## 23.6%-efficient monolithic perovskite/silicon tandem so

Nature Energy 2,

DOI: 10.1038/nenergy.2017.9

Citation Report

#	Article	IF	CITATIONS
1	Perovskite Solar Cells: The Birth of a New Era in Photovoltaics. ACS Energy Letters, 2017, 2, 822-830.	17.4	305
2	Efficient Light Management by Textured Nanoimprinted Layers for Perovskite Solar Cells. ACS Photonics, 2017, 4, 1232-1239.	6.6	103
3	Recent progress in stabilizing hybrid perovskites for solar cell applications. Journal of Power Sources, 2017, 355, 98-133.	7.8	96
4	Nondestructive Probing of Perovskite Silicon Tandem Solar Cells Using Multiwavelength Photoluminescence Mapping. IEEE Journal of Photovoltaics, 2017, 7, 1081-1086.	2.5	24
5	Growth patterns and properties of aerosol-assisted chemical vapor deposition of CH3NH3PbI3 films in a single step. Surface and Coatings Technology, 2017, 321, 336-340.	4.8	15
6	Balancing optimization and innovation. Nature Energy, 2017, 2, .	39.5	1
7	Synergistic Effects of Lead Thiocyanate Additive and Solvent Annealing on the Performance of Wide-Bandgap Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1177-1182.	17.4	190
8	Solution-processed perovskite-kesterite reflective tandem solar cells. Solar Energy, 2017, 155, 35-38.	6.1	16
9	Inorganic CsPbI <sub>3</sub> Perovskiteâ€Based Solar Cells: A Choice for a Tandem Device. Solar Rrl, 2017, 1, 1700048.	5.8	268
10	Secondary Hydrothermally Processed Engineered Titanium Dioxide Nanostructures for Efficient Perovskite Solar Cells. Energy Technology, 2017, 5, 1775-1787.	3.8	6
11	Solar cell efficiency tables (version 50). Progress in Photovoltaics: Research and Applications, 2017, 25, 668-676.	8.1	792
12	Correlation between Photoluminescence and Carrier Transport and a Simple In Situ Passivation Method for High-Bandgap Hybrid Perovskites. Journal of Physical Chemistry Letters, 2017, 8, 3289-3298.	4.6	41
13	Lowâ€refractiveâ€index nanoparticle interlayers to reduce parasitic absorption in metallic rear reflectors of solar cells. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700179.	1.8	12
14	Energy-Down-Shift CsPbCl <sub>3</sub> :Mn Quantum Dots for Boosting the Efficiency and Stability of Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1479-1486.	17.4	221
15	Perovskite solar cells - An overview of critical issues. Progress in Quantum Electronics, 2017, 53, 1-37.	7.0	132
16	Rubidium Multication Perovskite with Optimized Bandgap for Perovskite‣ilicon Tandem with over 26% Efficiency. Advanced Energy Materials, 2017, 7, 1700228.	19.5	443
17	Towards enabling stable lead halide perovskite solar cells; interplay between structural, environmental, and thermal stability. Journal of Materials Chemistry A, 2017, 5, 11483-11500.	10.3	319
18	Toward Full Solution Processed Perovskite/Si Monolithic Tandem Solar Device With PCE Exceeding 20%. Solar Rrl, 2017, 1, 1700149.	5.8	69

ATION RE

#	Article	IF	CITATIONS
19	Improved stability and efficiency of perovskite solar cells with submicron flexible barrier films deposited in air. Journal of Materials Chemistry A, 2017, 5, 22975-22983.	10.3	38
20	The influence of hybrid alumina/titania materials as electron transmission layer in planar high-performance perovskite solar cells. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	2
21	Research progress on large-area perovskite thin films and solar modules. Journal of Materiomics, 2017, 3, 231-244.	5.7	75
22	The Potential of Multijunction Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 2506-2513.	17.4	272
23	Low temperature perovskite solar cells with an evaporated TiO2 compact layer for perovskite silicon tandem solar cells. Energy Procedia, 2017, 124, 567-576.	1.8	21
24	Cerium and Ytterbium Codoped Halide Perovskite Quantum Dots: A Novel and Efficient Downconverter for Improving the Performance of Silicon Solar Cells. Advanced Materials, 2017, 29, 1704149.	21.0	389
25	Monolithic perovskite/silicon-homojunction tandem solar cell with over 22% efficiency. Energy and Environmental Science, 2017, 10, 2472-2479.	30.8	178
26	Influence of the Grain Size on the Properties of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 38428-38435.	8.0	25
27	Perovskite Photovoltaics: The Path to a Printable Terawatt-Scale Technology. ACS Energy Letters, 2017, 2, 2540-2544.	17.4	64
28	Enhancing the performance and stability of carbon-based perovskite solar cells by the cold isostatic pressing method. RSC Advances, 2017, 7, 48958-48961.	3.6	12
29	ABX3 Perovskites for Tandem Solar Cells. Joule, 2017, 1, 769-793.	24.0	176
30	Electronic structure of organic–inorganic lanthanide iodide perovskite solar cell materials. Journal of Materials Chemistry A, 2017, 5, 23131-23138.	10.3	28
31	Photoluminescence from Radiative Surface States and Excitons in Methylammonium Lead Bromide Perovskites. Journal of Physical Chemistry Letters, 2017, 8, 4258-4263.	4.6	46
32	Monolithic tandem solar cells comprising electrodeposited CuInSe <sub>2</sub> and perovskite solar cells with a nanoparticulate ZnO buffer layer. Journal of Materials Chemistry A, 2017, 5, 19439-19446.	10.3	45
33	Modeling the Performance Limitations and Prospects of Perovskite/Si Tandem Solar Cells under Realistic Operating Conditions. ACS Energy Letters, 2017, 2, 2089-2095.	17.4	86
34	Bismuth Incorporation Stabilized α-CsPbI <sub>3</sub> for Fully Inorganic Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 2219-2227.	17.4	468
35	Stabilizing the α-Phase of CsPbI3 Perovskite by Sulfobetaine Zwitterions in One-Step Spin-Coating Films. Joule, 2017, 1, 371-382.	24.0	442
36	Recent advances in plasmonic metal and rare-earth-element upconversion nanoparticle doped perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 21604-21624.	10.3	86

#	Article	IF	CITATIONS
37	Synthesis and Characterization of Alkylamine-Functionalized Si(111) for Perovskite Adhesion With Minimal Interfacial Oxidation or Electronic Defects. ACS Applied Materials & Interfaces, 2017, 9, 34377-34388.	8.0	18
38	Too Many Junctions? A Case Study of Multijunction Thinâ€Film Silicon Solar Cells. Advanced Sustainable Systems, 2017, 1, 1700077.	5.3	11
39	Effect of Formamidinium/Cesium Substitution and PbI <sub>2</sub> on the Longâ€Term Stability of Tripleâ€Cation Perovskites. ChemSusChem, 2017, 10, 3804-3809.	6.8	28
40	Circumventing UV Light Induced Nanomorphology Disorder to Achieve Long Lifetime PTB7â€Th:PCBM Based Solar Cells. Advanced Energy Materials, 2017, 7, 1701201.	19.5	67
41	Current-Induced Phase Segregation in Mixed Halide Hybrid Perovskites and its Impact on Two-Terminal Tandem Solar Cell Design. ACS Energy Letters, 2017, 2, 1841-1847.	17.4	161
42	Synergic Interface Optimization with Green Solvent Engineering in Mixed Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700576.	19.5	240
43	Highly Efficient Perovskite–Perovskite Tandem Solar Cells Reaching 80% of the Theoretical Limit in Photovoltage. Advanced Materials, 2017, 29, 1702140.	21.0	278
44	Optical Analysis of Planar Multicrystalline Perovskite Solar Cells. Advanced Optical Materials, 2017, 5, 1700151.	7.3	51
45	15.3%-Efficient GaAsP Solar Cells on GaP/Si Templates. ACS Energy Letters, 2017, 2, 1911-1918.	17.4	44
46	Environmental analysis of perovskites and other relevant solar cell technologies in a tandem configuration. Energy and Environmental Science, 2017, 10, 1874-1884.	30.8	104
47	Ohmic shunts in two-terminal dual-junction solar cells with current mismatch. Japanese Journal of Applied Physics, 2017, 56, 08MA05.	1.5	10
48	Predicting and optimising the energy yield of perovskite-on-silicon tandem solar cells under real world conditions. Energy and Environmental Science, 2017, 10, 1983-1993.	30.8	192
49	Atomic Layer Deposition of Electron Selective SnO <sub><i>x</i></sub> and ZnO Films on Mixed Halide Perovskite: Compatibility and Performance. ACS Applied Materials & Interfaces, 2017, 9, 29707-29716.	8.0	36
50	Small molecule-driven directional movement enabling pin-hole free perovskite film via fast solution engineering. Nanoscale, 2017, 9, 15778-15785.	5.6	2
51	Synthetic Manipulation of Hybrid Perovskite Systems in Search of New and Enhanced Functionalities. ChemSusChem, 2017, 10, 3722-3739.	6.8	11
52	Efficient ambient-air-stable solar cells with 2D–3D heterostructured butylammonium-caesium-formamidinium lead halide perovskites. Nature Energy, 2017, 2, .	39.5	1,169
53	Overcoming the Challenges of Large-Area High-Efficiency Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1978-1984.	17.4	130
54	Metal halide perovskite tandem and multiple-junction photovoltaics. Nature Reviews Chemistry, 2017, 1,	30.2	344

#	Article	IF	CITATIONS
55	Strained hybrid perovskite thin films and their impact on the intrinsic stability of perovskite solar cells. Science Advances, 2017, 3, eaao5616.	10.3	635
56	Electrical analysis of c-Si/CGSe monolithic tandem solar cells by using a cell-selective light absorption scheme. Scientific Reports, 2017, 7, 15723.	3.3	20
57	Contact Selectivity Engineering in a 2 μm Thick Ultrathin c-Si Solar Cell Using Transition-Metal Oxides Achieving an Efficiency of 10.8%. ACS Applied Materials & Interfaces, 2017, 9, 41863-41870.	8.0	25
58	<i>J–V</i> and <i>C–V</i> investigation of the effect of small molecular fullerene and non-fullerene acceptors for CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cell. Journal Physics D: Applied Physics, 2017, 50, 475303.	2.8	6
59	Promises and challenges of perovskite solar cells. Science, 2017, 358, 739-744.	12.6	1,510
60	Layer-by-Layer Degradation of Methylammonium Lead Tri-iodide Perovskite Microplates. Joule, 2017, 1, 548-562.	24.0	199
61	Accelerated Lifetime Testing of Organic–Inorganic Perovskite Solar Cells Encapsulated by Polyisobutylene. ACS Applied Materials & Interfaces, 2017, 9, 25073-25081.	8.0	165
62	Band Gap Tuning via Lattice Contraction and Octahedral Tilting in Perovskite Materials for Photovoltaics. Journal of the American Chemical Society, 2017, 139, 11117-11124.	13.7	570
63	Progress on Perovskite Materials and Solar Cells with Mixed Cations and Halide Anions. ACS Applied Materials & Interfaces, 2017, 9, 30197-30246.	8.0	453
64	Balance on the charge generation, separation and transfer performance of different TiO 2 nanostructures in quantum dot sensitized solar cells. Materials Research Bulletin, 2017, 94, 463-471.	5.2	9
65	Improved light management in planar silicon and perovskite solar cells using PDMS scattering layer. Solar Energy Materials and Solar Cells, 2017, 173, 59-65.	6.2	82
66	Photoluminescence Study of the Photoinduced Phase Separation in Mixed-Halide Hybrid Perovskite CH3NH3Pb(Brxl1â°'x)3 Crystals Synthesized via a Solvothermal Method. Scientific Reports, 2017, 7, 17695.	3.3	18
67	Numerical optical optimization of monolithic planar perovskite-silicon tandem solar cells with regular and inverted device architectures. Optics Express, 2017, 25, A473.	3.4	114
68	Nanoimprinted perovskite metasurface for enhanced photoluminescence. Optics Express, 2017, 25, A1162.	3.4	35
69	Predicting the Efficiency of the Silicon Bottom Cell in a Two-Terminal Tandem Solar Cell. , 2017, , .		1
70	Towards Perovskite Silicon Tandem Solar Cells with Optimized Optical Properties. , 2017, , .		0
71	Highly Efficient 3rd Generation Multi-Junction Solar Cells Using Silicon Heterojunction and Perovskite Tandem: Prospective Life Cycle Environmental Impacts. Energies, 2017, 10, 841.	3.1	24
72	A comparative life cycle assessment of chalcogenide/Si tandem solar modules. Energy, 2018, 145, 700-709.	8.8	26

#	Article	IF	CITATIONS
73	Thermomechanical-stress-free interconnection of solar cells using a liquid metal. Solar Energy Materials and Solar Cells, 2018, 180, 10-18.	6.2	6
74	Sequential Processing: Spontaneous Improvements in Film Quality and Interfacial Engineering for Efficient Perovskite Solar Cells. Solar Rrl, 2018, 2, 1800027.	5.8	33
75	Comparison of the Al back contact deposited by sputtering, e-beam, or thermal evaporation for inverted perovskite solar cells. Journal Physics D: Applied Physics, 2018, 51, 135502.	2.8	11
76	Complex Refractive Indices of Cesium–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
77	Enhanced performance <i>via</i> partial lead replacement with calcium for a CsPbI <sub>3</sub> perovskite solar cell exceeding 13% power conversion efficiency. Journal of Materials Chemistry A, 2018, 6, 5580-5586.	10.3	202
78	Electronic band structure and carrier concentration of formamidinium–cesium mixed cation lead mixed halide hybrid perovskites. Applied Physics Letters, 2018, 112, .	3.3	54
79	Towards Nanowire Tandem Junction Solar Cells on Silicon. IEEE Journal of Photovoltaics, 2018, 8, 733-740.	2.5	53
80	Developing a Robust Recombination Contact to Realize Monolithic Perovskite Tandems With Industrially Common p-Type Silicon Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1023-1028.	2.5	27
81	Perovskite seeding growth of formamidinium-lead-iodide-based perovskites for efficient and stable solar cells. Nature Communications, 2018, 9, 1607.	12.8	309
82	Present status and future prospects of perovskite photovoltaics. Nature Materials, 2018, 17, 372-376.	27.5	590
83	Improving Efficiency and Light Stability of Perovskite Solar Cells by Incorporating YVO <sub>4</sub> :Eu <sub>3</sub> <sup>+</sup> , Bi <sub>3</sub> <sup>+</sup> Nanophosphor into the Mesoporous TiO <sub>2</sub> Layer. ACS Applied Energy Materials, 2018, 1, 2096-2102.	5.1	32
84	Temperature Variation-Induced Performance Decline of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 16390-16399.	8.0	89
85	Sustainable luminescent solar concentrators based on organic–inorganic hybrids modified with chlorophyll. Journal of Materials Chemistry A, 2018, 6, 8712-8723.	10.3	38
86	Nb-doped amorphous titanium oxide compact layer for formamidinium-based high efficiency perovskite solar cells by low-temperature fabrication. Journal of Materials Chemistry A, 2018, 6, 9583-9591.	10.3	30
87	Material challenges for solar cells in the twenty-first century: directions in emerging technologies. Science and Technology of Advanced Materials, 2018, 19, 336-369.	6.1	162
88	Maximizing tandem solar cell power extraction using a three-terminal design. Sustainable Energy and Fuels, 2018, 2, 1141-1147.	4.9	67
89	Tin oxide (SnO2) as effective electron selective layer material in hybrid organic–inorganic metal halide perovskite solar cells. Journal of Energy Chemistry, 2018, 27, 962-970.	12.9	39
90	Synthesis of SnO <sub>2</sub> nanofibers and nanobelts electron transporting layer for efficient perovskite solar cells. Nanoscale, 2018, 10, 8275-8284.	5.6	51

#	Article	IF	CITATIONS
91	Lead Halide Perovskites in Thin Film Photovoltaics: Background and Perspectives. Bulletin of the Chemical Society of Japan, 2018, 91, 1058-1068.	3.2	84
92	A review of recent progress in heterogeneous silicon tandem solar cells. Journal Physics D: Applied Physics, 2018, 51, 133002.	2.8	103
93	In-system photoelectron spectroscopy study of tin oxide layers produced from tetrakis(dimethylamino)tin by plasma enhanced atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	8
94	Tandem perovskite solar cells. Renewable and Sustainable Energy Reviews, 2018, 84, 89-110.	16.4	93
95	Structural and Electronic Properties of Two-Dimensional Organic–inorganic Halide Perovskites and their Stability against Moisture. Journal of Physical Chemistry C, 2018, 122, 5844-5853.	3.1	19
96	Role of Acid–Base Equilibria in the Size, Shape, and Phase Control of Cesium Lead Bromide Nanocrystals. ACS Nano, 2018, 12, 1704-1711.	14.6	395
97	Morphology Characterization of Bulk Heterojunction Solar Cells. Small Methods, 2018, 2, 1700229.	8.6	98
98	Research progress on organic–inorganic halide perovskite materials and solar cells. Journal Physics D: Applied Physics, 2018, 51, 093001.	2.8	56
99	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
100	Nanophotonic design of perovskite/silicon tandem solar cells. Journal of Materials Chemistry A, 2018, 6, 3625-3633.	10.3	53
101	Highly Efficient and Stable Flexible Perovskite Solar Cells with Metal Oxides Nanoparticle Charge Extraction Layers. Small, 2018, 14, e1702775.	10.0	111
102	Nanoporous p-type NiOx electrode for p-i-n inverted perovskite solar cell toward air stability. Materials Today, 2018, 21, 483-500.	14.2	99
103	Boosting efficiency of hole conductor-free perovskite solar cells by incorporating p-type NiO nanoparticles into carbon electrodes. Solar Energy Materials and Solar Cells, 2018, 178, 164-169.	6.2	62
104	Amideâ€Catalyzed Phaseâ€Selective Crystallization Reduces Defect Density in Wideâ€Bandgap Perovskites. Advanced Materials, 2018, 30, e1706275.	21.0	80
105	Compositional Engineering for Efficient Wide Band Gap Perovskites with Improved Stability to Photoinduced Phase Segregation. ACS Energy Letters, 2018, 3, 428-435.	17.4	344
106	Spatial Atmospheric Pressure Atomic Layer Deposition of Tin Oxide as an Impermeable Electron Extraction Layer for Perovskite Solar Cells with Enhanced Thermal Stability. ACS Applied Materials & Interfaces, 2018, 10, 6006-6013.	8.0	65
107	Chlorine-Incorporation-Induced Formation of the Layered Phase for Antimony-Based Lead-Free Perovskite Solar Cells. Journal of the American Chemical Society, 2018, 140, 1019-1027.	13.7	241
108	Sputtered indium zinc oxide rear electrodes for inverted semitransparent perovskite solar cells without using a protective buffer layer. Organic Electronics, 2018, 54, 48-53.	2.6	34

#	Article	IF	CITATIONS
109	Fully Vacuum-Processed Wide Band Gap Mixed-Halide Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 214-219.	17.4	91
110	Topological distribution of reversible and non-reversible degradation in perovskite solar cells. Nano Energy, 2018, 45, 94-100.	16.0	46
111	Transparent electrode for monolithic perovskite/silicon-heterojunction two-terminal tandem solar cells. Nano Energy, 2018, 45, 280-286.	16.0	67
112	Systematic investigation of the impact of operation conditions on the degradation behaviour of perovskite solar cells. Nature Energy, 2018, 3, 61-67.	39.5	544
113	Voltage Losses in Organic Solar Cells: Understanding the Contributions of Intramolecular Vibrations to Nonradiative Recombinations. Advanced Energy Materials, 2018, 8, 1702227.	19.5	47
114	Balancing electrical and optical losses for efficient 4-terminal Si–perovskite solar cells with solution processed percolation electrodes. Journal of Materials Chemistry A, 2018, 6, 3583-3592.	10.3	102
115	Infrared Solutionâ€Processed Quantum Dot Solar Cells Reaching External Quantum Efficiency of 80% at 1.35 µm and <i>J</i> <sub>sc</sub> in Excess of 34 mA cm <sup>â~2</sup> . Advanced Materials, 2018, 30, 1704928.	21.0	92
116	Graphene aerogels for efficient energy storage and conversion. Energy and Environmental Science, 2018, 11, 772-799.	30.8	435
117	Fully Solutionâ€Processed Semiâ€Transparent Perovskite Solar Cells With Inkâ€Jet Printed Silver Nanowires Top Electrode. Solar Rrl, 2018, 2, 1700184.	5.8	66
118	Mechanically-stacked perovskite/CIGS tandem solar cells with efficiency of 23.9% and reduced oxygen sensitivity. Energy and Environmental Science, 2018, 11, 394-406.	30.8	209
119	An integrated organic–inorganic hole transport layer for efficient and stable perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 2157-2165.	10.3	79
120	New-generation integrated devices based on dye-sensitized and perovskite solar cells. Energy and Environmental Science, 2018, 11, 476-526.	30.8	364
121	Compositionally Graded Absorber for Efficient and Stable Nearâ€Infraredâ€Transparent Perovskite Solar Cells. Advanced Science, 2018, 5, 1700675.	11.2	65
122	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
123	Cyclic Utilization of Lead in Carbon-Based Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2018, 6, 7558-7564.	6.7	30
124	Optical characterization and bandgap engineering of flat and wrinkle-textured FA0.83Cs0.17Pb(I1– <i>x</i> Br <i>x</i> )3 perovskite thin films. Journal of Applied Physics, 2018, 123, .	2.5	25
125	Enhancing Defect Tolerance and Phase Stability of High-Bandgap Perovskites via Guanidinium Alloying. ACS Energy Letters, 2018, 3, 1261-1268.	17.4	105
126	Metal replacement in perovskite solar cell materials: chemical bonding effects and optoelectronic properties. Sustainable Energy and Fuels, 2018, 2, 1430-1445.	4.9	78

	CITATION R	EPORT	
# 127	ARTICLE Impact of interlayer application on band bending for improved electron extraction for efficient flexible perovskite mini-modules. Nano Energy, 2018, 49, 300-307.	lF 16.0	CITATIONS 32
128	Cation-Dependent Light-Induced Halide Demixing in Hybrid Organic–Inorganic Perovskites. Nano Letters, 2018, 18, 3473-3480.	9.1	65
129	Economic viability of thin-film tandem solar modules in the United States. Nature Energy, 2018, 3, 387-394.	39.5	68
130	Controlling Thin-Film Stress and Wrinkling during Perovskite Film Formation. ACS Energy Letters, 2018, 3, 1225-1232.	17.4	148
131	Advances in Spray-Cast Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2018, 9, 1977-1984.	4.6	106
132	Ill–V-on-silicon solar cells reaching 33% photoconversion efficiency in two-terminal configuration. Nature Energy, 2018, 3, 326-333.	39.5	244
133	Advances in Polymer-Based Photovoltaic Cells: Review of Pioneering Materials, Design, and Device Physics. , 2018, , 1-48.		1
134	Blade-Coated Hybrid Perovskite Solar Cells with Efficiency > 17%: An In Situ Investigation. ACS Energy Letters, 2018, 3, 1078-1085.	17.4	171
135	Maximizing and stabilizing luminescence from halide perovskites with potassium passivation. Nature, 2018, 555, 497-501.	27.8	1,336
136	Perovskite–silicon tandem solar modules with optimised light harvesting. Energy and Environmental Science, 2018, 11, 1489-1498.	30.8	104
137	Single-graded CIGS with narrow bandgap for tandem solar cells. Science and Technology of Advanced Materials, 2018, 19, 263-270.	6.1	51
138	High-Open-Circuit-Voltage Solar Cells Based on Bright Mixed-Halide CsPbBrl <sub>2</sub> Perovskite Nanocrystals Synthesized under Ambient Air Conditions. Journal of Physical Chemistry C, 2018, 122, 7621-7626.	3.1	56
139	Perovskite/Colloidal Quantum Dot Tandem Solar Cells: Theoretical Modeling and Monolithic Structure. ACS Energy Letters, 2018, 3, 869-874.	17.4	77
140	Large-area perovskite solar cells – a review of recent progress and issues. RSC Advances, 2018, 8, 10489-10508.	3.6	171
141	Low-temperature SnO <sub>2</sub> -modified TiO <sub>2</sub> yields record efficiency for normal planar perovskite solar modules. Journal of Materials Chemistry A, 2018, 6, 10233-10242.	10.3	75
142	Effect of non-stoichiometric solution chemistry on improving the performance of wide-bandgap perovskite solar cells. Materials Today Energy, 2018, 7, 232-238.	4.7	31
143	Design and understanding of encapsulated perovskite solar cells to withstand temperature cycling. Energy and Environmental Science, 2018, 11, 144-150.	30.8	314

Advances and challenges to the commercialization of organic–inorganic halide perovskite solar cell technology. Materials Today Energy, 2018, 7, 169-189. 

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#	Article	IF	CITATIONS
145	Improved Optics in Monolithic Perovskite/Silicon Tandem Solar Cells with a Nanocrystalline Silicon Recombination Junction. Advanced Energy Materials, 2018, 8, 1701609.	19.5	192
146	Meteoroid Impact Detection for Exploration of Asteroids: Small Satellites for Asteroid Characterization. Journal of Spacecraft and Rockets, 2018, 55, 202-213.	1.9	5
147	Quantifying energy losses in planar perovskite solar cells. Solar Energy Materials and Solar Cells, 2018, 174, 206-213.	6.2	76
148	Molecular Interlayers in Hybrid Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1701544.	19.5	80
149	Perovskite/Silicon Tandem Solar Cells: Marriage of Convenience or True Love Story? – An Overview. Advanced Materials Interfaces, 2018, 5, 1700731.	3.7	321
150	Solar cell efficiency tables (version 51). Progress in Photovoltaics: Research and Applications, 2018, 26, 3-12.	8.1	729
151	Preparation of mixed-ion and inorganic perovskite films using water and isopropanol as solvents for solar cell applications. Sustainable Energy and Fuels, 2018, 2, 606-615.	4.9	29
152	Effect of Cation Composition on the Mechanical Stability of Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1702116.	19.5	130
153	Reverse Bias Behavior of Halide Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1702365.	19.5	127
154	Bandgap Optimization of Perovskite Semiconductors for Photovoltaic Applications. Chemistry - A European Journal, 2018, 24, 2305-2316.	3.3	103
155	Enhanced charge carrier mobility and lifetime suppress hysteresis and improve efficiency in planar perovskite solar cells. Energy and Environmental Science, 2018, 11, 78-86.	30.8	246
156	Insights Into the Microscopic and Degradation Processes in Hybrid Perovskite Solar Cells Using Noise Spectroscopy. Solar Rrl, 2018, 2, 1700173.	5.8	13
157	Influence of Radiation on the Properties and the Stability of Hybrid Perovskites. Advanced Materials, 2018, 30, 1702905.	21.0	162
158	High-quality perovskite MAPbI3 single crystals for broad-spectrum and rapid response integrate photodetector. Journal of Energy Chemistry, 2018, 27, 722-727.	12.9	76
159	Combination of Hybrid CVD and Cation Exchange for Upscaling Cs‣ubstituted Mixed Cation Perovskite Solar Cells with High Efficiency and Stability. Advanced Functional Materials, 2018, 28, 1703835.	14.9	158
160	Flexible and Semitransparent Organic Solar Cells. Advanced Energy Materials, 2018, 8, 1701791.	19.5	556
161	Design and Optimization of Perovskite Solar Cell with Thin ZnO Insulator Layer as Electron Transport. , 2018, , .		8
162	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.	30.8	281

#	ARTICLE	IF	CITATIONS
163	Modification of dry/wet hybrid fabrication method for preparing a perovskite absorption layer on a PCBM electron transport layer. RSC Advances, 2018, 8, 39047-39052.	3.6	1
164	Energy yield modelling of perovskite/silicon two-terminal tandem PV modules with flat and textured interfaces. Sustainable Energy and Fuels, 2018, 2, 2754-2761.	4.9	61
165	Realizing solution-processed monolithic PbS QDs/perovskite tandem solar cells with high UV stability. Journal of Materials Chemistry A, 2018, 6, 24693-24701.	10.3	45
166	Effect of Composition and Microstructure on the Mechanical Stability of Perovskite Solar Cells. , 2018, , .		1
167	The Bandgap as a Moving Target: Reversible Bandgap Instabilities in Multiple-Cation Mixed-Halide Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 2995-3001.	17.4	24
168	Recent Advances in and New Perspectives on Crystalline Silicon Solar Cells with Carrier-Selective Passivation Contacts. Crystals, 2018, 8, 430.	2.2	52
169	Electron Transfer and Dye Regeneration in Dye-Sensitized Solar Cells. , 2018, , .		0
170	Optimization of highly efficient GaAs–silicon hybrid solar cell. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	24
171	Excess charge-carrier induced instability of hybrid perovskites. Nature Communications, 2018, 9, 4981.	12.8	159
172	Thermionic Emission–Based Interconnecting Layer Featuring Solvent Resistance for Monolithic Tandem Solar Cells with Solutionâ€Processed Perovskites. Advanced Energy Materials, 2018, 8, 1801954.	19.5	40
173	Thick TiO <sub>2</sub> -Based Top Electron Transport Layer on Perovskite for Highly Efficient and Stable Solar Cells. ACS Energy Letters, 2018, 3, 2891-2898.	17.4	71
174	Current-matching in two-terminal perovskite/silicon tandems employing wide-bandgap perovskites and varying light-management schemes. , 2018, , .		4
175	Light Management Enhancement for Four-Terminal Perovskite-Silicon Tandem Solar Cells: The Impact of the Optical Properties and Thickness of the Spacer Layer between Sub-Cells. Materials, 2018, 11, 2570.	2.9	16
176	Thin-film solar cells exceeding 22% solar cell efficiency: An overview on CdTe-, Cu(In,Ga)Se2-, and perovskite-based materials. Applied Physics Reviews, 2018, 5, .	11.3	175
177	Numerical analysis of bifacial silicon-based tandem devices: Shifts in the optimum top-cell bandgap with varying albedo. , 2018, , .		2
178	Highly near-infrared-transparent perovskite solar cells and their application in high-efficiency 4-terminal perovskite/c-Si tandems. , 2018, , .		0
179	In situ recombination junction between p-Si and TiO <sub>2</sub> enables high-efficiency monolithic perovskite/Si tandem cells. Science Advances, 2018, 4, eaau9711.	10.3	122
180	Nanocrystalline silicon oxide interlayer in monolithic perovskite/silicon heterojunction tandem solar cells with total current density >39 mA/cm <sup>2</sup> . , 2018, , .		2

#	Article	IF	CITATIONS
181	Impact of Light on the Thermal Stability of Perovskite Solar Cells and Development of Stable Semi-transparent Cells. , 2018, , .		2
184	Illumination-Dependent Series Resistance in Perovskite Solar Cells Revealed by J <inf>sc</inf> -V <inf>oc</inf> Measurements. , 2018, , .		1
185	Optical and Compositional Engineering of Wide Band Gap Perovskites with Improved Stability to Photoinduced Phase Segregation for Efficient Monolithic Perovskite/Silicon Tandem Solar Cells. , 2018, , .		0
187	Damp Heat, Temperature Cycling and UV Stress Testing of Encapsulated Perovskite Photovoltaic Cells. , 2018, , .		7
188	Lithium Permeability Increase in Nanosized Amorphous Silicon Layers. Journal of Physical Chemistry C, 2018, 122, 28528-28536.	3.1	12
189	Hybrid sequential deposition process for fully textured perovskite/silicon tandem solar cells. , 2018, ,		2
190	Transparent, Conductive and Lightweight Superstrates for Perovskite Solar Cells and Modules. , 2018, , .		1
191	Manufacturing Cost Analysis of Perovskite Solar Modules in Single-Junction and All-Perovskite Tandem Configurations. , 2018, , .		11
192	Recent Advances in Synthesis and Properties of Hybrid Halide Perovskites for Photovoltaics. Nano-Micro Letters, 2018, 10, 68.	27.0	50
193	Selfâ€Assembled Hole Transporting Monolayer for Highly Efficient Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1801892.	19.5	172
194	Monolithic perovskite/Si tandem solar cells exceeding 22% efficiency via optimizing top cell absorber. Nano Energy, 2018, 53, 798-807.	16.0	83
195	Activated carbon as back contact for HTM-free mixed cation perovskite solar cell. Phase Transitions, 2018, 91, 1268-1276.	1.3	7
196	Impact of Surfaces on Photoinduced Halide Segregation in Mixed-Halide Perovskites. ACS Energy Letters, 2018, 3, 2694-2700.	17.4	184
197	Perovskite photovoltaic cells with ultra-thin buffer layers for tandem applications. Japanese Journal of Applied Physics, 2018, 57, 102303.	1.5	3
198	The Potential of Singlet Fission Photon Multipliers as an Alternative to Silicon-Based Tandem Solar Cells. ACS Energy Letters, 2018, 3, 2587-2592.	17.4	61
199	Multifunctional molecular modulators for perovskite solar cells with over 20% efficiency and high operational stability. Nature Communications, 2018, 9, 4482.	12.8	266
200	Room-Temperature-Sputtered Nanocrystalline Nickel Oxide as Hole Transport Layer for p–i–n Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 6227-6233.	5.1	88
201	Highly efficient MoOx-free semitransparent perovskite cell for 4 T tandem application improving the efficiency of commercially-available Al-BSF silicon. Scientific Reports, 2018, 8, 16139.	3.3	30

#	Article	IF	CITATIONS
202	Perovskite Solar Cells Employing Copper Phthalocyanine Hole-Transport Material with an Efficiency over 20% and Excellent Thermal Stability. ACS Energy Letters, 2018, 3, 2441-2448.	17.4	90
203	Efficient Polymer Scattering Layer Fabrication and their Application in Electrical Properties Enhancement of Perovskite/Silicon Tandem Solar Cells. Key Engineering Materials, 0, 778, 283-289.	0.4	2
204	Semi-transparent perovskite solar cells: unveiling the trade-off between transparency and efficiency. Journal of Materials Chemistry A, 2018, 6, 19696-19702.	10.3	95
205	Inorganic Materials as Hole Selective Contacts and Intermediate Tunnel Junction Layer for Monolithic Perovskite IGSe Tandem Solar Cells. Advanced Energy Materials, 2018, 8, 1801692.	19.5	17
206	Silicon Tunnel Junctions Produced by Ion Implantation and Diffusion Processes for Tandem Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1436-1442.	2.5	5
207	Challenges for commercializing perovskite solar cells. Science, 2018, 361, .	12.6	1,327
208	Tunable Bandgap GaInAsP Solar Cells With 18.7% Photoconversion Efficiency Synthesized by Low-Cost and High-Growth Rate Hydride Vapor Phase Epitaxy. IEEE Journal of Photovoltaics, 2018, 8, 1577-1583.	2.5	13
209	A full overview of international standards assessing the long-term stability of perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 21794-21808.	10.3	134
210	Dependence of power conversion properties of perovskite solar cells on operating temperature. Applied Physics Letters, 2018, 113, .	3.3	23
211	Enhanced UV stability of perovskite solar cells with a SrO interlayer. Organic Electronics, 2018, 63, 343-348.	2.6	30
212	Effect of Silicon Surface for Perovskite/Silicon Tandem Solar Cells: Flat or Textured?. ACS Applied Materials & Interfaces, 2018, 10, 35016-35024.	8.0	40
213	Quaternary alkylammonium salt incorporated 2D/3D mixed halide perovskite with highly enhanced photoluminescence and arrested iodide/bromide phase segregation. APL Materials, 2018, 6, .	5.1	13
214	Progress toward Stable Lead Halide Perovskite Solar Cells. Joule, 2018, 2, 1961-1990.	24.0	181
215	High efficiency 4-terminal perovskite/c-Si tandem cells. Solar Energy Materials and Solar Cells, 2018, 188, 1-5.	6.2	43
216	Solvent Engineering to Balance Light Absorbance and Transmittance in Perovskite for Tandem Solar Cells. Solar Rrl, 2018, 2, 1800176.	5.8	42
217	A Stepâ€byâ€Step Optimization of the câ€Si Bottom Cell in Monolithic Perovskite/câ€Si Tandem Devices. Solar Rrl, 2018, 2, 1800193.	5.8	10
218	Highly photostable and efficient semitransparent quantum dot solar cells by using solution-phase ligand exchange. Nano Energy, 2018, 53, 373-382.	16.0	29
219	Light and elevated temperature induced degradation (LeTID) in perovskite solar cells and development of stable semi-transparent cells. Solar Energy Materials and Solar Cells, 2018, 188, 27-36.	6.2	43

#	Article	IF	CITATIONS
220	Unraveling the Passivation Process of PbI <sub>2</sub> to Enhance the Efficiency of Planar Perovskite Solar Cells. Journal of Physical Chemistry C, 2018, 122, 21269-21276.	3.1	97
221	High-performance perovskite/Cu(In,Ga)Se <sub>2</sub> monolithic tandem solar cells. Science, 2018, 361, 904-908.	12.6	314
222	Boosting spectral response of multi-crystalline Si solar cells with Mn2+ doped CsPbCl3 quantum dots downconverter. Journal of Power Sources, 2018, 395, 85-91.	7.8	34
223	Toward Longâ€Term Stable and Highly Efficient Perovskite Solar Cells via Effective Charge Transporting Materials. Advanced Energy Materials, 2018, 8, 1800249.	19.5	85
224	Effect of Light Illumination on Mixed Halide Lead Perovskites: Reversible or Irreversible Transformation. ACS Applied Energy Materials, 2018, 1, 2859-2865.	5.1	27
225	Formation and characterization of preferred oriented perovskite thin films on single-crystalline substrates. Materials Research Express, 2018, 5, 066403.	1.6	3
226	Recent progressive efforts in perovskite solar cells toward commercialization. Journal of Materials Chemistry A, 2018, 6, 12215-12236.	10.3	56
227	Abnormal Synergetic Effect of Organic and Halide Ions on the Stability and Optoelectronic Properties of a Mixed Perovskite via In Situ Characterizations. Advanced Materials, 2018, 30, e1801562.	21.0	55
228	Effects of Frequency Dependence of the External Quantum Efficiency of Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2018, 9, 3099-3104.	4.6	59
229	Cost Analysis of Perovskite Tandem Photovoltaics. Joule, 2018, 2, 1559-1572.	24.0	266
229 230	Cost Analysis of Perovskite Tandem Photovoltaics. Joule, 2018, 2, 1559-1572. Ternary non-fullerene polymer solar cells with an efficiency of 11.6% by simultaneously optimizing photon harvesting and phase separation. Journal of Materials Chemistry A, 2018, 6, 11751-11758.	24.0 10.3	266 30
	Ternary non-fullerene polymer solar cells with an efficiency of 11.6% by simultaneously optimizing		
230	Ternary non-fullerene polymer solar cells with an efficiency of 11.6% by simultaneously optimizing photon harvesting and phase separation. Journal of Materials Chemistry A, 2018, 6, 11751-11758. Ultralow Thermal Conductivity and Ultrahigh Thermal Expansion of Single-Crystal Organic–Inorganic Hybrid Perovskite CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> (X = Cl, Br, I).	10.3	30
230 231	Ternary non-fullerene polymer solar cells with an efficiency of 11.6% by simultaneously optimizing photon harvesting and phase separation. Journal of Materials Chemistry A, 2018, 6, 11751-11758. Ultralow Thermal Conductivity and Ultrahigh Thermal Expansion of Single-Crystal Organicae <sup>(*)</sup> Inorganic Hybrid Perovskite CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> (X = Cl, Br, I). Journal of Physical Chemistry C, 2018, 122, 15973-15978. Barrier Design to Prevent Metal-Induced Degradation and Improve Thermal Stability in Perovskite	10.3 3.1	30 93
230 231 232	Ternary non-fullerene polymer solar cells with an efficiency of 11.6% by simultaneously optimizing photon harvesting and phase separation. Journal of Materials Chemistry A, 2018, 6, 11751-11758. Ultralow Thermal Conductivity and Ultrahigh Thermal Expansion of Single-Crystal Organica€"Inorganic Hybrid Perovskite CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> (X = Cl, Br, I). Journal of Physical Chemistry C, 2018, 122, 15973-15978. Barrier Design to Prevent Metal-Induced Degradation and Improve Thermal Stability in Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 1772-1778. Efficient Semitransparent Perovskite Solar Cells Using a Transparent Silver Electrode and	10.3 3.1 17.4	30 93 182
230 231 232 233	<ul> <li>Ternary non-fullerene polymer solar cells with an efficiency of 11.6% by simultaneously optimizing photon harvesting and phase separation. Journal of Materials Chemistry A, 2018, 6, 11751-11758.</li> <li>Ultralow Thermal Conductivity and Ultrahigh Thermal Expansion of Single-Crystal Organic–Inorganic Hybrid Perovskite CH<sub>3</sub>NH<sub>3</sub>PbX<sub>3</sub>(X = Cl, Br, I). Journal of Physical Chemistry C, 2018, 122, 15973-15978.</li> <li>Barrier Design to Prevent Metal-Induced Degradation and Improve Thermal Stability in Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 1772-1778.</li> <li>Efficient Semitransparent Perovskite Solar Cells Using a Transparent Silver Electrode and Four-Terminal Perovskite/Silicon Tandem Device Exploration. Journal of Nanomaterials, 2018, 2018, 1-8.</li> <li>Breakthroughs in NiOx-HTMs towards stable, low-cost and efficient perovskite solar cells. Nano</li> </ul>	10.3 3.1 17.4 2.7	30 93 182 7
230 231 232 233 233	Ternary non-fullerene polymer solar cells with an efficiency of 11.6% by simultaneously optimizing photon harvesting and phase separation. Journal of Materials Chemistry A, 2018, 6, 11751-11758.         Ultralow Thermal Conductivity and Ultrahigh Thermal Expansion of Single-Crystal Organic–Inorganic Hybrid Perovskite CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> (X = Cl, Br, I). Journal of Physical Chemistry C, 2018, 122, 15973-15978.         Barrier Design to Prevent Metal-Induced Degradation and Improve Thermal Stability in Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 1772-1778.         Efficient Semitransparent Perovskite Solar Cells Using a Transparent Silver Electrode and Four-Terminal Perovskite/Silicon Tandem Device Exploration. Journal of Nanomaterials, 2018, 2018, 1-8.         Breakthroughs in NiOx-HTMs towards stable, low-cost and efficient perovskite solar cells. Nano Energy, 2018, 51, 408-424.         Low-Temperature Atomic Layer Deposition of Metal Oxide Layers for Perovskite Solar Cells with High Efficiency and Stability under Harsh Environmental Conditions. ACS Applied Materials & amp;	10.3 3.1 17.4 2.7 16.0	<ul> <li>30</li> <li>93</li> <li>182</li> <li>7</li> <li>145</li> </ul>

#	Article	IF	CITATIONS
238	Innovative approaches in thin-film photovoltaic cells. , 2018, , 595-632.		0
239	Evolution of Perovskite Solar Cells. , 2018, , 43-88.		18
240	Ion Migration in Hybrid Perovskites. , 2018, , 163-196.		10
241	Fabrication and Life Time of Perovskite Solar Cells. , 2018, , 231-287.		7
242	Research Update: Bismuth-based perovskite-inspired photovoltaic materials. APL Materials, 2018, 6, .	5.1	82
243	Interfacial Effects of Tin Oxide Atomic Layer Deposition in Metal Halide Perovskite Photovoltaics. Advanced Energy Materials, 2018, 8, 1800591.	19.5	62
245	Large area efficient interface layer free monolithic perovskite/homo-junction-silicon tandem solar cell with over 20% efficiency. Energy and Environmental Science, 2018, 11, 2432-2443.	30.8	172
246	Encapsulating perovskite solar cells to withstand damp heat and thermal cycling. Sustainable Energy and Fuels, 2018, 2, 2398-2406.	4.9	231
247	Approaching Perfect Light Incoupling in Perovskite and Silicon Thin Film Solar Cells by Moth Eye Surface Textures. Advanced Theory and Simulations, 2018, 1, 1800030.	2.8	38
248	A NH4F interface passivation strategy to produce air-processed high-performance planar perovskite solar cells. Electrochimica Acta, 2018, 282, 653-661.	5.2	26
249	Fully solution processed semi-transparent perovskite solar cells with spray-coated silver nanowires/ZnO composite top electrode. Solar Energy Materials and Solar Cells, 2018, 185, 399-405.	6.2	111
250	Techno-economic viability of silicon-based tandem photovoltaic modules in the United States. Nature Energy, 2018, 3, 747-753.	39.5	86
251	Visualization and suppression of interfacial recombination for high-efficiency large-area pin perovskite solar cells. Nature Energy, 2018, 3, 847-854.	39.5	721
252	New thiophene-based C <sub>60</sub> fullerene derivatives as efficient electron transporting materials for perovskite solar cells. New Journal of Chemistry, 2018, 42, 14551-14558.	2.8	34
253	Optical design of spectrally selective interlayers for perovskite/silicon heterojunction tandem solar cells. Optics Express, 2018, 26, A750.	3.4	39
254	Optical modeling of structured silicon-based tandem solar cells and module stacks. Optics Express, 2018, 26, A761.	3.4	13
255	Infrared photocurrent management in monolithic perovskite/silicon heterojunction tandem solar cells by using a nanocrystalline silicon oxide interlayer. Optics Express, 2018, 26, A487.	3.4	48
256	Design of perovskite/crystalline-silicon monolithic tandem solar cells. Optics Express, 2018, 26, A579.	3.4	44

#	Article	IF	CITATIONS
257	Improve the Stability of Hybrid Halide Perovskite via Atomic Layer Deposition on Activated Phenyl-C <sub>61</sub> Butyric Acid Methyl Ester. ACS Applied Materials & Interfaces, 2018, 10, 28948-28954.	8.0	13
258	Initiation and future prospects of colloidal metal halide double-perovskite nanocrystals: Cs <sub>2</sub> AgBiX <sub>6</sub> (X = Cl, Br, I). Journal of Materials Chemistry A, 2018, 6, 21666-21675.	10.3	77
259	Solutionâ€Processed Lowâ€Bandgap CuIn(S,Se) <sub>2</sub> Absorbers for Highâ€Efficiency Singleâ€Junction and Monolithic Chalcopyriteâ€Perovskite Tandem Solar Cells. Advanced Energy Materials, 2018, 8, 1801254.	19.5	56
260	High irradiance performance of metal halide perovskites for concentrator photovoltaics. Nature Energy, 2018, 3, 855-861.	39.5	180
261	Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. Nature Communications, 2018, 9, 3100.	12.8	237
262	Tin–lead halide perovskites with improved thermal and air stability for efficient all-perovskite tandem solar cells. Sustainable Energy and Fuels, 2018, 2, 2450-2459.	4.9	167
263	Improved air-stability of an organic–inorganic perovskite with anhydrously transferred graphene. Journal of Materials Chemistry C, 2018, 6, 8663-8669.	5.5	9
264	High-efficiency heterojunction crystalline Si solar cells. Japanese Journal of Applied Physics, 2018, 57, 08RB20.	1.5	113
265	Synergistic combination of semiconductor quantum dots and organic-inorganic halide perovskites for hybrid solar cells. Coordination Chemistry Reviews, 2018, 374, 279-313.	18.8	51
266	All that glitters is not gold: Recent progress of alternative counter electrodes for perovskite solar cells. Nano Energy, 2018, 52, 211-238.	16.0	85
267	Modified solvent bathing method for forming high quality perovskite films. Thin Solid Films, 2018, 661, 60-64.	1.8	6
268	Effect of halide ratio and Cs+ addition on the photochemical stability of lead halide perovskites. Journal of Materials Chemistry A, 2018, 6, 22134-22144.	10.3	26
269	Stability in Perovskite Photovoltaics: A Paradigm for Newfangled Technologies. ACS Energy Letters, 2018, 3, 2136-2143.	17.4	113
270	Perovskite/Perovskite/Silicon Monolithic Triple-Junction Solar Cells with a Fully Textured Design. ACS Energy Letters, 2018, 3, 2052-2058.	17.4	87
271	Analysing the Prospects of Perovskite Solar Cells within the Purview of Recent Scientific Advancements. Crystals, 2018, 8, 242.	2.2	13
272	Oxygen aging time: A dominant step for spiro-OMeTAD in perovskite solar cells. Journal of Renewable and Sustainable Energy, 2018, 10, .	2.0	12
273	Atomic Layer Deposited TiO 2 –IrO x Alloy as a Hole Transport Material for Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800191.	3.7	15
274	Self-Assembled Growth of Ultrastable CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Perovskite Milliwires for Photodetectors. ACS Applied Materials & Interfaces, 2018, 10, 25763-25769.	8.0	37

#	Article	IF	CITATIONS
275	Opportunities and challenges for tandem solar cells using metal halide perovskite semiconductors. Nature Energy, 2018, 3, 828-838.	39.5	716
276	The Impact of Hybrid Compositional Film/Structure on Organic–Inorganic Perovskite Solar Cells. Nanomaterials, 2018, 8, 356.	4.1	30
277	Suppression of atomic vacancies via incorporation of isovalent small ions to increase the stability of halide perovskite solar cells in ambient air. Nature Energy, 2018, 3, 648-654.	39.5	552
278	"Heat Wave―of Metal Halide Perovskite Solar Cells Continues in Phoenix. ACS Energy Letters, 2018, 3, 1898-1903.	17.4	5
279	Compositionâ€Tuned Wide Bandgap Perovskites: From Grain Engineering to Stability and Performance Improvement. Advanced Functional Materials, 2018, 28, 1803130.	14.9	121
280	Cs <i><sub>x</sub></i> FA <sub>1–<i>x</i></sub> Pb(I <sub>1–<i>y</i></sub> Br <i><sub>y</sub></i> ) <sub>3 Perovskite Compositions: the Appearance of Wrinkled Morphology and its Impact on Solar Cell Performance. Journal of Physical Chemistry C, 2018, 122, 17123-17135.</sub>	8 3.1	42
281	Elucidation of Chemical Species and Reactivity at Methylammonium Lead Iodide and Cesium Tin Bromide Perovskite Surfaces via Orthogonal Reaction Chemistry. Journal of Physical Chemistry C, 2018, 122, 17882-17894.	3.1	16
282	Temperature Dependent Photoinduced Reversible Phase Separation in Mixed-Halide Perovskite. ACS Applied Energy Materials, 2018, 1, 3807-3814.	5.1	36
283	Overcoming the Photovoltage Plateau in Large Bandgap Perovskite Photovoltaics. Nano Letters, 2018, 18, 3985-3993.	9.1	97
284	Highly Efficient and Stable Semiâ€Transparent pâ€iâ€n Planar Perovskite Solar Cells by Atmospheric Pressure Spatial Atomic Layer Deposited ZnO. Solar Rrl, 2018, 2, 1800147.	5.8	31
285	Hysteresisâ€Free 1D Network Mixed Halideâ€Perovskite Semitransparent Solar Cells. Small, 2018, 14, e1802319.	10.0	13
286	Photophysics of metal halide perovskites: From materials to devices. Japanese Journal of Applied Physics, 2018, 57, 090101.	1.5	59
287	Low-Temperature Plasma-Assisted Atomic-Layer-Deposited SnO <sub>2</sub> as an Electron Transport Layer in Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 30367-30378.	8.0	88
288	Improved efficiency in fullerene and non-fullerene polymer solar cells having an interdigitated interface with the electron transport layer. Materials Chemistry Frontiers, 2018, 2, 1859-1865.	5.9	8
289	Minimizing Current and Voltage Losses to Reach 25% Efficient Monolithic Two-Terminal Perovskite–Silicon Tandem Solar Cells. ACS Energy Letters, 2018, 3, 2173-2180.	17.4	194
290	Crystalline silicon solar cells with tetracene interlayers: the path to silicon-singlet fission heterojunction devices. Materials Horizons, 2018, 5, 1065-1075.	12.2	92
291	Impact of Perovskite/Silicon Tandem Module Design on Hot-Spot Temperature. ACS Applied Energy Materials, 2018, 1, 3025-3029.	5.1	17
292	Low-temperature sintered SnO2 electron transport layer for efficient planar perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2018, 29, 13138-13147.	2.2	12

#	Article	IF	CITATIONS
293	Humidity-Induced Photoluminescence Hysteresis in Variable Cs/Br Ratio Hybrid Perovskites. Journal of Physical Chemistry Letters, 2018, 9, 3463-3469.	4.6	50
294	Solvent-controlled growth of inorganic perovskite films in dry environment for efficient and stable solar cells. Nature Communications, 2018, 9, 2225.	12.8	526
295	Enabling reliability assessments of pre-commercial perovskite photovoltaics with lessons learned from industrial standards. Nature Energy, 2018, 3, 459-465.	39.5	123
296	High-Bandgap Perovskite Materials for Multijunction Solar Cells. Joule, 2018, 2, 1421-1436.	24.0	173
297	Tailoring the Open-Circuit Voltage Deficit of Wide-Band-Gap Perovskite Solar Cells Using Alkyl Chain-Substituted Fullerene Derivatives. ACS Applied Materials & Interfaces, 2018, 10, 22074-22082.	8.0	57
298	Fully textured monolithic perovskite/silicon tandem solar cells with 25.2% power conversion efficiency. Nature Materials, 2018, 17, 820-826.	27.5	1,046
299	Perovskites cover silicon textures. Nature Materials, 2018, 17, 751-752.	27.5	19
300	Perovskite/c‣i tandem solar cells with realistic inverted architecture: Achieving high efficiency by optical optimization. Progress in Photovoltaics: Research and Applications, 2018, 26, 924-933.	8.1	19
301	A review on morphology engineering for highly efficient and stable hybrid perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 12842-12875.	10.3	168
302	Characterization of p-type nitrogen-doped cuprous oxide/n-type hydrogenated microcrystalline silicon tunnel recombination junction for perovskite/crystalline silicon tandem solar cells. Japanese Journal of Applied Physics, 2018, 57, 08RB05.	1.5	4
303	High-Voltage-Efficiency Inorganic Perovskite Solar Cells in a Wide Solution-Processing Window. Journal of Physical Chemistry Letters, 2018, 9, 3646-3653.	4.6	63
304	The Material Use of Perovskite Solar Cells. , 2019, , 122-132.		0
305	Combination of solution-phase process and halide exchange for all-inorganic, highly stable CsPbBr3 perovskite nanowire photodetector. Science China Materials, 2019, 62, 65-73.	6.3	38
306	Nature of the excited state in lead iodide perovskite materials: Time-dependent charge density response and the role of the monovalent cation. Physical Review B, 2019, 100, .	3.2	10
307	I <sub>2</sub> vapor-induced degradation of formamidinium lead iodide based perovskite solar cells under heat–light soaking conditions. Energy and Environmental Science, 2019, 12, 3074-3088.	30.8	131
308	Research advances towards large-scale solar hydrogen production from water. EnergyChem, 2019, 1, 100014.	19.1	130
309	The Next Frontier in Melt Electrospinning: Taming the Jet. Advanced Functional Materials, 2019, 29, 1904664.	14.9	173
310	Scalable Fabrication of Metal Halide Perovskite Solar Cells and Modules. ACS Energy Letters, 2019, 4, 2147-2167.	17.4	161

#	Article	IF	CITATIONS
311	Interfacial charge-transfer doping of metal halide perovskites for high performance photovoltaics. Energy and Environmental Science, 2019, 12, 3063-3073.	30.8	111
312	Interface Molecular Engineering for Laminated Monolithic Perovskite/Silicon Tandem Solar Cells with 80.4% Fill Factor. Advanced Functional Materials, 2019, 29, 1901476.	14.9	43
313	Enhancing the performance of perovskite solar cells via interface modification. Journal of Materials Science, 2019, 54, 14134-14142.	3.7	17
314	Polaron-Mediated Slow Carrier Cooling in a Type-1 3D/0D CsPbBr <sub>3</sub> @Cs <sub>4</sub> PbBr <sub>6</sub> Core–Shell Perovskite System. Journal of Physical Chemistry Letters, 2019, 10, 5302-5311.	4.6	66
315	Perovskite/Silicon Tandem Solar Cells: From Detailed Balance Limit Calculations to Photon Management. Nano-Micro Letters, 2019, 11, 58.	27.0	115
316	p-Doping of organic hole transport layers in p–i–n perovskite solar cells: correlating open-circuit voltage and photoluminescence quenching. Journal of Materials Chemistry A, 2019, 7, 18971-18979.	10.3	55
317	A review on the crystalline silicon bottom cell for monolithic perovskite/silicon tandem solar cells. Materials Today Nano, 2019, 7, 100045.	4.6	46
318	Tailored Phase Transformation of CsPbI <sub>2</sub> Br Films by Copper(II) Bromide for High-Performance All-Inorganic Perovskite Solar Cells. Nano Letters, 2019, 19, 5176-5184.	9.1	161
319	Enhanced Open-Circuit Voltage of Wide-Bandgap Perovskite Photovoltaics by Using Alloyed (FA <sub>1–<i>x</i></sub> Cs <sub><i>x</i></sub> )Pb(I <sub>1–<i>x</i></sub> Br <sub><i>x</i></sub> ) <sub Quantum Dots. ACS Energy Letters, 2019, 4, 1954-1960.</sub 	> <b>37./s</b> ub>	73
320	Recent Progress in Inorganic Hole Transport Materials for Efficient and Stable Perovskite Solar Cells. Electronic Materials Letters, 2019, 15, 505-524.	2.2	62
321	Dynamical Phase Transitions and Cation Orientation-Dependent Photoconductivity in CH(NH <sub>2</sub> ) <sub>2</sub> PbBr <sub>3</sub> ., 2019, 1, 260-264.		35
322	Planar perovskite solar cells with long-term stability using ionic liquid additives. Nature, 2019, 571, 245-250.	27.8	1,103
323	High irradiance performance of cesium-formamidinium-based mixed-halide perovskite for concentrator photovoltaics under various operating conditions. Journal of Physics and Chemistry of Solids, 2019, 135, 109093.	4.0	11
324	Recent progress in fundamental understanding of halide perovskite semiconductors. Progress in Materials Science, 2019, 106, 100580.	32.8	95
325	Direct and Indirect Recombination and Thermal Kinetics of Excitons in Colloidal All-Inorganic Lead Halide Perovskite Nanocrystals. Journal of Physical Chemistry C, 2019, 123, 19844-19850.	3.1	21
326	Scalable Deposition Methods for Largeâ€area Production of Perovskite Thin Films. Energy and Environmental Materials, 2019, 2, 119-145.	12.8	153
327	Improving the Performance of Perovskite Solar Cells using a Polyphosphazene Interfacing Layer. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900436.	1.8	9
328	Light induced degradation in mixed-halide perovskites. Journal of Materials Chemistry C, 2019, 7, 9326-9334.	5.5	67

#	Article	IF	CITATIONS
329	Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS. Joule, 2019, 3, 1734-1745.	24.0	227
330	A Review of Perovskite Photovoltaic Materials' Synthesis and Applications via Chemical Vapor Deposition Method. Materials, 2019, 12, 3304.	2.9	25
331	Solutionâ€Processed Laminated Perovskite Layers for Highâ€Performance Solar Cells. Advanced Functional Materials, 2019, 29, 1903330.	14.9	10
332	Nonradiative Recombination in Perovskite Solar Cells: The Role of Interfaces. Advanced Materials, 2019, 31, e1902762.	21.0	422
333	Efficient and Stable Inverted Perovskite Solar Cells Incorporating Secondary Amines. Advanced Materials, 2019, 31, e1903559.	21.0	128
334	Cesium Lead Inorganic Solar Cell with Efficiency beyond 18% via Reduced Charge Recombination. Advanced Materials, 2019, 31, e1905143.	21.0	202
335	Nanostructured Perovskite Solar Cells. Nanomaterials, 2019, 9, 1481.	4.1	19
336	Large-Area 23%-Efficient Monolithic Perovskite/Homojunction-Silicon Tandem Solar Cell with Enhanced UV Stability Using Down-Shifting Material. ACS Energy Letters, 2019, 4, 2623-2631.	17.4	88
337	Core–Shell ZnO@SnO <sub>2</sub> Nanoparticles for Efficient Inorganic Perovskite Solar Cells. Journal of the American Chemical Society, 2019, 141, 17610-17616.	13.7	113
338	Passivating and low-resistive poly-Si tunneling junction enabling high-efficiency monolithic perovskite/silicon tandem solar cells. Applied Physics Letters, 2019, 115, 182105.	3.3	31
339	Perovskite/c-Si Monolithic Tandem Solar Cells under Real Solar Spectra: Improving Energy Yield by Oblique Incident Optimization. Journal of Physical Chemistry C, 2019, 123, 28659-28667.	3.1	8
340	Enhanced Nucleation of Atomic Layer Deposited Contacts Improves Operational Stability of Perovskite Solar Cells in Air. Advanced Energy Materials, 2019, 9, 1902353.	19.5	47
341	Semi-Transparent Perovskite Solar Cells with ITO Directly Sputtered on Spiro-OMeTAD for Tandem Applications. ACS Applied Materials & amp; Interfaces, 2019, 11, 45796-45804.	8.0	63
342	Probing the Degradation Chemistry and Enhanced Stability of 2D Organolead Halide Perovskites. Journal of the American Chemical Society, 2019, 141, 18170-18181.	13.7	50
343	Efficient and semi-transparent perovskite solar cells using a room-temperature processed MoO <sub>x</sub> /ITO/Ag/ITO electrode. Journal of Materials Chemistry C, 2019, 7, 10981-10987.	5.5	31
344	Two-terminal mechanical perovskite/silicon tandem solar cells with transparent conductive adhesives. Nano Energy, 2019, 65, 104044.	16.0	36
345	Controlling spectral selectivity in optoelectronics via photonic band engineering in absorbing media. , 2019, , .		0
346	Interfacial Bonding and Electronic Structure between Copper Thiocyanate and Hybrid Organohalide Lead Perovskites for Photovoltaic Application. Journal of Physical Chemistry Letters, 2019, 10, 5609-5616.	4.6	4

# 347	ARTICLE Poly(vinylpyrrolidone)-doped SnO <sub>2</sub> as an electron transport layer for perovskite solar	IF	CITATIONS
347	cells with improved performance. Journal of Materials Chemistry C, 2019, 7, 12204-12210. Scalable Ambient Fabrication of High-Performance CsPbI2Br Solar Cells. Joule, 2019, 3, 2485-2502.	5.5 24.0	28
349	20%-efficient epitaxial GaAsP/Si tandem solar cells. Solar Energy Materials and Solar Cells, 2019, 202, 110144.	6.2	33
350	The Value of Efficiency in Photovoltaics. Joule, 2019, 3, 2732-2747.	24.0	49
351	Low-temperature preparation of crystallized graphite nanofibers for high performance perovskite solar cells. Solar Energy, 2019, 193, 205-211.	6.1	5
352	NaCl doped electrochemical PEDOT:PSS layers for inverted perovskite solar cells with enhanced stability. Synthetic Metals, 2019, 257, 116178.	3.9	10
353	Ultrasonically sprayed-on perovskite solar cells-effects of organic cation on defect formation of CH3NH3PbI3 films. Current Applied Physics, 2019, 19, 1427-1435.	2.4	3
354	Enhancing electron diffusion length in narrow-bandgap perovskites for efficient monolithic perovskite tandem solar cells. Nature Communications, 2019, 10, 4498.	12.8	234
355	Organic composition tailored perovskite solar cells and light-emitting diodes: Perspectives and advances. Materials Today Energy, 2019, 14, 100338.	4.7	9
356	Rapid large-grain (>100â€Î¼4m) formation of organic-inorganic perovskite thin films via shear deposition for photovoltaic application. Solar Energy, 2019, 191, 629-636.	6.1	10
357	Irradiance in Mixed Coherent/Incoherent Structures: An Analytical Approach. Coatings, 2019, 9, 536.	2.6	2
358	Highly efficient prismatic perovskite solar cells. Energy and Environmental Science, 2019, 12, 929-937.	30.8	54
359	Atomic layer deposition for efficient and stable perovskite solar cells. Chemical Communications, 2019, 55, 2403-2416.	4.1	76
360	A Dualâ€Retarded Reaction Processed Mixed ation Perovskite Layer for Highâ€Efficiency Solar Cells. Advanced Functional Materials, 2019, 29, 1807420.	14.9	28
361	Perovskite—a Perfect Top Cell for Tandem Devices to Break the S–Q Limit. Advanced Science, 2019, 6, 1801704.	11.2	80
362	Highly Efficient and Stable Perovskite Solar Cells via Modification of Energy Levels at the Perovskite/Carbon Electrode Interface. Advanced Materials, 2019, 31, e1804284.	21.0	161
363	Low-temperature processed yttrium-doped SrSnO3 perovskite electron transport layer for planar heterojunction perovskite solar cells with high efficiency. Nano Energy, 2019, 59, 1-9.	16.0	52
364	Development of wide bandgap perovskites for next-generation low-cost CdTe tandem solar cells. Chemical Engineering Science, 2019, 199, 388-397.	3.8	28

#	Article	IF	CITATIONS
365	SnO <sub>2</sub> –Ti <sub>3</sub> C <sub>2</sub> MXene electron transport layers for perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 5635-5642.	10.3	173
366	Exploring the electrochemical properties of hole transporting materials from first-principles calculations: an efficient strategy to improve the performance of perovskite solar cells. Physical Chemistry Chemical Physics, 2019, 21, 1235-1241.	2.8	23
367	Review of lead-free halide perovskites as light-absorbers for photovoltaic applications: From materials to solar cells. Solar Energy Materials and Solar Cells, 2019, 193, 107-132.	6.2	135
368	Doping strategies for small molecule organic hole-transport materials: impacts on perovskite solar cell performance and stability. Chemical Science, 2019, 10, 1904-1935.	7.4	279
369	A study of electromagnetic light propagation in a perovskite-based solar cell via a computational modelling approach. Bulletin of Materials Science, 2019, 42, .	1.7	20
370	Light Management: A Key Concept in High-Efficiency Perovskite/Silicon Tandem Photovoltaics. Journal of Physical Chemistry Letters, 2019, 10, 3159-3170.	4.6	81
371	Performance of perovskite solar cells under simulated temperature-illumination real-world operating conditions. Nature Energy, 2019, 4, 568-574.	39.5	186
372	Electrochemical Hole Injection Selectively Expels Iodide from Mixed Halide Perovskite Films. Journal of the American Chemical Society, 2019, 141, 10812-10820.	13.7	104
373	Monodisperse Bismuth-Halide Double Perovskite Nanocrystals Confined in Mesoporous Silica Templates. Inorganic Chemistry, 2019, 58, 8500-8505.	4.0	16
374	Exploring the formation of formamidinium-based hybrid perovskites by antisolvent methods: <i>in situ</i> GIWAXS measurements during spin coating. Sustainable Energy and Fuels, 2019, 3, 2287-2297.	4.9	38
375	Blocking effect of morphology-controllable TiO2 films in carbon-based hole-conductor-free perovskite solar cells. Materials Research Express, 2019, 6, 095501.	1.6	3
376	Magnetron-sputtered nickel oxide films as hole transport layer for planar heterojunction perovskite solar cells. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	2.3	14
377	Reduced methylammonium triple-cation Rb <sub>0.05</sub> (FAPbI <sub>3</sub> ) <sub>0.95</sub> (MAPbBr <sub>3</sub> ) <sub>0.05</sub> perovskite solar cells based on a TiO <sub>2</sub> /SnO <sub>2</sub> bilayer electron transport layer approaching a stabilized 21% efficiency: the role of antisolvents. Journal of Materials Chemistry A, 2019, 7, 17516-17528.	10.3	37
378	Irradiance and temperature considerations in the design and deployment of high annual energy yield perovskite/CIGS tandems. Sustainable Energy and Fuels, 2019, 3, 1841-1851.	4.9	30
379	Highâ€Performance Inverted Perovskite Solar Cells by Reducing Electron Capture Region for Electron Transport Layers. Solar Rrl, 2019, 3, 1900207.	5.8	6
380	Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. ACS Energy Letters, 2019, 4, 1521-1527.	17.4	130
381	Wide-bandgap, low-bandgap, and tandem perovskite solar cells. Semiconductor Science and Technology, 2019, 34, 093001.	2.0	89
382	Effects of layer thickness on Power Conversion Efficiency in Perovskite solar cell: A numerical simulation approach. , 2019, , .		8

#	Article	IF	CITATIONS
383	Fabrication of perovskite solar cells with ITO deposited at a high rate by activated reactive evaporation using a pressure-gradient-type plasma gun. Japanese Journal of Applied Physics, 2019, 58, 068010.	1.5	1
384	Inorganic CsPblBr <sub>2</sub> â€Based Perovskite Solar Cells: Fabrication Technique Modification and Efficiency Improvement. Solar Rrl, 2019, 3, 1900135.	5.8	60
385	Twoâ€Terminal Perovskites Tandem Solar Cells: Recent Advances and Perspectives. Solar Rrl, 2019, 3, 1900080.	5.8	55
386	Atmospheric Pressure Spatial Atomic Layer Deposited Metal Oxides for Thin Film Solar Cells. , 2019, , 245-277.		2
387	Designing a new family of oxonium-cation based structurally diverse organic–inorganic hybrid iodoantimonate crystals. Chemical Communications, 2019, 55, 7562-7565.	4.1	16
388	Influence of phase transition on stability of perovskite solar cells under thermal cycling conditions. Solar Energy, 2019, 188, 312-317.	6.1	23
389	Imperfections and their passivation in halide perovskite solar cells. Chemical Society Reviews, 2019, 48, 3842-3867.	38.1	1,257
390	A two-terminal all-inorganic perovskite/organic tandem solar cell. Science Bulletin, 2019, 64, 885-887.	9.0	76
391	Efficiency of all-perovskite two-terminal tandem solar cells: A drift-diffusion study. Solar Energy, 2019, 187, 39-46.	6.1	27
392	An Analytical Approach to CH 3 NH 3 PbI 3 Perovskite Solar Cells Based on Different Hole Transport Materials. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900087.	1.8	5
393	Trap passivation and efficiency improvement of perovskite solar cells by a guanidinium additive. Materials Chemistry Frontiers, 2019, 3, 1357-1364.	5.9	30
394	Enabling Flexible All-Perovskite Tandem Solar Cells. Joule, 2019, 3, 2193-2204.	24.0	331
395	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.	4.9	208
396	A Long-Lifetime All-Organic Aqueous Flow Battery Utilizing TMAP-TEMPO Radical. CheM, 2019, 5, 1861-1870.	11.7	196
397	First-order calculations of performance metrics of perovskite/Si tandem solar cells. AIP Conference Proceedings, 2019, , .	0.4	0
398	Record Openâ€Circuit Voltage Wideâ€Bandgap Perovskite Solar Cells Utilizing 2D/3D Perovskite Heterostructure. Advanced Energy Materials, 2019, 9, 1803699.	19.5	325
399	Impact of perovskite solar cell degradation on the lifetime energy yield and economic viability of perovskite/silicon tandem modules. Sustainable Energy and Fuels, 2019, 3, 1439-1447.	4.9	30
400	Efficient and Stable CsPbI <sub>3</sub> Solar Cells via Regulating Lattice Distortion with Surface Organic Terminal Groups. Advanced Materials, 2019, 31, e1900605.	21.0	209

#	Article	IF	CITATIONS
401	Model for the Prediction of the Lifetime and Energy Yield of Methyl Ammonium Lead Iodide Perovskite Solar Cells at Elevated Temperatures. ACS Applied Materials & Interfaces, 2019, 11, 16517-16526.	8.0	19
402	Carrier lifetimes of >1 μs in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. Science, 2019, 364, 475-479.	12.6	781
403	Achieving a high open-circuit voltage in inverted wide-bandgap perovskite solar cells with a graded perovskite homojunction. Nano Energy, 2019, 61, 141-147.	16.0	152
404	Towards Oxide Electronics: a Roadmap. Applied Surface Science, 2019, 482, 1-93.	6.1	236
405	Understanding Effects of Cesium in CH(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> for Stabilizing CH(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> /CsPbI <sub>3</sub> Interface under UV Illumination. Journal of Physical Chemistry C, 2019, 123, 12117-12125.	3.1	11
406	Stable Two-Photon Pumped Amplified Spontaneous Emission from Millimeter-Sized CsPbBr <sub>3</sub> Single Crystals. Journal of Physical Chemistry Letters, 2019, 10, 2357-2362.	4.6	43
407	Reaction Temperature and Partial Pressure Induced Etching of Methylammonium Lead Iodide Perovskite by Trimethylaluminum. Langmuir, 2019, 35, 6522-6531.	3.5	12
408	Hydrogen Passivated Silicon Grain Boundaries Greatly Reduce Charge Recombination for Improved Silicon/Perovskite Tandem Solar Cell Performance: Time Domain Ab Initio Analysis. Journal of Physical Chemistry Letters, 2019, 10, 2445-2452.	4.6	14
409	Low-Temperature Screen-Printed Metallization for the Scale-Up of Two-Terminal Perovskite–Silicon Tandems. ACS Applied Energy Materials, 2019, 2, 3815-3821.	5.1	78
410	Improved performance of perovskite solar cells through using (FA)x(MA)1-xPbI3 optical absorber layer. Optoelectronics Letters, 2019, 15, 117-121.	0.8	13
411	Nickel phthalocyanine as an excellent hole-transport material in inverted planar perovskite solar cells. Chemical Communications, 2019, 55, 5343-5346.	4.1	25
412	Flexible and Highly Durable Perovskite Solar Cells with a Sandwiched Device Structure. ACS Applied Materials & Interfaces, 2019, 11, 17475-17481.	8.0	13
413	Optics of Perovskite Solar Cell Front Contacts. ACS Applied Materials & Interfaces, 2019, 11, 14693-14701.	8.0	32
414	Quantum-cutting Yb <sup>3+</sup> -doped perovskite nanocrystals for monolithic bilayer luminescent solar concentrators. Journal of Materials Chemistry A, 2019, 7, 9279-9288.	10.3	67
415	Optimization of device design for low cost and high efficiency planar monolithic perovskite/silicon tandem solar cells. Nano Energy, 2019, 60, 213-221.	16.0	79
416	Insights into operational stability and processing of halide perovskite active layers. Energy and Environmental Science, 2019, 12, 1341-1348.	30.8	125
417	Highly stable semi-transparent MAPbI3 perovskite solar cells with operational output for 4000â€h. Solar Energy Materials and Solar Cells, 2019, 195, 323-329.	6.2	84
418	Toward an alternative approach for the preparation of low-temperature titanium dioxide blocking underlayers for perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 10729-10738.	10.3	13

#	Article	IF	CITATIONS
419	Rapid Aqueous Spray Fabrication of Robust NiO <sub>x</sub> : A Simple and Scalable Platform for Efficient Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803600.	19.5	62
420	A chemically inert bismuth interlayer enhances long-term stability of inverted perovskite solar cells. Nature Communications, 2019, 10, 1161.	12.8	225
421	Opportunities for Atomic Layer Deposition in Emerging Energy Technologies. ACS Energy Letters, 2019, 4, 908-925.	17.4	81
422	Solutionâ€Processable Perovskite Solar Cells toward Commercialization: Progress and Challenges. Advanced Functional Materials, 2019, 29, 1807661.	14.9	149
423	Assessing light absorption contributions in thin periodically-textured silicon absorbers under oblique illumination. AIP Advances, 2019, 9, .	1.3	0
424	Atomic layer deposition of vanadium oxide to reduce parasitic absorption and improve stability in n–i–p perovskite solar cells for tandems. Sustainable Energy and Fuels, 2019, 3, 1517-1525.	4.9	76
425	Zrâ€Doped Indium Oxide (IZRO) Transparent Electrodes for Perovskiteâ€Based Tandem Solar Cells. Advanced Functional Materials, 2019, 29, 1901741.	14.9	124
426	Advances in Polymer-Based Photovoltaic Cells: Review of Pioneering Materials, Design, and Device Physics. , 2019, , 1055-1101.		3
427	Series and Parallel Module Design for Large-Area Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 3851-3859.	5.1	37
428	Photo-stability of perovskite solar cells with Cu electrode. Journal of Materials Science: Materials in Electronics, 2019, 30, 9582-9592.	2.2	6
429	Toward the design of monolithic 23.1% efficient hysteresis and moisture free perovskite/c-Si HJ tandem solar cell: a numerical simulation study. Journal of Micromechanics and Microengineering, 2019, 29, 064001.	2.6	38
430	Ultrahigh energy density CH3NH3PbI3 perovskite based supercapacitor with fast discharge. Electrochimica Acta, 2019, 307, 334-340.	5.2	27
431	The progression of silicon technology acting as substratum for the betterment of future photovoltaics. International Journal of Energy Research, 2019, 43, 3959-3980.	4.5	11
432	Lowâ€Bandgap Mixed Tinâ€Lead Perovskites and Their Applications in Allâ€Perovskite Tandem Solar Cells. Advanced Functional Materials, 2019, 29, 1808801.	14.9	133
433	Causes and Solutions of Recombination in Perovskite Solar Cells. Advanced Materials, 2019, 31, e1803019.	21.0	422
434	Demonstration of Photovoltaic Action and Enhanced Stability from a Quasi-Two-Dimensional Hybrid Organic–Inorganic Copperâ^'Halide Material Incorporating Divalent Organic Groups. ACS Applied Energy Materials, 2019, 2, 2178-2187.	5.1	6
435	Emerging Nanomaterials in Energy and Environmental Science: An Overview. Environmental Chemistry for A Sustainable World, 2019, , 1-49.	0.5	1
436	Novel heterojunction bipolar transistor architectures for the practical implementation of high-efficiency three-terminal solar cells. Solar Energy Materials and Solar Cells, 2019, 194, 54-61.	6.2	12

#	Article	IF	CITATIONS
437	Potential Applications of Halide Double Perovskite Cs <sub>2</sub> AgInX <sub>6</sub> (X = Cl, Br) in Flexible Optoelectronics: Unusual Effects of Uniaxial Strains. Journal of Physical Chemistry Letters, 2019, 10, 1120-1125.	4.6	44
438	Enhanced performance of ZnO nanoparticle decorated all-inorganic CsPbBr <sub>3</sub> quantum dot photodetectors. Journal of Materials Chemistry A, 2019, 7, 6134-6142.	10.3	64
439	Efficient and Stable Perovskite Solar Cell with TiO <inf>2</inf> Thin Insulator Layer as Electron Transport. , 2019, , .		4
440	Series Resistance Measurements of Perovskite Solar Cells Using <i>J<sub>sc</sub></i> – <i>V<sub>oc</sub></i> Measurements. Solar Rrl, 2019, 3, 1800378.	5.8	61
441	Acid-Catalyzed Reactions Activate DMSO as a Reagent in Perovskite Precursor Inks. Chemistry of Materials, 2019, 31, 2114-2120.	6.7	33
442	Halide Perovskite Photovoltaics: Background, Status, and Future Prospects. Chemical Reviews, 2019, 119, 3036-3103.	47.7	2,009
443	Halide Perovskites: Is It All about the Interfaces?. Chemical Reviews, 2019, 119, 3349-3417.	47.7	404
444	Enhanced optical absorption and efficient cascade electron extraction based on energy band alignment double absorbers perovskite solar cells. Solar Energy Materials and Solar Cells, 2019, 194, 168-176.	6.2	20
445	A Review of Perovskites Solar Cell Stability. Advanced Functional Materials, 2019, 29, 1808843.	14.9	835
446	Hybrid perovskites for device applications. , 2019, , 211-256.		13
446 447	Hybrid perovskites for device applications. , 2019, , 211-256. Negligibleâ€Pbâ€Waste and Upscalable Perovskite Deposition Technology for Highâ€Operationalâ€Stability Perovskite Solar Modules. Advanced Energy Materials, 2019, 9, 1803047.	19.5	13 68
	Negligibleâ€Pbâ€Waste and Upscalable Perovskite Deposition Technology for Highâ€Operationalâ€Stability	19.5 19.5	
447	Negligibleâ€Pbâ€Waste and Upscalable Perovskite Deposition Technology for Highâ€Operationalâ€Stability Perovskite Solar Modules. Advanced Energy Materials, 2019, 9, 1803047. Infrared Light Management Using a Nanocrystalline Silicon Oxide Interlayer in Monolithic Perovskite/Silicon Heterojunction Tandem Solar Cells with Efficiency above 25%. Advanced Energy		68
447 448	Negligibleâ€Pbâ€Waste and Upscalable Perovskite Deposition Technology for Highâ€Operationalâ€Stability         Perovskite Solar Modules. Advanced Energy Materials, 2019, 9, 1803047.         Infrared Light Management Using a Nanocrystalline Silicon Oxide Interlayer in Monolithic         Perovskite/Silicon Heterojunction Tandem Solar Cells with Efficiency above 25%. Advanced Energy         Materials, 2019, 9, 1803241.         Stability Improvement of Perovskite Solar Cells for Application of CulnS <sub>2</sub> Quantum	19.5	68 239
447 448 449	Negligibleâ€Pbâ€Waste and Upscalable Perovskite Deposition Technology for Highâ€Operationalâ€Stability         Perovskite Solar Modules. Advanced Energy Materials, 2019, 9, 1803047.         Infrared Light Management Using a Nanocrystalline Silicon Oxide Interlayer in Monolithic         Perovskite/Silicon Heterojunction Tandem Solar Cells with Efficiency above 25%. Advanced Energy         Materials, 2019, 9, 1803241.         Stability Improvement of Perovskite Solar Cells for Application of CulnS <sub>2</sub> Quantum         Dot-Modified TiO <sub>2</sub> Nanoarrays. ACS Omega, 2019, 4, 3432-3438.         Unravelling Optical and Electrical Degradation of Perovskite Solar Cells and Impact on	19.5	68 239 19
447 448 449 450	Negligibleâ€Pbâ€Waste and Upscalable Perovskite Deposition Technology for Highâ€Operational tability Perovskite Solar Modules. Advanced Energy Materials, 2019, 9, 1803047.         Infrared Light Management Using a Nanocrystalline Silicon Oxide Interlayer in Monolithic Perovskite/Silicon Heterojunction Tandem Solar Cells with Efficiency above 25%. Advanced Energy Materials, 2019, 9, 1803241.         Stability Improvement of Perovskite Solar Cells for Application of CulnS <sub>2</sub> Quantum Dot-Modified TiO <sub>2</sub> Nanoarrays. ACS Omega, 2019, 4, 3432-3438.         Unravelling Optical and Electrical Degradation of Perovskite Solar Cells and Impact on Perovskite/Silicon Monolithic Tandem Modules. , 2019,	19.5	68 239 19 0
447 448 449 450 451	Negligibleâ€Pbâ€Waste and Upscalable Perovskite Deposition Technology for Highâ€Operationalâ€Stability         Perovskite Solar Modules. Advanced Energy Materials, 2019, 9, 1803047.         Infrared Light Management Using a Nanocrystalline Silicon Oxide Interlayer in Monolithic         Perovskite[Silicon Heterojunction Tandem Solar Cells with Efficiency above 25%. Advanced Energy         Materials, 2019, 9, 1803241.         Stability Improvement of Perovskite Solar Cells for Application of CulnS <sub>2</sub> Quantum         Dot-Modified TiO <sub>2</sub> Nanoarrays. ACS Omega, 2019, 4, 3432-3438.         Unravelling Optical and Electrical Degradation of Perovskite Solar Cells and Impact on         Perovskite[Silicon Monolithic Tandem Modules., 2019,         Designing an Adaptive Software and Hardware Complex for Converting Solar Energy., 2019,	19.5	<ul> <li>68</li> <li>239</li> <li>19</li> <li>0</li> <li>3</li> </ul>

#	Article	lF	CITATIONS
455	Development of p <sup>+</sup> /n <sup>+</sup> Polysilicon Tunnel Junctions Compatible for Industrial Screen Printing. , 2019, , .		3
456	Ways of Producing Perovskite Light Absorbing Layer on Periodically Patterned Silicon Texture and Evaluating Method. , 2019, , .		0
457	Effects of Amorphous Silicon Thickness Variation on Infrared-Tuned Silicon Heterojunction Bottom Cells. , 2019, , .		2
458	Towards the Record Efficiency of Si Based Solar Cells. , 2019, , .		0
459	Tailoring solvent coordination for high-speed, room-temperature blading of perovskite photovoltaic films. Science Advances, 2019, 5, eaax7537.	10.3	312
460	Passivating contacts for crystalline silicon solar cells. Nature Energy, 2019, 4, 914-928.	39.5	374
461	Design of low bandgap tin–lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability. Nature Energy, 2019, 4, 939-947.	39.5	235
462	Conformal monolayer contacts with lossless interfaces for perovskite single junction and monolithic tandem solar cells. Energy and Environmental Science, 2019, 12, 3356-3369.	30.8	519
463	Influence of bromide content on iodide migration in inverted MAPb(I <sub>1â^'x</sub> Br <sub>x</sub> ) <sub>3</sub> perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 22604-22614.	10.3	42
464	Plasma-assisted atomic layer deposition of nickel oxide as hole transport layer for hybrid perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 12532-12543.	5.5	80
465	Singleâ€Walled Carbon Nanotubes in Emerging Solar Cells: Synthesis and Electrode Applications. Advanced Energy Materials, 2019, 9, 1801312.	19.5	86
466	Structural Engineering of Si/TiO <sub>2</sub> /P3HT Heterojunction Photodetectors for a Tunable Response Range. ACS Applied Materials & Interfaces, 2019, 11, 3241-3250.	8.0	30
467	Facile Synthesis of Stable and Highly Luminescent Methylammonium Lead Halide Nanocrystals for Efficient Light Emitting Devices. Journal of the American Chemical Society, 2019, 141, 1269-1279.	13.7	108
468	Designing a hybrid thinâ€film/wafer silicon triple photovoltaic junction for solar water splitting. Progress in Photovoltaics: Research and Applications, 2019, 27, 245-254.	8.1	10
469	Rough versus planar interfaces: How to maximize the short circuit current of perovskite single and tandem solar cells. Materials Today Energy, 2019, 11, 106-113.	4.7	32
470	Electronic Traps and Phase Segregation in Lead Mixed-Halide Perovskite. ACS Energy Letters, 2019, 4, 75-84.	17.4	212
471	Emerging solar cells energy trade-off: Interface engineering materials impact on stability and efficiency progress. International Journal of Energy Research, 2019, 43, 1670-1688.	4.5	13
472	Dimethyl Sulfoxide Solvent Engineering for High Quality Cationâ€Anionâ€Mixed Hybrid and High Efficiency Perovskite Solar Cells. Energy Technology, 2019, 7, 346-351.	3.8	3

ARTICLE IF CITATIONS # Inverted pyramidally-textured PDMS antireflective foils for perovskite/silicon tandem solar cells with 473 16.0 80 flat top cell. Nano Énergy, 2019, 56, 234-240. Understanding Degradation Mechanisms and Improving Stability of Perovskite Photovoltaics. 474 47.7 1,131 Chemical Reviews, 2019, 119, 3418-3451. SnO2-based electron transporting layer materials for perovskite solar cells: A review of recent 475 12.9 129 progress. Journal of Energy Chemistry, 2019, 35, 144-167. Doubleâ€6ideâ€Passivated Perovskite Solar Cells with Ultraâ€low Potential Loss. Solar Rrl, 2019, 3, 1800296. 5.8 Optimization of Three-Terminal Perovskite/Silicon Tandem Solar Cells. IEEE Journal of Photovoltaics, 477 2.5 30 2019, 9, 446-451. A Three-Terminal Monolithic Perovskite/Si Tandem Solar Cell Characterization Platform. Joule, 2019, 3, 478 24.0 807-818. Monolithic Perovskite/Silicon-Heterojunction Tandem Solar Cells with Open-Circuit Voltage of over 479 5.1 44 1.8 V. ACS Applied Energy Materials, 2019, 2, 243-249. Acid-Compatible Halide Perovskite Photocathodes Utilizing Atomic Layer Deposited TiO<sub>2</sub> 17.4 for Solar-Driven Hydrogen Evolution. ACS Energy Letters, 2019, 4, 293-298. 481 Solution-Processed All-Perovskite Multi-junction Solar Cells. Joule, 2019, 3, 387-401. 24.0 177 Chemical Analysis of the Interface between Hybrid Organic–Inorganic Perovskite and Atomic Layer 8.0 Deposited Al<sub>2</sub>O<sub>3</sub>. ACS Applied Materials & amp; Interfaces, 2019, 11, 5526-5535. Assembling Mesoscaleâ€5tructured Organic Interfaces in Perovskite Photovoltaics. Advanced Materials, 483 21.0 16 2019, 31, e1806516. Enhanced Stability and Optical Absorption in the Perovskiteâ€Based Compounds MA 1â<sup>°</sup> x Cs x PbI 3â<sup>°</sup> y Br y. 484 2.1 ChemPhysChem, 2019, 20, 489-498. Progress and challenges in perovskite photovoltaics from single- to multi-junction cells. Materials 485 4.7 67 Today Energy, 2019, 12, 70-94. Quantum and Dielectric Confinement Effects in Lower-Dimensional Hybrid Perovskite 47.7 Semiconductors. Chemical Reviews, 2019, 119, 3140-3192. Unraveling the Impact of Halide Mixing on Perovskite Stability. Journal of the American Chemical 487 13.7 116 Society, 2019, 141, 3515-3523. Grain Engineering for Perovskite/Silicon Monolithic Tandem Solar Cells with Efficiency of 25.4%. 488 24.0 329 Joule, 2019, 3, 177-190. Comparative evaluation of lead emissions and toxicity potential in the life cycle of lead halide 489 8.8 83 perovskite photovoltaics. Energy, 2019, 166, 1089-1096. 490 Synthetic Approaches for Halide Perovskite Thin Films. Chemical Reviews, 2019, 119, 3193-3295. 454

#	Article	IF	CITATIONS
491	NDI-based small molecules as electron transporting layers in solution-processed planar perovskite solar cells. Journal of Solid State Chemistry, 2019, 270, 51-57.	2.9	19
492	Minimizing Voltage Loss in Wide-Bandgap Perovskites for Tandem Solar Cells. ACS Energy Letters, 2019, 4, 259-264.	17.4	143
493	Efficiency Enhancement and Hysteresis Mitigation by Manipulation of Grain Growth Conditions in Hybrid Evaporated–Spin-coated Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 722-729.	8.0	16
494	Two-dimensional materials in perovskite solar cells. Materials Today Energy, 2019, 11, 128-158.	4.7	93
495	Low ost Counterâ€Electrode Materials for Dye‧ensitized and Perovskite Solar Cells. Advanced Materials, 2020, 32, e1806478.	21.0	99
496	Optical Design in Perovskite Solar Cells. Small Methods, 2020, 4, 1900150.	8.6	32
497	Performance evaluation of composition graded layer of aSi1-xGex: H in n+aSi:H/i-aSi:H/p+aSi1-xGex:H graded band gap single junction solar cells. Materials Today: Proceedings, 2020, 27, 26-31.	1.8	4
498	Numerical simulation of charge transport layer free perovskite solar cell using metal work function shifted contacts. Optik, 2020, 202, 163646.	2.9	32
499	Atomic layer deposition enabling higher efficiency solar cells: A review. Nano Materials Science, 2020, 2, 204-226.	8.8	44
500	Light Management in Monolithic Perovskite/Silicon Tandem Solar Cells. Solar Rrl, 2020, 4, 1900206.	5.8	36
501	Self-driven visible-near infrared photodetector with vertical CsPbBr <sub>3</sub> /PbS quantum dots heterojunction structure. Nanotechnology, 2020, 31, 035202.	2.6	25
502	Structural and electronic features of Si/CH3NH3PbI3 interfaces with optoelectronic applicability: Insights from first-principles. Nano Energy, 2020, 67, 104166.	16.0	6
503	Semitransparent Perovskite Solar Cells: From Materials and Devices to Applications. Advanced Materials, 2020, 32, e1806474.	21.0	148
504	Advances in metal halide perovskite nanocrystals: Synthetic strategies, growth mechanisms, and optoelectronic applications. Materials Today, 2020, 32, 204-221.	14.2	114
505	Recent Advances in Lead Halide Perovskites for Radiation Detectors. Solar Rrl, 2020, 4, 1900210.	5.8	55
506	The development of all-inorganic CsPbX3 perovskite solar cells. Journal of Materials Science, 2020, 55, 464-479.	3.7	52
507	Conformal perovskite films on 100Âcm2 textured silicon surface using two-step vacuum process. Thin Solid Films, 2020, 693, 137694.	1.8	17
508	Perovskite solar cells. , 2020, , 163-228.		8

#	Article	IF	CITATIONS
509	27%â€Efficiency Fourâ€Terminal Perovskite/Silicon Tandem Solar Cells by Sandwiched Gold Nanomesh. Advanced Functional Materials, 2020, 30, 1908298.	14.9	91
510	Stable Cesium Formamidinium Lead Halide Perovskites: A Comparison of Photophysics and Phase Purity in Thin Films and Single Crystals. Energy Technology, 2020, 8, 1901041.	3.8	19
511	Atomic Layer Deposition of Functional Layers in Planar Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900332.	5.8	46
512	A study on the effects of mixed organic cations on the structure and properties in lead halide perovskites. Physical Chemistry Chemical Physics, 2020, 22, 3105-3111.	2.8	19
513	Halide perovskite materials as light harvesters for solar energy conversion. EnergyChem, 2020, 2, 100026.	19.1	24
514	Sensitizer-free photon up conversion in (HQ)2ZnCl4 and HQCl crystals: systems involving resonant energy transfer and triplet–triplet annihilation. Physical Chemistry Chemical Physics, 2020, 22, 1575-1582.	2.8	6
515	Laminated Perovskite Photovoltaics: Enabling Novel Layer Combinations and Device Architectures. Advanced Functional Materials, 2020, 30, 1907481.	14.9	33
516	Importance of Vacancies and Doping in the Hole-Transporting Nickel Oxide Interface with Halide Perovskites. ACS Applied Materials & Interfaces, 2020, 12, 6633-6640.	8.0	21
517	Revealing the origin of voltage loss in mixed-halide perovskite solar cells. Energy and Environmental Science, 2020, 13, 258-267.	30.8	283
518	Ambient blade coating of mixed cation, mixed halide perovskites without dripping: <i>in situ</i> in vestigation and highly efficient solar cells. Journal of Materials Chemistry A, 2020, 8, 1095-1104.	10.3	68
519	Cerium-doped indium oxide transparent electrode for semi-transparent perovskite and perovskite/silicon tandem solar cells. Solar Energy, 2020, 196, 409-418.	6.1	34
521	Power Losses in the Front Transparent Conductive Oxide Layer of Silicon Heterojunction Solar Cells: Design Guide for Single-Junction and Four-Terminal Tandem Applications. IEEE Journal of Photovoltaics, 2020, 10, 326-334.	2.5	2
522	Perfluorinated Self-Assembled Monolayers Enhance the Stability and Efficiency of Inverted Perovskite Solar Cells. ACS Nano, 2020, 14, 1445-1456.	14.6	115
523	Origin of Open ircuit Voltage Enhancements in Planar Perovskite Solar Cells Induced by Addition of Bulky Organic Cations. Advanced Functional Materials, 2020, 30, 1906763.	14.9	47
524	Structural Origins of Light-Induced Phase Segregation in Organic-Inorganic Halide Perovskite Photovoltaic Materials. Matter, 2020, 2, 207-219.	10.0	128
525	Wideâ€Bandgap Perovskite/Gallium Arsenide Tandem Solar Cells. Advanced Energy Materials, 2020, 10, 1903085.	19.5	49
526	Perovskite solar cells: The new epoch in photovoltaics. Solar Energy, 2020, 196, 295-309.	6.1	53
527	Vacuumâ€Assisted Growth of Lowâ€Bandgap Thin Films (FA <sub>0.8</sub> MA <sub>0.2</sub> Sn <sub>0.5</sub> Pb <sub>0.5</sub> I <sub>3</sub> ) for Allâ€Perovskite Tandem Solar Cells. Advanced Energy Materials, 2020, 10, 1902583.	19.5	60

ARTICLE IF CITATIONS # Monolithic Perovskite/Si Tandem Solar Cells: Pathways to Over 30% Efficiency. Advanced Energy 528 19.5 87 Materials, 2020, 10, 1902840. The balance between efficiency, stability and environmental impacts in perovskite solar cells: a review. 529 5.3 JPhys Energy, 2020, 2, 022001. Interface engineering with a novel n-type small organic molecule for efficient inverted perovskite 530 12.7 31 solar cells. Chemical Engineering Journal, 2020, 392, 123677. Time resolved photo-induced optical spectroscopy., 2020, , 139-160. 531 Stability of materials and complete devices., 2020, , 197-215. 532 1 Organic-inorganic metal halide perovskite tandem devices., 2020, , 237-254. Simultaneous Improved Performance and Thermal Stability of Planar Metal Ion Incorporated 534 CsPbI<sub>2</sub>Br Allâ€Inorganic Perovskite Solar Cells Based on MgZnO Nanocrystalline Electron 19.5 61 Transporting Layer. Advanced Energy Materials, 2020, 10, 1902708. Electrode Engineering by Atomic Layer Deposition for Sodiumâ€Ion Batteries: From Traditional to 14.9 36 Advanced Batteries. Advanced Functional Materials, 2020, 30, 1906890. Improving the Thermal Stability of CIGS Photovoltaic Devices. IEEE Journal of Photovoltaics, 2020, 10, 536 2.5 1 267-275. Three-Terminal Tandem Solar Cells With a Back-Contact-Type Bottom Cell Bonded Using Conductive 2.5 Metal Nanoparticle Arrays. IEEE Journal of Photovoltaics, 2020, 10, 358-362. The Race for Lowest Costs of Electricity Production: Techno-Economic Analysis of Silicon, Perovskite 538 2.5 62 and Tandem Solar Cells. IEEE Journal of Photovoltaics, 2020, 10, 1632-1641. The chemistry and energetics of the interface between metal halide perovskite and atomic layer deposited metal oxides. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2.1 2020, 38, . Swelling-shrinking modified hyperstatic hydrophilic perovskite polymer fluorescent beads for Fe(III) 540 7.8 15 detection. Sensors and Actuators B: Chemical, 2020, 325, 128809. Historical Analysis of Highâ€Efficiency, Largeâ€Area Solar Cells: Toward Upscaling of Perovskite Solar 541 21.0 Cells. Advanced Materials, 2020, 32, e2002202. Effect of π-linker extension on property of fluorene-based hole-transporting materials for perovskite 542 2.57 solar cells. Computational and Theoretical Chemistry, 2020, 1192, 113049. Photoinduced Phase Segregation in Mixed Halide Perovskites: Thermodynamic and Kinetic Aspects of 543 46 Cl–Br Segregation. Advanced Optical Materials, 2021, 9, 2001440. Insight into the Origins of Figures of Merit and Design Strategies for Organic/Inorganic Leadâ€Halide 544 5.8 14 Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000452. Simplified interconnection structure based on C60/SnO2-x for all-perovskite tandem solar cells. 545 186 Nature Energy, 2020, 5, 657-665.

ARTICLE IF CITATIONS # Ultrathin Perovskite Monocrystals Boost the Solar Cell Performance. Advanced Energy Materials, 546 19.5 42 2020, 10, 2000453. 547 Halide Pb-Free Double–Perovskites: Ternary vs. Quaternary Stoichiometry. Energies, 2020, 13, 3516. 3.1 Impact of Processing on Structural and Compositional Evolution in Mixed Metal Halide Perovskites 548 14.9 39 during Film Formation. Advanced Functional Materials, 2020, 30, 2001752. Perovskiteâ€Based Tandem Solar Cells: Get the Most Out of the Sun. Advanced Functional Materials, 549 14.9 2020, 30, 2001904. Perovskite Solar Cells for BIPV Application: A Review. Buildings, 2020, 10, 129. 550 3.1 60 Controlling and Optimizing Amplified Spontaneous Emission in Perovskites. ACS Applied Materials & amp; Interfaces, 2020, 12, 35242-35249. 8.0 Optical optimization of double-side-textured monolithic perovskite–silicon tandem solar cells for 552 3.6 20 improved light management. RSC Advances, 2020, 10, 26631-26638. RbCs(MAFA)PbI3 perovskite solar cell with 22.81% efficiency using the precise ions cascade regulation. 553 6.1 Applied Surface Science, 2020, 530, 147240. Nonfullerene Acceptors: A Renaissance in Organic Photovoltaics?. Advanced Energy Materials, 2020, 554 19.5 88 10, 2001788. High-performance solar flow battery powered by a perovskite/silicon tandem solar cell. Nature Materials, 2020, 19, 1326-1331. Rapid Open-Air Fabrication of Perovskite Solar Modules. Joule, 2020, 4, 2675-2692. 556 24.0 78 Tin-Based Defects and Passivation Strategies in Tin-Related Perovskite Solar Cells. ACS Energy Letters, 17.4 143 2020, 5, 3752-3772. Triple-cation low-bandgap perovskite thin-films for high-efficiency four-terminal all-perovskite 558 10.3 26 tandem solar cells. Journal of Materials Chemistry A, 2020, 8, 24608-24619. Perovskite Tandem Solar Cells: From Fundamentals to Commercial Deployment. Chemical Reviews, 47.7 248 2020, 120, 9835-9950. Design and optimization of 26.3% efficient perovskite/FeSi2 monolithic tandem solar cell. Journal of 560 2.2 22 Materials Science: Materials in Electronics, 2020, 31, 15218-15224. Electrical and Optical Properties of Nickelâ€Oxide Films for Efficient Perovskite Solar Cells. Small Methods, 2020, 4, 2000454. Ultraefficient Singlet Oxygen Generation from Manganese-Doped Cesium Lead Chloride Perovskite 562 14.6 20 Quantum Dots. ACS Nano, 2020, 14, 12596-12604. Alkali-cation-enhanced benzylammonium passivation for efficient and stable perovskite solar cells fabricated through sequential deposition. Journal of Materials Chemistry A, 2020, 8, 19357-19366.

#	Article	IF	CITATIONS
564	Efficient monolithic perovskite/organic tandem solar cells and their efficiency potential. Nano Energy, 2020, 78, 105238.	16.0	59
565	Molecular mechanisms of thermal instability in hybrid perovskite light absorbers for photovoltaic solar cells. Journal of Materials Chemistry A, 2020, 8, 17765-17779.	10.3	16
566	Inverted planar perovskite solar cells with efficient and stability via optimized cathode-interfacial layer. Solar Energy, 2020, 207, 1165-1171.	6.1	5
567	Barrier Designs in Perovskite Solar Cells for Longâ€Term Stability. Advanced Energy Materials, 2020, 10, 2001610.	19.5	84
568	High-Efficiency Perovskite Solar Cells. Chemical Reviews, 2020, 120, 7867-7918.	47.7	1,480
569	Enamine-based hole transporting materials for vacuum-deposited perovskite solar cells. Sustainable Energy and Fuels, 2020, 4, 5017-5023.	4.9	6
570	Hot-Casting Large-Grain Perovskite Film for Efficient Solar Cells: Film Formation and Device Performance. Nano-Micro Letters, 2020, 12, 156.	27.0	47
571	Reduced bilateral recombination by functional molecular interface engineering for efficient inverted perovskite solar cells. Nano Energy, 2020, 78, 105249.	16.0	45
572	Narrow-Bandgap Mixed Lead/Tin-Based 2D Dion–Jacobson Perovskites Boost the Performance of Solar Cells. Journal of the American Chemical Society, 2020, 142, 15049-15057.	13.7	103
573	A novel perylene diimide-based zwitterion as the cathode interlayer for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 18117-18124.	10.3	31
574	Exploring Light Polarization Effects of Photovoltaic Actions in Organic–Inorganic Hybrid Perovskites with Asymmetric and Symmetric Unit Structures. ACS Applied Materials & Interfaces, 2020, 12, 38054-38060.	8.0	2
575	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.	8.0	79
576	Photoinduced Phase Segregation Leading to Evident Open-Circuit Voltage Loss in Efficient Inorganic CsPbIBr <sub>2</sub> Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 7035-7041.	4.6	26
577	Dimensionality engineering of metal halide perovskites. Frontiers of Optoelectronics, 2020, 13, 196-224.	3.7	25
578	Defects chemistry in high-efficiency and stable perovskite solar cells. Journal of Applied Physics, 2020, 128, .	2.5	91
579	Application of a Genetic Algorithm in Four-Terminal Perovskite/Crystalline-Silicon Tandem Devices. IEEE Journal of Photovoltaics, 2020, 10, 1689-1700.	2.5	7
580	A study on optoelectronic performance of perovskite solar cell under different stress testing conditions. Optical Materials, 2020, 109, 110377.	3.6	8
581	Nearâ€Infraredâ€Transparent Perovskite Solar Cells and Perovskiteâ€Based Tandem Photovoltaics. Small Methods, 2020, 4, 2000395.	8.6	63

#	Article	IF	Citations
582	Carbon Nanotube Electrodeâ€Based Perovskite–Silicon Tandem Solar Cells. Solar Rrl, 2020, 4, 2000353.	5.8	19
583	TiO2 Nanotubes: An Advanced Electron Transport Material for Enhancing the Efficiency and Stability of Perovskite Solar Cells. Industrial & Engineering Chemistry Research, 2020, 59, 18549-18557.	3.7	25
584	Effect of halide-mixing on tolerance factor and charge-carrier dynamics in (CH3NH3PbBr3â^'xClx) perovskites powders. Journal of Materials Science: Materials in Electronics, 2020, 31, 19415-19428.	2.2	4
585	High-Efficiency Silicon Heterojunction Solar Cells: Materials, Devices and Applications. Materials Science and Engineering Reports, 2020, 142, 100579.	31.8	139
586	Enhancing the Performance of Two-Terminal All-Perovskite Tandem Solar Cells by the Optical Coupling Layer Beyond the Antireflection Function. IEEE Photonics Journal, 2020, 12, 1-12.	2.0	5
587	Grain Boundary Defect Passivation of Triple Cation Mixed Halide Perovskite with Hydrazine-Based Aromatic Iodide for Efficiency Improvement. ACS Applied Materials & Interfaces, 2020, 12, 41312-41322.	8.0	45
588	Quantum-assisted photoelectric gain effects in perovskite solar cells. NPG Asia Materials, 2020, 12, .	7.9	12
589	Recombination junctions for efficient monolithic perovskite-based tandem solar cells: physical principles, properties, processing and prospects. Materials Horizons, 2020, 7, 2791-2809.	12.2	65
590	Atomic Layer Deposition of Metal Oxides in Perovskite Solar Cells: Present and Future. Small Methods, 2020, 4, 2000588.	8.6	21
591	Recent Progress in Metal Halide Perovskiteâ€Based Tandem Solar Cells. Advanced Materials, 2020, 32, e2002228.	21.0	39
592	Towards commercialization: the operational stability of perovskite solar cells. Chemical Society Reviews, 2020, 49, 8235-8286.	38.1	371
593	Quantification of Surface Reactivity and Step-Selective Etching Chemistry on Single-Crystal BiOI(001). Langmuir, 2020, 36, 9343-9355.	3.5	3
594	Intelligent Control Algorithm for an Automated Autonomous Power Supply System. , 2020, , .		1
595	Recent Progress in Developing Monolithic Perovskite/Si Tandem Solar Cells. Frontiers in Chemistry, 2020, 8, 603375.	3.6	22
596	Monolithic perovskite/silicon tandem solar cell with >29% efficiency by enhanced hole extraction. Science, 2020, 370, 1300-1309.	12.6	1,120
597	Improved the Performance and Stability at High Humidity of Perovskite Solar Cells by Mixed Cesium-Metylammonium Cations. Key Engineering Materials, 0, 860, 9-14.	0.4	1
598	Choose Your Own Adventure: Fabrication of Monolithic Allâ€Perovskite Tandem Photovoltaics. Advanced Materials, 2020, 32, e2003312.	21.0	39
599	Monolithic Perovskite Tandem Solar Cells: A Review of the Present Status and Advanced Characterization Methods Toward 30% Efficiency. Advanced Energy Materials, 2020, 10, 1904102.	19.5	321

#	ARTICLE	IF	CITATIONS
600	Improving the heterointerface in hybrid organic–inorganic perovskite solar cells by surface engineering: Insights from periodic hybrid density functional theory calculations. Journal of Computational Chemistry, 2020, 41, 1740-1747.	3.3	8
601	Applications of atomic layer deposition and chemical vapor deposition for perovskite solar cells. Energy and Environmental Science, 2020, 13, 1997-2023.	30.8	102
602	A review of photovoltaic performance of organic/inorganic solar cells for future renewable and sustainable energy technologies. Superlattices and Microstructures, 2020, 143, 106549.	3.1	90
603	25.1% Highâ€Efficiency Monolithic Perovskite Silicon Tandem Solar Cell with a High Bandgap Perovskite Absorber. Solar Rrl, 2020, 4, 2000152.	5.8	81
604	Effect of Interfacial Layers on the Device Lifetime of Perovskite Solar Cells. Small Methods, 2020, 4, 2000065.	8.6	22
605	Magnetron Sputtered SnO <sub>2</sub> Constituting Double Electron Transport Layers for Efficient PbS Quantum Dot Solar Cells. Solar Rrl, 2020, 4, 2000218.	5.8	12
606	Preventing phase segregation in mixed-halide perovskites: a perspective. Energy and Environmental Science, 2020, 13, 2024-2046.	30.8	221
607	Rapid Scalable Processing of Tin Oxide Transport Layers for Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 5552-5562.	5.1	52
608	Enhanced thermal stability of inverted perovskite solar cells by interface modification and additive strategy. RSC Advances, 2020, 10, 18400-18406.	3.6	15
609	Solution processed perovskite incorporated tandem photovoltaics: developments, manufacturing, and challenges. Journal of Materials Chemistry C, 2020, 8, 10641-10675.	5.5	11
610	Ion Migrationâ€Induced Amorphization and Phase Segregation as a Degradation Mechanism in Planar Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000310.	19.5	103
611	Enhanced near-ultraviolet and visible light absorption of organic-inorganic halide perovskites by co-doping with cesium and barium: Insight from first-principles calculations. Journal of Solid State Chemistry, 2020, 289, 121477.	2.9	4
612	Experimental and SCAPS simulated formamidinium perovskite solar cells: A comparison of device performance. Solar Energy, 2020, 205, 349-357.	6.1	177
613	A linear conjugated tetramer as a surface-modification layer to increase perovskite solar cell performance and stability. Journal of Materials Chemistry A, 2020, 8, 11728-11733.	10.3	21
614	In situ studies of the degradation mechanisms of perovskite solar cells. EcoMat, 2020, 2, e12025.	11.9	123
615	Progress in Materials Development for the Rapid Efficiency Advancement of Perovskite Solar Cells. Small, 2020, 16, e1907531.	10.0	23
616	Dibenzo-tetraphenyl diindeno perylene as hole transport layer for high-bandgap perovskite solar cells. Emergent Materials, 2020, 3, 109-116.	5.7	6
617	Structure engineering of hierarchical layered perovskite interface for efficient and stable wide bandgap photovoltaics. Nano Energy, 2020, 75, 104917.	16.0	44

#	Article	IF	CITATIONS
618	Strong performance enhancement in lead-halide perovskite solar cells through rapid, atmospheric deposition of n-type buffer layer oxides. Nano Energy, 2020, 75, 104946.	16.0	20
619	Cesium Substitution Disrupts Concerted Cation Dynamics in Formamidinium Hybrid Perovskites. Chemistry of Materials, 2020, 32, 6266-6277.	6.7	38
620	Gas chromatography–mass spectrometry analyses of encapsulated stable perovskite solar cells. Science, 2020, 368, .	12.6	306
621	Strategies for high performance perovskite/c-Si tandem solar cells: Effects of bandgap engineering, solar concentration and device temperature. Optical Materials, 2020, 106, 109935.	3.6	18
622	Semitransparent perovskite solar cells with ultrathin silver electrodes for tandem solar cells. Solar Energy, 2020, 206, 294-300.	6.1	19
623	Synthesis and Applications of Wide Bandgap 2D Layered Semiconductors Reaching the Green and Blue Wavelengths. ACS Applied Electronic Materials, 2020, 2, 1777-1814.	4.3	50
624	Rapid Vapor-Phase Deposition of High-Mobility <i>p</i> -Type Buffer Layers on Perovskite Photovoltaics for Efficient Semitransparent Devices. ACS Energy Letters, 2020, 5, 2456-2465.	17.4	32
625	Molecular materials as interfacial layers and additives in perovskite solar cells. Chemical Society Reviews, 2020, 49, 4496-4526.	38.1	130
626	Carrier transport composites with suppressed glass-transition for stable planar perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 14106-14113.	10.3	18
627	Nature-inspired spherical silicon solar cell for three-dimensional light harvesting, improved dust and thermal management. MRS Communications, 2020, 10, 391-397.	1.8	8
628	Large Conduction Band Energy Offset Is Critical for High Fill Factors in Inorganic Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2343-2348.	17.4	20
629	Efficient Passivation and Low Resistivity for p <sup>+</sup> -Si/TiO <sub>2</sub> Contact by Atomic Layer Deposition. ACS Applied Energy Materials, 2020, 3, 6291-6301.	5.1	5
630	Mitigation of Vacuum and Illumination-Induced Degradation in Perovskite Solar Cells by Structure Engineering. Joule, 2020, 4, 1087-1103.	24.0	69
631	Influence of the Subcell Properties on the Fill Factor of Two-Terminal Perovskite–Silicon Tandem Solar Cells. ACS Energy Letters, 2020, 5, 1077-1082.	17.4	49
632	Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. Science, 2020, 367, 1135-1140.	12.6	525
633	Enhanced optical path and electron diffusion length enable high-efficiency perovskite tandems. Nature Communications, 2020, 11, 1257.	12.8	180
634	Infrared Absorption Enhancement Using Periodic Inverse Nanopyramids in Crystalline-Silicon Bottom Cells for Application in Tandem Devices. IEEE Journal of Photovoltaics, 2020, 10, 740-748.	2.5	7
635	A Taxonomy for Three-Terminal Tandem Solar Cells. ACS Energy Letters, 2020, 5, 1233-1242.	17.4	51

#	Article	IF	CITATIONS
636	Density Functional Study of Cubic, Tetragonal, and Orthorhombic CsPbBr <sub>3</sub> Perovskite. ACS Omega, 2020, 5, 7468-7480.	3.5	105
637	Perovskites fabricated on textured silicon surfaces for tandem solar cells. Communications Chemistry, 2020, 3, .	4.5	31
638	Multi-component engineering to enable long-term operational stability of perovskite solar cells. JPhys Energy, 2020, 2, 024008.	5.3	13
639	Efficient, stable silicon tandem cells enabled by anion-engineered wide-bandgap perovskites. Science, 2020, 368, 155-160.	12.6	420
640	Transparent Electrodes Consisting of a Surfaceâ€Treated Buffer Layer Based on Tungsten Oxide for Semitransparent Perovskite Solar Cells and Fourâ€Terminal Tandem Applications. Small Methods, 2020, 4, 2000074.	8.6	41
641	Laser-Induced Optoelectronic and Crystallographic Tuning of Methyl Ammonium Iodobismuthate Perovskite for Improved Performance of Sandwich-Type Photodetectors. ACS Applied Electronic Materials, 2020, 2, 1145-1153.	4.3	12
642	Synthesis of Highly-Oriented Black CsPbl <sub>3</sub> Microstructures for High-Performance Solar Cells. Chemistry of Materials, 2020, 32, 3235-3244.	6.7	23
643	Fabrication of rapid response self-powered photodetector using solution-processed triple cation lead-halide perovskite. Engineering Research Express, 2020, 2, 015043.	1.6	16
644	Triple-halide wide–band gap perovskites with suppressed phase segregation for efficient tandems. Science, 2020, 367, 1097-1104.	12.6	669
645	Sputtered indium tin oxide as a recombination layer formed on the tunnel oxide/poly-Si passivating contact enabling the potential of efficient monolithic perovskite/Si tandem solar cells. Solar Energy Materials and Solar Cells, 2020, 210, 110482.	6.2	33
646	Influence of Perovskite Interface Morphology on the Photon Management in Perovskite/Silicon Tandem Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 15080-15086.	8.0	30
647	Understanding of perovskite crystal growth and film formation in scalable deposition processes. Chemical Society Reviews, 2020, 49, 1653-1687.	38.1	364
648	Interface modification effect on the performance of CsxFA1â^'xPblyBr3â^'y perovskite solar cells fabricated by evaporation/spray-coating method. Journal of Chemical Physics, 2020, 153, 014706.	3.0	13
649	A piperidinium salt stabilizes efficient metal-halide perovskite solar cells. Science, 2020, 369, 96-102.	12.6	461
650	Architecturing Lattice-Matched Bismuthene–SnO <sub>2</sub> Heterojunction for Effective Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 0, , .	6.7	8
651	2-Terminal CIGS-perovskite tandem cells: A layer by layer exploration. Solar Energy, 2020, 207, 270-288.	6.1	44
652	Microscopic Degradation in Formamidinium-Cesium Lead Iodide Perovskite Solar Cells under Operational Stressors. Joule, 2020, 4, 1743-1758.	24.0	156
653	FA <sub><i>x</i></sub> Cs <sub>1–<i>x</i></sub> PbI <sub>3</sub> Nanocrystals: Tuning Crystal Symmetry by A-Site Cation Composition. ACS Energy Letters, 2020, 5, 2475-2482.	17.4	34

	CITATION R	EPORT	
#	Article	IF	CITATIONS
654	Economically Sustainable Growth of Perovskite Photovoltaics Manufacturing. Joule, 2020, 4, 822-839.	24.0	59
655	Intrinsic and environmental stability issues of perovskite photovoltaics. Progress in Energy, 2020, 2, 022002.	10.9	33
656	Flexible inorganic CsPbI <sub>3</sub> perovskite nanocrystal-PMMA composite films with enhanced stability in air and water for white light-emitting diodes. Nanotechnology, 2020, 31, 225602.	2.6	28
657	Mechanically Stacked, Two-Terminal Graphene-Based Perovskite/Silicon Tandem Solar Cell with Efficiency over 26%. Joule, 2020, 4, 865-881.	24.0	125
658	Forecasting the Decay of Hybrid Perovskite Performance Using Optical Transmittance or Reflected Dark-Field Imaging. ACS Energy Letters, 2020, 5, 946-954.	17.4	22
659	Dopantâ€Free Organic Holeâ€Transporting Material for Efficient and Stable Inverted Allâ€Inorganic and Hybrid Perovskite Solar Cells. Advanced Materials, 2020, 32, e1908011.	21.0	195
660	From Defects to Degradation: A Mechanistic Understanding of Degradation in Perovskite Solar Cell Devices and Modules. Advanced Energy Materials, 2020, 10, 1904054.	19.5	256
661	Temperature-Dependent Dynamic Carrier Process of FAPbI <sub>3</sub> Nanocrystals' Film. Journal of Physical Chemistry C, 2020, 124, 5093-5098.	3.1	14
662	High voltage vacuum-processed perovskite solar cells with organic semiconducting interlayers. RSC Advances, 2020, 10, 6640-6646.	3.6	13
663	Device simulation of 17.3% efficient lead-free all-perovskite tandem solar cell. Solar Energy, 2020, 197, 212-221.	6.1	188
664	Blade-Coated Perovskites on Textured Silicon for 26%-Efficient Monolithic Perovskite/Silicon Tandem Solar Cells. Joule, 2020, 4, 850-864.	24.0	281
665	How far are we from attaining 10-year lifetime for metal halide perovskite solar cells?. Materials Science and Engineering Reports, 2020, 140, 100545.	31.8	67
666	Xâ€Ray Microscopy of Halide Perovskites: Techniques, Applications, and Prospects. Advanced Energy Materials, 2020, 10, 1903170.	19.5	49
667	Cslâ€Antisolvent Adduct Formation in Allâ€Inorganic Metal Halide Perovskites. Advanced Energy Materials, 2020, 10, 1903365.	19.5	55
668	Trap States, Electric Fields, and Phase Segregation in Mixedâ€Halide Perovskite Photovoltaic Devices. Advanced Energy Materials, 2020, 10, 1903488.	19.5	79
669	Two-Dimensional BAs/InTe: A Promising Tandem Solar Cell with High Power Conversion Efficiency. ACS Applied Materials & Interfaces, 2020, 12, 6074-6081.	8.0	32
670	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. Nature Energy, 2020, 5, 35-49.	39.5	797
671	Stability Improvement and Performance Reproducibility Enhancement of Perovskite Solar Cells Following (FA/MA/Cs)Pbl <sub>3–<i>x</i></sub> Br <sub><i>x</i></sub> /(CH <sub>3</sub> ) <sub>3</sub> SPbl <sub>3<!--<br-->Dimensionality Engineering, ACS Applied Energy Materials, 2020, 3, 2465-2477.</sub>	sub≻	44

#	ARTICLE Analysis, optimisation and experimental validation of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"</mml:math 	IF	CITATIONS
672	altimg="si59.svg"> <mml:mrow><mml:msup><mml:mrow><mml:mi mathvariant="normal"&gt;n</mml:mi </mml:mrow><mml:mrow><mml:mo>+</mml:mo></mml:mrow></mml:msup> graded band gap single junction solar cell. Results in Physics, 2020, 16, 102940.</mml:mrow>	4.1 > <td>2 row&gt;</td>	2 row>
673	Polymorphous nature of cubic halide perovskites. Physical Review B, 2020, 101, .	3.2	104
674	Bifacial Four-Terminal Perovskite/Silicon Tandem Solar Cells and Modules. ACS Energy Letters, 2020, 5, 1676-1680.	17.4	49
675	Validated Analysis of Component Distribution Inside Perovskite Solar Cells and Its Utility in Unveiling Factors of Device Performance and Degradation. ACS Applied Materials & Interfaces, 2020, 12, 22730-22740.	8.0	20
676	Tunable relativistic quasiparticle electronic and excitonic behavior of the FAPb(I <sub>1â^'x</sub> Br <sub>x</sub> ) <sub>3</sub> alloy. Physical Chemistry Chemical Physics, 2020, 22, 11943-11955.	2.8	18
677	Impact of Cesium/Rubidium Incorporation on the Photophysics of Multipleâ€Cation Lead Halide Perovskites. Solar Rrl, 2020, 4, 2000072.	5.8	13
678	Damp-Heat-Stable, High-Efficiency, Industrial-Size Silicon Heterojunction Solar Cells. Joule, 2020, 4, 913-927.	24.0	48
679	Highly Efficient Thermally Co-evaporated Perovskite Solar Cells and Mini-modules. Joule, 2020, 4, 1035-1053.	24.0	257
680	Computational study of stack/terminal topologies for perovskite based bifacial tandem solar cells. Solar Energy, 2020, 203, 1-9.	6.1	15
681	Perovskite hybrid evaporation/ spin coating method: From band gap tuning to thin film deposition on textures. Thin Solid Films, 2020, 704, 137970.	1.8	22
682	Atomic layer deposition of metal oxides for efficient perovskite single-junction and perovskite/silicon tandem solar cells. RSC Advances, 2020, 10, 14856-14866.	3.6	18
683	Passivating contacts and tandem concepts: Approaches for the highest silicon-based solar cell efficiencies. Applied Physics Reviews, 2020, 7, .	11.3	150
684	Recent advances on synthesis and applications of lead- and tin-free perovskites. Journal of Alloys and Compounds, 2020, 835, 155112.	5.5	19
685	China's progress of perovskite solar cells in 2019. Science Bulletin, 2020, 65, 1306-1315.	9.0	12
686	Degradation mechanisms in mixed-cation and mixed-halide Cs <sub>x</sub> FA <sub>1â^'x</sub> Pb(Br <sub>y</sub> 1a^'y) <sub>3</sub> perovskite films under ambient conditions. Journal of Materials Chemistry A, 2020, 8, 9302-9312.	10.3	26
687	Recent progress in encapsulation strategies to enhance the stability of organometal halide perovskite solar cells. JPhys Energy, 2020, 2, 031002.	5.3	76
688	Efficient Interconnection in Perovskite Tandem Solar Cells. Small Methods, 2020, 4, 2000093.	8.6	43
689	Tailoring the Dimension of Halide Perovskites Enables Quantum Wires with Enhanced Visible Light Absorption. Journal of Physical Chemistry C, 2020, 124, 11124-11131.	3.1	1

#	Article	IF	CITATIONS
690	Highly efficient bifacial CsPbIBr <sub>2</sub> solar cells with a TeO <sub>2</sub> /Ag transparent electrode and unsymmetrical carrier transport behavior. Dalton Transactions, 2020, 49, 6012-6019.	3.3	11
691	Strong hot-phonon bottleneck effect in all-inorganic perovskite nanocrystals. Applied Physics Letters, 2020, 116, .	3.3	19
692	Nickel oxide for inverted structure perovskite solar cells. Journal of Energy Chemistry, 2021, 52, 393-411.	12.9	132
693	Advanced Characterization Techniques for Overcoming Challenges of Perovskite Solar Cell Materials. Advanced Energy Materials, 2021, 11, 2001753.	19.5	29
694	Perovskite/perovskite planar tandem solar cells: A comprehensive guideline for reaching energy conversion efficiency beyond 30%. Nano Energy, 2021, 79, 105400.	16.0	69
695	Encapsulation for perovskite solar cells. Science Bulletin, 2021, 66, 100-102.	9.0	18
696	Enhanced fill factor for normal nâ€iâ€p planar heterojunction and mesoscopic perovskite solar cells using rutheniumâ€doped TiO 2 electron transporting layer. Progress in Photovoltaics: Research and Applications, 2021, 29, 159-171.	8.1	4
697	Perovskite tandem solar cells with improved efficiency and stability. Journal of Energy Chemistry, 2021, 58, 219-232.	12.9	32
698	Kinetics of light-induced degradation in semi-transparent perovskite solar cells. Solar Energy Materials and Solar Cells, 2021, 219, 110776.	6.2	29
699	Revealing the Perovskite Film Formation Using the Gas Quenching Method by In Situ GIWAXS: Morphology, Properties, and Device Performance. Advanced Functional Materials, 2021, 31, 2007473.	14.9	40
700	Recent advances in semitransparent perovskite solar cells. InformaÄnÃ-Materiály, 2021, 3, 101-124.	17.3	55
701	Application of Atomic Layer Deposition in Dye-Sensitized Photoelectrosynthesis Cells. Trends in Chemistry, 2021, 3, 59-71.	8.5	7
702	The dual-defect passivation role of lithium bromide doping in reducing the nonradiative loss in CsPbX <sub>3</sub> (X = Br and I) quantum dots. Inorganic Chemistry Frontiers, 2021, 8, 658-668.	6.0	15
703	Device Performance of Emerging Photovoltaic Materials (Version 1). Advanced Energy Materials, 2021, 11, 2002774.	19.5	93
704	Inorganic Electron Transport Materials in Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2008300.	14.9	105
705	Perovskite-based tandem solar cells. Science Bulletin, 2021, 66, 621-636.	9.0	91
706	Structural Properties and Stability of Inorganic CsPbI <sub>3</sub> Perovskites. Small Structures, 2021, 2, 2000089.	12.0	39
707	Preparation of CsSnBr3 perovskite film and its all-inorganic solar cells with planar heterojunction. Journal of Solid State Chemistry, 2021, 294, 121902.	2.9	15

#	Article	IF	CITATIONS
708	Impact of loading topology and current mismatch on current–voltage curves of three-terminal tandem solar cells with interdigitated back contacts. Solar Energy Materials and Solar Cells, 2021, 221, 110901.	6.2	10
709	Efficient ultrafast energy-down-shift upon ultraviolet excitation in methylammonium lead bromide nanoplatelets. Chemical Physics Letters, 2021, 763, 138192.	2.6	3
710	Combinatorial study of the structural, optical, and electrical properties of low temperature deposited Cd1-Zn Te (0Ââ‰ÂxÂâ‰Â1) thin films by MOCVD. Applied Surface Science, 2021, 540, 148452.	6.1	11
711	Wide-Bandgap Metal Halide Perovskites for Tandem Solar Cells. ACS Energy Letters, 2021, 6, 232-248.	17.4	89
712	Semi-transparent perovskite solar cells with bidirectional transparent electrodes. Nano Energy, 2021, 82, 105703.	16.0	71
713	A bottomâ€up cost analysis of silicon–perovskite tandem photovoltaics. Progress in Photovoltaics: Research and Applications, 2021, 29, 401-413.	8.1	35
714	The Effects of Solvent on Doctorâ€Bladed Perovskite Light Absorber under Ambient Process Condition for Multipleâ€Cation Mixed Halide Perovskites. Energy Technology, 2021, 9, .	3.8	3
715	Nickel oxide thin films grown by chemical deposition techniques: Potential and challenges in nextâ€generation rigid and flexible device applications. InformaÄnÃ-Materiály, 2021, 3, 536-576.	17.3	57
716	Ambient Fabrication of Organic–Inorganic Hybrid Perovskite Solar Cells. Small Methods, 2021, 5, e2000744.	8.6	63
717	Superior optoelectrical properties of magnetron sputter-deposited cerium-doped indium oxide thin films for solar cell applications. Ceramics International, 2021, 47, 1798-1806.	4.8	8
718	Carbon nanotubes in high-performance perovskite photovoltaics and other emerging optoelectronic applications. Journal of Applied Physics, 2021, 129, .	2.5	15
719	Controlling Diffusion in Poly-Si Tunneling Junctions for Monolithic Perovskite/Silicon Tandem Solar Cells. IEEE Journal of Photovoltaics, 2021, 11, 1395-1402.	2.5	10
720	Recent cutting-edge strategies for flexible perovskite solar cells toward commercialization. Chemical Communications, 2021, 57, 11604-11612.	4.1	6
721	Transparent conducting electrodes based on zinc oxide. , 2021, , 291-318.		0
722	Advent of alkali metal doping: a roadmap for the evolution of perovskite solar cells. Chemical Society Reviews, 2021, 50, 2696-2736.	38.1	90
723	SnO <sub><i>x</i></sub> Atomic Layer Deposition on Bare Perovskite—An Investigation of Initial Growth Dynamics, Interface Chemistry, and Solar Cell Performance. ACS Applied Energy Materials, 2021, 4, 510-522.	5.1	18
724	High-performance wide bandgap perovskite solar cells fabricated in ambient high-humidity conditions. Materials Advances, 2021, 2, 6344-6355.	5.4	15
725	Optoelectronic devices based on the integration of halide perovskites with silicon-based materials. Journal of Materials Chemistry A, 2021, 9, 20919-20940.	10.3	19

	Сітл	ATION REPORT	
#	Article	IF	CITATIONS
726	A Perspective on Perovskite Solar Cells. Energy, Environment, and Sustainability, 2021, , 55-151.	1.0	1
727	Solar cell contacts: quantifying the impact of interfacial layers on selectivity, recombination, charge transfer, and <i>V</i> <sub>oc</sub> . Sustainable Energy and Fuels, 2021, 5, 1767-1778.	4.9	3
728	Charge-transfer induced multifunctional BCP:Ag complexes for semi-transparent perovskite solar cells with a record fill factor of 80.1%. Journal of Materials Chemistry A, 2021, 9, 12009-12018.	10.3	29
729	Advancements in the Development of Various Types of Dye-Sensitized Solar Cells: A Comparative Review. Energy Engineering: Journal of the Association of Energy Engineers, 2021, 118, 737-759.	0.5	3
730	Structure optimization and optoelectronical property calculation for organic lead iodine perovskite solar cells. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 168802-168802.	0.5	0
731	Perovskite-inspired materials for photovoltaics and beyond—from design to devices. Nanotechnology 2021, 32, 132004.	, 2.6	106
732	Efficient bifacial monolithic perovskite/silicon tandem solar cells via bandgap engineering. Nature Energy, 2021, 6, 167-175.	39.5	164
733	Pushing commercialization of perovskite solar cells by improving their intrinsic stability. Energy and Environmental Science, 2021, 14, 3233-3255.	30.8	166
734	Perovskite solar cells. , 2021, , 249-281.		5
735	Dualâ€Interface Modification of CsPbIBr <sub>2</sub> Solar Cells with Improved Efficiency and Stability. Advanced Materials Interfaces, 2021, 8, 2001994.	3.7	12
737	Controllable Electrochemical Deposition and Theoretical Understanding of Conformal Perovskite on Textured Silicon towards Efficient Perovskite/Silicon Tandem Solar Cells. Journal of Physical Chemistry C, 2021, 125, 2875-2883.	3.1	9
738	Toward efficient and stable operation of perovskite solar cells: Impact of sputtered metal oxide interlayers. Nano Select, 2021, 2, 1417-1436.	3.7	10
739	Identification of embedded nanotwins at c-Si/a-Si:H interface limiting the performance of high-efficiency silicon heterojunction solar cells. Nature Energy, 2021, 6, 194-202.	39.5	52
740	Band Engineering via Gradient Molecular Dopants for CsFA Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2010572.	14.9	12
741	Fully Air-Processed Dynamic Hot-Air-Assisted M:CsPbI2Br (M: Eu2+, In3+) for Stable Inorganic Perovskite Solar Cells. Matter, 2021, 4, 635-653.	10.0	109
742	Recent Progress in the Semiconducting Oxide Overlayer for Halide Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2003119.	19.5	9
743	Cesium-Containing Triple Cation Perovskite Solar Cells. Coatings, 2021, 11, 279.	2.6	13
744	Efficient Inverted Perovskite Solar Cells with Low Voltage Loss Achieved by a Pyridineâ€Based Dopantâ€Free Polymer Semiconductor. Angewandte Chemie - International Edition, 2021, 60, 7227-72	233. <sup>13.8</sup>	107

#	Article	IF	Citations
745	Efficient Inverted Perovskite Solar Cells with Low Voltage Loss Achieved by a Pyridineâ€Based Dopantâ€Free Polymer Semiconductor. Angewandte Chemie, 2021, 133, 7303-7309.	2.0	18
746	Halide Segregation in Mixed-Halide Perovskites: Influence of A-Site Cations. ACS Energy Letters, 2021, 6, 799-808.	17.4	129
747	Investigation of CsSn <sub>0.5</sub> Ge <sub>0.5</sub> I <sub>3</sub> -on-Si Tandem Solar Device Utilizing SCAPS Simulation. IEEE Transactions on Electron Devices, 2021, 68, 618-625.	3.0	47
748	Mechanism of Additive-Assisted Room-Temperature Processing of Metal Halide Perovskite Thin Films. ACS Applied Materials & Interfaces, 2021, 13, 13212-13225.	8.0	27
749	Investigation of non-Pb all-perovskite 4-T mechanically stacked and 2-T monolithic tandem solar devices utilizing SCAPS simulation. SN Applied Sciences, 2021, 3, 1.	2.9	23
750	Halide Perovskite Lightâ€Emitting Diode Technologies. Advanced Optical Materials, 2021, 9, 2002128.	7.3	100
751	Interconnecting layers of different crystalline silicon bottom cells in monolithic perovskite/silicon tandem solar cells. Superlattices and Microstructures, 2021, 151, 106811.	3.1	4
752	Wide and Tunable Bandgap MAPbBr <sub>3â^'<i>x</i></sub> Cl <sub><i>x</i></sub> Hybrid Perovskites with Enhanced Phase Stability: In Situ Investigation and Photovoltaic Devices. Solar Rrl, 2021, 5, 2000718.	5.8	32
753	Compositional and Interfacial Engineering Yield High-Performance and Stable p-i-n Perovskite Solar Cells and Mini-Modules. ACS Applied Materials & Interfaces, 2021, 13, 13022-13033.	8.0	69
755	Design rules for high-efficiency both-sides-contacted silicon solar cells with balanced charge carrier transport and recombination losses. Nature Energy, 2021, 6, 429-438.	39.5	238
756	Photon redistribution of 2T perovskite/Si tandem solar cells induced by the optical coupling layer for higher power conversion efficiency. Semiconductor Science and Technology, 0, , .	2.0	1
757	Effect of bismuth iodide ( <mml:math )="" 0.78431<br="" 1="" etqq1="" ij="" xmlns:mml="http://www.w3.org/1998/Math/MathML">interfacial layer with different HTL's in FAPI based perovskite solar cell – SCAPS – 1D study. Solar</mml:math>	4 rgB1 /O	47
758	Review on persistent challenges of perovskite solar cells' stability. Solar Energy, 2021, 218, 469-491.	6.1	80
759	Photoâ€essisted Rechargeable Metal Batteries for Energy Conversion and Storage. Energy and Environmental Materials, 2022, 5, 439-451.	12.8	55
760	Flip hip Packaged Perovskite Solar Cells. Energy Technology, 2021, 9, 2001129.	3.8	2
761	Optical modelling of tandem solar cells using hybrid organic-inorganic tin perovskite bottom sub-cell. Solar Energy, 2021, 218, 251-261.	6.1	13
762	Linking Phase Segregation and Photovoltaic Performance of Mixed-Halide Perovskite Films through Grain Size Engineering. ACS Energy Letters, 0, , 1649-1658.	17.4	33
763	Slot-die coating large-area formamidinium-cesium perovskite film for efficient and stable parallel solar module. Science Advances, 2021, 7, .	10.3	165

#	Article	IF	CITATIONS
764	Twoâ€Terminal Perovskiteâ€Based Tandem Solar Cells for Energy Conversion and Storage. Small, 2021, 17, e2006145.	10.0	16
765	Preparation of Low Grain Boundary Perovskite Crystals with Excellent Performance: The Inhibition of Ammonium Iodide. ACS Omega, 2021, 6, 12858-12865.	3.5	5
766	Unified theory for light-induced halide segregation in mixed halide perovskites. Nature Communications, 2021, 12, 2687.	12.8	70
767	Insights into the Development of Monolithic Perovskite/Silicon Tandem Solar Cells. Advanced Energy Materials, 2022, 12, 2003628.	19.5	72
768	Metalâ€Halide Perovskite Crystallization Kinetics: A Review of Experimental and Theoretical Studies. Advanced Energy Materials, 2021, 11, 2100784.	19.5	35
769	Achieving Resistance against Moisture and Oxygen for Perovskite Solar Cells with High Efficiency and Stability. Chemistry of Materials, 2021, 33, 4269-4303.	6.7	51
770	Computational Modelling of Two Terminal CIGS/Perovskite Tandem Solar Cells with Power Conversion Efficiency of 23.1 %. European Journal of Inorganic Chemistry, 2021, 2021, 4959-4969.	2.0	37
771	Optimized bandgaps of top and bottom subcells for bifacial two-terminal tandem solar cells under different back irradiances. Solar Energy, 2021, 220, 163-174.	6.1	12
772	27.9% Efficient Monolithic Perovskite/Silicon Tandem Solar Cells on Industry Compatible Bottom Cells. Solar Rrl, 2021, 5, 2100244.	5.8	59
773	Fabrication and Characterization of FA <sub><i>x</i></sub> Cs <sub>1â^'<i>x</i></sub> PbI <sub>3</sub> Polycrystal Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100166.	5.8	8
774	Single Junction Highly Efficient Perovskite Solar Cells With Sun-Light Tracking System. , 2021, , .		0
775	Perspectives of Open-Air Processing to Enable Perovskite Solar Cell Manufacturing. Frontiers in Energy Research, 2021, 9, .	2.3	10
776	Toward Commercialization of Stable Devices: An Overview on Encapsulation of Hybrid Organic-Inorganic Perovskite Solar Cells. Crystals, 2021, 11, 519.	2.2	30
777	The Role of Dimensionality on the Optoelectronic Properties of Oxide and Halide Perovskites, and their Halide Derivatives. Advanced Energy Materials, 2022, 12, 2100499.	19.5	66
778	Investigation of the Selectivity of Carrier Transport Layers in Wideâ€Bandgap Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100107.	5.8	13
779	Prospects for metal halide perovskite-based tandem solar cells. Nature Photonics, 2021, 15, 411-425.	31.4	195
780	Layered Perovskites in Solar Cells: Structure, Optoelectronic Properties, and Device Design. Advanced Energy Materials, 2021, 11, 2003877.	19.5	49
781	Impact of device parameters on the performance of CSC based silicon tandem solar cells. , 2021, , .		Ο

	CITATION	Report	
# 782	ARTICLE Timeline for Successful Commercialization of Thin-film Perovskite Solar Cells. , 2021, , .	IF	CITATIONS
783	Evolution of stability enhancement in organo-metallic halide perovskite photovoltaics-a review. Materials Today Communications, 2021, 27, 102159.	1.9	12
784	Room Temperature Processed Transparent Amorphous InGaTiO Cathodes for Semi-Transparent Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 27353-27363.	8.0	16
785	Emerging Indoor Photovoltaic Technologies for Sustainable Internet of Things. Advanced Energy Materials, 2021, 11, 2100698.	19.5	117
786	Room-Temperature Solution-Processed 0D/1D Bilayer Electrodes for Translucent CsPbBr3 Perovskite Photovoltaics. Nanomaterials, 2021, 11, 1489.	4.1	3
787	Effectively transparent electrical contacts for thermally sensitive solar cells. Solar Energy Materials and Solar Cells, 2021, 224, 110973.	6.2	7
788	Ternary halide perovskites for possible optoelectronic applications revealed by Artificial Intelligence and DFT calculations. Materials Chemistry and Physics, 2021, 267, 124710.	4.0	23
789	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.	17.4	42
790	Inorganic top electron transport layer for high performance inverted perovskite solar cells. EcoMat, 2021, 3, e12127.	11.9	26
791	Boosting the Efficiency of CZTS/Si Tandem Solar Cells Using In <sub>2</sub> O <sub>3</sub> Layer in CZTS Top Cell. Advanced Theory and Simulations, 2021, 4, 2100099.	2.8	8
792	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.	19.5	102
793	Dimensional structure regulation of organic–inorganic hybrid perovskite and its application in thin film transistors. Nanotechnology, 2021, 32, 395704.	2.6	4
794	p-i-n Structured Semitransparent Perovskite Solar Cells with Solution-Processed Electron Transport Layer. Journal of Electronic Materials, 2021, 50, 5732-5739.	2.2	7
795	Hotspots, frontiers, and emerging trends of tandem solar cell research: A comprehensive review. International Journal of Energy Research, 2022, 46, 104-123.	4.5	12
796	From Groundwork to Efficient Solar Cells: On the Importance of the Substrate Material in Coâ€Evaporated Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2104482.	14.9	51
797	A Review on Emerging Barrier Materials and Encapsulation Strategies for Flexible Perovskite and Organic Photovoltaics. Advanced Energy Materials, 2021, 11, 2101383.	19.5	57
798	Progress with Defect Engineering in Silicon Heterojunction Solar Cells. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100170.	2.4	16
799	Stability of Perovskite Solar Cells: Degradation Mechanisms and Remedies. Frontiers in Electronics, 2021, 2, .	3.2	75

#	Article	IF	CITATIONS
800	Rationally Designed Window Layers for High Efficiency Perovskite/Si Tandem Solar Cells. Advanced Optical Materials, 2021, 9, 2100788.	7.3	7
801	Dyeâ€sensitized solar cells based on nickelâ€doped tungsten diselenide counter electrodes. Energy Storage, 2022, 4, e276.	4.3	1
802	Incorporating EA+ into PbI2 film for stable multiple cations perovskite solar cells with negligible hysteresis. Solar Energy, 2021, 224, 868-874.	6.1	6
803	Linked Nickel Oxide/Perovskite Interface Passivation for Highâ€Performance Textured Monolithic Tandem Solar Cells. Advanced Energy Materials, 2021, 11, 2101662.	19.5	77
804	Mechanics-coupled stability of metal-halide perovskites. Matter, 2021, 4, 2765-2809.	10.0	43
805	Tuning of the Interconnecting Layer for Monolithic Perovskite/Organic Tandem Solar Cells with Record Efficiency Exceeding 21%. Nano Letters, 2021, 21, 7845-7854.	9.1	40
806	A Perspective on the Commercial Viability of Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100401.	5.8	33
807	Additive engineering for stable halide perovskite solar cells. Journal of Energy Chemistry, 2021, 60, 599-634.	12.9	59
808	Radiation stability of mixed tin–lead halide perovskites: Implications for space applications. Solar Energy Materials and Solar Cells, 2021, 230, 111232.	6.2	15
809	Slot-die coated methylammonium-free perovskite solar cells with 18% efficiency. Solar Energy Materials and Solar Cells, 2021, 230, 111189.	6.2	28
810	Perovskite/Si tandem solar cells: Fundamentals, advances, challenges, and novel applications. SusMat, 2021, 1, 324-344.	14.9	70
811	Improved Nanophotonic Front Contact Design for Highâ€Performance Perovskite Singleâ€Junction and Perovskite/Perovskite Tandem Solar Cells. Solar Rrl, 2021, 5, 2100509.	5.8	23
812	A critical review of materials innovation and interface stabilization for efficient and stable perovskite photovoltaics. Nano Energy, 2021, 87, 106141.	16.0	28
813	A SCAPS simulation investigation of non-toxic MAGeI3-on-Si tandem solar device utilizing monolithically integrated (2-T) and mechanically stacked (4-T) configurations. Solar Energy, 2021, 225, 471-485.	6.1	33
814	Modeling and simulation of bifacial perovskite/PERT-silicon tandem solar cells. Solar Energy, 2021, 227, 292-302.	6.1	7
815	Switchable photovoltaic and enhanced photoelectricity in a single PbS@CH3NH3PbI3 hybrid composite micro/nanowire. Chemical Engineering Journal, 2021, 422, 130136.	12.7	6
816	Metal grid technologies for flexible transparent conductors in large-area optoelectronics. Current Applied Physics, 2021, 31, 105-121.	2.4	15
817	Materials, methods and strategies for encapsulation of perovskite solar cells: From past to present. Renewable and Sustainable Energy Reviews, 2021, 151, 111608.	16.4	45

#	Article	IF	Citations
818	Improving light absorption of active layer by adjusting PEDOT:PSS film for high efficiency Si-based hybrid solar cells. Solar Energy, 2021, 228, 299-307.	6.1	9
819	Low-temperature treated anatase TiO2 nanophotonic-structured contact design for efficient triple-cation perovskite solar cells. Chemical Engineering Journal, 2021, 426, 131831.	12.7	22
820	Potassium tetrafluoroborate-induced defect tolerance enables efficient wide-bandgap perovskite solar cells. Journal of Colloid and Interface Science, 2022, 605, 710-717.	9.4	20
821	Large-Area Synthesis and Patterning of All-Inorganic Lead Halide Perovskite Thin Films and Heterostructures. Nano Letters, 2021, 21, 1454-1460.	9.1	27
822	Strategy for <scp>largeâ€scale</scp> monolithic <scp>Perovskite</scp> /Silicon tandem solar cell: A review of recent progress. EcoMat, 2021, 3, e12084.	11.9	38
823	Simulation of Optimized High-Current Tandem Solar-Cells With Efficiency Beyond 41%. IEEE Access, 2021, 9, 49724-49737.	4.2	28
824	Transparent Electrode Techniques for Semitransparent and Tandem Perovskite Solar Cells. Electronic Materials Letters, 2021, 17, 18-32.	2.2	22
825	Application of two-dimensional materials in perovskite solar cells: recent progress, challenges, and prospective solutions. Journal of Materials Chemistry C, 2021, 9, 14065-14092.	5.5	24
826	Thin silicon interference solar cells for targeted or broadband wavelength absorption enhancement. Optics Express, 2021, 29, 4324.	3.4	12
827	Towards Simplifying the Device Structure of Highâ€Performance Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2000863.	14.9	67
828	Toward Perovskite Solar Cell Commercialization: A Perspective and Research Roadmap Based on Interfacial Engineering. Advanced Materials, 2018, 30, e1800455.	21.0	332
829	Soft Templateâ€Controlled Growth of Highâ€Quality CsPbl <sub>3</sub> Films for Efficient and Stable Solar Cells. Advanced Energy Materials, 2020, 10, 1903751.	19.5	82
830	Impermeable Charge Transport Layers Enable Aqueous Processing on Top of Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903897.	19.5	30
831	Differences in Engineered Nanoparticle Surface Physicochemistry Revealed by Investigation of Changes in Copper Bioavailability During Sorption to Nanoparticles in the Aqueous Phase. Environmental Toxicology and Chemistry, 2019, 38, 925-935.	4.3	3
832	Recent Development of Organic-Inorganic Perovskite-Based Tandem Solar Cells. Solar Rrl, 2017, 1, 1700045.	5.8	32
833	Recent Advances in Solar Cells. , 2020, , 79-122.		7
834	Composite Encapsulation Enabled Superior Comprehensive Stability of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 27277-27285.	8.0	54
835	Scalable fabrication and coating methods for perovskite solar cells and solar modules. Nature Reviews Materials, 2020, 5, 333-350.	48.7	568

#	Article	IF	CITATIONS
836	On the effect of atomic layer deposited Al <sub>2</sub> O <sub>3</sub> on the environmental degradation of hybrid perovskite probed by positron annihilation spectroscopy. Journal of Materials Chemistry C, 2019, 7, 5275-5284.	5.5	11
837	Redox-active Eu <sub>2</sub> O <sub>3</sub> nanoflakes as a buffer layer for inverted CsPbI <sub>2</sub> Br perovskite solar cells with enhanced performance. Journal of Materials Chemistry C, 2020, 8, 13754-13761.	5.5	12
838	Defects in halide perovskite semiconductors: impact on photo-physics and solar cell performance. Journal Physics D: Applied Physics, 2020, 53, 503003.	2.8	26
839	Nanotechnology for catalysis and solar energy conversion. Nanotechnology, 2021, 32, 042003.	2.6	44
840	Recent progress in developing efficient monolithic all-perovskite tandem solar cells. Journal of Semiconductors, 2020, 41, 051201.	3.7	19
841	Perovskite solar cell performance assessment. JPhys Energy, 2020, 2, 044002.	5.3	12
842	Structural dynamics in hybrid halide perovskites: Bulk Rashba splitting, spin texture, and carrier localization. Physical Review Materials, 2018, 2, .	2.4	19
843	Computational generation of voids in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mi>a</mml:mi> -Si and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>a</mml:mi></mml:math> -Si:H by cavitation at low density. Physical Review Materials. 2020. 4</mml:math 	2.4	5
844	Tuning the electronic levels of NiO with alkali halides surface modifiers for perovskite solar cells. Physical Review Materials, 2020, 4, .	2.4	9
	riysical Review Materials, 2020, 4, .		
845	Epitaxial GaAsP/Si Solar Cells with High Quantum Efficiency. , 2020, , .		2
845 846		1.3	2 40
	Epitaxial GaAsP/Si Solar Cells with High Quantum Efficiency. , 2020, , . Nanophotonic light management for perovskite–silicon tandem solar cells. Journal of Photonics for	1.3	
846	Epitaxial GaAsP/Si Solar Cells with High Quantum Efficiency. , 2020, , . Nanophotonic light management for perovskite–silicon tandem solar cells. Journal of Photonics for Energy, 2018, 8, 1.	1.3	40
846 847	<ul> <li>Epitaxial GaAsP/Si Solar Cells with High Quantum Efficiency., 2020, , .</li> <li>Nanophotonic light management for perovskite–silicon tandem solar cells. Journal of Photonics for Energy, 2018, 8, 1.</li> <li>Advanced module optics of textured perovskite silicon tandem solar cells., 2018, , .</li> <li>Enhanced Optical Absorption in Perovskite/Si Tandem Solar Cells with Nanoholes Array. Nanoscale</li> </ul>		40 2
846 847 848	Epitaxial GaAsP/Si Solar Cells with High Quantum Efficiency. , 2020, , .         Nanophotonic light management for perovskite–silicon tandem solar cells. Journal of Photonics for Energy, 2018, 8, 1.         Advanced module optics of textured perovskite silicon tandem solar cells. , 2018, , .         Enhanced Optical Absorption in Perovskite/Si Tandem Solar Cells with Nanoholes Array. Nanoscale Research Letters, 2020, 15, 213.         Optical modeling of wide-bandgap perovskite and perovskite/silicon tandem solar cells using complex	5.7	40 2 16
846 847 848 849	<ul> <li>Epitaxial GaAsP/Si Solar Cells with High Quantum Efficiency. , 2020, , .</li> <li>Nanophotonic light management for perovskite–silicon tandem solar cells. Journal of Photonics for Energy, 2018, 8, 1.</li> <li>Advanced module optics of textured perovskite silicon tandem solar cells. , 2018, , .</li> <li>Enhanced Optical Absorption in Perovskite/Si Tandem Solar Cells with Nanoholes Array. Nanoscale Research Letters, 2020, 15, 213.</li> <li>Optical modeling of wide-bandgap perovskite and perovskite/silicon tandem solar cells using complex refractive indices for arbitrary-bandgap perovskite absorbers. Optics Express, 2018, 26, 27441.</li> <li>Tailored disorder: a self-organized photonic contact for light trapping in silicon-based tandem solar</li> </ul>	5.7 3.4	40 2 16 102
846 847 848 849 850	<ul> <li>Epitaxial GaAsP/Si Solar Cells with High Quantum Efficiency. , 2020, , .</li> <li>Nanophotonic light management for perovskite–silicon tandem solar cells. Journal of Photonics for Energy, 2018, 8, 1.</li> <li>Advanced module optics of textured perovskite silicon tandem solar cells. , 2018, , .</li> <li>Enhanced Optical Absorption in Perovskite/Si Tandem Solar Cells with Nanoholes Array. Nanoscale Research Letters, 2020, 15, 213.</li> <li>Optical modeling of wide-bandgap perovskite and perovskite/silicon tandem solar cells using complex refractive indices for arbitrary-bandgap perovskite absorbers. Optics Express, 2018, 26, 27441.</li> <li>Tailored disorder: a self-organized photonic contact for light trapping in silicon-based tandem solar cells. Optics Express, 2020, 28, 10909.</li> <li>Progress in perovskite based solar cells: scientific and engineering state of the art. Reviews on</li> </ul>	5.7 3.4 3.4	40 2 16 102 11

ARTICLE IF CITATIONS # Computational Design of Highly Efficient and Robust Hole Transport Layers in Perovskite Solar Cells. 854 1.0 3 Journal of Korean Institute of Metals and Materials, 2019, 57, 535-542. Designs from single junctions, heterojunctions to multijunctions for high-performance perovskite 38.1 solar cells. Chemical Society Reviews, 2021, 50, 13090-13128. Semitransparent Perovskite Solar Cells for Building Integration and Tandem Photovoltaics: Design 856 5.8 31 Strategies and Challenges. Solar Rrl, 2021, 5, 2100702. Use of n-type amorphous silicon films as an electron transport layer in the perovskite solar cells. Japanese Journal of Applied Physics, 2022, 61, SB1012. A-site phase segregation in mixed cation perovskite. Materials Reports Energy, 2021, 1, 100064. 858 3.2 19 Efficient 2T CsKPb(IBr)3â€"Tin Incorporated Narrow Bandgap Perovskite Tandem Solar Cells: A Numerical Study with Current Matching Conditions. Advanced Theory and Simulations, 2021, 4, 2.8 2100121. Vapor deposition of metal halide perovskite thin films: Process control strategies to shape layer 860 5.1 37 properties. APL Materials, 2021, 9, . Electrode metallization for scaled perovskite/silicon tandem solar cells: Challenges and 861 8.1 opportunities. Progress in Photovoltaics: Research and Applications, 2023, 31, 429-442. Atomic Level Insights into Metal Halide Perovskite Materials by Scanning Tunneling Microscopy and 863 13.8 3 Spectroscopy. Angewandte Chemie - International Edition, 2022, 61, . Atomic level insights intoÂmetal halide perovskiteÂmaterials by scanning tunneling microscopy and 864 spectroscopy. Angewandte Chemie, 2022, 134, e202112352. Recent progress and future prospects of perovskite tandem solar cells. Applied Physics Reviews, 2021, 865 11.3 71 8,. Perovskites boost solar-cell potential. Communications of the ACM, 2017, 60, 11-13. 866 4.5 The Photovoltaic Installation Application in the Public Utility Building. Ecological Chemistry and 867 1.5 3 Engineering S, 2017, 24, 517-538. Thin Film Hybrid Structures Perovskite and Silicon Photovoltaic Cells. Science Technology and Innovation, 2018, 2, 27-30. Photonic band engineering in absorbing media for spectrally selective optoelectronic films. Optics 869 3.4 5 Express, 2018, 26, 26933. Semiconductor photovoltaics: Nurrent state and actual directions of research. OptoA"lektronika I 870 Poluprovodnikovaâ Tehnika, 2018, 53, 13-37. 871 Advanced Coupling of Energy Storage and Photovoltaics., 2019, , 317-350. 0 872 Highly Efficient and Stable Perovskite-Silicon Tandem Solar Cells., 2019, , .

#	Article	IF	CITATIONS
873	Research progress of crystalline silicon solar cells with dopant-free asymmetric heterocontacts. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 048801.	0.5	0
874	Perovskite Tandem Solar Cells for Photovoltaics. , 2019, , 271-284.		0
875	Manufacturable Perovskite/Silicon Tandems with Solution-Processed Perovskites on Textured Silicon Bottom Cells. , 2020, , .		0
876	Silicon heterojunction-based tandem solar cells: past, status, and future prospects. Nanophotonics, 2021, 10, 2001-2022.	6.0	21
878	Development of encapsulation strategies towards the commercialization of perovskite solar cells. Energy and Environmental Science, 2022, 15, 13-55.	30.8	158
879	Dye-sensitized solar cells: a comprehensive introduction. , 2022, , 25-43.		0
880	Optics of Perovskite-based Highly Efficient Tandem Solar Cells. , 2020, , .		0
881	Research Progress in the Stability of Organic-Inorganic Hybrid Perovskite Solar Cells. Materials Science Forum, 0, 980, 97-106.	0.3	0
883	Revealing Fundamental Efficiency Limits of Monolithic Perovskite/Silicon Tandem Photovoltaics through Subcell Characterization. ACS Energy Letters, 2021, 6, 3982-3991.	17.4	22
885	Growth and Degradation Kinetics of Organic–Inorganic Hybrid Perovskite Films Determined by In Situ Grazingâ€Incidence Xâ€Ray Scattering Techniques. Small Methods, 2021, 5, e2100829.	8.6	8
887	Flexible and Wearable Optoelectronic Devices Based on Perovskites. Advanced Materials Technologies, 2022, 7, .	5.8	26
888	TiO2-intercalated graphite nanosheets increasing power conversion efficiency of MAxFA(1-x)PbI3 perovskite solar cells. Journal of Materials Science: Materials in Electronics, 0, , 1.	2.2	0
889	2D Position-Sensitive Hybrid-Perovskite Detectors. ACS Applied Materials & Interfaces, 2021, 13, 54527-54535.	8.0	11
890	Deployment Opportunities for Space Photovoltaics and the Prospects for Perovskite Solar Cells. Advanced Materials Technologies, 2022, 7, .	5.8	25
891	Lowâ€Cost Strategy for Highâ€Efficiency Bifacial Perovskite/câ€5i Tandem Solar Cells. Solar Rrl, 2022, 6, 2100781.	5.8	5
892	Sputtered transparent electrodes for optoelectronic devices: Induced damage and mitigation strategies. Matter, 2021, 4, 3549-3584.	10.0	43
893	Silicon-Based Technologies for Flexible Photovoltaic (PV) Devices: From Basic Mechanism to Manufacturing Technologies. Nanomaterials, 2021, 11, 2944.	4.1	16
894	Investigations on Optical, Material and Electrical Properties of aSi:H and aSiGe:H in Making Proposed n+aSi:H/i-aSi:H/p+aSiGe:H Graded Bandgap Single-junction Solar Cell. Nanoscience and Nanotechnology - Asia, 2020, 10, 709-718.	0.7	0

#	Article	IF	CITATIONS
895	Passivating contacts for high-efficiency silicon-based solar cells: From single-junction to tandem architecture. Nano Energy, 2022, 92, 106712.	16.0	30
896	Updated Progresses in Perovskite Solar Cells. Chinese Physics Letters, 2021, 38, 107801.	3.3	11
898	Monolithic Perovskite/Silicon-Heterojunction Tandem Solar Cells with Nanocrystalline Si/SiOx Tunnel Junction. Energies, 2021, 14, 7684.	3.1	7
899	Lead-Sealed Stretchable Underwater Perovskite-Based Optoelectronics <i>via</i> Self-Recovering Polymeric Nanomaterials. ACS Nano, 2021, 15, 20127-20135.	14.6	8
900	28.2%-efficient, outdoor-stable perovskite/silicon tandem solar cell. Joule, 2021, 5, 3169-3186.	24.0	99
901	Insight into the Interface Engineering of a SnO <sub>2</sub> /FAPbI <sub>3</sub> Perovskite Using Lead Halide as an Interlayer: A First-Principles Study. Journal of Physical Chemistry Letters, 2021, 12, 11330-11338.	4.6	8
902	Device Performance of Emerging Photovoltaic Materials (Version 2). Advanced Energy Materials, 2021, 11, .	19.5	66
903	Recent Issues and Configuration Factors in Perovskite-Silicon Tandem Solar Cells towards Large Scaling Production. Nanomaterials, 2021, 11, 3186.	4.1	10
906	Integrated and Unassisted Solar Waterâ€Splitting System by Monolithic Perovskite/Silicon Tandem Solar Cell. Solar Rrl, 2022, 6, 2100748.	5.8	8
907	Halide Perovskites for Photonics: Recent History and Perspectives. , 2021, , 1-28.		1
909	Structure and electronic properties of CsPbBr3 perovskite: first principle calculations. Journal of Physical Studies, 2021, 25, .	0.5	1
910	Ultrathin Oxides for Solar Cells. RSC Energy and Environment Series, 2022, , 27-69.	0.5	1
911	Eliminating the Perovskite Solar Cell Manufacturing Bottleneck via High‧peed Flexography. Advanced Materials Technologies, 2022, 7, .	5.8	6
912	High-efficiency modified tandem solar cell: Simulation of two-absorbers bottom subcell. Optik, 2022, 251, 168458.	2.9	3
913	Design of Lighting Systems using Solar Energy Sources for Rural Outdoor use: Case Study of the Guapán Hot Springs Tourism Project. , 2020, , .		2
914	CdSe thin film solar cell. , 2021, , .		0
915	Investigation of lead-free MASnI3-MASnIBr2 tandem solar cell: Numerical simulation. Optical Materials, 2022, 123, 111893.	3.6	32
916	Direct measurement of radiative decay rates in metal halide perovskites. Energy and Environmental Science, 2022, 15, 1211-1221.	30.8	7

#	Article	IF	CITATIONS
917	Encapsulation and Outdoor Testing of Perovskite Solar Cells: Comparing Industrially Relevant Process with a Simplified Lab Procedure. ACS Applied Materials & Interfaces, 2022, 14, 5159-5167.	8.0	43
918	Potential of NiOx/Nickel Silicide/n+ Poly-Si Contact for Perovskite/TOPCon Tandem Solar Cells. Energies, 2022, 15, 870.	3.1	5
919	Progress and challenges on scaling up of perovskite solar cell technology. Sustainable Energy and Fuels, 2022, 6, 243-266.	4.9	59
920	Investigations of Fused Deposition Modeling for Perovskite Active Solar Cells. Polymers, 2022, 14, 317.	4.5	5
921	Optics in high efficiency perovskite tandem solar cells. , 2022, , 319-345.		1
922	Lightâ€Soak Stable Semitransparent and Bifacial Perovskite Solar Cells for Singleâ€Junction and Tandem Architectures. Solar Rrl, 0, , 2100621.	5.8	3
923	Monolithic perovskite/organic tandem solar cells with 23.6% efficiency enabled by reduced voltage losses and optimized interconnecting layer. Nature Energy, 2022, 7, 229-237.	39.5	137
924	Encapsulation and Stability Testing of Perovskite Solar Cells for Real Life Applications. ACS Materials Au, 2022, 2, 215-236.	6.0	41
926	Large-area perovskite solar cells employing spiro-Naph hole transport material. Nature Photonics, 2022, 16, 119-125.	31.4	123
927	Advanced nanomaterials utilized as top transparent electrodes in semi-transparent photovoltaic. Colloids and Interface Science Communications, 2022, 46, 100563.	4.1	16
928	Numerical simulation of novel designed perovskite/silicon heterojunction solar cell. Optical Materials, 2022, 123, 111847.	3.6	19
929	Reducing sputter induced stress and damage for efficient perovskite/silicon tandem solar cells. Journal of Materials Chemistry A, 2022, 10, 1343-1349.	10.3	27
930	High-Intensity Illuminated Annealing of Industrial SHJ Solar Cells: A Pilot Study. IEEE Journal of Photovoltaics, 2022, 12, 267-273.	2.5	10
931	Monolithic Perovskiteâ€Silicon Tandem Solar Cells: From the Lab to Fab?. Advanced Materials, 2022, 34, e2106540.	21.0	92
932	Comprehensive study and performance analysis of an eco-friendly double perovskite Cs <sub>2</sub> AgBiBr <sub>6</sub> on Si tandem solar cell. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 756.	2.1	8
933	Threeâ€ŧerminal perovskite/integrated back contact silicon tandem solar cells under low light intensity conditions. , 2022, 1, 148-156.		36
934	Carbon nanotubes in perovskite-based optoelectronic devices. Matter, 2022, 5, 448-481.	10.0	19
935	Dual interfacial engineering to improve ultraviolet and near-infrared light harvesting for efficient and stable perovskite solar cells. Chemical Engineering Journal, 2022, 435, 134792.	12.7	7

#	Article	IF	CITATIONS
937	Gasâ€Assisted Spray Coating of Perovskite Solar Cells Incorporating Sprayed Selfâ€Assembled Monolayers. Advanced Science, 2022, 9, e2104848.	11.2	29
938	Inverted Perovskite Solar Cells: The Emergence of a Highly Stable and Efficient Architecture. Energy Technology, 2022, 10, .	3.8	11
939	Direct band gap AlPSi3 and GaPSi3 for tandem solar cells. Journal of Power Sources, 2022, 525, 231104.	7.8	0
940	Phase segregation induced efficiency degradation and variability in mixed halide perovskite solar cells. Journal of Applied Physics, 2021, 130, .	2.5	12
941	Enhanced Self-Assembled Monolayer Surface Coverage by ALD NiO in p-i-n Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 2166-2176.	8.0	77
942	Concept for Efficient Light Harvesting in Perovskite Materials via Solar Harvester with Multi-Functional Folded Electrode. Nanomaterials, 2021, 11, 3362.	4.1	4
943	Columnar liquid crystals as stability enhancing hole transport layers for Ruddlesden–Popper perovskite optoelectronics. Molecular Systems Design and Engineering, 0, , .	3.4	0
944	Dust Deposition's Effect on Solar Photovoltaic Module Performance: An Experimental Study in India's Tropical Region. Journal of Renewable Materials, 2022, 10, 2133-2153.	2.2	6
945	Improving the Performance of Perovskite Solar Cells with Insulating Additive-Modified Hole Transport Layers. ACS Applied Materials & Interfaces, 2022, 14, 11500-11508.	8.0	14
946	Perovskite/Silicon Tandem Solar Cells with a <i>V</i> <sub>oc</sub> of 1784 mV Based on an Industrially Feasible 25 cm <sup>2</sup> TOPCon Silicon Cell. ACS Applied Energy Materials, 2022, 5, 5449-5456.	5.1	14
947	Dimensional Engineering Enables 1.31 V Open ircuit Voltage for Efficient and Stable Wideâ€Bandgap Halide Perovskite Solar Cells. Solar Rrl, 2022, 6, .	5.8	5
948	Understanding Instability in Formamidinium Lead Halide Perovskites: Kinetics of Transformative Reactions at Grain and Subgrain Boundaries. ACS Energy Letters, 2022, 7, 1534-1543.	17.4	45
949	Lowâ€Temperatureâ€Processed Stable Perovskite Solar Cells and Modules: A Comprehensive Review. Advanced Energy Materials, 2022, 12, .	19.5	38
950	Gradient Doping in Sn–Pb Perovskites by Barium Ions for Efficient Singleâ€Junction and Tandem Solar Cells. Advanced Materials, 2022, 34, e2110351.	21.0	62
951	A Photovoltaic Technology Review: History, Fundamentals and Applications. Energies, 2022, 15, 1823.	3.1	48
952	Influence of Annealing and Composition on the Crystal Structure of Mixed-Halide, Ruddlesden–Popper Perovskites. Chemistry of Materials, 2022, 34, 3109-3122.	6.7	27
953	Electrochemical deposition of Si nano-spheres from water contaminated ionic liquid at room temperature: Structural evolution and growth mechanism. Journal of Electroanalytical Chemistry, 2022, 910, 116175.	3.8	4
954	The state of the art of Sb <sub>2</sub> (S, Se) <sub>3</sub> thin film solar cells: current progress and future prospect. Journal Physics D: Applied Physics, 2022, 55, 303001.	2.8	19

#	Article	IF	CITATIONS
955	Damp heat–stable perovskite solar cells with tailored-dimensionality 2D/3D heterojunctions. Science, 2022, 376, 73-77.	12.6	366
956	Pseudoâ€Planar Heterojunction Organic Photovoltaics with Optimized Light Utilization for Printable Solar Windows. Advanced Materials, 2022, 34, e2201604.	21.0	30
957	Progress on the stability and encapsulation techniques of perovskite solar cells. Organic Electronics, 2022, 106, 106515.	2.6	22
958	Halide Perovskite Crystallization Processes and Methods in Nanocrystals, Single Crystals, and Thin Films. Advanced Materials, 2022, 34, e2200720.	21.0	50
959	Prediction of the power conversion efficiency of Perovskite-on-CICS tandem and triple junctions thin-film cells under solar concentration irradiations by optimization of structural and optoelectronic materials characteristic. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2022, 280, 115712.	3.5	4
960	Efficient and Stable Perovskite Solar Cells Based on Inorganic Hole Transport Materials. Nanomaterials, 2022, 12, 112.	4.1	21
961	Siliconâ€based passivating contacts: The TOPCon route. Progress in Photovoltaics: Research and Applications, 2023, 31, 341-359.	8.1	26
962	Recent Advances in Materials Design Using Atomic Layer Deposition for Energy Applications. Advanced Functional Materials, 2022, 32, .	14.9	34
963	Amorphous Silicon Thin Film Deposition for Poly-Si/SiO2 Contact Cells to Minimize Parasitic Absorption in the Near-Infrared Region. Energies, 2021, 14, 8199.	3.1	3
966	A review on monolithic perovskite/c-Si tandem solar cells: progress, challenges, and opportunities. Journal of Materials Chemistry A, 2022, 10, 10811-10828.	10.3	11
967	ç¡åŸº-钙钛矿åå±,å≇e˜³èf½ç"µæ±çš"å‰ç®¡ç†ç−ç•¥. Chinese Science Bulletin, 2022, , .	0.7	1
968	Monolithic perovskite/c-Si tandem solar cell: Progress on numerical simulation. , 2022, 1, .		5
969	CsPbCl <sub>3</sub> â€Clusterâ€Widened Bandgap and Inhibited Phase Segregation in a Wideâ€Bandgap Perovskite and its Application to NiO <i><sub>x</sub></i> â€Based Perovskite/Silicon Tandem Solar Cells. Advanced Materials, 2022, 34, e2201451.	21.0	29
970	Rear Electrode Materials for Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	14.9	49
971	Clobal prediction of the energy yields for hybrid perovskite/Si tandem and Si heterojunction single solar modules. Progress in Photovoltaics: Research and Applications, 2022, 30, 1198-1218.	8.1	4
972	Optoelectronic Properties of Mixed Iodide–Bromide Perovskites from First-Principles Computational Modeling and Experiment. Journal of Physical Chemistry Letters, 2022, 13, 4184-4192.	4.6	16
973	Developing the Next-Generation Perovskite/Si Tandems: Toward Efficient, Stable, and Commercially Viable Photovoltaics. ACS Applied Materials & Interfaces, 2022, 14, 34262-34268.	8.0	9
974	Review on two-terminal and four-terminal crystalline-silicon/perovskite tandem solar cells; progress, challenges, and future perspectives. Energy Reports, 2022, 8, 5820-5851.	5.1	24

#	Article	IF	CITATIONS
975	Ambient Airâ€Processed Wideâ€Bandgap Perovskite Solar Cells with Wellâ€Controlled Film Morphology for Fourâ€Terminal Tandem Application. Solar Rrl, 2022, 6, .	5.8	4
976	Photoactivated p-Doping of Organic Interlayer Enables Efficient Perovskite/Silicon Tandem Solar Cells. ACS Energy Letters, 2022, 7, 1987-1993.	17.4	14
977	Effect of fluorine substitution on properties of hole-transporting materials for perovskite solar cells. Dyes and Pigments, 2022, 204, 110370.	3.7	4
978	Nanophotonics for Perovskite Solar Cells. Advanced Photonics Research, 2022, 3, .	3.6	15
979	Efficient Light Harvesting in Thick Perovskite Solar Cells Processed on Industry-Applicable Random Pyramidal Textures. ACS Applied Energy Materials, 2022, 5, 6700-6708.	5.1	9
980	Challenges of Scalable Development for Perovskite/Silicon Tandem Solar Cells. ACS Applied Energy Materials, 2022, 5, 6499-6515.	5.1	10
981	Photovoltaic performance of bifacial perovskite/c-Si tandem solar cells. Journal of Power Sources, 2022, 540, 231622.	7.8	3
982	A thioacetamide additive-based hybrid (MA0.5FA0.5)PbI3 perovskite solar cells crossing 21 % efficiency with excellent long term stability. Materials Today Chemistry, 2022, 25, 100950.	3.5	4
983	Empowering Photovoltaics with Smart Light Management Technologies. , 2022, , 1165-1248.		1
984	Efficient interconnecting layers in monolithic all-perovskite tandem solar cells. Energy and Environmental Science, 2022, 15, 3152-3170.	30.8	26
985	Airâ€Degradation Mechanisms in Mixed Leadâ€Tin Halide Perovskites for Solar Cells. Advanced Energy Materials, 2023, 13, .	19.5	15
986	Perovskite-based tandem solar cells: Device architecture, stability, and economic perspectives. Renewable and Sustainable Energy Reviews, 2022, 165, 112553.	16.4	16
988	Efficient and stable perovskite-silicon tandem solar cells through contact displacement by MgF <i><sub>x</sub> </i> . Science, 2022, 377, 302-306.	12.6	141
990	Improving Light Absorption in a Perovskite/Si Tandem Solar Cell via Light Scattering and UVâ€Đown Shifting by a Mixture of SiO <sub>2</sub> Nanoparticles and Phosphors. Advanced Functional Materials, 2022, 32, .	14.9	6
991	Surface engineering with oxidized Ti3C2Tx MXene enables efficient and stable p-i-n-structured CsPbI3 perovskite solar cells. Joule, 2022, 6, 1672-1688.	24.0	45
992	Bifacial perovskite/silicon tandem solar cells. Joule, 2022, 6, 1431-1445.	24.0	24
993	Tuning the photovoltaic parameters of spiro[fluorenexanthene]-diol (SFX-OH)-based crosslinked donor materials for efficient organic solar cells. Computational and Theoretical Chemistry, 2022, 1214, 113778.	2.5	1
994	Performance investigation of cesium formamidinium lead mixed halide (FA0.83Cs0.17PbI3-xBrx) for different iodine and bromine ratios. , 2022, 168, 207305.		6

		Report	
#	Article	IF	CITATIONS
995	Optimization of the substrate temperature of narrow bandgap CIS solar cells by three stage coevaporation process. Materials Science in Semiconductor Processing, 2022, 149, 106879.	4.0	2
996	Multiple-cation wide-bandgap perovskite solar cells grown using cesium formate as the Cs precursor with high efficiency under sunlight and indoor illumination. Physical Chemistry Chemical Physics, 2022, 24, 17526-17534.	2.8	6
997	Perovskite solar cells for building integrated photovoltaicsâꀔglazing applications. Joule, 2022, 6, 1446-1474.	24.0	39
998	27.6% Perovskite/c‣i Tandem Solar Cells Using Industrial Fabricated TOPCon Device. Advanced Energy Materials, 2022, 12, .	19.5	22
999	Numerical Simulation and Design Optimization of Highly Efficient Lead-free Perovskite/c-Si Tandem Solar Cell. , 2022, , .		0
1000	Defect engineering in wide-bandgap perovskites for efficient perovskite–silicon tandem solar cells. Nature Photonics, 2022, 16, 588-594.	31.4	112
1001	<i>In Situ</i> Grown Nanocrystalline Si Recombination Junction Layers for Efficient Perovskite–Si Monolithic Tandem Solar Cells: Toward a Simpler Multijunction Architecture. ACS Applied Materials & Interfaces, 2022, 14, 33505-33514.	8.0	6
1002	F-Type Pseudo-Halide Anions for High-Efficiency and Stable Wide-Band-Gap Inverted Perovskite Solar Cells with Fill Factor Exceeding 84%. ACS Nano, 2022, 16, 10798-10810.	14.6	45
1003	Wide bandgap halide perovskite absorbers for semi-transparent photovoltaics: From theoretical design to modules. Nano Energy, 2022, 101, 107560.	16.0	12
1004	Tuning bandgap and energy stability of Organic-Inorganic halide perovskites through surface engineering. Computational Materials Science, 2022, 213, 111649.	3.0	1
1005	Surface redox engineering of vacuum-deposited NiOx for top-performance perovskite solar cells and modules. Joule, 2022, 6, 1931-1943.	24.0	64
1006	Raytracing Modelling of Infrared Light Management Using Molybdenum Disulfide (MoS2) as a Back-Reflector Layer in a Silicon Heterojunction Solar Cell (SHJ). Materials, 2022, 15, 5024.	2.9	2
1007	Stability and efficiency issues, solutions and advancements in perovskite solar cells: A review. Solar Energy, 2022, 244, 516-535.	6.1	76
1008	Thermodynamic modeling of a spectrum split perovskite/silicon solar cell hybridized with thermoelectric devices. International Journal of Energy Research, 2022, 46, 19451-19466.	4.5	8
1009	Impact of Holeâ€Transport Layer and Interface Passivation on Halide Segregation in Mixedâ€Halide Perovskites. Advanced Functional Materials, 2022, 32, .	14.9	11
1010	Surface optimization of metal halide perovskite solar cells using ZnS nanorods. Journal of Materials Science: Materials in Electronics, 2022, 33, 21576-21587.	2.2	2
1011	Progress of Solution-Processed Metal Oxides as Charge Transport Layers towards Efficient and Stable Perovskite Solar Cells and Modules. Materials Today Nano, 2022, , 100252.	4.6	2
1012	Performance Enhancement of Crystal Silicon Solar Cell by a CsPbBr <sub>3</sub> –Cs <sub>4</sub> PbBr <sub>6</sub> Perovskite Quantum Dot @ZnO/Ethylene Vinyl Acetate Copolymer Downshifting Composite Film. Solar Rrl, 2022, 6, .	5.8	12

#	Article	IF	Citations
1013	Fully Textured, Productionâ€Line Compatible Monolithic Perovskite/Silicon Tandem Solar Cells Approaching 29% Efficiency. Advanced Materials, 2022, 34, .	21.0	84
1014	Computational Modelling and Optimization of a Methylammoniumâ€free Perovskite and Gaâ€free Chalcogenide Tandem Solar Cell with an Efficiency above 25 %. ChemistrySelect, 2022, 7, .	1.5	1
1015	Performance enhancement of cost-effective mixed cationic perovskite solar cell with MgCl2 and n-BAI as surface passivating agents. Optical Materials, 2022, 132, 112845.	3.6	2
1016	Thickness effect of In2O3:Sn electrodes on the performance of flexible all-thin film electrochromic devices. Thin Solid Films, 2022, 759, 139460.	1.8	0
1017	Preparation and investigation of ITO/metal/ITO electrodes for electrochromic application. Optical Materials, 2022, 133, 112848.	3.6	3
1018	Metal oxide charge transporting layers for stable high-performance perovskite solar cells. CrystEngComm, 2022, 24, 7229-7249.	2.6	2
1019	Degradation pathways in perovskite solar cells and how to meet international standards. Communications Materials, 2022, 3, .	6.9	64
1020	Pivotal Routes for Maximizing Semitransparent Perovskite Solar Cell Performance: Photon Propagation Management and Carrier Kinetics Regulation. Advanced Materials, 2023, 35, .	21.0	11
1021	Recent Advances in the Combined Elevated Temperature, Humidity, and Light Stability of Perovskite Solar Cells. Solar Rrl, 2022, 6, .	5.8	12
1022	Comparative architecture in monolithic perovskite/silicon tandem solar cells. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	5.1	3
1023	Stable pure-iodide wide-band-gap perovskites for efficient Si tandem cells via kinetically controlled phase evolution. Joule, 2022, 6, 2390-2405.	24.0	35
1024	Slot-Die Coated Triple-Halide Perovskites for Efficient and Scalable Perovskite/Silicon Tandem Solar Cells. ACS Energy Letters, 2022, 7, 3600-3611.	17.4	29
1025	Improving the stability of inverted perovskite solar cells towards commercialization. Communications Materials, 2022, 3, .	6.9	29
1026	Improvement Strategies for Stability and Efficiency of Perovskite Solar Cells. Nanomaterials, 2022, 12, 3295.	4.1	11
1027	Recent Advances in the Research of Photoâ€Assisted Lithiumâ€Based Rechargeable Batteries. Chemistry - A European Journal, 2022, 28, .	3.3	9
1028	Hole-Transporting Vanadium-Containing Oxide (V <sub>2</sub> O <sub>5–<i>x</i></sub> ) Interlayers Enhance Stability of α-FAPbl <sub>3</sub> -Based Perovskite Solar Cells (â^1⁄423%). ACS Applied Materials & Interfaces, 2022, 14, 42007-42017.	8.0	9
1029	Solutionâ€Processed Ternary Tin (II) Alloy as Holeâ€Transport Layer of Sn–Pb Perovskite Solar Cells for Enhanced Efficiency and Stability. Advanced Materials, 2022, 34, .	21.0	32
1030	Intrinsic Halide Immiscibility in 2D Mixed-Halide Ruddlesden–Popper Perovskites. ACS Energy Letters, 2022, 7, 3423-3431.	17.4	13

	CITATION	Report	
# 1031	ARTICLE Grain Boundary Passivation Using D131 Organic Dye Molecule for Efficient and Thermally Stable Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2022, 10, 13825-13834.	IF 6.7	CITATIONS
1032	All-perovskite two-terminal tandem solar cell with 32.3% efficiency by numerical simulation. Materials Today Sustainability, 2022, 20, 100241.	4.1	10
1033	Metal halide perovskite nanocrystals with enhanced photoluminescence and stability toward anti-counterfeiting high-performance flexible fibers. Nano Research, 2023, 16, 3542-3551.	10.4	10
1034	Inorganic frameworks of low-dimensional perovskites dictate the performance and stability of mixed-dimensional perovskite solar cells. Materials Horizons, 2023, 10, 536-546.	12.2	5
1035	Nano-optical designs for high-efficiency monolithic perovskite–silicon tandem solar cells. Nature Nanotechnology, 2022, 17, 1214-1221.	31.5	115
1036	Monolithic perovskite/black-silicon tandems based on tunnel oxide passivated contacts. Joule, 2022, 6, 2644-2661.	24.0	31
1037	Solution-processed CZTS thin films and its simulation study for solar cell applications with ZnTe as the buffer layer. Environmental Science and Pollution Research, 2023, 30, 98671-98681.	5.3	1
1038	Low-temperature PECVD silicon-nitride passivation for perovskite solar cell. Materials Chemistry and Physics, 2023, 294, 126880.	4.0	0
1039	Stabilizing Wide Bandgap Tripleâ€Halide Perovskite Alloy through Organic Gelators. Solar Rrl, 2022, 6, .	5.8	2
1040	Compositional Engineering in α-CsPbI <sub>3</sub> toward the Efficiency and Stability Enhancement of All Inorganic Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 12099-12108.	5.1	10
1041	Conductive Passivator for Efficient Monolithic Perovskite/Silicon Tandem Solar Cell on Commercially Textured Silicon. Advanced Energy Materials, 2022, 12, .	19.5	23
1042	Holistic Approach toward a Damage-Less Sputtered Indium Tin Oxide Barrier Layer for High-Stability Inverted Perovskite Solar Cells and Modules. ACS Applied Materials & Interfaces, 2022, 14, 51438-51448.	8.0	6
1043	Monolithic perovskite/silicon tandem solar cells with optimized front zinc doped indium oxides and industrial textured silicon heterojunction solar cells. Journal of Alloys and Compounds, 2023, 932, 167640.	5.5	7
1044	Two birds with one stone: Simultaneous realization of constructed 3D/2D heterojunction and p-doping of hole transport layer for highly efficient and stable perovskite solar cells. Chemical Engineering Journal, 2023, 453, 139721.	12.7	12
1045	Semitransparent Perovskite Solar Cells for Photovoltaic Application. Solar Rrl, 2023, 7, .	5.8	2
1046	Mitigation of Openâ€Circuit Voltage Losses in Perovskite Solar Cells Processed over Micrometerâ€Sizedâ€Textured Si Substrates. Advanced Functional Materials, 2023, 33, .	14.9	5
1047	Recent progress in perovskite solar cells: from device to commercialization. Science China Chemistry, 2022, 65, 2369-2416.	8.2	53
1048	Correlating the perovskite/polymer multi-mode reactions with deep-level traps in perovskite solar cells. Joule, 2022, 6, 2849-2868.	24.0	29

		ATION REPO	JRT	
#	Article	I	F	CITATIONS
1049	Optical design and optimization of BP/c-Si tandem solar cells. Optics Communications, 2022, , 12912	3. 2	2.1	0
1050	Vapor-Deposited Amino Coupling of Hybrid Perovskite Single Crystals and Silicon Wafers toward Highly Efficient Multiwavelength Photodetection. ACS Applied Materials & Interfaces, 2022, 14, 52476-52485.	8	8.0	5
1051	Solar Cells. Springer Handbooks, 2023, , 699-745.	(	0.6	0
1052	Tailoring the PEDOT:PSS hole transport layer by electrodeposition method to improve perovskite solar cells. Electrochimica Acta, 2023, 439, 141573.		5.2	6
1053	Absence of presumed ferroelectricity in methylammonium lead chloride single crystals representing organic-inorganic hybrid perovskites. Materials Chemistry and Physics, 2023, 295, 127169.	2	4.0	0
1054	On current technology for light absorber materials used in highly efficient industrial solar cells. Renewable and Sustainable Energy Reviews, 2023, 173, 113027.		16.4	9
1055	Bifacial all-perovskite tandem solar cells. Science Advances, 2022, 8, .	I	10.3	26
1056	Improving intrinsic stability for perovskite/silicon tandem solar cells. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	ł	5.1	7
1057	Perovskite/Perovskite Tandem Solar Cells in the Substrate Configuration with Potential for Bifacial Operation. , 2022, 4, 2638-2644.			8
1058	Thermal evaporation and hybrid deposition of perovskite solar cells and mini-modules. Joule, 2022, 6, 2692-2734.	1	24.0	22
1059	How to stabilize standard perovskite solar cells to withstand operating conditions under an ambient environment for more than 1000 hours using simple and universal encapsulation. Journal of Energy Chemistry, 2023, 78, 246-252.	I	12.9	10
1060	Perylene Diimide Derivative Engineering for Covering Interfacial Defects in Indoor Perovskite Optoelectronics. Solar Rrl, 2023, 7, .		5.8	2
1061	Atomic layer deposition of conductive and semiconductive oxides. Applied Physics Reviews, 2022, 9, .	t	11.3	14
1062	Solar Solutions for the Future. , 0, , .			0
1063	Slowing the hot arrier cooling by an organic small molecule in perovskite solar cells. EcoMat, 2023, 5, .	I	11.9	4
1064	XANES Studies of Zinc Tin Oxide Films Deposited by Atomic Layer Deposition: Revealing Process-Structure Relationships for Amorphous Oxide Semiconductors. Journal of Physical Chemistry C, 2023, 127, 338-349.		3.1	0
1065	Numerical Study on the Effect of Dual Electron Transport Layer in Improving the Performance of Perovskite–Perovskite Tandem Solar Cells. Advanced Theory and Simulations, 2023, 6, .	2	2.8	6
1066	Ultrathin Light-Emitting Diodes with External Efficiency over 26% Based on Resurfaced Perovskite Nanocrystals. ACS Energy Letters, 2023, 8, 927-934.		17.4	36

# 1067	ARTICLE Stability challenges for the commercialization of perovskite–silicon tandem solar cells. Nature Reviews Materials, 2023, 8, 261-281.	IF 48.7	CITATIONS
1068	Recent Advances in the Functionalization of Perovskite Solar Cells/Photodetectors. Laser and Photonics Reviews, 2023, 17, .	8.7	5
1069	Recycling of halide perovskites. , 2023, , 385-446.		0
1070	Facile synthesis strategy for cesium tin halide perovskite crystals toward light emitting devices and anti-counterfeiting flexible fiber. Nanoscale, 2023, 15, 4893-4898.	5.6	5
1071	Dragon Mimic Shape Facilitate Ultrahighâ€Performance Flexible Allâ€Perovskite Tandem Solar Cells. Solar Rrl, 2023, 7, .	5.8	1
1072	Smart nanomaterials and three-dimensional printing for flexible solar cell applications. , 2023, , 389-411.		1
1073	Design and analysis of Sb2S3/Si thin film tandem solar cell. Solar Energy Materials and Solar Cells, 2023, 253, 112210.	6.2	16
1074	Alkylammonium bis(trifluoromethylsulfonyl)imide as a dopant in the hole-transporting layer for efficient and stable perovskite solar cells. Energy and Environmental Science, 2023, 16, 2226-2238.	30.8	12
1075	Interface optimization and growth control for high efficiency wide bandgap perovskite solar cells. Surfaces and Interfaces, 2023, 37, 102680.	3.0	6
1076	Brief Outlook on Top Cell Absorber of Siliconâ€Based Tandem Solar Cells. Solar Rrl, 2023, 7, .	5.8	2
1077	Modelling and numerical simulations of eco-friendly double absorber solar cell "Spiro-OmeTAD/CIGS/MASnI3/CdS/ZnO―and its PV-module. Organic Electronics, 2023, 117, 106781.	2.6	0
1078	Minimizing electro-optical losses of ITO layers for monolithic perovskite silicon tandem solar cells. Solar Energy Materials and Solar Cells, 2023, 254, 112246.	6.2	2
1079	Advances in Encapsulations for Perovskite Solar Cells: From Materials to Applications. Solar Rrl, 2023, 7, .	5.8	11
1080	Efficient monolithic perovskite–Si tandem solar cells enabled by an ultra-thin indium tin oxide interlayer. Energy and Environmental Science, 2023, 16, 1223-1233.	30.8	16
1081	Monolithic Perovskite/Si Tandem Solar Cells—Silicon Bottom Cell Types and Characterization Methods. Advanced Materials Technologies, 2023, 8, .	5.8	0
1082	Interference effects induced by electrodes and their influences on the distribution of light field in perovskite absorber and current matching of perovskite/silicon tandem solar cell. Solar Energy, 2023, 252, 252-259.	6.1	3
1083	Reducing nonradiative recombination in perovskite solar cells with a porous insulator contact. Science, 2023, 379, 683-690.	12.6	128
1084	Perovskite/Silicon Tandem Solar Cells: Choice of Bottom Devices and Recombination Layers. ACS Energy Letters, 2023, 8, 1535-1550.	17.4	10

#	Article	IF	Citations
1085	Temperatureâ€Dependent Reversal of Phase Segregation in Mixedâ€Halide Perovskites. Advanced Materials, 2023, 35, .	21.0	9
1086	Design and numerical characterization of high-performance all-perovskite multi-junction solar cells. Optik, 2023, 277, 170714.	2.9	1
1087	A sharp interface. Nature Energy, 2023, 8, 224-225.	39.5	1
1088	Passivation Engineering Using Ultrahydrophobic Donor–π–Acceptor Organic Dye with Machine Learning Insights for Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2023, 7, .	5.8	4
1089	Stress and Strain in Perovskite/Silicon Tandem Solar Cells. Nano-Micro Letters, 2023, 15, .	27.0	5
1090	Composition engineering of perovskite absorber assisted efficient textured monolithic perovskite/silicon heterojunction tandem solar cells. RSC Advances, 2023, 13, 7886-7896.	3.6	4
1091	High performance perovskite luminescent devices on Si substrates by controlling quasi-two-dimensional phases. Semiconductor Science and Technology, 2023, 38, 055004.	2.0	0
1092	Designed multi-layer buffer for high-performance semitransparent wide-bandgap perovskite solar cells. Materials Advances, 2023, 4, 1777-1784.	5.4	1
1093	Innovative Approaches to Semi-Transparent Perovskite Solar Cells. Nanomaterials, 2023, 13, 1084.	4.1	7
1094	The Effect of Redox Reactions on the Stability of Perovskite Solar Cells. ChemPhotoChem, 2023, 7, .	3.0	1
1095	Combined Stress Testing of Perovskite Solar Cells for Stable Operation in Space. ACS Applied Energy Materials, 2023, 6, 10319-10326.	5.1	2
1096	Crystalline silicon solar cells with thin polyâ€SiO <sub>x</sub> carrierâ€selective passivating contacts for perovskite/câ€Si tandem applications. Progress in Photovoltaics: Research and Applications, 2023, 31, 877-887.	8.1	1
1097	Advances in the large-scale production, fabrication, stability, and lifetime considerations of electronic materials for clean energy applications. , 2023, , 27-60.		0
1098	Precursor Engineering of Lead Acetate-Based Precursors for High-Open-Circuit Voltage Wide-Bandgap Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2023, 15, 18800-18807.	8.0	3
1099	Enhancement of NiO <sub><i>x</i></sub> /Poly‣i Contact Performance by Insertion of an Ultrathin Metallic Ni Interlayer. Physica Status Solidi (A) Applications and Materials Science, 2023, 220, .	1.8	1
1100	Moistureâ€Resilient Perovskite Solar Cells for Enhanced Stability. Advanced Materials, 0, , .	21.0	12
1101	All-Perovskite Tandem Solar Cells: From Certified 25% and Beyond. Energies, 2023, 16, 3519.	3.1	3
1102	Design optimization of bifacial perovskite minimodules for improved efficiency and stability. Nature Energy, 2023, 8, 675-684.	39.5	6

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C	IIAII	<b>ON</b>	Repo	КL

#	Article	IF	CITATIONS
1103	Investigation of Polymer/Si Thin Film Tandem Solar Cell Using TCAD Numerical Simulation. Polymers, 2023, 15, 2049.	4.5	4
1104	Chlorideâ€Based Additive Engineering for Efficient and Stable Wideâ€Bandgap Perovskite Solar Cells. Advanced Materials, 2023, 35, .	21.0	19
1105	Interfacial modification in perovskite-based tandem solar cells. Nano Convergence, 2023, 10, .	12.1	6
1106	Solutionâ€Processed Metal Ion Polyelectrolytes as Hole Transport Materials for Efficient Inverted Perovskite Solar Cells. Advanced Materials Interfaces, 2023, 10, .	3.7	3
1107	Defect Passivation Scheme toward High-Performance Halide Perovskite Solar Cells. Polymers, 2023, 15, 2010.	4.5	4
1108	Surface n-type band bending for stable inverted CsPbI <sub>3</sub> perovskite solar cells with over 20% efficiency. Energy and Environmental Science, 2023, 16, 2572-2578.	30.8	20
1109	Efficient and Thermally Stable Wide Bandgap Perovskite Solar Cells by Dual‣ource Vacuum Deposition. Advanced Functional Materials, 2023, 33, .	14.9	6
1110	Stability and Performance Enhancement of Perovskite Solar Cells: A Review. Energies, 2023, 16, 4031.	3.1	8
1111	Advances on the Application of Wide Bandâ€Gap Insulating Materials in Perovskite Solar Cells. Small Methods, 2023, 7, .	8.6	5
1112	Understanding and Mitigating the Degradation of Perovskite Solar Cells Based on a Nickel Oxide Hole Transport Material during Damp Heat Testing. ACS Applied Materials & Interfaces, 2023, 15, 27941-27951.	8.0	3
1113	钙钛矿åå±,å≇é~³ç"µæ±ä,电è•ä¼è³¼"ææ−™çš"ç"究进展. Science China Materials, 2023, 66, 2107-2127.	6.3	1
1114	Light management using photonic structures towards high-index perovskite optoelectronics: fundamentals, designing, and applications. Energy and Environmental Science, 2023, 16, 4135-4163.	30.8	6
1115	A Multifunctional Liquid Crystal as Hole Transport Layer Additive Enhances Efficiency and Stability of Perovskite Solar Cells. Angewandte Chemie - International Edition, 2023, 62, .	13.8	9
1116	A Multifunctional Liquid Crystal as Hole Transport Layer Additive Enhances Efficiency and Stability of Perovskite Solar Cells. Angewandte Chemie, 2023, 135, .	2.0	1
1117	Synergetically Optimized Perovskite Subcells with a <i>V</i> <sub>OC</sub> beyond 2 V in Tandem Architecture. Energy & Fuels, 2023, 37, 12291-12300.	5.1	2
1118	Planar heterojunction formamidinium lead-based perovskite solar cells with MXenes/Au electrode. Optical and Quantum Electronics, 2023, 55, .	3.3	0
1120	What defines the perovskite solar cell efficiency and stability: fullerene-based ETL structure or film morphology?. Sustainable Energy and Fuels, 2023, 7, 3893-3901.	4.9	1
1121	Elucidating Charge Carrier Dynamics in Perovskiteâ€Based Tandem Solar Cells. Small Methods, 2024, 8, .	8.6	7

#	Article	IF	CITATIONS
1122	Frontier research in perovskite solar cells: Following the paths of European research and innovation. CheM, 2023, 9, 2738-2756.	11.7	0
1123	Efficient Monolithic Perovskite/Silicon Tandem Photovoltaics. Energy and Environmental Materials, 0,	12.8	1
1124	Silica aerogel as rear reflector in silicon heterojunction solar cells for improved infrared response. Solar Energy Materials and Solar Cells, 2023, 258, 112430.	6.2	0
1125	Recent Progress in Perovskite Tandem Solar Cells. Nanomaterials, 2023, 13, 1886.	4.1	8
1126	Seedâ€Assisted Cuâ€Doped Chemical Bath Deposition for Preparing Highâ€Quality NiO <sub><i>x</i></sub> Holeâ€Transport Layers in Perovskite Solar Cells. Solar Rrl, 2023, 7, .	5.8	3
1127	Augmenting stability and performance in perovskite solar cells: A critical review on perovskite-polymer synergy. Solar Energy, 2023, 257, 266-306.	6.1	4
1128	Optical Simulation-Aided Design and Engineering of Monolithic Perovskite/Silicon Tandem Solar Cells. ACS Applied Energy Materials, 2023, 6, 5217-5229.	5.1	4
1129	Optoelectronic Devices of Large-Scale Transferred All-Inorganic Lead Halide Perovskite Thin Films. ACS Applied Materials & Interfaces, 2023, 15, 24606-24613.	8.0	3
1130	A Comprehensive Review of Tandem Solar Cells Integrated on Silicon Substrate: III/V vs Perovskite. Silicon, 2023, 15, 6329-6347.	3.3	5
1131	A moderate intensity ligand works best: a theoretical study on passivation effects of pyridine-based molecules for perovskite solar cells. Nanoscale, 2023, 15, 10730-10739.	5.6	1
1132	A passivation by H2O2-TiO2 interlayer for efficient and stable Carbon-based perovskite solar cells. Applied Surface Science, 2023, 637, 157933.	6.1	4
1133	Theoretical insights into monovalent-metal-cation transmutation effects on lead-free halide double perovskites for optoelectronic applications. Physical Review Materials, 2023, 7, .	2.4	1
1134	Tandems have the power. Science, 2023, 381, 30-31.	12.6	5
1135	Sustainable materials acceleration platform reveals stable and efficient wide-bandgap metal halide perovskite alloys. Matter, 2023, 6, 2963-2986.	10.0	3
1136	Circular economy for perovskite solar cells – drivers, progress and challenges. Energy and Environmental Science, 2023, 16, 3711-3733.	30.8	4
1137	Band Gap-Tailored Two-Terminal Lead-Free Germanium- and Tin-Based Single-Halide Perovskite Materials for Efficient Tandem Solar Cells. Energy & Fuels, 2023, 37, 12301-12318.	5.1	4
1138	Industrial perspectives on the upscaling of perovskite materials for photovoltaic applications and its environmental impacts. , 2023, , 117-142.		0
1139	Managing Interfacial Charged Defects with Multiple Active Sited Macrocyclic Valinomycin for Efficient and Stable Inverted Perovskite Solar Cells. Advanced Materials, 2023, 35, .	21.0	6

	Сітл	CITATION REPORT	
#	Article	IF	Citations
1140	Long-term operating stability in perovskite photovoltaics. Nature Reviews Materials, 2023, 8, 569-586.	48.7	31
1141	Rare earth element-doped SnO2 for enhancing the efficiency and stability of Cs2AgBiBr6 lead-free perovskite solar cells. Journal of Luminescence, 2023, 263, 120144.	3.1	2
1142	Thermal interdiffusion, microstructure and contact resistivity of NiOx/Ni/p+ poly-Si layer systems for perovskite/TOPCon tandem solar cells during annealing processes. Solar Energy Materials and Solar Cells, 2023, 261, 112514.	6.2	0
1143	Design considerations for the bottom cell in perovskite/silicon tandems: a terawatt scalability perspective. Energy and Environmental Science, 2023, 16, 4164-4190.	30.8	1
1144	Effect of steric hindrance and number of substituents on the transfer and interface properties of Y-shaped hole-transporting materials for perovskite solar cells. Physical Chemistry Chemical Physics, 2023, 25, 25850-25861.	2.8	1
1145	Thermally cross-linkable fluorene-based hole transporting materials: synthesis, characterization, and application in perovskite solar cells. RSC Advances, 2023, 13, 26933-26939.	3.6	0
1146	Organolead halide perovskites: Synthetic routes, structural features, and their potential in the development of photovoltaic. Nanotechnology Reviews, 2023, 12, .	5.8	1
1147	Enhanced optoelectronic coupling for perovskite/silicon tandem solar cells. Nature, 2023, 623, 732-738.	27.8	29
1148	Recent Advances in UV-Cured Encapsulation for Stable and Durable Perovskite Solar Cell Devices. Polymers, 2023, 15, 3911.	4.5	0
1149	Encapsulation: The path to commercialization of stable perovskite solar cells. Matter, 2023, 6, 3838-3863.	10.0	9
1150	A Comprehensive Review on Third-Generation Photovoltaic Technologies. Journal of Chemical Engineering Research Updates, 0, 10, 1-17.	0.1	0
1151	Unveiling and Balancing the Passivationâ€Transport Tradeâ€Off in Perovskite Solar Cells with Doubleâ€ Patterned Insulator Contacts. Advanced Energy Materials, 2023, 13, .	€ <b>S</b> ide 19.5	3
1152	Device Engineering of Highly-Efficient Eco-Friendly Novel FASnI3 Based Tandem Photovoltaic Cells. Silicon, 0, , .	3.3	0
1153	Shunt mitigation toward efficient large-area perovskite-silicon tandem solar cells. Cell Reports Physical Science, 2023, 4, 101628.	5.6	1
1154	The Intermediate Connection of Subcells in Siâ€based Tandem Solar Cells. Small Methods, 2024, 8, .	8.6	0
1155	Aging and characterization of high-bandgap perovskites for all thin-film tandem solar cell devices. , 2023, , .		0
1156	Precrystallization of the Cs <sub>2</sub> PbI <sub>2</sub> Cl <sub>2</sub> Intermediate Phase for MA and Br-Free Wide Bandgap Perovskite Solar Cells. ACS Energy Letters, 0, , 4726-4732.	- 17.4	0
1157	Double Layer and High–Low Refractive Index Stacks Antireflecting Coatings for Multijunction Perovskite-on-Silicon Solar Cells. IEEE Journal of Photovoltaics, 2024, 14, 93-98.	2.5	1

#	Article	IF	CITATIONS
1158	A numerical approach to study the effect of bandgap and electron affinity in HTL-free perovskite solar cells and design of two-terminal silicon/perovskite tandem solar cell. Materials Today Communications, 2023, 37, 107383.	1.9	0
1159	Degradation Evolution of Perovskite Solar Cells via In Situ Realâ€Time Optical Observation. Advanced Functional Materials, 2024, 34, .	14.9	1
1160	Major strategies for improving the performance of perovskite solar cells. , 2023, 2, 172-199.		5
1161	Methylammonium-free wide-bandgap metal halide perovskites for tandem photovoltaics. Nature Reviews Materials, 2023, 8, 822-838.	48.7	2
1162	Current status and applications of photovoltaic technology in wearable sensors: a review. Frontiers in Nanotechnology, 0, 5, .	4.8	0
1163	Polycrystalline silicon tunnelling recombination layers for high-efficiency perovskite/tunnel oxide passivating contact tandem solar cells. Nature Energy, 2023, 8, 1250-1261.	39.5	4
1164	Mismatch of Quasi–Fermi Level Splitting and <i>V</i> <sub>oc</sub> in Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	19.5	5
1165	Improving the barrier properties of tin oxide in metal halide perovskite solar cells using ozone to enhance nucleation. Joule, 2023, 7, 2873-2893.	24.0	2
1166	Numerical analysis of carbon-based perovskite tandem solar cells: Pathways towards high efficiency and stability. Renewable and Sustainable Energy Reviews, 2024, 189, 114041.	16.4	1
1167	Ca-Doped Copper (I) Oxide Deposited via the Spray Coating Technique for Heterojunction Solar Cell Application. Molecules, 2023, 28, 7324.	3.8	1
1168	Carrier Transport in Lead Halide Perovskites. Journal of Physical Chemistry C, 2023, 127, 22868-22879.	3.1	0
1169	Perovskite/silicon tandem solar cells–compositions for improved stability and power conversion efficiency. Photochemical and Photobiological Sciences, 2024, 23, 1-22.	2.9	2
1170	All-inorganic halide perovskites for air-processed "n–i–p―monolithic perovskite/organic hybrid tandem solar cells exceeding 23% efficiency. Energy and Environmental Science, 2024, 17, 1046-1060.	30.8	1
1171	Perovskite/CIGS tandem solar cells: progressive advances from technical perspectives. Materials Today Energy, 2024, 39, 101473.	4.7	0
1172	Rational Design, Synthesis, and Structure–Property Relationship Studies of a Library of Thermoplastic Polyurethane Films as an Effective and Scalable Encapsulation Material for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2023, 15, 53935-53950.	8.0	0
1173	Additive effect on hot carrier cooling in a hybrid perovskite. Chemical Communications, 0, , .	4.1	0
1174	Constructing tin oxides Interfacial Layer with Gradient Compositions for Efficient Perovskite/Silicon Tandem Solar Cells with Efficiency Exceeding 28%. Small, 0, , .	10.0	1
1175	Conductive passivating contact for high fill factor monolithic perovskite/silicon tandem solar cells. , 2023, 2, 855-865.		1

#	Article	IF	CITATIONS
1176	Preparation of CsPbBr <sub>3</sub> Films with Tens of Micrometer-Scale Grains and Preferential Orientation for Perovskite Solar Cells. ACS Applied Energy Materials, 0, , .	5.1	0
1177	Evaluation of Ethylene-Vinyl Acetate, Methyl Methacrylate, and Polyvinylidene Fluoride as Encapsulating Materials for Perovskite-Based Solar Cells, Using the Low-Temperature Encapsulation Method in a Cleanroom Environment. Energies, 2024, 17, 60.	3.1	0
1178	Practical and Thermal Atomic Layer Deposition of NiO as Holeâ€Transporting Layers for Inverted Perovskite Solar Cells. Solar Rrl, 2024, 8, .	5.8	0
1179	Research Perspective for Perovskite/Silicon Tandem Solar Cells. Energy Technology, 2024, 12, .	3.8	0
1180	Monolithic perovskite/perovskite/silicon triple-junction solar cells with cation double displacement enabled 2.0 eV perovskites. Joule, 2024, 8, 224-240.	24.0	1
1181	Ultrafast Energy Funneling in Two-Dimensional Mixed-Halide Perovskites Caused by Intrinsic Halide Immiscibility. Journal of Physical Chemistry C, 0, , .	3.1	0
1182	Efficient and Stable Perovskite/Silicon Tandem Solar Cells Modulated with Tripleâ€Functional Passivator. Advanced Energy Materials, 2024, 14, .	19.5	1
1183	The Development of Carbon/Silicon Heterojunction Solar Cells through Interface Passivation. Advanced Science, 2024, 11, .	11.2	0
1184	A review on current development of thermophotovoltaic technology in heat recovery. International Journal of Extreme Manufacturing, 2024, 6, 022009.	12.7	1
1185	Design principles of crystalline silicon/CsGeI3 perovskite tandem solar cells using a combination of density functional theory and SCAPS-1D frameworks. Solar Energy Materials and Solar Cells, 2024, 267, 112688.	6.2	1
1186	High stability and spectral tunability of versatile manganese/europium/tellurium-doped double perovskite crystals toward flexible functional fabric and semiconductor devices. Chemical Engineering Journal, 2024, 482, 148829.	12.7	0
1187	Metal oxides for hybrid photoassisted electrochemical energy systems. , 2024, , 607-634.		0
1188	Temperature Matters: Enhancing Performance and Stability of Perovskite Solar Cells through Advanced Annealing Methods. Chemistry, 2024, 6, 207-236.	2.2	0
1189	Towards operationâ€stabilizing perovskite solar cells: Fundamental materials, device designs, and commercial applications. InformaÄnÃ-Materiály, 2024, 6, .	17.3	2
1190	Slot-die coating of formamidinium-cesium mixed halide perovskites in ambient conditions with FAAc additive. MRS Communications, 2024, 14, 215-221.	1.8	0
1191	Enhancing perovskite-silicon tandem solar cells through numerical optical and electric optimizations for light management. Optics Express, 2024, 32, 8614.	3.4	0
1192	Hot-Antisolvent Assisted Morphological Regulation of Perovskites for Semitransparent Photovoltaics Employing Hot-Pressing Approach. International Journal of Energy Research, 2024, 2024, 1-14.	4.5	0
1193	Inhibition of halide oxidation and deprotonation of organic cations with dimethylammonium formate for air-processed p–i–n perovskite solar cells. Nature Energy, 0, , .	39.5	Ο

#	Article	IF	CITATIONS
1194	Phase Transitions and Dynamics in Mixed Three- and Low-Dimensional Lead Halide Perovskites. Chemical Reviews, 2024, 124, 2281-2326.	47.7	0
1195	Perovskite/Silicon Tandem Solar Cells: Insights and Outlooks. ACS Energy Letters, 2024, 9, 1305-1330.	17.4	0
1196	Bayesian Optimization with Experience for Fast Development of Monolithic Tandem Solar Cells: Simulation Case Study. Advanced Theory and Simulations, 2024, 7, .	2.8	0
1197	Review on perovskite solar cells via vacuum and non-vacuum solution based methods. Results in Surfaces and Interfaces, 2024, 14, 100210.	2.4	0
1198	Accelerating the evaluation of operational lifetimes of perovskite solar cells and modules. Journal of Energy Chemistry, 2024, 94, 1-9.	12.9	0
1199	Proposal and design of organic/CIGS tandem solar cell: Unveiling optoelectronic approaches for enhanced photovoltaic performance. Optik, 2024, 302, 171719.	2.9	0
1200	Unconventional perovskite-to-perovskite tandem cell designed by stacking with large-gap phosphonium-based analogs. Materials Today Energy, 2024, 42, 101556.	4.7	0
1201	Key issues and solutions affecting efficiency and stability of perovskite/heterojunction tandem solar cells. Wuli Xuebao/Acta Physica Sinica, 2024, 73, 088801.	0.5	0
1202	Monolithic perovskite/silicon tandem solar cells: A review of the present status and solutions toward commercial application. Nano Energy, 2024, 124, 109476.	16.0	0
1203	Physiochemical machine learning models predict operational lifetimes of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. Journal of Materials Chemistry A, 2024, 12, 9730-9746.	10.3	0
1204	Analysis of two-terminal perovskite/silicon tandem solar cells with differing texture structure, perovskite carrier lifetime, and tunneling junction quality. Journal of Applied Physics, 2024, 135, .	2.5	0