Stefaan De Wolf

List of Publications by Year
in descending order

197 papers	20,529 citations	10956 71 h-index	10424 139 g-index
203 all docs	203 docs citations	203 times ranked	13856 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.	2.1	2,153
2	High-efficiency crystalline silicon solar cells: status and perspectives. Energy and Environmental Science, 2016, 9, 1552-1576.	15.6	790
3	High-efficiency Silicon Heterojunction Solar Cells: A Review. Green, 2012, 2, 7-24.	0.4	725
4	Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. Science, 2020, 367, 1135-1140.	6.0	525
5	Complex Refractive Index Spectra of CH₃NH₃PbI₃ Perovskite Thin Films Determined by Spectroscopic Ellipsometry and Spectrophotometry. Journal of Physical Chemistry Letters, 2015, 6, 66-71.	2.1	491
6	Current Losses at the Front of Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2012, 2, 7-15.	1.5	479
7	Efficient silicon solar cells with dopant-free asymmetric heterocontacts. Nature Energy, 2016, 1, .	19.8	461
8	Efficient Monolithic Perovskite/Silicon Tandem Solar Cell with Cell Area >1 cm². Journal of Physical Chemistry Letters, 2016, 7, 161-166.	2.1	448
9	Defect and Contact Passivation for Perovskite Solar Cells. Advanced Materials, 2019, 31, e1900428.	11.1	445
10	Self-Assembled Monolayer Enables Hole Transport Layer-Free Organic Solar Cells with 18% Efficiency and Improved Operational Stability. ACS Energy Letters, 2020, 5, 2935-2944.	8.8	425
11	A Universal Doubleâ€Side Passivation for High Openâ€Circuit Voltage in Perovskite Solar Cells: Role of Carbonyl Groups in Poly(methyl methacrylate). Advanced Energy Materials, 2018, 8, 1801208.	10.2	387
12	Passivating contacts for crystalline silicon solar cells. Nature Energy, 2019, 4, 914-928.	19.8	374
13	Damp heatâ€“stable perovskite solar cells with tailored-dimensionality 2D/3D heterojunctions. Science, 2022, 376, 73-77.	6.0	366
14	Silicon heterojunction solar cell with passivated hole selective MoOx contact. Applied Physics Letters, 2014, 104, .	1.5	363
15	22.5% efficient silicon heterojunction solar cell with molybdenum oxide hole collector. Applied Physics Letters, 2015, 107, .	1.5	360
16	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.	8.8	332
17	Terawatt-scale photovoltaics: Transform global energy. Science, 2019, 364, 836-838.	6.0	320
18	Transparent Electrodes for Efficient Optoelectronics. Advanced Electronic Materials, 2017, 3, 1600529.	2.6	310

#	Article	IF	Citations
19	Organicâ€“inorganic halide perovskite/crystalline silicon four-terminal tandem solar cells. Physical Chemistry Chemical Physics, 2015, 17, 1619-1629.	1.3	308
20	Infrared light management in high-efficiency silicon heterojunction and rear-passivated solar cells. Journal of Applied Physics, 2013, 113, .	1.1	270
21	CH_3NH_3PbI_3 perovskite / silicon tandem solar cells: characterization based optical simulations. Optics Express, 2015, 23, A263.	1.7	258
22	Intrinsic efficiency limits in low-bandgap non-fullerene acceptor organic solar cells. Nature Materials, 2021, 20, 378-384.	13.3	257
23	Improved amorphous/crystalline silicon interface passivation by hydrogen plasma treatment. Applied Physics Letters, 2011, 99, .	1.5	238
24	Sputtered rear electrode with broadband transparency for perovskite solar cells. Solar Energy Materials and Solar Cells, 2015, 141, 407-413.	3.0	223
25	Abruptness of a-Si:Hâˆ•c-Si interface revealed by carrier lifetime measurements. Applied Physics Letters, 2007, 90, 042111.	1.5	210
26	Raman Spectroscopy of Organicâ€“Inorganic Halide Perovskites. Journal of Physical Chemistry Letters, 2015, 6, 401-406.	2.1	206
27	Damage at hydrogenated amorphous/crystalline silicon interfaces by indium tin oxide overlayer sputtering. Applied Physics Letters, 2012, 101, .	1.5	200
28	Nature of doped a-Si:H/c-Si interface recombination. Journal of Applied Physics, 2009, 105, .	1.1	197
29	Tin Oxide Electronâ€Selective Layers for Efficient, Stable, and Scalable Perovskite Solar Cells. Advanced Materials, 2021, 33, e2005504.	11.1	196
30	Improved Optics in Monolithic Perovskite/Silicon Tandem Solar Cells with a Nanocrystalline Silicon Recombination Junction. Advanced Energy Materials, 2018, 8, 1701609.	10.2	192
31	Temperature Dependence of the Urbach Energy in Lead Iodide Perovskites. Journal of Physical Chemistry Letters, 2019, 10, 1368-1373.	2.1	191
32	>21% Efficient Silicon Heterojunction Solar Cells on n- and p-Type Wafers Compared. IEEE Journal of Photovoltaics, 2013, 3, 83-89.	1.5	187
33	Enhanced optical path and electron diffusion length enable high-efficiency perovskite tandems. Nature Communications, 2020, 11, 1257.	5.8	180
34	Interplay between temperature and bandgap energies on the outdoor performance of perovskite/silicon tandem solar cells. Nature Energy, 2020, 5, 851-859.	19.8	177
35	Nanoimprint Lithography for High-Efficiency Thin-Film Silicon Solar Cells. Nano Letters, 2011, 11, 661-665.	4.5	171
36	Efficient bifacial monolithic perovskite/silicon tandem solar cells via bandgap engineering. Nature Energy, 2021, 6, 167-175.	19.8	164

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37	Generation of long-lived charges in organic semiconductor heterojunction nanoparticles for efficient photocatalytic hydrogen evolution. Nature Energy, 2022, 7, 340-351.	19.8	164
38	Multi-cation Synergy Suppresses Phase Segregation in Mixed-Halide Perovskites. Joule, 2019, 3, 1746-1764.	11.7	159
39	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.	7.7	143
40	Efficient and stable perovskite-silicon tandem solar cells through contact displacement by MgF <i> _x </i>. Science, 2022, 377, 302-306.	6.0	141
41	Industrially feasible, dopantâ€free, carrierâ€selective contacts for highâ€efficiency silicon solar cells. Progress in Photovoltaics: Research and Applications, 2017, 25, 896-904.	4.4	137
42	Lithium Fluoride Based Electron Contacts for High Efficiency nâ€Type Crystalline Silicon Solar Cells. Advanced Energy Materials, 2016, 6, 1600241.	10.2	134
43	High-Performance Perovskite Single-Junction and Textured Perovskite/Silicon Tandem Solar Cells via Slot-Die-Coating. ACS Energy Letters, 2020, 5, 3034-3040.	8.8	134
44	Zrâ€Doped Indium Oxide (IZRO) Transparent Electrodes for Perovskiteâ€Based Tandem Solar Cells. Advanced Functional Materials, 2019, 29, 1901741.	7.8	124
45	Stretched-exponential a-Si:Hâˆ•c-Si interface recombination decay. Applied Physics Letters, 2008, 93, .	1.5	123
46	Organicâ€"Inorganic Halide Perovskites: Perspectives for Silicon-Based Tandem Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1545-1551.	1.5	123
47	Concurrent cationic and anionic perovskite defect passivation enables 27.4% perovskite/silicon tandems with suppression of halide segregation. Joule, 2021, 5, 1566-1586.	11.7	119
48	Boron-doped a-Si:Hâˆ•c-Si interface passivation: Degradation mechanism. Applied Physics Letters, 2007, 91, .	1.5	114
49	Amorphous silicon oxide window layers for high-efficiency silicon heterojunction solar cells. Journal of Applied Physics, 2014, 115, .	1.1	113
50	Low-Temperature High-Mobility Amorphous IZO for Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1340-1347.	1.5	113
51	Tantalum Nitride Electronâ€Selective Contact for Crystalline Silicon Solar Cells. Advanced Energy Materials, 2018, 8, 1800608.	10.2	112
52	Organic Holeâ€Transport Layers for Efficient, Stable, and Scalable Inverted Perovskite Solar Cells. Advanced Materials, 2022, 34, .	11.1	107
53	Zinc tin oxide as high-temperature stable recombination layer for mesoscopic perovskite/silicon monolithic tandem solar cells. Applied Physics Letters, 2016, 109, .	1.5	105
54	28.2%-efficient, outdoor-stable perovskite/silicon tandem solar cell. Joule, 2021, 5, 3169-3186.	11.7	99

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55	A Low Resistance Calcium/Reduced Titania Passivated Contact for High Efficiency Crystalline Silicon Solar Cells. Advanced Energy Materials, 2017, 7, 1602606.	10.2	97
56	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.	1.5	96
57	Simple processing of back-contacted silicon heterojunction solar cells using selective-area crystalline growth. Nature Energy, 2017, 2, .	19.8	95
58	Record Infrared Internal Quantum Efficiency in Silicon Heterojunction Solar Cells With Dielectric/Metal Rear Reflectors. IEEE Journal of Photovoltaics, 2013, 3, 1243-1249.	1.5	92
59	Amorphous/crystalline silicon interface defects induced by hydrogen plasma treatments. Applied Physics Letters, 2013, 102, .	1.5	91
60	Dual-Function Electron-Conductive, Hole-Blocking Titanium Nitride Contacts for Efficient Silicon Solar Cells. Joule, 2019, 3, 1314-1327.	11.7	91
61	The silane depletion fraction as an indicator for the amorphous/crystalline silicon interface passivation quality. Applied Physics Letters, 2010, 97, .	1.5	90
62	Room-Temperature-Sputtered Nanocrystalline Nickel Oxide as Hole Transport Layer for pâ€“iâ€“n Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 6227-6233.	2.5	88
63	Defect Passivation in Perovskite Solar Cells by Cyanoâ€Based Ï€â€Conjugated Molecules for Improved Performance and Stability. Advanced Functional Materials, 2020, 30, 2002861.	7.8	87
64	Nanocrystalline Silicon Carrier Collectors for Silicon Heterojunction Solar Cells and Impact on Low-Temperature Device Characteristics. IEEE Journal of Photovoltaics, 2016, 6, 1654-1662.	1.5	82
65	Parasitic Absorption Reduction in Metal Oxide-Based Transparent Electrodes: Application in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 17260-17267.	4.0	80
66	Ligand-bridged charge extraction and enhanced quantum efficiency enable efficient nâ€“iâ€“p perovskite/silicon tandem solar cells. Energy and Environmental Science, 2021, 14, 4377-4390.	15.6	79
67	Linked Nickel Oxide/Perovskite Interface Passivation for Highâ€Performance Textured Monolithic Tandem Solar Cells. Advanced Energy Materials, 2021, 11, 2101662.	10.2	77
68	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.	15.6	76
69	Kinetic Stabilization of the Solâ€“Gel State in Perovskites Enables Facile Processing of Highâ€Efficiency Solar Cells. Advanced Materials, 2019, 31, e1808357.	11.1	76
70	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.	3.0	75
71	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, .	1.1	74
72	Hole-Collection Mechanism in Passivating Metal-Oxide Contacts on Si Solar Cells: Insights From Numerical Simulations. IEEE Journal of Photovoltaics, 2018, 8, 473-482.	1.5	71

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73	Back-Contacted Silicon Heterojunction Solar Cells With Efficiency >21%. IEEE Journal of Photovoltaics, 2014, 4, 1046-1054.	1.5	70
74	Device physics underlying silicon heterojunction and passivatingâ€contact solar cells: A topical review. Progress in Photovoltaics: Research and Applications, 2018, 26, 241-260.	4.4	70
75	Surface passivation properties of boron-doped plasma-enhanced chemical vapor deposited hydrogenated amorphous silicon films on p-type crystalline Si substrates. Applied Physics Letters, 2006, 88, 022104.	1.5	69
76	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,	1.1	69
77	Field-effect passivation on silicon nanowire solar cells. Nano Research, 2015, 8, 673-681.	5.8	69
78	Field Performance versus Standard Test Condition Efficiency of Tandem Solar Cells and the Singular Case of Perovskites/Silicon Devices. Journal of Physical Chemistry Letters, 2018, 9, 446-458.	2.1	69
79	Ambient blade coating of mixed cation, mixed halide perovskites without dripping: <i>in situ</i> investigation and highly efficient solar cells. Journal of Materials Chemistry A, 2020, 8, 1095-1104.	5.2	68
80	Acene Ring Size Optimization in Fused Lactam Polymers Enabling High n-Type Organic Thermoelectric Performance. Journal of the American Chemical Society, 2021, 143, 260-268.	6.6	68
81	Influence of stoichiometry of direct plasma-enhanced chemical vapor deposited SiNx films and silicon substrate surface roughness on surface passivation. Journal of Applied Physics, 2005, 97, 063303.	1.1	67
82	Light-induced performance increase of silicon heterojunction solar cells. Applied Physics Letters, 2016, 109, .	1.5	67
83	Atomic Layer Deposition of Vanadium Oxide as Holeâ€Selective Contact for Crystalline Silicon Solar Cells. Advanced Electronic Materials, 2020, 6, 2000467.	2.6	67
84	Increasing the efficiency of silicon heterojunction solar cells and modules by light soaking. Solar Energy Materials and Solar Cells, 2017, 173, 43-49.	3.0	65
85	Recombination junctions for efficient monolithic perovskite-based tandem solar cells: physical principles, properties, processing and prospects. Materials Horizons, 2020, 7, 2791-2809.	6.4	65
86	Properties of interfaces in amorphous/crystalline silicon heterojunctions. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 651-656.	0.8	63
87	Mitigating Plasmonic Absorption Losses at Rear Electrodes in Highâ€Efficiency Silicon Solar Cells Using Dopantâ€Free Contact Stacks. Advanced Functional Materials, 2020, 30, 1907840.	7.8	55
88	Analysis of lateral transport through the inversion layer in amorphous silicon/crystalline silicon heterojunction solar cells. Journal of Applied Physics, 2013, 114, 074504.	1.1	54
89	Strategies for Doped Nanocrystalline Silicon Integration in Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1132-1140.	1.5	54
90	Ultralow Lattice Thermal Conductivity and Thermoelectric Properties of Monolayer Tl₂O. ACS Applied Energy Materials, 2019, 2, 3004-3008.	2.5	52

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91	Enhancing the Charge Extraction and Stability of Perovskite Solar Cells Using Strontium Titanate (SrTiO₃) Electron Transport Layer. ACS Applied Energy Materials, 2019, 2, 8090-8097.	2.5	51
92	Light-induced activation of boron doping in hydrogenated amorphous silicon for over 25% efficiency silicon solar cells. Nature Energy, 2022, 7, 427-437.	19.8	50
93	Atomic-Layer-Deposited Transparent Electrodes for Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1387-1396.	1.5	48
94	Damp-Heat-Stable, High-Efficiency, Industrial-Size Silicon Heterojunction Solar Cells. Joule, 2020, 4, 913-927.	11.7	48
95	Environmental stability of high-mobility indium-oxide based transparent electrodes. APL Materials, 2015, 3, 116105.	2.2	47
96	A Highly Conductive Titanium Oxynitride Electronâ€Selective Contact for Efficient Photovoltaic Devices. Advanced Materials, 2020, 32, e2002608.	11.1	46
97	Scaling-up perovskite solar cells on hydrophobic surfaces. Nano Energy, 2021, 81, 105633.	8.2	46
98	Back-Contacted Silicon Heterojunction Solar Cells: Optical-Loss Analysis and Mitigation. IEEE Journal of Photovoltaics, 2015, 5, 1293-1303.	1.5	45
99	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.	0.8	44
100	Micromorph thin-film silicon solar cells with transparent high-mobility hydrogenated indium oxide front electrodes. Journal of Applied Physics, 2011, 109, .	1.1	43
101	Sputtered transparent electrodes for optoelectronic devices: Induced damage and mitigation strategies. Matter, 2021, 4, 3549-3584.	5.0	43
102	Toward Annealingâ€Stable Molybdenumâ€Oxideâ€Based Holeâ€Selective Contacts For Silicon Photovoltaics. Solar Rrl, 2018, 2, 1700227.	3.1	42
103	Toward Stable Monolithic Perovskite/Silicon Tandem Photovoltaics: A Six-Month Outdoor Performance Study in a Hot and Humid Climate. ACS Energy Letters, 2021, 6, 2944-2951.	8.8	42
104	Silicon heterojunction solar cells: Techno-economic assessment and opportunities. Joule, 2022, 6, 514-542.	11.7	42
105	Polysilicon Passivating Contacts for Silicon Solar Cells: Interface Passivation and Carrier Transport Mechanism. ACS Applied Energy Materials, 2019, 2, 4609-4617.	2.5	41
106	A universal solution processed interfacial bilayer enabling ohmic contact in organic and hybrid optoelectronic devices. Energy and Environmental Science, 2020, 13, 268-276.	15.6	40
107	Transparent Electrodes in Silicon Heterojunction Solar Cells: Influence on Contact Passivation. IEEE Journal of Photovoltaics, 2016, 6, 17-27.	1.5	38
108	Lewis-Acid Doping of Triphenylamine-Based Hole Transport Materials Improves the Performance and Stability of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 23874-23884.	4.0	38

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109	Heat generation and mitigation in silicon solar cells and modules. Joule, 2021, 5, 631-645.	11.7	38
110	Chemical Design Rules for Nonâ€Fullerene Acceptors in Organic Solar Cells. Advanced Energy Materials, 2021, 11, 2102363.	10.2	38
111	Autonomous MXene-PVDF actuator for flexible solar trackers. Nano Energy, 2020, 77, 105277.	8.2	35
112	Polymeric Electron-Selective Contact for Crystalline Silicon Solar Cells with an Efficiency Exceeding 19%. ACS Energy Letters, 2020, 5, 897-902.	8.8	35
113	Amorphous/Crystalline Silicon Interface Passivation: Ambient-Temperature Dependence and Implications for Solar Cell Performance. IEEE Journal of Photovoltaics, 2015, 5, 718-724.	1.5	32
114	A Generalized Theory Explains the Anomalous Sunsâ€“ $V_{{m{oc}}}$ Response of Si Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 169-176.	1.5	32
115	Wide and Tunable Bandgap MAPbBr_{3âˆ’<i>x</i>}Cl_{<i>x</i>} Hybrid Perovskites with Enhanced Phase Stability: In Situ Investigation and Photovoltaic Devices. Solar Rrl, 2021, 5, 2000718.	3.1	32
116	Photon recycling in perovskite solar cells and its impact on device design. Nanophotonics, 2021, 10, 2023-2042.	2.9	29
117	Dip Coating Passivation of Crystalline Silicon by Lewis Acids. ACS Nano, 2019, 13, 3723-3729.	7.3	28
118	Scalable Pulsed Laser Deposition of Transparent Rear Electrode for Perovskite Solar Cells. Advanced Materials Technologies, 2021, 6, 2000856.	3.0	28
119	Scaled Deposition of Ti₃C₂<i>T</i>_{<i>x</i>} MXene on Complex Surfaces: Application Assessment as Rear Electrodes for Silicon Heterojunction Solar Cells. ACS Nano, 2022, 16, 2419-2428.	7.3	28
120	Amorphous Silicon/Crystalline Silicon Heterojunction Solar Cells. Semiconductors and Semimetals, 2014, , 73-120.	0.4	26
121	Dynamics of Antisolvent Processed Hybrid Metal Halide Perovskites Studied by <i>In Situ</i> Photoluminescence and Its Influence on Optoelectronic Properties. ACS Applied Energy Materials, 2020, 3, 2386-2393.	2.5	26
122	Potassium Thiocyanateâ€Assisted Enhancement of Slotâ€Dieâ€Coated Perovskite Films for Highâ€Performance Solar Cells. Small Science, 2021, 1, 2000044.	5.8	26
123	Copper Thiocyanate and Copper Selenocyanate Hole Transport Layers: Determination of Band Offsets with Silicon and Hybrid Perovskites from First Principles. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900328.	1.2	25
124	Metal-induced gap states in passivating metal/silicon contacts. Applied Physics Letters, 2019, 114, .	1.5	25
125	Interfacial Dynamics and Contact Passivation in Perovskite Solar Cells. Advanced Electronic Materials, 2019, 5, 1800500.	2.6	25
126	Mechanical Reliability of Fullerene/Tin Oxide Interfaces in Monolithic Perovskite/Silicon Tandem Cells. ACS Energy Letters, 2022, 7, 827-833.	8.8	25

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127	Is light-induced degradation of <i>a-</i>Si:H/<i>c</i>-Si interfaces reversible?. Applied Physics Letters, 2014, 104, .	1.5	24
128	How Humidity and Light Exposure Change the Photophysics of Metal Halide Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000382.	3.1	23
129	Ecoâ€Friendly Spray Deposition of Perovskite Films on Macroscale Textured Surfaces. Advanced Materials Technologies, 2020, 5, 1901009.	3.0	23
130	Impact of Acceptor Quadrupole Moment on Charge Generation and Recombination in Blends of IDTâ€Based Nonâ€Fullerene Acceptors with PCE10 as Donor Polymer. Advanced Energy Materials, 2021, 11, 2100839.	10.2	23
131	Probing Photocurrent Nonuniformities in the Subcells of Monolithic Perovskite/Silicon Tandem Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 5114-5120.	2.1	22
132	Low-temperature plasma-deposited silicon epitaxial films: Growth and properties. Journal of Applied Physics, 2014, 116, .	1.1	21
133	Sputtered Hydrogenated Amorphous Silicon for Silicon Heterojunction Solar Cell Fabrication. Energy Procedia, 2014, 55, 865-872.	1.8	21
134	All Set for Efficient and Reliable Perovskite/Silicon Tandem Photovoltaic Modules?. Solar Rrl, 2022, 6, 2100493.	3.1	21
135	Charge Carrier Recombination at Perovskite/Hole Transport Layer Interfaces Monitored by Time-Resolved Spectroscopy. ACS Energy Letters, 2021, 6, 4155-4164.	8.8	20
136	Monolithic Perovskite/Silicon Tandem Photovoltaics with Minimized Cell-to-Module Losses by Refractive-Index Engineering. ACS Energy Letters, 2022, 7, 2370-2372.	8.8	20
137	Carrier Extraction from Perovskite to Polymeric Charge Transport Layers Probed by Ultrafast Transient Absorption Spectroscopy. Journal of Physical Chemistry Letters, 2019, 10, 6921-6928.	2.1	19
138	Characterizing amorphous silicon, silicon nitride, and diffused layers in crystalline siliconsolarcellsusingmicro-photoluminescence spectroscopy. Solar Energy Materials and Solar Cells, 2016, 145, 403-411.	3.0	18
139	Photocurrent Spectroscopy of Perovskite Layers and Solar Cells: A Sensitive Probe of Material Degradation. Journal of Physical Chemistry Letters, 2017, 8, 838-843.	2.1	18
140	Impact of Cation Multiplicity on Halide Perovskite Defect Densities and Solar Cell Voltages. Journal of Physical Chemistry C, 2020, 124, 27333-27339.	1.5	18
141	Electrode metallization for scaled perovskite/silicon tandem solar cells: Challenges and opportunities. Progress in Photovoltaics: Research and Applications, 2023, 31, 429-442.	4.4	18
142	Unleashing the Full Power of Perovskite/Silicon Tandem Modules with Solar Trackers. ACS Energy Letters, 2022, 7, 1604-1610.	8.8	18
143	Asymmetric band offsets in silicon heterojunction solar cells: Impact on device performance. Journal of Applied Physics, 2016, 120, 054501.	1.1	17
144	Tuning the Optoelectronic Properties of ZnO:Al by Addition of Silica for Light Trapping in Highâ€Efficiency Crystalline Si Solar Cells. Advanced Materials Interfaces, 2016, 3, 1500462.	1.9	16

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145	Triarylphosphine Oxide as Cathode Interfacial Material for Inverted Perovskite Solar Cells. Advanced Materials Interfaces, 2019, 6, 1900434.	1.9	16
146	Understanding of Passivation Mechanism in Heterojunction c-Si Solar Cells. Materials Research Society Symposia Proceedings, 2008, 1066, 1.	0.1	14
147	Profilometry of thin films on rough substrates by Raman spectroscopy. Scientific Reports, 2016, 6, 37859.	1.6	14
148	Imaging the Spatial Evolution of Degradation in Perovskite/Si Tandem Solar Cells After Exposure to Humid Air. IEEE Journal of Photovoltaics, 2017, 7, 1563-1568.	1.5	14
149	Solution-Doped Polysilicon Passivating Contacts for Silicon Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 8455-8460.	4.0	14
150	Photoactivated p-Doping of Organic Interlayer Enables Efficient Perovskite/Silicon Tandem Solar Cells. ACS Energy Letters, 2022, 7, 1987-1993.	8.8	14
151	Effect of the thin-film limit on the measurable optical properties of graphene. Scientific Reports, 2015, 5, 15684.	1.6	13
152	Amorphous gallium oxide grown by low-temperature PECVD. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, 021518.	0.9	13
153	Impact of Cesium/Rubidium Incorporation on the Photophysics of Multipleâ€Cation Lead Halide Perovskites. Solar Rrl, 2020, 4, 2000072.	3.1	13
154	Life Cycle Assessment of Coated-Glass Recovery from Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2021, 9, 15239-15248.	3.2	13
155	Attenuated total reflectance Fourier-transform infrared spectroscopic investigation of silicon heterojunction solar cells. Review of Scientific Instruments, 2015, 86, 073108.	0.6	12
156	Survey of dopant-free carrier-selective contacts for silicon solar cells. , 2016, , .		12
157	Practical silicon deposition rules derived from silane monitoring during plasma-enhanced chemical vapor deposition. Journal of Applied Physics, 2015, 117, .	1.1	10
158	Impact of Photoluminescence Reabsorption in Metalâ€Halide Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100029.	3.1	9
159	Potassium Thiocyanateâ€Assisted Enhancement of Slotâ€Dieâ€Coated Perovskite Films for Highâ€Performance Solar Cells. Small Science, 2021, 1, 2170013.	5.8	9
160	Visualization of Charge Carrier Trapping in Silicon at the Atomic Surface Level Using Four-Dimensional Electron Imaging. Journal of Physical Chemistry Letters, 2019, 10, 1960-1966.	2.1	8
161	Intrinsic Silicon Buffer Layer Improves Holeâ€Collecting Polyâ€Si Passivating Contact. Advanced Materials Interfaces, 2020, 7, 2000188.	1.9	8
162	Efficient bandgap widening in co-evaporated MAPbI₃ perovskite. Sustainable Energy and Fuels, 2022, 6, 2428-2438.	2.5	8

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163	Large-area Hybrid Silicon Heterojunction Solar Cells with Ni/Cu Plated Front Contacts. Energy Procedia, 2014, 55, 715-723.	1.8	7
164	Hole selective MoO<inf>x</inf> contact for silicon heterojunction solar cells. , 2014, , .		7
165	Scanning Laser-Beam-Induced Current Measurements of Lateral Transport Near-Junction Defects in Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 154-159.	1.5	7
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