2013, 3, 83-89.	2.5	187
34	Plasmonic absorption in textured silver back reflectors of thin film solar cells. Journal of Applied Physics, 2008, 104, .	2.5	185
35	23.5%-efficient silicon heterojunction silicon solar cell using molybdenum oxide as hole-selective contact. Nano Energy, 2020, 70, 104495.	16.0	179
36	High-Bandgap Perovskite Materials for Multijunction Solar Cells. Joule, 2018, 2, 1421-1436.	24.0	173

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37	Nanoimprint Lithography for High-Efficiency Thin-Film Silicon Solar Cells. Nano Letters, 2011, 11, 661-665.	9.1	171
38	Stable Dopant-Free Asymmetric Heterocontact Silicon Solar Cells with Efficiencies above 20%. ACS Energy Letters, 2018, 3, 508-513.	17.4	164
39	Building Integrated Photovoltaics (BIPV): Review, Potentials, Barriers and Myths. Green, 2013, 3, .	0.4	160
40	Silicon heterojunction solar cells: Recent technological development and practical aspects - from lab to industry. Solar Energy Materials and Solar Cells, 2018, 187, 140-153.	6.2	159
41	Influence of the substrate geometrical parameters on microcrystalline silicon growth for thin-film solar cells. Solar Energy Materials and Solar Cells, 2009, 93, 1714-1720.	6.2	156
42	Polycrystalline ZnO: B grown by LPCVD as TCO for thin film silicon solar cells. Thin Solid Films, 2010, 518, 2961-2966.	1.8	155
43	Hydrogen-doped indium oxide/indium tin oxide bilayers for high-efficiency silicon heterojunction solar cells. Solar Energy Materials and Solar Cells, 2013, 115, 151-156.	6.2	153
44	25.1%-Efficient Monolithic Perovskite/Silicon Tandem Solar Cell Based on a p-type Monocrystalline Textured Silicon Wafer and High-Temperature Passivating Contacts. ACS Energy Letters, 2019, 4, 844-845.	17.4	152
45	Photocatalytic degradation of phenol by TiO2 thin films prepared by sputtering. Applied Catalysis B: Environmental, 2000, 25, 83-92.	20.2	151
46	Amorphous Si Thin Film Based Photocathodes with High Photovoltage for Efficient Hydrogen Production. Nano Letters, 2013, 13, 5615-5618.	9.1	151
47	Optimization of amorphous silicon thin film solar cells for flexible photovoltaics. Journal of Applied Physics, 2008, 103, .	2.5	147
48	Integrated thinking for photovoltaics in buildings. Nature Energy, 2018, 3, 438-442.	39.5	146
49	Improving metal reflectors by suppressing surface plasmon polaritons: a priori calculation of the internal reflectance of a solar cell. Light: Science and Applications, 2013, 2, e106-e106.	16.6	143
50	New Crystal Structures of WS2: Microtubes, Ribbons, and Ropes. Advanced Materials, 1998, 10, 246-249.	21.0	140
51	Status and perspectives of crystalline silicon photovoltaics in research and industry. Nature Reviews Materials, 2022, 7, 597-616.	48.7	139
52	Comparison and optimization of randomly textured surfaces in thin-film solar cells. Optics Express, 2010, 18, A335.	3.4	138
53	Review: Progress in solar cells from hydrogenated amorphous silicon. Renewable and Sustainable Energy Reviews, 2017, 76, 1497-1523.	16.4	134
54	Modeling of light scattering from micro- and nanotextured surfaces. Journal of Applied Physics, 2010, 107, 044504.	2.5	132

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55	I₂ vapor-induced degradation of formamidinium lead iodide based perovskite solar cells under heatâ€“light soaking conditions. Energy and Environmental Science, 2019, 12, 3074-3088.	30.8	131
56	Fracture strength and Youngâ€™s modulus of ZnO nanowires. Nanotechnology, 2007, 18, 205503.	2.6	130
57	Multiscale Transparent Electrode Architecture for Efficient Light Management and Carrier Collection in Solar Cells. Nano Letters, 2012, 12, 1344-1348.	9.1	127
58	Stretched-exponential a-Si:Hâ•c-Si interface recombination decay. Applied Physics Letters, 2008, 93, .	3.3	123
59	Organicâ€“Inorganic Halide Perovskites: Perspectives for Silicon-Based Tandem Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1545-1551.	2.5	123
60	Mixed-phase p-type silicon oxide containing silicon nanocrystals and its role in thin-film silicon solar cells. Applied Physics Letters, 2010, 97, .	3.3	119
61	Silicon Filaments in Silicon Oxide for Nextâ€Generation Photovoltaics. Advanced Materials, 2012, 24, 1182-1186.	21.0	118
62	Resistive interlayer for improved performance of thin film silicon solar cells on highly textured substrate. Applied Physics Letters, 2010, 96, .	3.3	116
63	In Situ TEM Analysis of Organicâ€“Inorganic Metal-Halide Perovskite Solar Cells under Electrical Bias. Nano Letters, 2016, 16, 7013-7018.	9.1	115
64	Realization of GaInP/Si Dual-Junction Solar Cells With 29.8% 1-Sun Efficiency. IEEE Journal of Photovoltaics, 2016, 6, 1012-1019.	2.5	114
65	Amorphous silicon oxide window layers for high-efficiency silicon heterojunction solar cells. Journal of Applied Physics, 2014, 115, .	2.5	113
66	Low-Temperature High-Mobility Amorphous IZO for Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1340-1347.	2.5	113
67	Photocurrent enhancement in thin film amorphous silicon solar cells with silver nanoparticles. Progress in Photovoltaics: Research and Applications, 2011, 19, 260-265.	8.1	111
68	Solar cell efficiency enhancement via light trapping in printable resonant dielectric nanosphere arrays. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 255-260.	1.8	109
69	Laser-Scribing Patterning for the Production of Organometallic Halide Perovskite Solar Modules. IEEE Journal of Photovoltaics, 2015, 5, 1087-1092.	2.5	109
70	A passivating contact for silicon solar cells formed during a single firing thermal annealing. Nature Energy, 2018, 3, 800-808.	39.5	109
71	Axial p-n Junctions Realized in Silicon Nanowires by Ion Implantation. Nano Letters, 2009, 9, 1341-1344.	9.1	107
72	Zinc tin oxide as high-temperature stable recombination layer for mesoscopic perovskite/silicon monolithic tandem solar cells. Applied Physics Letters, 2016, 109, .	3.3	105

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73	Deformation mechanisms of silicon during nanoscratching. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 2858-2869.	1.8	102
74	Optical management in high-efficiency thin-film silicon micromorph solar cells with a silicon oxide based intermediate reflector. Physica Status Solidi - Rapid Research Letters, 2008, 2, 163-165.	2.4	102
75	Silicon Heterojunction Solar Cells With Copper-Plated Grid Electrodes: Status and Comparison With Silver Thick-Film Techniques. IEEE Journal of Photovoltaics, 2014, 4, 1055-1062.	2.5	96
76	Simple processing of back-contacted silicon heterojunction solar cells using selective-area crystalline growth. Nature Energy, 2017, 2, .	39.5	95
77	Geometric light trapping for high efficiency thin film silicon solar cells. Solar Energy Materials and Solar Cells, 2012, 98, 185-190.	6.2	94
78	Record Infrared Internal Quantum Efficiency in Silicon Heterojunction Solar Cells With Dielectric/Metal Rear Reflectors. IEEE Journal of Photovoltaics, 2013, 3, 1243-1249.	2.5	92
79	Monolithic Perovskiteâ€Silicon Tandem Solar Cells: From the Lab to Fab?. Advanced Materials, 2022, 34, e2106540.	21.0	92
80	Amorphous/crystalline silicon interface defects induced by hydrogen plasma treatments. Applied Physics Letters, 2013, 102, .	3.3	91
81	Light management in thin film silicon solar cells. Energy and Environmental Science, 2015, 8, 824-837.	30.8	91
82	Development of micromorph tandem solar cells on flexible low-cost plastic substrates. Solar Energy Materials and Solar Cells, 2009, 93, 884-887.	6.2	90
83	Photocurrent increase in n-i-p thin film silicon solar cells by guided mode excitation via grating coupler. Applied Physics Letters, 2010, 96, .	3.3	90
84	The silane depletion fraction as an indicator for the amorphous/crystalline silicon interface passivation quality. Applied Physics Letters, 2010, 97, .	3.3	90
85	Highâ€efficiency microcrystalline silicon singleâ€junction solar cells. Progress in Photovoltaics: Research and Applications, 2013, 21, 821-826.	8.1	90
86	Passivating electron contact based on highly crystalline nanostructured silicon oxide layers for silicon solar cells. Solar Energy Materials and Solar Cells, 2016, 158, 2-10.	6.2	90
87	An Indiumâ€Free Anode for Largeâ€Area Flexible OLEDs: Defectâ€Free Transparent Conductive Zinc Tin Oxide. Advanced Functional Materials, 2016, 26, 384-392.	14.9	90
88	Structural, chemical, and electrical characterisation of reactively sputtered WSx thin films. Thin Solid Films, 1996, 280, 67-75.	1.8	89
89	Complex Refractive Indices of Cesiumâ€“Formamidinium-Based Mixed-Halide Perovskites with Optical Band Gaps from 1.5 to 1.8 eV. ACS Energy Letters, 2018, 3, 742-747.	17.4	89
90	Efficient nanocoaxâ€based solar cells. Physica Status Solidi - Rapid Research Letters, 2010, 4, 181-183.	2.4	87

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91	Perovskite/Perovskite/Silicon Monolithic Triple-Junction Solar Cells with a Fully Textured Design. ACS Energy Letters, 2018, 3, 2052-2058.	17.4	87
92	Solar glass with industrial porous SiO2 antireflection coating: measurements of photovoltaic module properties improvement and modelling of yearly energy yield gain. Solar Energy Materials and Solar Cells, 2004, 82, 331-344.	6.2	86
93	Solar-to-Hydrogen Production at 14.2% Efficiency with Silicon Photovoltaics and Earth-Abundant Electrocatalysts. Journal of the Electrochemical Society, 2016, 163, F1177-F1181.	2.9	85
94	Solar Water Splitting with Perovskite/Silicon Tandem Cell and TiC-Supported Pt Nanocluster Electrocatalyst. Joule, 2019, 3, 2930-2941.	24.0	85
95	Recent advances and remaining challenges in thin-film silicon photovoltaic technology. Materials Today, 2015, 18, 378-384.	14.2	83
96	Optimization of thin film silicon solar cells on highly textured substrates. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1863-1868.	1.8	82
97	Nanocrystalline Silicon Carrier Collectors for Silicon Heterojunction Solar Cells and Impact on Low-Temperature Device Characteristics. IEEE Journal of Photovoltaics, 2016, 6, 1654-1662.	2.5	82
98	Growth Model of MOCVD Polycrystalline ZnO. Crystal Growth and Design, 2009, 9, 4957-4962.	3.0	81
99	Light Management: A Key Concept in High-Efficiency Perovskite/Silicon Tandem Photovoltaics. Journal of Physical Chemistry Letters, 2019, 10, 3159-3170.	4.6	81
100	Solar Hydrogen Production by Amorphous Silicon Photocathodes Coated with a Magnetron Sputter Deposited Mo₂C Catalyst. Journal of the American Chemical Society, 2015, 137, 7035-7038.	13.7	80
101	Parasitic Absorption Reduction in Metal Oxide-Based Transparent Electrodes: Application in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 17260-17267.	8.0	80
102	Interplay of annealing temperature and doping in hole selective rear contacts based on silicon-rich silicon-carbide thin films. Solar Energy Materials and Solar Cells, 2017, 173, 18-24.	6.2	79
103	TCOs for nip thin film silicon solar cells. Progress in Photovoltaics: Research and Applications, 2009, 17, 165-176.	8.1	78
104	Low-Temperature Screen-Printed Metallization for the Scale-Up of Two-Terminal Perovskiteâ€“Silicon Tandems. ACS Applied Energy Materials, 2019, 2, 3815-3821.	5.1	78
105	The impact of silicon solar cell architecture and cell interconnection on energy yield in hot & sunny climates. Energy and Environmental Science, 2017, 10, 1196-1206.	30.8	76
106	Instability of pâ€“iâ€“n perovskite solar cells under reverse bias. Journal of Materials Chemistry A, 2020, 8, 242-250.	10.3	76
107	Asymmetric intermediate reflector for tandem micromorph thin film silicon solar cells. Applied Physics Letters, 2009, 94, .	3.3	75
108	Parasitic absorption in the rear reflector of a silicon solar cell: Simulation and measurement of the sub-bandgap reflectance for common dielectric/metal reflectors. Solar Energy Materials and Solar Cells, 2014, 120, 426-430.	6.2	75

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109	Very fast light-induced degradation of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>a</mml:mi></mml:mrow></mml:math>-Si:H/<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>c</mml:mi></mml:mrow></mml:math>-Si(100) interfaces. Physical Review B, 2011, 83, .	3.2	74
110	UVâ€nanoâ€imprint lithography technique for the replication of back reflectors for nâ€iâ€p thin film silicon solar cells. Progress in Photovoltaics: Research and Applications, 2011, 19, 202-210.	8.1	74
111	A New View of Microcrystalline Silicon: The Role of Plasma Processing in Achieving a Dense and Stable Absorber Material for Photovoltaic Applications. Advanced Functional Materials, 2012, 22, 3665-3671.	14.9	74
112	Hole-Collection Mechanism in Passivating Metal-Oxide Contacts on Si Solar Cells: Insights From Numerical Simulations. IEEE Journal of Photovoltaics, 2018, 8, 473-482.	2.5	71
113	Back-Contacted Silicon Heterojunction Solar Cells With Efficiency >21%. IEEE Journal of Photovoltaics, 2014, 4, 1046-1054.	2.5	70
114	Impact of metal silicide precipitate dissolution during rapid thermal processing of multicrystalline silicon solar cells. Applied Physics Letters, 2005, 87, 121918.	3.3	69
115	Window layer with p doped silicon oxide for high Voc thin-film silicon n-i-p solar cells. Journal of Applied Physics, 2011, 110, .	2.5	69
116	Kinetics of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>a</mml:mi></mml:math>-Si:H bulk defect and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>a</mml:mi></mml:math>-Si:H/<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>c</mml:mi></mml:math>-Si interface-state reduction. Physical Review B, 2012,	3.2	69
117	Field Performance versus Standard Test Condition Efficiency of Tandem Solar Cells and the Singular Case of Perovskites/Silicon Devices. Journal of Physical Chemistry Letters, 2018, 9, 446-458.	4.6	69
118	Light-induced performance increase of silicon heterojunction solar cells. Applied Physics Letters, 2016, 109, .	3.3	67
119	Mechanisms of wafer sawing and impact on wafer properties. Progress in Photovoltaics: Research and Applications, 2010, 18, 563-572.	8.1	65
120	Optimized short-circuit current mismatch in multi-junction solar cells. Solar Energy Materials and Solar Cells, 2013, 117, 120-125.	6.2	65
121	Increasing the efficiency of silicon heterojunction solar cells and modules by light soaking. Solar Energy Materials and Solar Cells, 2017, 173, 43-49.	6.2	65
122	Optical and electrical properties of semiconducting WS2 thin films: From macroscopic to local probe measurements. Solar Energy Materials and Solar Cells, 1999, 57, 189-207.	6.2	64
123	Resonances and absorption enhancement in thin film silicon solar cells with periodic interface texture. Journal of Applied Physics, 2011, 109, 084516.	2.5	64
124	Properties of interfaces in amorphous/crystalline silicon heterojunctions. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 651-656.	1.8	63
125	Efficient light management scheme for thin film silicon solar cells via transparent random nanostructures fabricated by nanoimprinting. Applied Physics Letters, 2010, 96, .	3.3	63
126	Economic viability for residential battery storage systems in gridâ€connected PV plants. IET Renewable Power Generation, 2018, 12, 135-142.	3.1	61

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127	Temperature dependence of the conductivity in large-grained boron-doped ZnO films. Solar Energy Materials and Solar Cells, 2007, 91, 1269-1274.	6.2	60
128	Carrier transport and sensitivity issues in heterojunction with intrinsic thin layer solar cells on N-type crystalline silicon: A computer simulation study. Journal of Applied Physics, 2010, 107, 054521.	2.5	60
129	Relaxing the Conductivity/Transparency Tradeâ€Off in MOCVD ZnO Thin Films by Hydrogen Plasma. Advanced Functional Materials, 2013, 23, 5177-5182.	14.9	60
130	Amorphous siliconâ€“germanium for triple and quadruple junction thin-film silicon based solar cells. Solar Energy Materials and Solar Cells, 2015, 133, 163-169.	6.2	60
131	High fidelity transfer of nanometric random textures by UV embossing for thin film solar cells applications. Solar Energy Materials and Solar Cells, 2011, 95, 881-886.	6.2	58
132	Silicon-Rich Silicon Carbide Hole-Selective Rear Contacts for Crystalline-Silicon-Based Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 35660-35667.	8.0	57
133	Microcrystalline silicon solar cells: effect of substrate temperature on cracks and their role in postâ€oxidation. Progress in Photovoltaics: Research and Applications, 2010, 18, 491-499.	8.1	56
134	High-Efficiency P-I-N Microcrystalline and Micromorph Thin Film Silicon Solar Cells Deposited on LPCVD Zno Coated Glass Substrates. , 2006, , .		55
135	Flexible micromorph tandem a-Si/Î¼c-Si solar cells. Journal of Applied Physics, 2010, 107, 014507.	2.5	55
136	Thin-film silicon triple-junction solar cell with 12.5% stable efficiency on innovative flat light-scattering substrate. Journal of Applied Physics, 2012, 112, .	2.5	55
137	Mitigating Plasmonic Absorption Losses at Rear Electrodes in Highâ€Efficiency Silicon Solar Cells Using Dopantâ€Free Contact Stacks. Advanced Functional Materials, 2020, 30, 1907840.	14.9	55
138	Understanding of photocurrent enhancement in real thin film solar cells: towards optimal one-dimensional gratings. Optics Express, 2011, 19, 128.	3.4	54
139	Analysis of lateral transport through the inversion layer in amorphous silicon/crystalline silicon heterojunction solar cells. Journal of Applied Physics, 2013, 114, 074504.	2.5	54
140	Strategies for Doped Nanocrystalline Silicon Integration in Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1132-1140.	2.5	54
141	High-Stable-Efficiency Tandem Thin-Film Silicon Solar Cell With Low-Refractive-Index Silicon-Oxide Interlayer. IEEE Journal of Photovoltaics, 2014, 4, 1368-1373.	2.5	52
142	ITO/MoOx/a-Si:H(i) Hole-Selective Contacts for Silicon Heterojunction Solar Cells: Degradation Mechanisms and Cell Integration. IEEE Journal of Photovoltaics, 2017, 7, 1584-1590.	2.5	52
143	Deep reinforcement learning control of electric vehicle charging in the presence of photovoltaic generation. Applied Energy, 2021, 301, 117504.	10.1	52
144	Stabilization of the rhombohedral polytype in MoS2 and WS2 microtubes: TEM and AFM study. Surface Science, 1999, 433-435, 637-641.	1.9	51

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145	Influence of the ZnO buffer on the guided mode structure in Si/ZnO/Ag multilayers. Journal of Applied Physics, 2009, 106, .	2.5	50
146	Control of CVD-deposited ZnO films properties through water/DEZ ratio: Decoupling of electrode morphology and electrical characteristics. Solar Energy Materials and Solar Cells, 2012, 105, 46-52.	6.2	50
147	Comparison of amorphous silicon absorber materials: Light-induced degradation and solar cell efficiency. Journal of Applied Physics, 2013, 114, 154509.	2.5	50
148	35Âyears of photovoltaics: Analysis of the TISOâ€10â€kW solar plant, lessons learnt in safety and performanceâ€"Part 1. Progress in Photovoltaics: Research and Applications, 2019, 27, 328-339.	8.1	49
149	Influence of the Subcell Properties on the Fill Factor of Two-Terminal Perovskiteâ€"Silicon Tandem Solar Cells. ACS Energy Letters, 2020, 5, 1077-1082.	17.4	49
150	Atomic-Layer-Deposited Transparent Electrodes for Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1387-1396.	2.5	48
151	Control of LPCVD ZnO growth modes for improved light trapping in thin film silicon solar cells. Solar Energy Materials and Solar Cells, 2011, 95, 1031-1034.	6.2	47
152	Environmental stability of high-mobility indium-oxide based transparent electrodes. APL Materials, 2015, 3, 116105.	5.1	47
153	Highly transparent modulated surface textured front electrodes for highâ€efficiency multijunction thinâ€film silicon solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 949-963.	8.1	46
154	Highly Conductive and Broadband Transparent Zr-Doped In₂O₃ as Front Electrode for Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1202-1207.	2.5	46
155	Back-Contacted Silicon Heterojunction Solar Cells: Optical-Loss Analysis and Mitigation. IEEE Journal of Photovoltaics, 2015, 5, 1293-1303.	2.5	45
156	Charge Collection in Hybrid Perovskite Solar Cells: Relation to the Nanoscale Elemental Distribution. IEEE Journal of Photovoltaics, 2017, 7, 590-597.	2.5	45
157	Cleavage Fracture of Brittle Semiconductors from the Nanometre to the Centimetre Scale. Advanced Engineering Materials, 2005, 7, 309-317.	3.5	44
158	Manufacturing 100-Âµm-thick silicon solar cells with efficiencies greater than 20% in a pilot production line. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 13-24.	1.8	44
159	Design of perovskite/crystalline-silicon monolithic tandem solar cells. Optics Express, 2018, 26, A579.	3.4	44
160	Phosphorous-Doped Silicon Carbide as Front-Side Full-Area Passivating Contact for Double-Side Contacted c-Si Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 346-354.	2.5	44
161	Preparation and Photoelectrochemistry of Semiconducting WS2Thin Films. Journal of Physical Chemistry B, 1997, 101, 2485-2490.	2.6	43
162	Determination of Raman emission cross-section ratio in hydrogenated microcrystalline silicon. Journal of Non-Crystalline Solids, 2006, 352, 1200-1203.	3.1	43

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163	Micromorph thin-film silicon solar cells with transparent high-mobility hydrogenated indium oxide front electrodes. Journal of Applied Physics, 2011, 109, .	2.5	43
164	Silicon oxide buffer layer at the pâ€“i interface in amorphous and microcrystalline silicon solar cells. Solar Energy Materials and Solar Cells, 2014, 120, 143-150.	6.2	43
165	Infrared laser-based monitoring of the silane dissociation during deposition of silicon thin films. Applied Physics Letters, 2009, 94, .	3.3	42
166	Highly reflective nanotextured sputtered silver back reflector for flexible high-efficiency nâ€“iâ€“p thin-film silicon solar cells. Solar Energy Materials and Solar Cells, 2011, 95, 3585-3591.	6.2	42
167	Optimization of ZnO Front Electrodes for High-Efficiency Micromorph Thin-Film Si Solar Cells. IEEE Journal of Photovoltaics, 2012, 2, 229-235.	2.5	42
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