Self-formed grain boundary healing layer for highly effi
cells

Nature Energy

1,

DOI: 10.1038/nenergy.2016.81

Citation Report

#	Article	IF	Citations
1	Evidence for ion migration in hybrid perovskite solar cells with minimal hysteresis. Nature Communications, 2016, 7, 13831.	5.8	616
2	A perspective on the recent progress in solution-processed methods for highly efficient perovskite solar cells. Science and Technology of Advanced Materials, 2016, 17, 650-658.	2.8	41
3	Correlations of Optical Absorption, Charge Trapping, and Surface Roughness of TiO₂Photoanode Layer Loaded with Neat Ag-NPs for Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 21522-21530.	4.0	27
4	Solvent Engineering for Ambient-Air-Processed, Phase-Stable CsPbI₃ in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 3603-3608.	2.1	328
5	The Influence of Water Vapor on the Stability and Processing of Hybrid Perovskite Solar Cells Made from Nonâ€Stoichiometric Precursor Mixtures. ChemSusChem, 2016, 9, 2699-2707.	3.6	77
6	Unreacted PbI₂ as a Double-Edged Sword for Enhancing the Performance of Perovskite Solar Cells. Journal of the American Chemical Society, 2016, 138, 10331-10343.	6.6	696
7	Towards stable and commercially available perovskite solar cells. Nature Energy, 2016, 1, .	19.8	941
8	Facet-Dependent Property of Sequentially Deposited Perovskite Thin Films: Chemical Origin and Self-Annihilation. ACS Applied Materials & Interfaces, 2016, 8, 32366-32375.	4.0	19
9	Enhanced performance and light soaking stability of planar perovskite solar cells using an amine-based fullerene interfacial modifier. Journal of Materials Chemistry A, 2016, 4, 18509-18515.	5.2	62
10	Surface and Interface Aspects of Organometal Halide Perovskite Materials and Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 4764-4794.	2.1	177
11	Enhanced performance of perovskite solar cells by modulating the Lewis acidâ€“base reaction. Nanoscale, 2016, 8, 19804-19810.	2.8	62
12	Concentration gradient-controlled growth of large-grain CH₃NH₃PbI₃films and enhanced photovoltaic performance of solar cells under ambient conditions. CrystEngComm, 2016, 18, 9243-9251.	1.3	11
13	Top and bottom surfaces limit carrier lifetime in lead iodide perovskite films. Nature Energy, 2017, 2, .	19.8	376
14	Lead acetate film as precursor for two-step deposition of CH 3 NH 3 PbI 3. Materials Research Bulletin, 2017, 89, 89-96.	2.7	8
15	Growing large columnar grains of CH3NH3PbI3 using the solid-state reaction method enhanced by less-crystallized nanoporous PbI2 films. Journal of Power Sources, 2017, 344, 46-55.	4.0	10
16	Electronic and Morphological Inhomogeneities in Pristine and Deteriorated Perovskite Photovoltaic Films. Nano Letters, 2017, 17, 1796-1801.	4.5	25
17	Antisolvent-assisted powder engineering for controlled growth of hybrid CH3NH3PbI3 perovskite thin films. APL Materials, 2017, 5, .	2.2	25
18	Efficient and stable solution-processed planar perovskite solar cells via contact passivation. Science, 2017, 355, 722-726.	6.0	2,019

#	Article	IF	Citations
19	Do grain boundaries dominate non-radiative recombination in CH₃NH₃PbI₃ perovskite thin films?. Physical Chemistry Chemical Physics, 2017, 19, 5043-5050.	1.3	161
20	Impact of Excess CH₃NH₃I on Free Carrier Dynamics in High-Performance Nonstoichiometric Perovskites. Journal of Physical Chemistry C, 2017, 121, 3143-3148.	1.5	49
21	Covalently Connecting Crystal Grains with Polyvinylammonium Carbochain Backbone To Suppress Grain Boundaries for Long-Term Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 6064-6071.	4.0	33
22	Facile Face-Down Annealing Triggered Remarkable Texture Development in CH₃NH₃PbI₃ Films for High-Performance Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 6104-6113.	4.0	67
23	A pure and stable intermediate phase is key to growing aligned and vertically monolithic perovskite crystals for efficient PIN planar perovskite solar cells with high processibility and stability. Nano Energy, 2017, 34, 58-68.	8.2	151
24	Tunable Br-doping CH 3 NH 3 PbI 3âˆ’x Br x thin films for efficient planar perovskite solar cells. Superlattices and Microstructures, 2017, 104, 445-450.	1.4	17
25	<i>In-Situ</i> Formed Type I Nanocrystalline Perovskite Film for Highly Efficient Light-Emitting Diode. ACS Nano, 2017, 11, 3311-3319.	7.3	161
26	Potassium Incorporation for Enhanced Performance and Stability of Fully Inorganic Cesium Lead Halide Perovskite Solar Cells. Nano Letters, 2017, 17, 2028-2033.	4.5	463
27	Enhanced perovskite electronic properties via a modified lead(<scp>ii</scp>) chloride Lewis acidâ€“base adduct and their effect in high-efficiency perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 5195-5203.	5.2	128
28	The rapid evolution of highly efficient perovskite solar cells. Energy and Environmental Science, 2017, 10, 710-727.	15.6	942
29	Perovskite Solar Cells on the Way to Their Radiative Efficiency Limit â€“ Insights Into a Success Story of High Openâ€Circuit Voltage and Low Recombination. Advanced Energy Materials, 2017, 7, 1602358.	10.2	430
30	The investigation of an amidine-based additive in the perovskite films and solar cells. Journal of Semiconductors, 2017, 38, 014001.	2.0	6
31	Device stability of perovskite solar cells â€“ A review. Renewable and Sustainable Energy Reviews, 2017, 77, 131-146.	8.2	345
32	Anti-solvent dependent device performance in CH₃NH₃PbI₃ solar cells: the role of intermediate phase content in the as-prepared thin films. Sustainable Energy and Fuels, 2017, 1, 1041-1048.	2.5	35
33	Eliminated hysteresis and stabilized power output over 20% in planar heterojunction perovskite solar cells by compositional and surface modifications to the low-temperature-processed TiO₂ layer. Journal of Materials Chemistry A, 2017, 5, 9402-9411.	5.2	127
34	Lowâ€Temperature Modification of ZnO Nanoparticles Film for Electronâ€Transport Layers in Perovskite Solar Cells. ChemSusChem, 2017, 10, 2425-2430.	3.6	31
35	Halide Perovskites for Tandem Solar Cells. Journal of Physical Chemistry Letters, 2017, 8, 1999-2011.	2.1	47
36	Dual function of a high-contrast hydrophobicâ€“hydrophilic coating for enhanced stability of perovskite solar cells in extremely humid environments. Nano Research, 2017, 10, 3885-3895.	5.8	23

#	Article	IF	Citations
37	Spontaneous Passivation of Hybrid Perovskite by Sodium Ions from Glass Substrates: Mysterious Enhancement of Device Efficiency Revealed. ACS Energy Letters, 2017, 2, 1400-1406.	8.8	143
38	Highly Efficient and Uniform 1â€…cm² Perovskite Solar Cells with an Electrochemically Deposited NiO_{<i>x</i>} Holeâ€Extraction Layer. ChemSusChem, 2017, 10, 2660-2667.	3.6	84
39	Efficient Bulk Heterojunction CH₃NH₃PbI₃â€"TiO₂ Solar Cells with TiO₂ Nanoparticles at Grain Boundaries of Perovskite by Multi-Cycle-Coating Strategy. ACS Applied Materials & Interfaces, 2017, 9, 16202-16214.	4.0	18
40	Self-encapsulated semi-transparent perovskite solar cells with water-soaked stability and metal-free electrode. Organic Electronics, 2017, 48, 308-313.	1.4	18
41	Size-controllable and stable organometallic halide perovskite quantum dots/polymer films. Journal of Materials Chemistry C, 2017, 5, 6667-6671.	2.7	44
42	Citric Acid Modulated Growth of Oriented Lead Perovskite Crystals for Efficient Solar Cells. Journal of the American Chemical Society, 2017, 139, 9598-9604.	6.6	77
43	Efficient Flexible Solar Cell based on Compositionâ€Tailored Hybrid Perovskite. Advanced Materials, 2017, 29, 1605900.	11.1	184
44	Analysis of long-term monitoring data of PV module with SiOx-based anti-reflective patterned protective glass. Solar Energy Materials and Solar Cells, 2017, 170, 33-38.	3.0	17
45	The Interplay between Trap Density and Hysteresis in Planar Heterojunction Perovskite Solar Cells. Nano Letters, 2017, 17, 4270-4276.	4.5	226
46	Hybrid Perovskites: Effective Crystal Growth for Optoelectronic Applications. Advanced Energy Materials, 2017, 7, 1602596.	10.2	62
47	Surface plasmon enhanced luminescence from organic-inorganic hybrid perovskites. Applied Physics Letters, 2017, 110, 233113.	1.5	22
48	<i>In Situ</i> Preparation of Metal Halide Perovskite Nanocrystal Thin Films for Improved Light-Emitting Devices. ACS Nano, 2017, 11, 3957-3964.	7.3	151
49	Acridine-based novel hole transporting material for high efficiency perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 7603-7611.	5.2	57
50	From Nano- to Micrometer Scale: The Role of Antisolvent Treatment on High Performance Perovskite Solar Cells. Chemistry of Materials, 2017, 29, 3490-3498.	3.2	234
51	Spatially segregated free-carrier and exciton populations in individual lead halide perovskite grains. Nature Photonics, 2017, 11, 285-288.	15.6	83
52	Fabrication of high quality perovskite films by modulating the Pbâ€"O bonds in Lewis acidâ€"base adducts. Journal of Materials Chemistry A, 2017, 5, 8416-8422.	5.2	73
53	Enhanced optoelectronic quality of perovskite films with excess CH₃NH₃I for high-efficiency solar cells in ambient air. Nanotechnology, 2017, 28, 205401.	1.3	18
54	Dualâ€Source Precursor Approach for Highly Efficient Inverted Planar Heterojunction Perovskite Solar Cells. Advanced Materials, 2017, 29, 1604758.	11.1	142

#	Article	IF	Citations
55	Accelerated degradation of methylammonium lead iodide perovskites induced by exposure to iodine vapour. Nature Energy, 2017, 2, .	19.8	491
56	Room temperature formation of organicâ€“inorganic lead halide perovskites: design of nanostructured and highly reactive intermediates. Journal of Materials Chemistry A, 2017, 5, 3599-3608.	5.2	48
57	Molecularly Engineered Phthalocyanines as Holeâ€Transporting Materials in Perovskite Solar Cells Reaching Power Conversion Efficiency of 17.5%. Advanced Energy Materials, 2017, 7, 1601733.	10.2	90
58	High-efficiency inverted semi-transparent planar perovskite solar cells in substrate configuration. Nature Energy, 2017, 2, .	19.8	247
59	Dimension engineering on cesium lead iodide for efficient and stable perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 2066-2072.	5.2	198
60	Scaling behavior of moisture-induced grain degradation in polycrystalline hybrid perovskite thin films. Energy and Environmental Science, 2017, 10, 516-522.	15.6	720
61	Efficiency enhancement in inverted planar perovskite solar cells by synergetic effect of sulfated graphene oxide (sGO) and PEDOT:PSS as hole transporting layer. RSC Advances, 2017, 7, 50410-50419.	1.7	21
62	Giant blueshifts of excitonic resonances in two-dimensional lead halide perovskite. Nano Energy, 2017, 41, 320-326.	8.2	36
63	Printing-friendly sequential deposition via intra-additive approach for roll-to-roll process of perovskite solar cells. Nano Energy, 2017, 41, 443-451.	8.2	91
64	Colloidal engineering for monolayer CH₃NH₃PbI₃ films toward high performance perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 24168-24177.	5.2	87
65	Solution-Processed Ultrathin TiO₂ Compact Layer Hybridized with Mesoporous TiO₂ for High-Performance Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 36865-36874.	4.0	51
66	High-Performance CH₃NH₃PbI₃-Inverted Planar Perovskite Solar Cells with Fill Factor Over 83% via Excess Organic/Inorganic Halide. ACS Applied Materials & Interfaces, 2017, 9, 35871-35879.	4.0	40
67	Stabilizing the Ag Electrode and Reducing <i>J</i>â€“<i>V</i> Hysteresis through Suppression of Iodide Migration in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 36338-36349.	4.0	129
68	Impact of halide stoichiometry on structure-tuned formation of CH3NH3PbX3â^'aYa hybrid perovskites. Solar Energy, 2017, 158, 367-379.	2.9	10
69	Thermal Stability-Enhanced and High-Efficiency Planar Perovskite Solar Cells with Interface Passivation. ACS Applied Materials & Interfaces, 2017, 9, 38467-38476.	4.0	76
70	Touching is believing: interrogating halide perovskite solar cells at the nanoscale via scanning probe microscopy. Npj Quantum Materials, 2017, 2, .	1.8	43
71	Additive engineering for high-performance room-temperature-processed perovskite absorbers with micron-size grains and microsecond-range carrier lifetimes. Energy and Environmental Science, 2017, 10, 2365-2371.	15.6	157
72	Planarâ€Structure Perovskite Solar Cells with Efficiency beyond 21%. Advanced Materials, 2017, 29, 1703852.	11.1	1,003

#	Article	IF	Citations
73	An isopropanol-assisted fabrication strategy of pinhole-free perovskite films in air for efficient and stable planar perovskite solar cells. Journal of Power Sources, 2017, 363, 317-326.	4.0	20
74	High-Quality (CH₃NH₃)₃Bi₂I₉ Film-Based Solar Cells: Pushing Efficiency up to 1.64%. Journal of Physical Chemistry Letters, 2017, 8, 4300-4307.	2.1	215
75	Selection of anti-solvent and optimization of dropping volume for the preparation of large area sub-module perovskite solar cells. Solar Energy Materials and Solar Cells, 2017, 172, 368-375.	3.0	59
76	Polymer-modified halide perovskite films for efficient and stable planar heterojunction solar cells. Science Advances, 2017, 3, e1700106.	4.7	588
77	Grapheneâ€Based Electron Transport Layers in Perovskite Solar Cells: A Stepâ€Up for an Efficient Carrier Collection. Advanced Energy Materials, 2017, 7, 1701349.	10.2	85
78	Room temperature nanoparticulate interfacial layers for perovskite solar cells <i>via</i> solvothermal synthesis. Journal of Materials Chemistry A, 2017, 5, 20381-20389.	5.2	33
79	Synthesis and Photoluminescence Properties of 2D Phenethylammonium Lead Bromide Perovskite Nanocrystals. Small Methods, 2017, 1, 1700245.	4.6	27
80	Microstructural Characterisations of Perovskite Solar Cells â€“ From Grains to Interfaces: Techniques, Features, and Challenges. Advanced Energy Materials, 2017, 7, 1700912.	10.2	76
81	A general approach for nanoparticle composite transport materials toward efficient perovskite solar cells. Chemical Communications, 2017, 53, 11028-11031.	2.2	3
82	The electron injection rate in CdSe quantum dot sensitized solar cells: from a bifunctional linker and zinc oxide morphology. Nanoscale, 2017, 9, 16806-16816.	2.8	8
83	Enhanced efficiency and air-stability of NiO_X-based perovskite solar cells via PCBM electron transport layer modification with Triton X-100. Nanoscale, 2017, 9, 16249-16255.	2.8	48
84	Photon management for efficient hybrid perovskite solar cells via synergetic localized grating and enhanced fluorescence effect. Nano Energy, 2017, 40, 540-549.	8.2	22
85	Impact of Interfacial Layers in Perovskite Solar Cells. ChemSusChem, 2017, 10, 3687-3704.	3.6	191
86	TiO₂ Nanocrystal/Perovskite Bilayer for Highâ€Performance Photodetectors. Advanced Electronic Materials, 2017, 3, 1700251.	2.6	39
87	Synergic Interface Optimization with Green Solvent Engineering in Mixed Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700576.	10.2	240
88	Dimensional Engineering of a Graded 3Dâ€"2D Halide Perovskite Interface Enables Ultrahigh <i>V</i>_{oc} Enhanced Stability in the pâ€iâ€n Photovoltaics. Advanced Energy Materials, 2017, 7, 1701038.	10.2	319
89	Origin of Hysteresis in CH₃NH₃PbI₃ Perovskite Thin Films. Advanced Functional Materials, 2017, 27, 1701924.	7.8	86
90	Charge Injection, Carriers Recombination and HOMO Energy Level Relationship in Perovskite Solar Cells. Scientific Reports, 2017, 7, 6101.	1.6	93

#	Article	IF	Citations
91	Superior stability for perovskite solar cells with 20% efficiency using vacuum co-evaporation. Nanoscale, 2017, 9, 12316-12323.	2.8	169
92	Interfacial Modification of Perovskite Solar Cells Using an Ultrathin MAI Layer Leads to Enhanced Energy Level Alignment, Efficiencies, and Reproducibility. Journal of Physical Chemistry Letters, 2017, 8, 3947-3953.	2.1	101
93	Reduction in the Interfacial Trap Density of Mechanochemically Synthesized MAPbI₃. ACS Applied Materials & Interfaces, 2017, 9, 28418-28425.	4.0	73
94	A Bifunctional Lewis Base Additive for Microscopic Homogeneity in Perovskite Solar Cells. CheM, 2017, 3, 290-302.	5.8	335
95	Ultrasound-spray deposition of multi-walled carbon nanotubes on NiO nanoparticles-embedded perovskite layers for high-performance carbon-based perovskite solar cells. Nano Energy, 2017, 42, 322-333.	8.2	82
96	Microstructure variations induced by excess PbX₂or AX within perovskite thin films. Chemical Communications, 2017, 53, 12966-12969.	2.2	9
97	Solution-processed SnO₂thin film for a hysteresis-free planar perovskite solar cell with a power conversion efficiency of 19.2%. Journal of Materials Chemistry A, 2017, 5, 24790-24803.	5.2	143
98	Defect passivation in hybrid perovskite solar cells using quaternary ammonium halide anions andÂcations. Nature Energy, 2017, 2, .	19.8	1,694
99	Capturing the Sun: A Review of the Challenges and Perspectives of Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700264.	10.2	295
100	Interface passivation using ultrathin polymerâ€“fullerene films for high-efficiency perovskite solar cells with negligible hysteresis. Energy and Environmental Science, 2017, 10, 1792-1800.	15.6	381
101	Strategies for Improving Efficiency and Stability of Perovskite Solar Cells. MRS Advances, 2017, 2, 3051-3060.	0.5	3
102	Band Gap Tuning via Lattice Contraction and Octahedral Tilting in Perovskite Materials for Photovoltaics. Journal of the American Chemical Society, 2017, 139, 11117-11124.	6.6	570
103	Strategies to reduce the open-circuit voltage deficit in Cu2ZnSn(S,Se)4 thin film solar cells. Electronic Materials Letters, 2017, 13, 373-392.	1.0	28
104	Progress on Perovskite Materials and Solar Cells with Mixed Cations and Halide Anions. ACS Applied Materials & Interfaces, 2017, 9, 30197-30246.	4.0	453
105	Nonstoichiometric Adduct Approach for High-Efficiency Perovskite Solar Cells. Inorganic Chemistry, 2017, 56, 3-10.	1.9	23
106	Impact of grain boundaries on efficiency and stability of organic-inorganic trihalide perovskites. Nature Communications, 2017, 8, 2230.	5.8	220
107	First-principles calculation for structural and optics properties of self-doped (CH<inf>3</inf>NH<inf>3</inf>)<inf>1âˆ'x</inf>PbI<inf>3</inf> perovskite. , 2017, , .		0
108	Anti-Solvent Crystallization Strategies for Highly Efficient Perovskite Solar Cells. Crystals, 2017, 7, 291.	1.0	144

#	Article	IF	Citations
109	Perovskite Solar Cells Fabricated by Using an Environmental Friendly Aprotic Polar Additive of 1,3-Dimethyl-2-imidazolidinone. Nanoscale Research Letters, 2017, 12, 632.	3.1	19
110	F-doped TiO2 Compact Film for High-Efficient Perovskite Solar Cells. International Journal of Electrochemical Science, 2017, 12, 1064-1074.	0.5	15
111	A first-principles prediction on the â€œhealing effectâ€• of graphene preventing carrier trapping near the surface of metal halide perovskites. Chemical Science, 2018, 9, 3341-3353.	3.7	19
112	Post-treatment of perovskite film with phenylalkylammonium iodide for hysteresis-less perovskite solar cells. Solar Energy Materials and Solar Cells, 2018, 179, 57-65.	3.0	81
113	Effective Carrierâ€Concentration Tuning of SnO₂ Quantum Dot Electronâ€Selective Layers for Highâ€Performance Planar Perovskite Solar Cells. Advanced Materials, 2018, 30, e1706023.	11.1	333
114	Vacuum Deposited Tripleâ€Cation Mixedâ€Halide Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1703506.	10.2	147
115	Organic/inorganic self-doping controlled crystallization and electronic properties of mixed perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 6319-6326.	5.2	28
116	Inorganic Hole Transporting Materials for Stable and High Efficiency Perovskite Solar Cells. Journal of Physical Chemistry C, 2018, 122, 14039-14063.	1.5	171
117	Evolution of organometal halide solar cells. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2018, 35, 74-107.	5.6	32
118	Exploring Inorganic Binary Alkaline Halide to Passivate Defects in Lowâ€Temperatureâ€Processed Planarâ€Structure Hybrid Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1800138.	10.2	186
119	Continuous Grain-Boundary Functionalization for High-Efficiency Perovskite Solar Cells with Exceptional Stability. CheM, 2018, 4, 1404-1415.	5.8	165
120	Clues from defect photochemistry. Nature Materials, 2018, 17, 383-384.	13.3	35
121	Defects in metal triiodide perovskite materials towards high-performance solar cells: origin, impact, characterization, and engineering. Chemical Society Reviews, 2018, 47, 4581-4610.	18.7	455
122	Photoluminescence Quenching in Selfâ€Assembled CsPbBr₃ Quantum Dots on Fewâ€Layer Black Phosphorus Sheets. Angewandte Chemie - International Edition, 2018, 57, 7682-7686.	7.2	54
123	Introducing optically polarizable molecules into perovskite solar cells by simultaneously enhanced spinâ€"orbital coupling, suppressed non-radiative recombination and improved transport balance towards enhancing photovoltaic actions. Journal of Materials Chemistry C, 2018, 6, 6164-6171.	2.7	18
124	Efficient Passivation of Hybrid Perovskite Solar Cells Using Organic Dyes with ï£¿COOH Functional Group. Advanced Energy Materials, 2018, 8, 1800715.	10.2	187
125	Improving the Performance of Perovskite Solar Cells Through Solvent Vapor Annealingâ€based Morphology Control of the Holeâ€Transport Layer. Energy Technology, 2018, 6, 1283-1289.	1.8	9
126	Fully doctor-bladed planar heterojunction perovskite solar cells under ambient condition. Organic Electronics, 2018, 58, 153-158.	1.4	69

#	Article	IF	Citations
127	High-air-flow-velocity assisted intermediate phase engineering for controlled crystallization of mixed perovskite in high efficiency photovoltaics. Journal of Materials Chemistry A, 2018, 6, 8860-8867.	5.2	15
128	Performance Enhancement of Perovskite Solar Cells Induced by Lead Acetate as an Additive. Solar Rrl, 2018, 2, 1800066.	3.1	94
129	Nanoscale photocurrent mapping in perovskite solar cells. Nano Energy, 2018, 48, 543-550.	8.2	19
130	Chelate-Pb Intermediate Engineering for High-Efficiency Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 14744-14750.	4.0	15
131	Passivation in perovskite solar cells: A review. Materials Today Energy, 2018, 7, 267-286.	2.5	170
132	Waterâ€Assisted Size and Shape Control of CsPbBr₃ Perovskite Nanocrystals. Angewandte Chemie - International Edition, 2018, 57, 3337-3342.	7.2	223
133	Efficient and stable planar heterojunction perovskite solar cells fabricated under ambient conditions with high humidity. Organic Electronics, 2018, 55, 140-145.	1.4	39
134	Waterâ€Assisted Size and Shape Control of CsPbBr₃ Perovskite Nanocrystals. Angewandte Chemie, 2018, 130, 3395-3400.	1.6	37
135	Efficient Planar-Heterojunction Perovskite Solar Cells Fabricated by High-Throughput Sheath-Gas-Assisted Electrospray. ACS Applied Materials & Interfaces, 2018, 10, 7281-7288.	4.0	9
136	Interfacial Modification for High-Efficiency Vapor-Phase-Deposited Perovskite Solar Cells Based on a Metal Oxide Buffer Layer. Journal of Physical Chemistry Letters, 2018, 9, 1041-1046.	2.1	101
137	Grain Boundaries Act as Solid Walls for Charge Carrier Diffusion in Large Crystal MAPI Thin Films. ACS Applied Materials & Interfaces, 2018, 10, 7974-7981.	4.0	40
138	Nonspiro, Fluoreneâ€Based, Amorphous Hole Transporting Materials for Efficient and Stable Perovskite Solar Cells. Advanced Science, 2018, 5, 1700811.	5.6	45
139	Transient Sub-bandgap States in Halide Perovskite Thin Films. Nano Letters, 2018, 18, 827-831.	4.5	24
140	Highly Bendable Flexible Perovskite Solar Cells on a Nanoscale Surface Oxide Layer of Titanium Metal Plates. ACS Applied Materials & Interfaces, 2018, 10, 4697-4704.	4.0	45
141	Research progress on organicâ€“inorganic halide perovskite materials and solar cells. Journal Physics D: Applied Physics, 2018, 51, 093001.	1.3	56
142	Diphenylamineâ€Substituted Carbazoleâ€Based Hole Transporting Materials for Perovskite Solar Cells: Influence of Isomeric Derivatives. Advanced Functional Materials, 2018, 28, 1704351.	7.8	95
143	Allâ€Inorganic CsPbI₃ Perovskite Phaseâ€Stabilized by Poly(ethylene oxide) for Redâ€Lightâ€Emitting Diodes. Advanced Functional Materials, 2018, 28, 1706401.	7.8	156
144	Methodologies toward Highly Efficient Perovskite Solar Cells. Small, 2018, 14, e1704177.	5.2	315

#	Article	IF	Citations
145	Enhanced Thermal Stability in Perovskite Solar Cells by Assembling 2D/3D Stacking Structures. Journal of Physical Chemistry Letters, 2018, 9, 654-658.	2.1	447
146	In Situ Realâ€Time Study of the Dynamic Formation and Conversion Processes of Metal Halide Perovskite Films. Advanced Materials, 2018, 30, 1706401.	11.1	52
147	Diffractionâ€Grated Perovskite Induced Highly Efficient Solar Cells through Nanophotonic Light Trapping. Advanced Energy Materials, 2018, 8, 1702960.	10.2	119
148	Environmental Surface Stability of the MAPbBr₃ Single Crystal. Journal of Physical Chemistry C, 2018, 122, 3513-3522.	1.5	66
149	Simultaneous Improvement of Photovoltaic Performance and Stability by In Situ Formation of 2D Perovskite at (FAPbI₃)_{0.88}(CsPbBr₃)_{0.12}/CuSCN Interface. Advanced Energy Materials, 2018, 8, 1702714.	10.2	253
150	Enthusiastic Discussions on Halide Perovskite Materials beyond Photovoltaics at Sungkyun International Solar Forum 2017 (SISF2017). ACS Energy Letters, 2018, 3, 199-203.	8.8	2
151	Oriented Grains with Preferred Lowâ€Angle Grain Boundaries in Halide Perovskite Films by Pressureâ€Induced Crystallization. Advanced Energy Materials, 2018, 8, 1702369.	10.2	74
152	Molecular engineering of conjugated polymers for efficient hole transport and defect passivation in perovskite solar cells. Nano Energy, 2018, 45, 28-36.	8.2	241
153	Efficient perovskite/organic integrated solar cells with extended photoresponse to 930 nm and enhanced near-infrared external quantum efficiency of over 50%. Nanoscale, 2018, 10, 3245-3253.	2.8	33
154	Tuning Charge Carrier Dynamics and Surface Passivation in Organolead Halide Perovskites with Capping Ligands and Metal Oxide Interfaces. Advanced Optical Materials, 2018, 6, 1701203.	3.6	18
155	Selfâ€Organized Superlattice and Phase Coexistence inside Thin Film Organometal Halide Perovskite. Advanced Materials, 2018, 30, 1705230.	11.1	79
156	Graphene oxide as an additive to improve perovskite film crystallization and morphology forÂhigh-efficiency solar cells. RSC Advances, 2018, 8, 987-993.	1.7	39
157	Enhanced crystallinity of CH₃NH₃PbI₃ by the pre-coordination of PbI₂â€“DMSO powders for highly reproducible and efficient planar heterojunction perovskite solar cells. RSC Advances, 2018, 8, 1005-1013.	1.7	33
158	Interface engineering of perovskite solar cells with multifunctional polymer interlayer toward improved performance and stability. Journal of Power Sources, 2018, 378, 483-490.	4.0	51
159	Universal Approach toward Hysteresis-Free Perovskite Solar Cell via Defect Engineering. Journal of the American Chemical Society, 2018, 140, 1358-1364.	6.6	708
160	Tuning Molecular Interactions for Highly Reproducible and Efficient Formamidinium Perovskite Solar Cells via Adduct Approach. Journal of the American Chemical Society, 2018, 140, 6317-6324.	6.6	338
161	From Ultrafast to Ultraslow: Charge-Carrier Dynamics of Perovskite Solar Cells. Joule, 2018, 2, 879-901.	11.7	190
162	A Lewis Baseâ€Assisted Passivation Strategy Towards Highly Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2018, 2, 1800055.	3.1	83

#	Article	IF	Citations
163	Photoluminescence Quenching in Selfâ€Assembled CsPbBr₃ Quantum Dots on Fewâ€Layer Black Phosphorus Sheets. Angewandte Chemie, 2018, 130, 7808-7812.	1.6	22
164	Electron extraction mechanism in low hysteresis perovskite solar cells using single crystal TiO2 nanorods. Solar Energy, 2018, 167, 251-257.	2.9	10
165	Hysteresis-free two-dimensional perovskite solar cells prepared by single-source physical vapour deposition. Solar Energy, 2018, 169, 179-186.	2.9	12
166	The effect of SrI₂ substitution on perovskite film formation and its photovoltaic properties <i>via</i> two different deposition methods. Inorganic Chemistry Frontiers, 2018, 5, 1354-1364.	3.0	15
167	Pbâ€"Snâ€"Cu Ternary Organometallic Halide Perovskite Solar Cells. Advanced Materials, 2018, 30, e1800258.	11.1	106
168	Efficient Planar Perovskite Solar Cells with Improved Fill Factor via Interface Engineering with Graphene. Nano Letters, 2018, 18, 2442-2449.	4.5	195
169	Fullereneâ€Based Materials as Holeâ€Transporting/Electronâ€Blocking Layers: Applications in Perovskite Solar Cells. Chemistry - A European Journal, 2018, 24, 8524-8529.	1.7	25
170	Rapid Decoherence Suppresses Charge Recombination in Multi-Layer 2D Halide Perovskites: Time-Domain Ab Initio Analysis. Nano Letters, 2018, 18, 2459-2466.	4.5	114
171	Engineering Interface Structure to Improve Efficiency and Stability of Organometal Halide Perovskite Solar Cells. Journal of Physical Chemistry B, 2018, 122, 511-520.	1.2	68
172	Scalable solution coating of the absorber for perovskite solar cells. Journal of Energy Chemistry, 2018, 27, 1101-1110.	7.1	44
173	CH3NH3PbI3/GeSe bilayer heterojunction solar cell with high performance. Solar Energy, 2018, 159, 142-148.	2.9	27
174	Pseudohalideâ€Induced Recrystallization Engineering for CH₃NH₃PbI₃ Film and Its Application in Highly Efficient Inverted Planar Heterojunction Perovskite Solar Cells. Advanced Functional Materials, 2018, 28, 1704836.	7.8	112
175	Critical Role of Interface and Crystallinity on the Performance and Photostability of Perovskite Solar Cell on Nickel Oxide. Advanced Materials, 2018, 30, 1703879.	11.1	198
176	Electric-field assisted perovskite crystallization for high-performance solar cells. Journal of Materials Chemistry A, 2018, 6, 1161-1170.	5.2	37
177	Stacking n-type layers: Effective route towards stable, efficient and hysteresis-free planar perovskite solar cells. Nano Energy, 2018, 44, 34-42.	8.2	56
178	Anisotropic optoelectronic performances on (112) and (100) lattice plane of perovskite MAPbI3 single crystal. Materials Chemistry and Physics, 2018, 204, 222-227.	2.0	31
179	Leadâ€Free Hybrid Perovskite Absorbers for Viable Application: Can We Eat the Cake and Have It too?. Advanced Science, 2018, 5, 1700331.	5.6	233
180	The role of grain boundaries in perovskite solar cells. Materials Today Energy, 2018, 7, 149-160.	2.5	209

#	Article	IF	Citations
181	Improved photovoltaic properties of nominal composition CH₃NH₃Pb₀₉₉Zn₀₀₁I₃ carbon-based perovskite solar cells. Optics Express, 2018, 26, A984.	1.7	17
182	Solution Processed Trilayer Structure for High-Performance Perovskite Photodetector. Nanoscale Research Letters, 2018, 13, 399.	3.1	42
183	Suppressing defects through the synergistic effect of a Lewis base and a Lewis acid for highly efficient and stable perovskite solar cells. Energy and Environmental Science, 2018, 11, 3480-3490.	15.6	274
184	Alleviate the Jâ€“V hysteresis of carbon-based perovskite solar cells via introducing additional methylammonium chloride into MAPbI3 precursor. RSC Advances, 2018, 8, 35157-35161.	1.7	19
185	Quantitative fraction analysis of coexisting phases in a polycrystalline CH3NH3PbI3 perovskite. Applied Physics Express, 2018, 11, 101401.	1.1	5
186	Perovskite-Structured Photovoltaic Materials. , 2018, , .		3
187	Tailored Phase Conversion under Conjugated Polymer Enables Thermally Stable Perovskite Solar Cells with Efficiency Exceeding 21%. Journal of the American Chemical Society, 2018, 140, 17255-17262.	6.6	235
188	Communicating Two States in Perovskite Revealed by Time-Resolved Photoluminescence Spectroscopy. Scientific Reports, 2018, 8, 16482.	1.6	18
189	Atomic scale insights into structure instability and decomposition pathway of methylammonium lead iodide perovskite. Nature Communications, 2018, 9, 4807.	5.8	161
190	Thick TiO₂-Based Top Electron Transport Layer on Perovskite for Highly Efficient and Stable Solar Cells. ACS Energy Letters, 2018, 3, 2891-2898.	8.8	71
191	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, .	5.5	175
193	Major Impediment to Highly Efficient, Stable and Low-Cost Perovskite Solar Cells. Metals, 2018, 8, 964.	1.0	26
194	Wet-Chemical Synthesis of Surface-Passivated Halide Perovskite Microwires for Improved Optoelectronic Performance and Stability. ACS Applied Materials & Interfaces, 2018, 10, 43850-43856.	4.0	20
195	Fabrication techniques and morphological analysis of perovskite absorber layer for high-efficiency perovskite solar cell: A review. Renewable and Sustainable Energy Reviews, 2018, 98, 469-488.	8.2	46
196	High Electrical Conductivity 2D MXene Serves as Additive of Perovskite for Efficient Solar Cells. Small, 2018, 14, e1802738.	5.2	193
197	Additive engineering induced perovskite crystal growth for high performance perovskite solar cells. Organic Electronics, 2018, 63, 207-215.	1.4	26
198	Dynamic Disorder Dominates Delocalization, Transport, and Recombination in Halide Perovskites. CheM, 2018, 4, 2826-2843.	5.8	104
199	Allâ€Inorganic Perovskite Quantum Dotâ€Monolayer MoS₂ Mixedâ€Dimensional van der Waals Heterostructure for Ultrasensitive Photodetector. Advanced Science, 2018, 5, 1801219.	5.6	157

#	Article	IF	Citations
200	Metallic tin substitution of organic lead perovskite films for efficient solar cells. Journal of Materials Chemistry A, 2018, 6, 20224-20232.	5.2	24
201	Understanding Detrimental and Beneficial Grain Boundary Effects in Halide Perovskites. Advanced Materials, 2018, 30, e1804792.	11.1	128
202	Dual Functions of Crystallization Control and Defect Passivation Enabled by Sulfonic Zwitterions for Stable and Efficient Perovskite Solar Cells. Advanced Materials, 2018, 30, e1803428.	11.1	296
203	New Tin(II) Fluoride Derivative as a Precursor for Enhancing the Efficiency of Inverted Planar Tin/Lead Perovskite Solar Cells. Journal of Physical Chemistry C, 2018, 122, 27284-27291.	1.5	26
204	In Situ Grain Boundary Modification via Two-Dimensional Nanoplates to Remarkably Improve Stability and Efficiency of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 39802-39808.	4.0	24
205	HPbI₃ as a Bifunctional Additive for Morphology Control and Grain Boundary Passivation toward Efficient Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 38985-38993.	4.0	16
206	Sequentially Fluorinated PTAA Polymers for Enhancing <i>V</i>_{OC} of Highâ€Performance Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1801668.	10.2	151
207	Carrier Dynamics Engineering for High-Performance Electron-Transport-Layer-free Perovskite Photovoltaics. CheM, 2018, 4, 2405-2417.	5.8	57
208	Fractional deviations in precursor stoichiometry dictate the properties, performance and stability of perovskite photovoltaic devices. Energy and Environmental Science, 2018, 11, 3380-3391.	15.6	125
209	Effect of Silicon Surface for Perovskite/Silicon Tandem Solar Cells: Flat or Textured?. ACS Applied Materials & Interfaces, 2018, 10, 35016-35024.	4.0	40
210	Realâ€Time In Situ Observation of Microstructural Change in Organometal Halide Perovskite Induced by Thermal Degradation. Advanced Functional Materials, 2018, 28, 1804039.	7.8	45
211	Progress toward Stable Lead Halide Perovskite Solar Cells. Joule, 2018, 2, 1961-1990.	11.7	181
212	Lightâ€Induced Degradation of Perovskite Solar Cells: The Influence of 4â€Tertâ€Butyl Pyridine and Gold. Advanced Energy Materials, 2018, 8, 1800554.	10.2	62
213	Low-temperature, simple and efficient preparation of perovskite solar cells using Lewis bases urea and thiourea as additives: stimulating large grain growth and providing a PCE up to 18.8%. RSC Advances, 2018, 8, 19610-19615.	1.7	54
214	Thermal-evaporated selenium as a hole-transporting material for planar perovskite solar cells. Solar Energy Materials and Solar Cells, 2018, 185, 130-135.	3.0	22
215	Large-Scale Compositional and Electronic Inhomogeneities in CH₃NH₃PbI₃ Perovskites and Their Effect on Device Performance. ACS Applied Energy Materials, 2018, 1, 2410-2416.	2.5	26
216	Highly photoluminescent, dense solid films from organic-capped CH₃NH₃PbBr₃ perovskite colloids. Journal of Materials Chemistry C, 2018, 6, 6771-6777.	2.7	20
217	Unsymmetrical and Symmetrical Zn(II) Phthalocyanines as Hole-Transporting Materials for Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 2399-2404.	2.5	16

#	Article	IF	Citations
218	Surfactant-controlled ink drying enables high-speed deposition of perovskite films for efficient photovoltaic modules. Nature Energy, 2018, 3, 560-566.	19.8	585
219	Improved Stability of Interfacial Energy-Level Alignment in Inverted Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 18964-18973.	4.0	22
220	Research Direction toward Theoretical Efficiency in Perovskite Solar Cells. ACS Photonics, 2018, 5, 2970-2977.	3.2	129
221	Understanding the effect of chlorobenzene and isopropanol anti-solvent treatments on the recombination and interfacial charge accumulation in efficient planar perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 14307-14314.	5.2	94
222	Semiconducting Metal Oxides for High Performance Perovskite Solar Cells. , 2018, , 241-265.		4
223	Enhanced device performance and stability of perovskite solar cells with low-temperature ZnO/TiO2 bilayered electron transport layers. RSC Advances, 2018, 8, 23019-23026.	1.7	17
224	Efficient Moistureâ€Resistant Perovskite Solar Cell With Nanostructure Featuring 3D Amine Motif. Solar Rrl, 2018, 2, 1800069.	3.1	13
225	High efficient perovskite whispering-gallery solar cells. Nano Energy, 2018, 51, 556-562.	8.2	51
226	Ultrahigh open-circuit voltage for high performance mixed-cation perovskite solar cells using acetate anions. Journal of Materials Chemistry A, 2018, 6, 14387-14391.	5.2	18
227	Ionic Additive Engineering Toward Highâ€Efficiency Perovskite Solar Cells with Reduced Grain Boundaries and Trap Density. Advanced Functional Materials, 2018, 28, 1801985.	7.8	130
228	Antisolvent diethyl ether as additive to enhance the performance of perovskite solar cells. Thin Solid Films, 2018, 663, 9-13.	0.8	18
229	2D perovskite stabilized phase-pure formamidinium perovskite solar cells. Nature Communications, 2018, 9, 3021.	5.8	575
230	Energy Level Alignment at Interfaces in Metal Halide Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800260.	1.9	215
231	Modified solvent bathing method for forming high quality perovskite films. Thin Solid Films, 2018, 661, 60-64.	0.8	6
232	Efficient charge separation at multiple quantum well perovskite/PCBM interface. Applied Physics Letters, 2018, 113, .	1.5	7
233	Additive engineering to improve the efficiency and stability of inverted planar perovskite solar cells. Journal of Materials Chemistry C, 2018, 6, 8234-8241.	2.7	39
234	A fluorene-terminated hole-transporting material for highly efficient and stable perovskite solar cells. Nature Energy, 2018, 3, 682-689.	19.8	1,856
235	Highly Efficient and Stable MAPbI3 Perovskite Solar Cell Induced by Regulated Nucleation and Ostwald Recrystallization. Materials, 2018, 11, 778.	1.3	30

#	Article	IF	Citations
236	Synergistic effects of thiocyanate additive and cesium cations on improving the performance and initial illumination stability of efficient perovskite solar cells. Sustainable Energy and Fuels, 2018, 2, 2435-2441.	2.5	27
237	Lead-less mesoscopic perovskite solar cells with enhanced photovoltaic performance by strontium chloride substitution. Ceramics International, 2018, 44, 18863-18870.	2.3	19
238	Introducing lead acetate into stoichiometric perovskite lewis acid-base precursor for improved solar cell photovoltaic performance. Journal of Alloys and Compounds, 2018, 767, 829-837.	2.8	8
239	Compositionâ€Tuned Wide Bandgap Perovskites: From Grain Engineering to Stability and Performance Improvement. Advanced Functional Materials, 2018, 28, 1803130.	7.8	121
240	Rear-Surface Passivation by Melaminium Iodide Additive for Stable and Hysteresis-less Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 25372-25383.	4.0	72
241	Halide perovskite photovoltaics: History, progress, and perspectives. MRS Bulletin, 2018, 43, 527-533.	1.7	15
242	Halide Perovskite Nanopillar Photodetector. ACS Nano, 2018, 12, 8564-8571.	7.3	70
243	Effect of PbI2 solution on air-preparation of perovskite solar cells for enhanced performance. Applied Surface Science, 2018, 458, 172-182.	3.1	24
244	CH₃NH₃PbI₃ and HC(NH₂)₂PbI₃ Powders Synthesized from Lowâ€Grade PbI₂: Single Precursor for Highâ€Efficiency Perovskite Solar Cells. ChemSusChem, 2018, 11, 1813-1823.	3.6	61
245	Effects of Moisture-Based Grain Boundary Passivation on Cell Performance and Ionic Migration in Organicâ€"Inorganic Halide Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 30322-30329.	4.0	40
246	Influence of anti-solvents on CH3NH3PbI3 films surface morphology for fabricating efficient and stable inverted planar perovskite solar cells. Thin Solid Films, 2018, 663, 105-115.	0.8	11
247	Efficient Perovskite Solar Cells Fabricated Through CsClâ€Enhanced PbI₂ Precursor via Sequential Deposition. Advanced Materials, 2018, 30, e1803095.	11.1	109
248	FA_{0.88}Cs_{0.12}PbI_{3âˆ’}<i>_x</i>(PF₆)<i>_x</i> Interlayer Formed by Ion Exchange Reaction between Perovskite and Hole Transporting Layer for Improving Photovoltaic Performance and Stability. Advanced Materials, 2018, 30, e1801948.	11.1	214
249	Charge carrier transport in polycrystalline CH3NH3PbI3 perovskite thin films in a lateral direction characterized by time-of-flight photoconductivity. Materials Chemistry and Physics, 2018, 220, 182-189.	2.0	11
250	All-inorganic perovskite nanocrystal scintillators. Nature, 2018, 561, 88-93.	13.7	1,274
251	Benchmarking Chemical Stability of Arbitrarily Mixed 3D Hybrid Halide Perovskites for Solar Cell Applications. Small Methods, 2018, 2, 1800242.	4.6	26
252	Defects engineering for high-performance perovskite solar cells. Npj Flexible Electronics, 2018, 2, .	5.1	334
253	Dynamic behavior of CH3NH3PbI3 perovskite twin domains. Applied Physics Letters, 2018, 113, .	1.5	27

#	Article	IF	Citations
254	A broad-spectral-response perovskite photodetector with a high on/off ratio and high detectivity. Materials Chemistry Frontiers, 2018, 2, 1847-1852.	3.2	19
255	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.	3.2	8
256	Perovskites photovoltaic solar cells: An overview of current status. Renewable and Sustainable Energy Reviews, 2018, 91, 1025-1044.	8.2	153
257	Simultaneous Formation of CH3NH3PbI3 and electron transport layers using antisolvent method for efficient perovskite solar cells. Thin Solid Films, 2018, 660, 75-81.	0.8	6
258	Pushing the Envelope: Achieving an Openâ€Circuit Voltage of 1.18 V for Unalloyed MAPbI₃ Perovskite Solar Cells of a Planar Architecture. Advanced Functional Materials, 2018, 28, 1801237.	7.8	26
259	Influence of Bulky Organoâ€Ammonium Halide Additive Choice on the Flexibility and Efficiency of Perovskite Lightâ€Emitting Devices. Advanced Functional Materials, 2018, 28, 1802060.	7.8	76
260	Application of Graphene and Graphene Derivatives/Oxide Nanomaterials for Solar Cells. , 2018, , 395-437.		4
261	Solvent-controlled growth of inorganic perovskite films in dry environment for efficient and stable solar cells. Nature Communications, 2018, 9, 2225.	5.8	526
262	Integration of a functionalized graphene nano-network into a planar perovskite absorber for high-efficiency large-area solar cells. Materials Horizons, 2018, 5, 868-873.	6.4	25
263	Low-Temperature Processable Charge Transporting Materials for the Flexible Perovskite Solar Cells. Electronic Materials Letters, 2018, 14, 657-668.	1.0	17
264	Colloidal Nanocrystals as a Platform for Rapid Screening of Charge Trap Passivating Molecules for Metal Halide Perovskite Thin Films. Chemistry of Materials, 2018, 30, 4515-4526.	3.2	19
265	Study To Observe the Effect of PbI₂ Passivation on Carbon Electrode for Perovskite Solar Cells by Quartz Crystal Microbalance System. ACS Sustainable Chemistry and Engineering, 2018, 6, 10221-10228.	3.2	14
266	Probing the Spatial Heterogeneity of Carrier Relaxation Dynamics in CH₃NH₃PbI₃ Perovskite Thin Films with Femtosecond Timeâ€Resolved Nonlinear Optical Microscopy. Advanced Optical Materials, 2019, 7, 1901185.	3.6	12
267	Importance of Functional Groups in Cross-Linking Methoxysilane Additives for High-Efficiency and Stable Perovskite Solar Cells. ACS Energy Letters, 2019, 4, 2192-2200.	8.8	157
268	High-performance CH3NH3PbI3 inverted planar perovskite solar cells via ammonium halide additives. Journal of Industrial and Engineering Chemistry, 2019, 80, 265-272.	2.9	19
269	Crystalline Liquid-like Behavior: Surface-Induced Secondary Grain Growth of Photovoltaic Perovskite Thin Film. Journal of the American Chemical Society, 2019, 141, 13948-13953.	6.6	163
270	Multistep spinâ€"spray deposition of large-grain-size CH3NH3PbI3 with bilayer structure for conductive-carbon-based perovskite solar cells. Current Applied Physics, 2019, 19, 1266-1270.	1.1	7
271	Quantifying the Composition of Methylammonium Lead Iodide Perovskite Thin Films with Infrared Spectroscopy. Journal of Physical Chemistry C, 2019, 123, 22083-22088.	1.5	5

#	Article	IF	Citations
272	Grain Boundary Healing of Organicâ€"Inorganic Halide Perovskites for Moisture Stability. Nano Letters, 2019, 19, 6498-6505.	4.5	24
273	Microstructural investigation of a compact TiO2 layer for improvement of perovskite solar cells. Applied Physics Letters, 2019, 115, 053902.	1.5	1
274	Bulk Heterojunction Perovskite Solar Cells Incorporated with Zn₂SnO₄ Nanoparticles as the Electron Acceptors. ACS Applied Materials & Interfaces, 2019, 11, 34020-34029.	4.0	38
275	All-inorganic quantum dot assisted enhanced charge extraction across the interfaces of bulk organo-halide perovskites for efficient and stable pin-hole free perovskite solar cells. Chemical Science, 2019, 10, 9530-9541.	3.7	43
276	Improving the Stability of Organicâ€"Inorganic Hybrid Perovskite Lightâ€Emitting Diodes Using Doped Electron Transport Materials. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900426.	0.8	11
277	CH₃NH₃PbI₃thin films prepared by hot-casting technique in the air: growth mechanism, trap states and relating solar cells. Japanese Journal of Applied Physics, 2019, 58, SIID07.	0.8	5
278	The Future Is Blue (LEDs): Why Chemistry Is the Key to Perovskite Displays. Chemistry of Materials, 2019, 31, 6003-6032.	3.2	91
279	Recent progress in fundamental understanding of halide perovskite semiconductors. Progress in Materials Science, 2019, 106, 100580.	16.0	95
280	Carrier-gas assisted vapor deposition for highly tunable morphology of halide perovskite thin films. Sustainable Energy and Fuels, 2019, 3, 2447-2455.	2.5	12
281	Potassium ions as a kinetic controller in ionic double layers for hysteresis-free perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 18807-18815.	5.2	54
282	On the Relation between the Openâ€Circuit Voltage and Quasiâ€Fermi Level Splitting in Efficient Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1901631.	10.2	275
283	Phenyl-C61-Butyric Acid Methyl Ester Hybrid Solution for Efficient CH3NH3PbI3 Perovskite Solar Cells. Sustainability, 2019, 11, 3867.	1.6	6
284	A dopant-free twisted organic small-molecule hole transport material for inverted planar perovskite solar cells with enhanced efficiency and operational stability. Nano Energy, 2019, 64, 103946.	8.2	49
285	Air-Stable Methylammonium Lead Iodide Perovskite Thin Films Fabricated via Aerosol-Assisted Chemical Vapor Deposition from a Pseudohalide Pb(SCN)₂ Precursor. ACS Applied Energy Materials, 2019, 2, 6012-6022.	2.5	13
286	Theoretical Analysis of Twoâ€Terminal and Fourâ€Terminal Perovskite/Copper Indium Gallium Selenide Tandem Solar Cells. Solar Rrl, 2019, 3, 1900303.	3.1	38
287	Îœethylammonium Chloride: A Key Additive for Highly Efficient, Stable, and Upâ€Scalable Perovskite Solar Cells. Energy and Environmental Materials, 2019, 2, 79-92.	7.3	79
288	Synergistic effects of multiple functional ionic liquid-treated PEDOT:PSS and less-ion-defects S-acetylthiocholine chloride-passivated perovskite surface enabling stable and hysteresis-free inverted perovskite solar cells with conversion efficiency over 20%. Nano Energy, 2019, 63, 103866.	8.2	60
289	Waterâ€Resistant and Flexible Perovskite Solar Cells via a Glued Interfacial Layer. Advanced Functional Materials, 2019, 29, 1902629.	7.8	89

#	Article	IF	Citations
290	Methylammonium Chloride Induces Intermediate Phase Stabilization for Efficient Perovskite Solar Cells. Joule, 2019, 3, 2179-2192.	11.7	1,228
291	Oxidative Passivation of Metal Halide Perovskites. Joule, 2019, 3, 2716-2731.	11.7	81
292	Efficient and Stable Mesoscopic Perovskite Solar Cells Using PDTITT as a New Hole Transporting Layer. Advanced Functional Materials, 2019, 29, 1905887.	7.8	29
293	Understanding the Chemical and Structural Properties of Multiple-Cation Mixed Halide Perovskite. Journal of Physical Chemistry C, 2019, 123, 26718-26726.	1.5	14
294	Role of Moisture in the Preparation of Efficient Planar Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2019, 7, 17691-17696.	3.2	20
295	Novel antisolvent-washing strategy for highly efficient carbon-based planar CsPbBr3 perovskite solar cells. Journal of Power Sources, 2019, 439, 227092.	4.0	33
296	Coreâ€“Shell ZnO@SnO₂ Nanoparticles for Efficient Inorganic Perovskite Solar Cells. Journal of the American Chemical Society, 2019, 141, 17610-17616.	6.6	113
297	Optimal Interfacial Engineering with Different Length of Alkylammonium Halide for Efficient and Stable Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1902740.	10.2	209
298	Engineering Halide Perovskite Crystals through Precursor Chemistry. Small, 2019, 15, e1903613.	5.2	82
300	A Potential Hybrid Hole-Transport Material Incorporating a Redox-Active Tetrathiafulvalene Derivative with CuSCN. Inorganic Chemistry, 2019, 58, 15824-15831.	1.9	4
301	Interface Engineering in Tin Perovskite Solar Cells. Advanced Materials Interfaces, 2019, 6, 1901322.	1.9	32
302	Effect of CsCl Additive on the Morphological and Optoelectronic Properties of Formamidinium Lead Iodide Perovskite. Solar Rrl, 2019, 3, 1900294.	3.1	30
303	Holeâ€Boosted Cu(Cr,M)O 2 Nanocrystals for Allâ€Inorganic CsPbBr 3 Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 16293-16297.	1.6	25
304	Holeâ€Boosted Cu(Cr,M)O₂ Nanocrystals for Allâ€Inorganic CsPbBr₃ Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 16147-16151.	7.2	118
305	Lightâ€Ferroic Interaction in Hybrid Organicâ€“Inorganic Perovskites. Advanced Optical Materials, 2019, 7, 1901451.	3.6	24
306	The Role of Grain Boundaries in Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1901489.	10.2	202
307	Electric dipole moment-assisted charge extraction and effective defect passivation in perovskite solar cells by depositing a PCBM:TIPD blend film on a CH₃NH₃PbI₃ layer. Journal of Materials Chemistry C, 2019, 7, 11559-11568.	2.7	13
308	Poly(vinylpyrrolidone)-doped SnO₂as an electron transport layer for perovskite solar cells with improved performance. Journal of Materials Chemistry C, 2019, 7, 12204-12210.	2.7	28

#	Article	IF	Citations
309	Precursor Engineering for a Large-Area Perovskite Solar Cell with >19% Efficiency. ACS Energy Letters, 2019, 4, 2393-2401.	8.8	127
310	Carrier lifetime enhancement in halide perovskite via remote epitaxy. Nature Communications, 2019, 10, 4145.	5.8	93
311	The Cesium doping using the nonstoichiometric precursor for improved CH3NH3PbI3 perovskite films and solar cells in ambient air. Thin Solid Films, 2019, 690, 137563.	0.8	8
312	Enhanced Performance and Stability in DNA-Perovskite Heterostructure-Based Solar Cells. ACS Energy Letters, 2019, 4, 2646-2655.	8.8	45
313	Tuning Methylammonium Iodide Amount in Organolead Halide Perovskite Materials by Post-Treatment for High-Efficiency Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 38683-38688.	4.0	25
314	Perovskite precursor solution chemistry: from fundamentals to photovoltaic applications. Chemical Society Reviews, 2019, 48, 2011-2038.	18.7	526
315	Highly efficient prismatic perovskite solar cells. Energy and Environmental Science, 2019, 12, 929-937.	15.6	54
316	Moisture-tolerant supermolecule for the stability enhancement of organicâ€“inorganic perovskite solar cells in ambient air. Nanoscale, 2019, 11, 1228-1235.	2.8	46
317	Improvement of Csâ€(FAPbI₃)_{0.85}(MAPbBr₃)_{0.15} Quality Via DMSOâ€Moleculeâ€Control to Increase the Efficiency and Boost the Longâ€Term Stability of 1â€‰cm² Sized Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800338.	3.1	21
318	Electronic Traps and Their Correlations to Perovskite Solar Cell Performance via Compositional and Thermal Annealing Controls. ACS Applied Materials & Interfaces, 2019, 11, 6907-6917.	4.0	63
319	Highly Efficient and Stable Perovskite Solar Cells via Modification of Energy Levels at the Perovskite/Carbon Electrode Interface. Advanced Materials, 2019, 31, e1804284.	11.1	161
320	Bright perovskite light-emitting diodes with improved film morphology and reduced trap density via surface passivation using quaternary ammonium salts. Organic Electronics, 2019, 67, 187-193.	1.4	28
321	Fatigue stability of CH3NH3PbI3 based perovskite solar cells in day/night cycling. Nano Energy, 2019, 58, 687-694.	8.2	46
322	Morphological and compositional progress in halide perovskite solar cells. Chemical Communications, 2019, 55, 1192-1200.	2.2	136
323	Bifacial stamping for high efficiency perovskite solar cells. Energy and Environmental Science, 2019, 12, 308-321.	15.6	91
324	Enhancement in lifespan of halide perovskite solar cells. Energy and Environmental Science, 2019, 12, 865-886.	15.6	143
325	Perovskite film-wire transformation: Preparation, characterization and device application. Superlattices and Microstructures, 2019, 130, 569-577.	1.4	2
326	Nitrogenâ€Dopantâ€Induced Organicâ€"Inorganic Hybrid Perovskite Crystal Growth on Carbon Nanotubes. Advanced Functional Materials, 2019, 29, 1902489.	7.8	18

#	Article	IF	Citations
327	Amphiphilic Fullerenes Employed to Improve the Quality of Perovskite Films and the Stability of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 24782-24788.	4.0	55
328	Influence of Defects on Excited-State Dynamics in Lead Halide Perovskites: Time-Domain ab Initio Studies. Journal of Physical Chemistry Letters, 2019, 10, 3788-3804.	2.1	66
329	Limitations of a polymer-based hole transporting layer for application in planar inverted perovskite solar cells. Nanoscale Advances, 2019, 1, 3107-3118.	2.2	35
330	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.	2.5	38
331	A systematic approach to ZnO nanoparticle-assisted electron transport bilayer for high efficiency and stable perovskite solar cells. Journal of Alloys and Compounds, 2019, 801, 277-284.	2.8	29
332	Nonfullerene nâ€Type Organic Semiconductors for Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1900860.	10.2	63
333	Plasmonic enhancement for high-efficiency planar heterojunction perovskite solar cells. Journal of Power Sources, 2019, 432, 112-118.	4.0	33
334	Role of Compositional Tuning on Thermoelectric Parameters of Hybrid Halide Perovskites. Journal of Physical Chemistry C, 2019, 123, 14928-14933.	1.5	37
335	Soldering Grain Boundaries Yields Inverted Perovskite Solar Cells with Enhanced Openâ€Circuit Voltages. Advanced Materials Interfaces, 2019, 6, 1900474.	1.9	17
336	Boosting the Efficiency of SnO₂â€Triple Cation Perovskite System Beyond 20% Using Nonhalogenated Antisolvent. Advanced Functional Materials, 2019, 29, 1903213.	7.8	66
337	Imperfections and their passivation in halide perovskite solar cells. Chemical Society Reviews, 2019, 48, 3842-3867.	18.7	1,257
338	In Situ Observation of Crystallization Dynamics and Grain Orientation in Sequential Deposition of Metal Halide Perovskites. Advanced Functional Materials, 2019, 29, 1902319.	7.8	53
339	Shortâ€Term Stability of Perovskite Solar Cells Affected by In Situ Interface Modification. Solar Rrl, 2019, 3, 1900089.	3.1	10
340	Fabrication of Sulfurâ€Incorporated Bismuthâ€Based Perovskite Solar Cells via a Vaporâ€Assisted Solution Process. Solar Rrl, 2019, 3, 1900218.	3.1	31
341	Accumulation of Deep Traps at Grain Boundaries in Halide Perovskites. ACS Energy Letters, 2019, 4, 1321-1327.	8.8	117
342	Patterned Wettability Surface for Competitionâ€Driving Largeâ€Grained Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1900838.	10.2	44
343	Defect and Contact Passivation for Perovskite Solar Cells. Advanced Materials, 2019, 31, e1900428.	11.1	445
344	The role of Mn as dopant on the optoelectronic properties of MA(Pb_{1âˆ’x}Mn_x)Cl₃ single crystals. Materials Research Express, 2019, 6, 086210.	0.8	3

#	Article	IF	Citations
345	CNC assisted spray deposition of large grain size CH3NH3PbI3 film for perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2019, 30, 11027-11033.	1.1	6
346	Controlling Orientation Diversity of Mixed Ion Perovskites: Reduced Crystal Microstrain and Improved Structural Stability. Journal of Physical Chemistry Letters, 2019, 10, 2898-2903.	2.1	18
347	Enhanced sensitivity of grain sizes to precursor stoichiometry enables high-quality CH3NH3PbI3 films for efficient perovskite solar cells. Materials Letters, 2019, 250, 88-91.	1.3	5
348	Conjugated Polymerâ€"Assisted Grain Boundary Passivation for Efficient Inverted Planar Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1808855.	7.8	133
349	Roomâ€Temperature Meniscus Coating of >20% Perovskite Solar Cells: A Film Formation Mechanism Investigation. Advanced Functional Materials, 2019, 29, 1900092.	7.8	92
350	Flexible and Highly Durable Perovskite Solar Cells with a Sandwiched Device Structure. ACS Applied Materials & Interfaces, 2019, 11, 17475-17481.	4.0	13
351	Extremely Low-Cost and Green Cellulose Passivating Perovskites for Stable and High-Performance Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 13491-13498.	4.0	71
352	Fabrication of Efficient and Stable Perovskite Solar Cells in Highâ€Humidity Environment through Traceâ€Doping of Largeâ€Sized Cations. ChemSusChem, 2019, 12, 2385-2392.	3.6	20
353	Perovskite and Conjugated Polymer Wrapped Semiconducting Carbon Nanotube Hybrid Films for High-Performance Transistors and Phototransistors. ACS Nano, 2019, 13, 3971-3981.	7.3	151
354	Controllable Perovskite Crystallization via Antisolvent Technique Using Chloride Additives for Highly Efficient Planar Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803587.	10.2	221
355	Bifacial Contact Junction Engineering for Highâ€Performance Perovskite Solar Cells with Efficiency Exceeding 21%. Small, 2019, 15, 1900606.	5.2	15
356	High-efficiency perovskite solar cell based on TiO2 nanorod arrays under natural ambient conditions: Solvent effect. Ceramics International, 2019, 45, 12353-12359.	2.3	7
357	Low-dimensional formamidinium lead perovskite architectures <i>via</i> controllable solvent intercalation. Journal of Materials Chemistry C, 2019, 7, 3945-3951.	2.7	23
358	Mechanism of Water Effect on Enhancing the Photovoltaic Performance of Triple-Cation Hybrid Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 12699-12708.	4.0	33
359	Facile synthesis of composite tin oxide nanostructures for high-performance planar perovskite solar cells. Nano Energy, 2019, 60, 275-284.	8.2	57
360	Research progress in lead-less or lead-free three-dimensional perovskite absorber materials for solar cells. International Journal of Minerals, Metallurgy and Materials, 2019, 26, 387-403.	2.4	17
361	Light Emission Enhancement by Tuning the Structural Phase of APbBr₃ (A =) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 107 Td (2135-2142.	2.1	12
362	Improving Performance and Stability of Planar Perovskite Solar Cells through Grain Boundary Passivation with Block Copolymers. Solar Rrl, 2019, 3, 1900078.	3.1	40

#	Article	IF	Citations
363	Recent progress in perovskite-based photodetectors: the design of materials and structures. Advances in Physics: X, 2019, 4, 1592709.	1.5	42
364	Pinhole-free TiO₂/Ag_(O)/ZnO configuration for flexible perovskite solar cells with ultralow optoelectrical loss. RSC Advances, 2019, 9, 9160-9170.	1.7	25
365	Highâ€Performance Solutionâ€Processed Organoâ€Metal Halide Perovskite Unipolar Resistive Memory Devices in a Crossâ€Bar Array Structure. Advanced Materials, 2019, 31, e1804841.	11.1	100
366	Improved Performance of Perovskite Light-Emitting Diodes by Dual Passivation with an Ionic Additive. ACS Applied Energy Materials, 2019, 2, 3336-3342.	2.5	21
367	Ethanol stabilized precursors for highly reproducible printable mesoscopic perovskite solar cells. Journal of Power Sources, 2019, 424, 261-267.	4.0	21
368	Interface and Defect Engineering for Metal Halide Perovskite Optoelectronic Devices. Advanced Materials, 2019, 31, e1803515.	11.1	315
369	On the Currentâ€"Voltage Hysteresis in Perovskite Solar Cells: Dependence on Perovskite Composition and Methods to Remove Hysteresis. Advanced Materials, 2019, 31, e1805214.	11.1	351
370	Perovskite Photovoltaics: The Significant Role of Ligands in Film Formation, Passivation, and Stability. Advanced Materials, 2019, 31, e1805702.	11.1	192
371	Causes and Solutions of Recombination in Perovskite Solar Cells. Advanced Materials, 2019, 31, e1803019.	11.1	422
372	Facile fabrication of highly efficient ETL-free perovskite solar cells with 20% efficiency by defect passivation and interface engineering. Chemical Communications, 2019, 55, 2777-2780.	2.2	61
373	A promising europium-based down conversion material: organicâ€"inorganic perovskite solar cells with high photovoltaic performance and UV-light stability. Journal of Materials Chemistry A, 2019, 7, 6467-6474.	5.2	43
374	A Water-Stable Organic-Inorganic Hybrid Perovskite for Solar Cells by Inorganic Passivation. Crystals, 2019, 9, 83.	1.0	19
375	Engineering of Perovskite Materials Based on Formamidinium and Cesium Hybridization for High-Efficiency Solar Cells. Chemistry of Materials, 2019, 31, 1620-1627.	3.2	99
376	Halide Perovskite Photovoltaics: Background, Status, and Future Prospects. Chemical Reviews, 2019, 119, 3036-3103.	23.0	2,009
377	Minimalist Design of Efficient, Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 12460-12466.	4.0	9
378	Kelvin probe force microscopy for perovskite solar cells. Science China Materials, 2019, 62, 776-789.	3.5	93
379	A Review of Perovskites Solar Cell Stability. Advanced Functional Materials, 2019, 29, 1808843.	7.8	835
380	Boosting Photovoltaic Performance for Lead Halide Perovskites Solar Cells with BF₄^{â^'} Anion Substitutions. Advanced Functional Materials, 2019, 29, 1808833.	7.8	104

#	Article	IF	Citations
381	Doping and Photon Induced Defect Healing of Hybrid Perovskite Thin Films: An Approach Towards Efficient Light Emitting Diodes. ChemNanoMat, 2019, 5, 666-673.	1.5	5
382	Improved efficiency and photo-stability of methylamine-free perovskite solar cells via cadmium doping. Journal of Semiconductors, 2019, 40, 122201.	2.0	7
383	Light Intensity-dependent Variation in Defect Contributions to Charge Transport and Recombination in a Planar MAPbI3 Perovskite Solar Cell. Scientific Reports, 2019, 9, 19846.	1.6	45
384	Spatially resolved investigation of the defect states in methylammonium lead iodide perovskite bicrystals. Journal of Materials Chemistry C, 2019, 7, 13156-13160.	2.7	2
385	Control of Crystal Growth toward Scalable Fabrication of Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1807047.	7.8	111
386	Fabrication of Perovskite Films with Long Carrier Lifetime for Efficient Perovskite Solar Cells from Low-Toxicity 1-Ethyl-2-Pyrrolidone. ACS Applied Energy Materials, 2019, 2, 320-327.	2.5	4
387	Fully Airâ€Processed Carbonâ€Based Efficient Hole Conductor Free Planar Heterojunction Perovskite Solar Cells With High Reproducibility and Stability. Solar Rrl, 2019, 3, 1800297.	3.1	20
388	Enhancing the efficiency and stability of perovskite solar cells by incorporating CdS and Cd(SCN₂H₄)₂Cl₂ into the CH₃NH₃PbI₃ active layer. Journal of Materials Chemistry A, 2019, 7, 1124-1137.	5.2	36
389	Cs/MAPbI3 composite formation and its influence on optical properties. Journal of Alloys and Compounds, 2019, 783, 935-942.	2.8	15
390	Toward Long-Term Stability: Single-Crystal Alloys of Cesium-Containing Mixed Cation and Mixed Halide Perovskite. Journal of the American Chemical Society, 2019, 141, 1665-1671.	6.6	141
391	Grainâ€Boundaryâ€Induced Drastic Sensing Performance Enhancement of Polycrystallineâ€Microwire Printed Gas Sensors. Advanced Materials, 2019, 31, e1804583.	11.1	110
392	Mixed Leadâ€"Tin Halide Perovskites for Efficient and Wavelengthâ€Tunable Nearâ€Infrared Lightâ€Emitting Diodes. Advanced Materials, 2019, 31, e1806105.	11.1	66
393	The external and internal influences on the tuning of the properties of perovskites: An overview. Ceramics International, 2019, 45, 4152-4166.	2.3	42
394	Synergistic Crystal and Interface Engineering for Efficient and Stable Perovskite Photovoltaics. Advanced Energy Materials, 2019, 9, 1802646.	10.2	189
395	Phenanthrenone-based hole transport material for efficient dopant-free perovskite solar cells. Organic Electronics, 2019, 65, 135-140.	1.4	18
396	Robust PbI₆ Framework of Organometal Halide CH₃NH₃PbI₃ Perovskite Observed by High Resolution Transmission Electron Microscopy. Chemistry Letters, 2019, 48, 26-27.	0.7	1
397	Doubleâ€Sideâ€Passivated Perovskite Solar Cells with Ultraâ€Low Potential Loss. Solar Rrl, 2019, 3, 1800296.	3.1	89
398	Dopamine-crosslinked TiO2/perovskite layer for efficient and photostable perovskite solar cells under full spectral continuous illumination. Nano Energy, 2019, 56, 733-740.	8.2	201

#	Article	IF	Citations
399	Highly Controllable Lasing Actions in Lead Halide Perovskiteâ€“Si₃N₄ Hybrid Microâ€Resonators. Laser and Photonics Reviews, 2019, 13, 1800189.	4.4	19
400	Influence of Cl Incorporation in Perovskite Precursor on the Crystal Growth and Storage Stability of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 6022-6030.	4.0	48
401	A Three-Terminal Monolithic Perovskite/Si Tandem Solar Cell Characterization Platform. Joule, 2019, 3, 807-818.	11.7	78
402	Optimizing reaction kinetics of sequential deposition technique for ambient air and solution processed hybrid perovskite thin films. Journal of Materials Science: Materials in Electronics, 2019, 30, 4250-4258.	1.1	5
403	Progress and challenges in perovskite photovoltaics from single- to multi-junction cells. Materials Today Energy, 2019, 12, 70-94.	2.5	67
404	Photoexcited Dynamics in Metal Halide Perovskites: From Relaxation Mechanisms to Applications. Journal of Physical Chemistry C, 2019, 123, 3255-3269.	1.5	9
405	Unraveling the Impact of Halide Mixing on Perovskite Stability. Journal of the American Chemical Society, 2019, 141, 3515-3523.	6.6	116
406	Synthetic Approaches for Halide Perovskite Thin Films. Chemical Reviews, 2019, 119, 3193-3295.	23.0	454
407	From scalable solution fabrication of perovskite films towards commercialization of solar cells. Energy and Environmental Science, 2019, 12, 518-549.	15.6	269
408	Passivation of the grain boundaries of CH₃NH₃PbI₃ using carbon quantum dots for highly efficient perovskite solar cells with excellent environmental stability. Nanoscale, 2019, 11, 115-124.	2.8	164
409	An ionic compensation strategy for high-performance mesoporous perovskite solar cells: healing defects with tri-iodide ions in a solvent vapor annealing process. Journal of Materials Chemistry A, 2019, 7, 353-362.	5.2	28
410	DFT prediction of band gap in organic-inorganic metal halide perovskites: An exchange-correlation functional benchmark study. Chemical Physics, 2019, 516, 225-231.	0.9	62
411	Dissolution and recrystallization of perovskite induced by N-methyl-2-pyrrolidone in a closed steam annealing method. Journal of Energy Chemistry, 2019, 30, 78-83.	7.1	16
412	Control of TiO2 electron transport layer properties to enhance perovskite photovoltaics performance and stability. Organic Electronics, 2020, 77, 105406.	1.4	24
413	A Review on Additives for Halide Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902492.	10.2	240
414	Recent Progresses on Defect Passivation toward Efficient Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902650.	10.2	516
415	Progress of Surface Science Studies on ABX₃â€Based Metal Halide Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902726.	10.2	87
416	Verringerung schÃ¤dlicher Defekte fÃ¼r leistungsstarke Metallhalogenidâ€Perowskitâ€Solarzellen. Angewandte Chemie, 2020, 132, 6740-6764.	1.6	16

#	Article	IF	Citations
417	Reducing Detrimental Defects for Highâ€Performance Metal Halide Perovskite Solar Cells. Angewandte Chemie - International Edition, 2020, 59, 6676-6698.	7.2	334
418	Material and Interface Engineering for Highâ€Performance Perovskite Solar Cells: A Personal Journey and Perspective. Chemical Record, 2020, 20, 209-229.	2.9	9
419	Additive Engineering for Efficient and Stable Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902579.	10.2	477
420	Aâ€Site Management for Highly Crystalline Perovskites. Advanced Materials, 2020, 32, e1904702.	11.1	62
421	Lowâ€Temperatureâ€Processed WO_{<i>x</i>} as Electron Transfer Layer for Planar Perovskite Solar Cells Exceeding 20% Efficiency. Solar Rrl, 2020, 4, 1900499.	3.1	36
422	Nucleation and crystal growth control for scalable solution-processed organicâ€“inorganic hybrid perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 1578-1603.	5.2	112
423	Improved Performance of Carbon Electrode Perovskite Solar Cells Using Urea Treatment in Twoâ€Step Processing. ChemNanoMat, 2020, 6, 806-815.	1.5	9
424	Observing Defect Passivation of the Grain Boundary with 2â€Aminoterephthalic Acid for Efficient and Stable Perovskite Solar Cells. Angewandte Chemie, 2020, 132, 4190-4196.	1.6	29
425	Observing Defect Passivation of the Grain Boundary with 2â€Aminoterephthalic Acid for Efficient and Stable Perovskite Solar Cells. Angewandte Chemie - International Edition, 2020, 59, 4161-4167.	7.2	122
426	Single Crystal Perovskite Solar Cells: Development and Perspectives. Advanced Functional Materials, 2020, 30, 1905021.	7.8	171
427	Incorporating a Polar Molecule to Passivate Defects for Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900489.	3.1	16
428	Engineering grain boundaries at theÂ2D limit for theÂhydrogen evolution reaction. Nature Communications, 2020, 11, 57.	5.8	153
429	Structural Origins of Light-Induced Phase Segregation in Organic-Inorganic Halide Perovskite Photovoltaic Materials. Matter, 2020, 2, 207-219.	5.0	128
430	Lead Oxalate-Induced Nucleation Retardation for High-Performance Indoor and Outdoor Perovskite Photovoltaics. ACS Applied Materials & Interfaces, 2020, 12, 836-843.	4.0	15
431	Modulation of Growth Kinetics of Vacuum-Deposited CsPbBr₃ Films for Efficient Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2020, 12, 1944-1952.	4.0	33
432	Experimental methods in chemical engineering: Transmission electron microscopyâ€”TEM. Canadian Journal of Chemical Engineering, 2020, 98, 628-641.	0.9	7
433	Crucial role of charge transporting layers on ion migration in perovskite solar cells. Journal of Energy Chemistry, 2020, 47, 132-137.	7.1	14
434	A review of aspects of additive engineering in perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 27-54.	5.2	232

#	Article	IF	Citations
435	Achieving Reproducible and High-Efficiency (>21%) Perovskite Solar Cells with a Presynthesized FAPbI₃ Powder. ACS Energy Letters, 2020, 5, 360-366.	8.8	139
436	Incorporation of Nickel Ions to Enhance Integrity and Stability of Perovskite Crystal Lattice for High-Performance Planar Heterojunction Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 904-913.	4.0	13
437	Simultaneous Contact and Grainâ€Boundary Passivation in Planar Perovskite Solar Cells Using SnO₂â€KCl Composite Electron Transport Layer. Advanced Energy Materials, 2020, 10, 1903083.	10.2	323
438	Improving Photovoltaic Performance Using Perovskite/Surfaceâ€Modified Graphitic Carbon Nitride Heterojunction. Solar Rrl, 2020, 4, 1900413.	3.1	38
439	Research Direction toward Scalable, Stable, and High Efficiency Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903106.	10.2	193
440	Imaging Metal Halide Perovskites Material and Properties at the Nanoscale. Advanced Energy Materials, 2020, 10, 1903161.	10.2	21
441	An Interlocking Fibrillar Polymer Layer for Mechanical Stability of Perovskite Solar Cells. Advanced Materials Interfaces, 2020, 7, 2001425.	1.9	9
442	Paradoxical Approach with a Hydrophilic Passivation Layer for Moisture-Stable, 23% Efficient Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 3268-3275.	8.8	110
443	Insight into the Origins of Figures of Merit and Design Strategies for Organic/Inorganic Leadâ€Halide Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000452.	3.1	14
444	Cesium iodide post-treatment of organicâ€“inorganic perovskite crystals to improve photovoltaic performance and thermal stability. Nanoscale, 2020, 12, 21605-21609.	2.8	12
445	Arylammonium-Assisted Reduction of the Open-Circuit Voltage Deficit in Wide-Bandgap Perovskite Solar Cells: The Role of Suppressed Ion Migration. ACS Energy Letters, 2020, 5, 2560-2568.	8.8	131
446	Methodologies for structural investigations of organic lead halide perovskites. Materials Today, 2020, 38, 67-83.	8.3	7
447	A Direct Mapping Approach to Understand Carrier Relaxation Dynamics in Varied Regions of a Polycrystalline Perovskite Film. Angewandte Chemie, 2020, 132, 19163-19167.	1.6	0
448	A Direct Mapping Approach to Understand Carrier Relaxation Dynamics in Varied Regions of a Polycrystalline Perovskite Film. Angewandte Chemie - International Edition, 2020, 59, 19001-19005.	7.2	4
449	Voltage bias stress effects in metal halide perovskites are strongly dependent on morphology and ion migration pathways. Journal of Materials Chemistry A, 2020, 8, 25109-25119.	5.2	11
450	Controlled Growth of Large Grains in CH₃NH₃PbI₃ Perovskite Films Mediated by an Intermediate Liquid Phase without an Antisolvent for Efficient Solar Cells. ACS Applied Energy Materials, 2020, 3, 12484-12493.	2.5	13
451	Highly efficient ligand-modified manganese ion doped CsPbCl3 perovskite quantum dots for photon energy conversion in silicon solar cells. Nanoscale, 2020, 12, 18621-18628.	2.8	14
452	Potential of building integrated and attached/applied photovoltaic (BIPV/BAPV) for adaptive less energy-hungry buildingâ€™s skin: A comprehensive review. Journal of Cleaner Production, 2020, 276, 123343.	4.6	172

#	Article	IF	Citations
453	Nanoscale Studies at the Early Stage of Water-Induced Degradation of CH₃NH₃PbI₃ Perovskite Films Used for Photovoltaic Applications. ACS Applied Nano Materials, 2020, 3, 8268-8277.	2.4	5
454	Effect of alkaline earth metal chloride additives BCl₂ (B = Mg, Ca, Sr and Ba) on the photovoltaic performance of FAPbI₃ based perovskite solar cells. Nanoscale Horizons, 2020, 5, 1332-1343.	4.1	40
455	Toward Efficient and Stable Perovskite Solar Cells: Choosing Appropriate Passivator to Specific Defects. Solar Rrl, 2020, 4, 2000308.	3.1	31
456	High-Efficiency Perovskite Solar Cells. Chemical Reviews, 2020, 120, 7867-7918.	23.0	1,480
457	A thin film (<200 nm) perovskite solar cell with 18% efficiency. Journal of Materials Chemistry A, 2020, 8, 17420-17428.	5.2	14
458	Toward All Slotâ€Die Fabricated High Efficiency Large Area Perovskite Solar Cell Using Rapid Near Infrared Heating in Ambient Air. Advanced Energy Materials, 2020, 10, 2001567.	10.2	49
459	Materials and Methods for Interface Engineering toward Stable and Efficient Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2742-2786.	8.8	307
460	Effect of Additives AX (Aâ€‰=â€‰FA, MA, Cs, Rb, NH₄, Xâ€‰=â€‰Cl, Br, I) in FAPbI₃ on Photovoltaic Parameters of Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000331.	3.1	55
461	Defects chemistry in high-efficiency and stable perovskite solar cells. Journal of Applied Physics, 2020, 128, .	1.1	91
462	Morphology Tuning and Its Role in Optimization of Perovskite Films Fabricated from A Novel Nonhalide Lead Source. Advanced Science, 2020, 7, 2002296.	5.6	14
463	Solid-phase hetero epitaxial growth of Î±-phase formamidinium perovskite. Nature Communications, 2020, 11, 5514.	5.8	71
464	Molecular Engineering of Organic Spacer Cations for Efficient and Stable Formamidinium Perovskite Solar Cell. Advanced Energy Materials, 2020, 10, 2001759.	10.2	48
465	Cd-Doped Triple-Cation Perovskite Thin Films with a 20 Î¼s Carrier Lifetime. Journal of Physical Chemistry C, 2020, 124, 22011-22018.	1.5	10
466	Manipulation of PEDOT:PSS with Polar and Nonpolar Solvent Post-treatment for Efficient Inverted Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 9656-9666.	2.5	16
467	Antisolvents in Perovskite Solar Cells: Importance, Issues, and Alternatives. Advanced Materials Interfaces, 2020, 7, 2000950.	1.9	94
468	Defect passivation strategies in perovskites for an enhanced photovoltaic performance. Energy and Environmental Science, 2020, 13, 4017-4056.	15.6	235
469	Airâ€Processed Perovskite Films with Innerâ€toâ€Outside Passivation for Highâ€Efficiency Solar Cells. Solar Rrl, 2020, 4, 2000410.	3.1	5
470	Introducing Ion Migration and Light-Induced Secondary Ion Redistribution for Phase-Stable and High-Efficiency Inorganic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 40364-40371.	4.0	21

#	Article	IF	Citations
471	Identifying Photoinduced Dipolar Polarization and Orbitâ€“Orbit Interaction between Excitons in Organicâ€“Inorganic Hybrid Perovskites. Advanced Functional Materials, 2020, 30, 2003476.	7.8	9
472	High Efficiency (41.85) of Br Perovskites base solar cells with ZnO and TiO2 comparable study as ETM. IOP Conference Series: Materials Science and Engineering, 2020, 928, 072091.	0.3	1
473	Modulation of strain, electric field and organic cation rotation on the band gap and electronic structures of organic-inorganic hybrid perovskite CH3NH3PbI3. Chinese Journal of Physics, 2020, 67, 559-568.	2.0	3
474	A Critical Review on Crystal Growth Techniques for Scalable Deposition of Photovoltaic Perovskite Thin Films. Materials, 2020, 13, 4851.	1.3	38
475	Benign ferroelastic twin boundaries in halide perovskites for charge carrier transport and recombination. Nature Communications, 2020, 11, 2215.	5.8	47
476	Cs-Incorporated AgBiI₄ Rudorffite for Efficient and Stable Solar Cells. ACS Sustainable Chemistry and Engineering, 2020, 8, 9980-9987.	3.2	20
477	Recent Progress in Engineering Metal Halide Perovskites for Efficient Visibleâ€Lightâ€Driven Photocatalysis. ChemSusChem, 2020, 13, 4005-4025.	3.6	79
478	Effects of cation size and concentration of cationic chlorides on the properties of formamidinium lead iodide based perovskite solar cells. Sustainable Energy and Fuels, 2020, 4, 3753-3763.	2.5	17
479	A favored crystal orientation for efficient printable mesoscopic perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 11148-11154.	5.2	42
480	In Situ Formation of Compact PbI₂ Shell Boosts the Efficiency and Thermostability of Perovskite Solar Cells. Small, 2020, 16, e2001866.	5.2	5
481	Identifying, understanding and controlling defects and traps in halide perovskites for optoelectronic devices: a review. Journal Physics D: Applied Physics, 2020, 53, 373001.	1.3	20
482	High-Quality Concentrated Precursor Solution in <i>N</i>,<i>N</i>-Dimethylformamide for Thick Methylammonium Triiodoplumbate Layer in Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 25972-25979.	4.0	5
483	Stretchable Perovskite Solar Cells with Recoverable Performance. Angewandte Chemie - International Edition, 2020, 59, 16602-16608.	7.2	122
484	Stretchable Perovskite Solar Cells with Recoverable Performance. Angewandte Chemie, 2020, 132, 16745.	1.6	8
485	Crucial Effect of Tiâ€“H Species Generated in the Visible-Light-Driven Transformations: Slowed-Down Proton-Coupled Electron Transfer. Journal of Physical Chemistry Letters, 2020, 11, 3941-3946.	2.1	6
486	Unravelling the Mechanism of Ionic Fullerene Passivation for Efficient and Stable Methylammonium-Free Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2015-2022.	8.8	38
487	Lewis acid/base approach for efficacious defect passivation in perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 12201-12225.	5.2	149
488	Blading Phaseâ€Pure Formamidiniumâ€Alloyed Perovskites for Highâ€Efficiency Solar Cells with Low Photovoltage Deficit and Improved Stability. Advanced Materials, 2020, 32, e2000995.	11.1	125

#	Article	IF	Citations
489	Enhanced Device Performance of Perovskite Photovoltaics by Magnetic Fieldâ€Aligned Perovskitesâ€Magnetic Nanoparticles Composite Thin Film. Advanced Functional Materials, 2020, 30, 2002808.	7.8	10
490	Influence of Hole Transport Layers/Perovskite Interfaces on the Hysteresis Behavior of Inverted Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 6391-6399.	2.5	9
491	Achieving over 21% efficiency in inverted perovskite solar cells by fluorinating a dopant-free hole transporting material. Journal of Materials Chemistry A, 2020, 8, 6517-6523.	5.2	63
492	Structural rigidity accelerates quantum decoherence and extends carrier lifetime in porphyrin nanoballs: a time domain atomistic simulation. Nanoscale Advances, 2020, 2, 1502-1511.	2.2	8
493	In Situ Growth of MAPbBr₃ Nanocrystals on Fewâ€Layer MXene Nanosheets with Efficient Energy Transfer. Small, 2020, 16, e1905896.	5.2	38
494	Facile Deposition of Mesoporous PbI2 through DMF:DMSO Solvent Engineering for Sequentially Deposited Metal Halide Perovskites. ACS Applied Energy Materials, 2020, 3, 3358-3368.	2.5	11
495	Understanding of perovskite crystal growth and film formation in scalable deposition processes. Chemical Society Reviews, 2020, 49, 1653-1687.	18.7	364
496	Anomalous 3D nanoscale photoconduction in hybrid perovskite semiconductors revealed by tomographic atomic force microscopy. Nature Communications, 2020, 11, 3308.	5.8	53
497	Exploring Electron Transporting Layer in Combination with a Polyelectrolyte for nâ€iâ€p Perovskite Solar Cells. Advanced Materials Interfaces, 2020, 7, 2000412.	1.9	13
498	Tunable electronic properties of TiO2 nanocrystals by in situ dopamine functionalization for planar perovskite solar cells. Electrochimica Acta, 2020, 354, 136720.	2.6	12
499	Highâ€Performance and Reliable Leadâ€Free Layeredâ€Perovskite Transistors. Advanced Materials, 2020, 32, e2002717.	11.1	86
500	Flexible Solar Yarns with 15.7% Power Conversion Efficiency, Based on Electrospun Perovskite Composite Nanofibers. Solar Rrl, 2020, 4, 2000269.	3.1	41
501	Interfacial defects passivation using fullerene-polymer mixing layer for planar-structure perovskite solar cells with negligible hysteresis. Solar Energy, 2020, 206, 816-825.	2.9	86
502	Perovskite nanogels: synthesis, properties, and applications. Journal of Materials Chemistry C, 2020, 8, 12355-12379.	2.7	7
503	Impact of hole transport layer on performance of perovskite solar cell. AIP Conference Proceedings, 2020, , .	0.3	0
504	Inorganic material passivation of defects toward efficient perovskite solar cells. Science Bulletin, 2020, 65, 2022-2032.	4.3	36
505	Challenges, myths, and opportunities of electron microscopy on halide perovskites. Journal of Applied Physics, 2020, 128, .	1.1	35
506	Detrimental Effect of Unreacted PbI₂ on the Longâ€Term Stability of Perovskite Solar Cells. Advanced Materials, 2020, 32, e1905035.	11.1	256

#	Article	IF	Citations
507	A hysteresis-free perovskite transistor with exceptional stability through molecular cross-linking and amine-based surface passivation. Nanoscale, 2020, 12, 7641-7650.	2.8	40
508	Twin domains modulate light-matter interactions in metal halide perovskites. APL Materials, 2020, 8, .	2.2	17
509	Enhanced performance and stability of ambient-processed CH3NH3PbI3-x(SCN)x planar perovskite solar cells by introducing ammonium salts. Applied Surface Science, 2020, 513, 145790.	3.1	14
510	High-performance inverted perovskite solar cells using 4-diaminomethylbenzoic as a passivant. Nanoscale, 2020, 12, 6767-6775.	2.8	26
511	Flexible and Selfâ€Powered Lateral Photodetector Based on Inorganic Perovskite CsPbI₃â€“CsPbBr₃ Heterojunction Nanowire Array. Advanced Functional Materials, 2020, 30, 1909771.	7.8	73
512	From Defects to Degradation: A Mechanistic Understanding of Degradation in Perovskite Solar Cell Devices and Modules. Advanced Energy Materials, 2020, 10, 1904054.	10.2	256
513	Enhanced stability and efficiency of perovskite solar cells via bifunctional group passivation with thiosalicylic acid. Organic Electronics, 2020, 81, 105681.	1.4	18
514	Two-dimensional cyclohexane methylamine based perovskites as stable light absorbers for solar cells. Solar Energy, 2020, 201, 13-20.	2.9	7
515	Relation between Fluorescence Quantum Yield and Openâ€Circuit Voltage in Complete Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900554.	3.1	13
516	Interfacial and structural modifications in perovskite solar cells. Nanoscale, 2020, 12, 5719-5745.	2.8	39
517	Pb dimerization greatly accelerates charge losses in MAPbI3: Time-domain ab initio analysis. Journal of Chemical Physics, 2020, 152, 064707.	1.2	12
518	Defect Passivation via the Incorporation of Tetrapropylammonium Cation Leading to Stability Enhancement in Lead Halide Perovskite. Advanced Functional Materials, 2020, 30, 1909737.	7.8	50
519	Optimizing Lignosulfonic Acid-Grafted Polyaniline as a Hole-Transport Layer for Inverted CH₃NH₃PbI₃Perovskite Solar Cells. ACS Omega, 2020, 5, 1887-1901.	1.6	23
520	Recent progress in flexibleâ€“wearable solar cells for self-powered electronic devices. Energy and Environmental Science, 2020, 13, 685-743.	15.6	340
521	Recent advances in defect passivation of perovskite active layer via additive engineering: a review. Journal Physics D: Applied Physics, 2020, 53, 183002.	1.3	15
522	Efficient Nanorod Array Perovskite Solar Cells: A Suitable Structure for High Strontium Substitution in Nature. ACS Applied Materials & Interfaces, 2020, 12, 10515-10526.	4.0	9
523	Structurally Stable and Highly Enhanced Luminescent Perovskite Based on Quasi-Two-Dimensional Structures upon Addition of Guanidinium Cations. Journal of Physical Chemistry C, 2020, 124, 4414-4420.	1.5	12
524	Emerging Conductive Atomic Force Microscopy for Metal Halide Perovskite Materials and Solar Cells. Advanced Energy Materials, 2020, 10, 1903922.	10.2	63

#	Article	IF	Citations
525	Nanoscale spatial mapping of charge carrier dynamics in perovskite solar cells. Nano Today, 2020, 33, 100874.	6.2	21
526	Efficient defect-passivation and charge-transfer with interfacial organophosphorus ligand modification for enhanced performance of perovskite solar cells. Solar Energy Materials and Solar Cells, 2020, 211, 110527.	3.0	54
527	Aged sol-gel solution-processed texture tin oxide for high-efficient perovskite solar cells. Nanotechnology, 2020, 31, 315205.	1.3	8
528	Recent Progress on Interface Engineering for Highâ€Performance, Stable Perovskites Solar Cells. Advanced Materials Interfaces, 2020, 7, 2000118.	1.9	34
529	Direct atomic scale characterization of the surface structure and planar defects in the organic-inorganic hybrid CH3NH3PbI3 by Cryo-TEM. Nano Energy, 2020, 73, 104820.	8.2	35
530	Improving energy level alignment by adenine for efficient and stable perovskite solar cells. Nano Energy, 2020, 74, 104846.	8.2	54
531	17% efficient perovskite solar mini-module <i>via</i> hexamethylphosphoramide (HMPA)-adduct-based large-area D-bar coating. Journal of Materials Chemistry A, 2020, 8, 9345-9354.	5.2	44
532	High-Performance Perovskite-Based Light-Emitting Diodes from the Conversion of Amorphous Spin-Coated Lead Bromide with Phenethylamine Doping. ACS Omega, 2020, 5, 8697-8706.	1.6	4
533	Dealing with Climate Parameters in the Fabrication of Perovskite Solar Cells under Ambient Conditions. ACS Sustainable Chemistry and Engineering, 2020, 8, 7132-7138.	3.2	11
534	Showerhead-Assisted Chemical Vapor Deposition of Perovskite Films for Solar Cell Application. MRS Advances, 2020, 5, 385-393.	0.5	2
535	Molecularâ€Level Insight into Correlation between Surface Defects and Stability of Methylammonium Lead Halide Perovskite Under Controlled Humidity. Small Methods, 2021, 5, e2000834.	4.6	30
536	Efficient and stable perovskite solar cells via shortwave infrared polymer passivation. Solar Energy Materials and Solar Cells, 2021, 220, 110862.	3.0	18
537	Stable and Efficient Methylammoniumâ€, Cesiumâ€, and Bromideâ€Free Perovskite Solar Cells by Inâ€Situ Interlayer Formation. Advanced Functional Materials, 2021, 31, 2007520.	7.8	34
538	Highâ€Efficiency Perovskite Solar Cells with Imidazoliumâ€Based Ionic Liquid for Surface Passivation and Charge Transport. Angewandte Chemie - International Edition, 2021, 60, 4238-4244.	7.2	221
539	Sequential Formation of Tunableâ€Bandgap Mixedâ€Halide Leadâ€Based Perovskites: In Situ Investigation and Photovoltaic Devices. Solar Rrl, 2021, 5, .	3.1	15
540	Perovskite Passivation Strategies for Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, .	3.1	23
541	Cementitious grain-boundary passivation for flexible perovskite solar cells with superior environmental stability and mechanical robustness. Science Bulletin, 2021, 66, 527-535.	4.3	54
542	Spontaneously supersaturated nucleation strategy for high reproducible and efficient perovskite solar cells. Chemical Engineering Journal, 2021, 405, 126998.	6.6	20

#	Article	IF	Citations
543	A sulfur-rich small molecule as a bifunctional interfacial layer for stable perovskite solar cells with efficiencies exceeding 22%. Nano Energy, 2021, 79, 105462.	8.2	72
544	Impact of halide additives on green antisolvent and high-humidity processed perovskite solar cells. Applied Surface Science, 2021, 536, 147949.	3.1	11
545	Boosting the efficiency of quasi-2D perovskites light-emitting diodes by using encapsulation growth method. Nano Energy, 2021, 80, 105511.	8.2	54
546	A modeling study on utilizing ultra-thin inorganic HTLs in inverted pâ€“n homojunction perovskite solar cells. Solar Energy, 2021, 213, 1-12.	2.9	30
547	Two-dimensional Bi2OS2 doping improves the performance and stability of perovskite solar cells. Chemical Engineering Journal, 2021, 420, 127700.	6.6	16
548	Artemisinin-passivated mixed-cation perovskite films for durable flexible perovskite solar cells with over 21% efficiency. Journal of Materials Chemistry A, 2021, 9, 1574-1582.	5.2	126
549	Synergistically Enhanced Amplified Spontaneous Emission by Cd Doping and Clâ€Assisted Crystallization. Advanced Optical Materials, 2021, 9, 2001825.	3.6	2
550	Effects of ion migration and improvement strategies for the operational stability of perovskite solar cells. Physical Chemistry Chemical Physics, 2021, 23, 94-106.	1.3	68
551	Titanium Nanopillar Arrays Functioning as Electron Transporting Layers for Efficient, Antiâ€Aging Perovskite Solar Cells. Small, 2021, 17, e2004778.	5.2	9
552	Carrier diffusion coefficient is independent of defects in CH3NH3PbBr3 single crystals: Direct evidence. Journal of Energy Chemistry, 2021, 58, 441-445.	7.1	2
553	Highâ€Efficiency Perovskite Solar Cells with Imidazoliumâ€Based Ionic Liquid for Surface Passivation and Charge Transport. Angewandte Chemie, 2021, 133, 4284-4290.	1.6	14
554	TiO2 surface oxygen vacancy passivation towards mitigated interfacial lattice distortion and efficient perovskite solar cell. Applied Surface Science, 2021, 544, 148583.	3.1	26
555	Effect of precursor solution concentrations of PCBM interlayer between low-temperature spin-coating TiO2 electron transport layer and light absorption layer on physical properties of perovskite film and photo-current hysteresis of photo-voltaic devices. Optik, 2021, 228, 165897.	1.4	0
556	Defect mitigation using <scp>d</scp>-penicillamine for efficient methylammonium-free perovskite solar cells with high operational stability. Chemical Science, 2021, 12, 2050-2059.	3.7	88
557	Fabrication and characterization of <scp> leadâ€free Cs ₂ SnI ₆ </scp> perovskite films for photovoltaic applications. International Journal of Energy Research, 2021, 45, 1720-1728.	2.2	17
558	Hybrid Lead Halide Perovskite Films with Large Grain Size Via Spinâ€Coating Free Fabrication. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000650.	0.8	1
559	Stability of the CsPbI₃perovskite: from fundamentals to improvements. Journal of Materials Chemistry A, 2021, 9, 11124-11144.	5.2	78
560	Dynamic structural property of organic-inorganic metal halide perovskite. IScience, 2021, 24, 101959.	1.9	29

#	Article	IF	Citations
561	Scalable perovskite coating <i>via</i> anti-solvent-free Lewis acidâ€“base adduct engineering for efficient perovskite solar modules. Journal of Materials Chemistry A, 2021, 9, 3018-3028.	5.2	58
562	Passivation of triple cation perovskites using guanidinium iodide in inverted solar cells for improved open-circuit voltage and stability. Sustainable Energy and Fuels, 2021, 5, 2486-2493.	2.5	5
563	Low-Cost, High-Performance Organic Small Molecular Hole-Transporting Materials for Perovskite Solar Cells. Chinese Journal of Organic Chemistry, 2021, 41, 1447.	0.6	5
564	Synergetic effects of DMA cation doping and Cl anion additives induced re-growth of MA_{1âˆ’x}DMA_xPbI₃ perovskites. Sustainable Energy and Fuels, 2021, 5, 2860-2864.	2.5	4
565	High-efficiency ternary polymer solar cells with optimized morphology of active layers enabled by few-layered Î²-InSe nanosheets. Nanoscale, 2021, 13, 6871-6883.	2.8	8
566	Lowâ€Dimensionalâ€Networked Perovskites with Aâ€Siteâ€Cation Engineering for Optoelectronic Devices. Small Methods, 2021, 5, e2001147.	4.6	27
567	Beneficial effects of cesium acetate in the sequential deposition method for perovskite solar cells. Nanoscale, 2021, 13, 11478-11487.	2.8	20
568	Engineering fluorinated-cation containing inverted perovskite solar cells with an efficiency of >21% and improved stability towards humidity. Nature Communications, 2021, 12, 52.	5.8	94
569	Mitigation of vacancy with ammonium salt-trapped ZIF-8 capsules for stable perovskite solar cells through simultaneous compensation and loss inhibition. Nanoscale Advances, 2021, 3, 3554-3562.	2.2	13
570	Mixed lead source precursors for producing light absorption layers of perovskite solar cells. RSC Advances, 2021, 11, 1976-1983.	1.7	4
571	Conjugated molecule based 2D perovskites for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 21910-21917.	5.2	8
572	Correlations between Electrochemical Ion Migration and Anomalous Device Behaviors in Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 1003-1014.	8.8	39
573	Chemical passivation of the under coordinated Pb2+ defects in inverted planar perovskite solar cells via Î²-diketone Lewis base additives. Photochemical and Photobiological Sciences, 2021, 20, 357-367.	1.6	6
574	Toward Efficient and Stable Perovskite Photovoltaics with Fluorinated Phosphonate Salt Surface Passivation. ACS Applied Energy Materials, 2021, 4, 2716-2723.	2.5	8
575	Phosphine Oxide Derivative as a Passivating Agent to Enhance the Performance of Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 1259-1268.	2.5	11
576	A review of experimental and computational attempts to remedy stability issues of perovskite solar cells. Heliyon, 2021, 7, e06211.	1.4	15
577	Analysis of misidentifications in TEM characterisation of organicâ€inorganic hybrid perovskite material. Journal of Microscopy, 2021, 282, 195-204.	0.8	11
578	CdS Induced Passivation toward High Efficiency and Stable Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 9771-9780.	4.0	17

#	Article	IF	Citations
579	Photostable and Uniform CH3NH3PbI3 Perovskite Film Prepared via Stoichiometric Modification and Solvent Engineering. Nanomaterials, 2021, 11, 405.	1.9	5
580	Degradation Mechanisms in a Mixed Cations and Anions Perovskite Solar Cell: Mitigation Effect of the Gold Electrode. ACS Applied Energy Materials, 2021, 4, 1365-1376.	2.5	11
581	Factors influencing the nucleation and crystal growth of solution-processed organic lead halide perovskites: a review. Journal Physics D: Applied Physics, 2021, 54, 163001.	1.3	35
582	Mechanism of Additive-Assisted Room-Temperature Processing of Metal Halide Perovskite Thin Films. ACS Applied Materials & Interfaces, 2021, 13, 13212-13225.	4.0	27
583	2D materials for conducting holes from grain boundaries in perovskite solar cells. Light: Science and Applications, 2021, 10, 68.	7.7	59
584	Stabilizing black-phase formamidinium perovskite formation at room temperature and high humidity. Science, 2021, 371, 1359-1364.	6.0	508
585	Interface Optimization via Fullerene Blends Enables Openâ€Circuit Voltages of 1.35ÂV in CH₃NH₃Pb(I_{0.8}Br_{0.2})₃ Solar Cells. Advanced Energy Materials, 2021, 11, 2003386.	10.2	57
586	Efficient and Stable Mesoscopic Perovskite Solar Cells Using a Dopantâ€Free Dâ€"A Copolymer Holeâ€Transporting Layer. Solar Rrl, 2021, 5, 2000801.	3.1	7
587	Synergistic Effect of Lewis Base Polymers and Graphene in Enhancing the Efficiency of Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 3928-3936.	2.5	25
588	Bulk Passivation and Interfacial Passivation for Perovskite Solar Cells: Which One is More Effective?. Advanced Materials Interfaces, 2021, 8, 2002078.	1.9	34
589	Efficient Perovskite Solar Cells Achieved using the 2-Methoxyethanol Additive: Morphology and Composition Control of Intermediate Film. ACS Applied Energy Materials, 2021, 4, 2681-2689.	2.5	10
590	Origin, Influence, and Countermeasures of Defects in Perovskite Solar Cells. Small, 2021, 17, e2005495.	5.2	61
591	Ambient Stable and Efficient Monolithic Tandem Perovskite/PbS Quantum Dots Solar Cells via Surface Passivation and Light Management Strategies. Advanced Functional Materials, 2021, 31, 2010623.	7.8	44
592	Printing strategies for scaling-up perovskite solar cells. National Science Review, 2021, 8, nwab075.	4.6	48
593	Manipulating Perovskite Precursor Solidification toward 21% Pristine MAPbI₃ Solar Cells. Solar Rrl, 2021, 5, 2100114.	3.1	8
594	Minimizing Openâ€Circuit Voltage Loss in Perovskite/Si Tandem Solar Cells via Exploring the Synergic Effect of Cations and Anions. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100119.	1.2	7
595	Perovskite films prepared by solvent volatilization via DMSO-based intermediate phase for photovoltaics. Solar Energy, 2021, 218, 383-391.	2.9	7
596	Direct Observation of Heterogeneous Surface Reactivity and Reconstruction on Terminations of Grain Boundaries of Platinum. , 2021, 3, 622-629.		14

#	Article	IF	Citations
597	Confined Growth of High-quality Single-Crystal MAPbBr3 by Inverse Temperature Crystallization for Photovoltaic Applications. Electronic Materials Letters, 2021, 17, 347-354.	1.0	12
598	Experimental Evidence of Chlorideâ€Induced Trap Passivation in Lead Halide Perovskites through Single Particle Blinking Studies. Advanced Optical Materials, 2021, 9, 2002240.	3.6	8
599	Photoemission Studies on the Environmental Stability of Thermal Evaporated MAPbI3 Thin Films and MAPbBr3 Single Crystals. Energies, 2021, 14, 2005.	1.6	3
600	Cuprous iodide dose dependent passivation of MAPbI3 perovskite solar cells. Organic Electronics, 2021, 91, 106080.	1.4	2
601	Effects of Choline Chloride in Lead Bromide Layer and Methylammonium Bromide Precursor on Perovskite Conversion and Optoelectronic Properties of Perovskite-Based Light-Emitting Diodes. ACS Applied Electronic Materials, 2021, 3, 2035-2043.	2.0	4
602	A simple one-step method with wide processing window for high-quality perovskite mini-module fabrication. Joule, 2021, 5, 958-974.	11.7	55
603	Direct Z-Scheme Heterojunction of Ligand-Free FAPbBr₃/Î±-Fe₂O₃ for Boosting Photocatalysis of CO₂ Reduction Coupled with Water Oxidation. ACS Applied Materials & Interfaces, 2021, 13, 22314-22322.	4.0	59
604	Perovskite solar cells with embedded homojunction via nonuniform metal ion doping. Cell Reports Physical Science, 2021, 2, 100415.	2.8	10
605	Halide Perovskites: A New Era of Solutionâ€Processed Electronics. Advanced Materials, 2021, 33, e2005000.	11.1	138
606	Defect compensation in formamidiniumâ€"caesium perovskites for highly efficient solar mini-modules with improved photostability. Nature Energy, 2021, 6, 633-641.	19.8	215
607	Small grains as recombination hot spots in perovskite solar cells. Matter, 2021, 4, 1683-1701.	5.0	73
608	Ionic screening in perovskite pâ€"n homojunctions. Nature Energy, 2021, 6, 589-591.	19.8	10
609	Numerical Simulation: Design of High-Efficiency Planar p-n Homojunction Perovskite Solar Cells. IEEE Transactions on Electron Devices, 2021, 68, 2360-2364.	1.6	31
610	Charge Carrier Inhomogeneity of MAPbI3 Clarified by the Clustering of the Time-Resolved Microscopic Image Sequence. ACS Applied Energy Materials, 2021, 4, 6430-6435.	2.5	5
611	Phenyl Ethylammonium Iodide introduction into inverted triple cation perovskite solar cells for improved VOC and stability. Organic Electronics, 2021, 93, 106121.	1.4	3
612	Flexible and Filterâ€Free Colorâ€Imaging Sensors with Multicomponent Perovskites Deposited Using Enhanced Vapor Technology. Small, 2021, 17, e2007543.	5.2	15
613	Defect activity in metal halide perovskites with wide and narrow bandgap. Nature Reviews Materials, 2021, 6, 986-1002.	23.3	121
614	Symmetrical Conjugated Molecular Additive for Defect Passivation and Charge Transfer Bridge in Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 5935-5943.	2.5	14

#	Article	IF	Citations
615	Excess Ion-Induced Efficiency Roll-Off in High-Efficiency Perovskite Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2021, 13, 28546-28554.	4.0	27
616	Robust Molecular Dipoleâ€Enabled Defect Passivation and Control of Energyâ€Level Alignment for Highâ€Efficiency Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 17805-17811.	1.6	22
617	Robust Molecular Dipoleâ€Enabled Defect Passivation and Control of Energyâ€Level Alignment for Highâ€Efficiency Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 17664-17670.	7.2	69
618	Stability of Perovskite Thin Films under Working Condition: Biasâ€Dependent Degradation and Grain Boundary Effects. Advanced Functional Materials, 2021, 31, 2103894.	7.8	28
619	Reply to: Perovskite decomposition and missing crystal planes in HRTEM. Nature, 2021, 594, E8-E9.	13.7	2
620	Interfacial Defect Passivation and Stress Release via Multi-Active-Site Ligand Anchoring Enables Efficient and Stable Methylammonium-Free Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 2526-2538.	8.8	170
621	Analysis of short time dynamics of time resolved photoluminescence applied on perovskite absorbers. , 2021, , .		0
622	Viscosity Blending Approach for 22.42% Efficient Perovskite Solar Cells. Bulletin of the Korean Chemical Society, 2021, 42, 1112-1120.	1.0	11
623	Multifunctional passivation strategy based on tetraoctylammonium bromide for efficient inverted perovskite solar cells. Nano Energy, 2021, 84, 105882.	8.2	46
624	Current Development toward Commercialization of Metalâ€Halide Perovskite Photovoltaics. Advanced Optical Materials, 2021, 9, 2100390.	3.6	15
625	Recent Progress on Perovskite Surfaces and Interfaces in Optoelectronic Devices. Advanced Materials, 2021, 33, e2006004.	11.1	86
626	Embedding of Ti₃C₂T<i>_x</i>Nanocrystals in MAPbI₃Microwires for Improved Responsivity and Detectivity of Photodetector. Small, 2021, 17, e2101954.	5.2	14
627	Aerosol Assisted Solvent Treatment: A Universal Method for Performance and Stability Enhancements in Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2101420.	10.2	21
628	Surface Management for Carbonâ€Based CsPbI₂Br Perovskite Solar Cell with 14% Power Conversion Efficiency. Solar Rrl, 2021, 5, 2100404.	3.1	24
629	A Sodium Chloride Modification of SnO₂ Electron Transport Layers to Enhance the Performance of Perovskite Solar Cells. ACS Omega, 2021, 6, 17880-17889.	1.6	29
630	Surface Stabilization of a Formamidinium Perovskite Solar Cell Using Quaternary Ammonium Salt. ACS Applied Materials & Interfaces, 2021, 13, 37052-37062.	4.0	23
631	Fundamental Flaw in the Current Construction of the TiO₂ Electron Transport Layer of Perovskite Solar Cells and Its Elimination. ACS Applied Materials & Interfaces, 2021, 13, 39371-39378.	4.0	11
632	Famished Two-Step Deposition for Self-Assembly Energy Cascade in the Perovskite Layer toward Efficient Photovoltaics. ACS Applied Energy Materials, 2021, 4, 10163-10171.	2.5	1

#	Article	IF	Citations
633	Understanding Differences in the Crystallization Kinetics between Oneâ€Step Slotâ€Die Coating and Spin Coating of MAPbI₃ Using Multimodal In Situ Optical Spectroscopy. Advanced Optical Materials, 2021, 9, 2101161.	3.6	8
634	Enhancing stability of hybrid perovskite solar cells by imidazolium incorporation. Solar Energy Materials and Solar Cells, 2021, 227, 111096.	3.0	8
635	Sandwiched electrode buffer for efficient and stable perovskite solar cells with dual back surface fields. Joule, 2021, 5, 2148-2163.	11.7	63
636	Material, Phase, and Interface Stability of Photovoltaic Perovskite: A Perspective. Journal of Physical Chemistry C, 2021, 125, 19088-19096.	1.5	7
637	Microâ€"Nanostructureâ€Assisted Luminescence in Perovskite Devices. Small Structures, 2021, 2, 2100084.	6.9	7
638	Humidity-resistant perovskite solar cells via the incorporation of halogenated graphene particles. Solar Energy, 2021, 224, 787-797.	2.9	13
639	Progress of Pbâ€Sn Mixed Perovskites for Photovoltaics: AÂReview. Energy and Environmental Materials, 2022, 5, 370-400.	7.3	20
640	High Efficiency (9.60) of Cl Perovskites base solar cells with PCBM (ETM)and P3HT(HTM). Journal of Physics: Conference Series, 2021, 1999, 012049.	0.3	0
641	Additive Engineering for Efficient and Stable MAPbI₃-Perovskite Solar Cells with an Efficiency of over 21%. ACS Applied Materials & Interfaces, 2021, 13, 44451-44459.	4.0	18
642	High-sensitivity high-resolution X-ray imaging with soft-sintered metal halide perovskites. Nature Electronics, 2021, 4, 681-688.	13.1	149
643	Carboxyl functional group-assisted defects passivation strategy for efficient air-processed perovskite solar cells with excellent ambient stability. Solar Energy Materials and Solar Cells, 2021, 230, 111242.	3.0	23
644	The Effect of Cs/FA Ratio on the Longâ€Term Stability of Mixed Cation Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100660.	3.1	10
645	Reduced Recombination Losses in Evaporated Perovskite Solar Cells by Postfabrication Treatment. Solar Rrl, 2021, 5, 2100400.	3.1	5
646	Removal of residual compositions by powder engineering for high efficiency formamidinium-based perovskite solar cells with operation lifetime over 2000Âh. Nano Energy, 2021, 87, 106152.	8.2	41
647	Enhancement in charge extraction and moisture stability of perovskite solar cell via infiltration of charge transport material in grain boundaries. Journal of Power Sources, 2021, 506, 230212.	4.0	6
648	Strategies and methods for fabricating high quality metal halide perovskite thin films for solar cells. Journal of Energy Chemistry, 2021, 60, 300-333.	7.1	31
649	Radiation stability of mixed tinâ€"lead halide perovskites: Implications for space applications. Solar Energy Materials and Solar Cells, 2021, 230, 111232.	3.0	15
650	Controlling the Crystallization Kinetics of Leadâ€Free Tin Halide Perovskites for High Performance Green Photovoltaics. Advanced Energy Materials, 2021, 11, 2102131.	10.2	47

#	Article	IF	Citations
651	Unraveling the influence of CsCl/MACl on the formation of nanotwins, stacking faults and cubic supercell structure in FA-based perovskite solar cells. Nano Energy, 2021, 87, 106226.	8.2	27
652	Toward Commercialization of Efficient and Stable Perovskite Solar Modules. Solar Rrl, 2022, 6, 2100600.	3.1	16
653	(FA 0.83 MA 0.17) 0.95 Cs 0.05 Pb(I 0.83 Br 0.17) 3 Perovskite Films Prepared by Solvent Volatilization for Highâ€Efficiency Solar Cells. Solar Rrl, 2021, 5, 2100640.	3.1	3
654	Tailoring hot carrier cooling and recombination dynamics of mixed-halide-perovskite by incorporating Au@CZTS core-shell nanocrystal. Journal Physics D: Applied Physics, 0, , .	1.3	3
655	Mitigating the Lead Leakage of High-Performance Perovskite Solar Cells via In Situ Polymerized Networks. ACS Energy Letters, 2021, 6, 3443-3449.	8.8	67
656	Achieving stable and high-efficiency (>21%) lead halide perovskite solar cells with Î´-CsPbI2Br seedâ€“assisted growth strategy. Materials Today Energy, 2021, 21, 100837.	2.5	12
657	Effect of Chemical Bonding Nature of Post-Treatment Materials on Photovoltaic Performance of Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 3435-3442.	8.8	34
658	Enhancing Performance and Stability of Tin Halide Perovskite Light Emitting Diodes via Coordination Engineering of Lewis Acidâ€“Base Adducts. Advanced Functional Materials, 2021, 31, 2106974.	7.8	37
659	Advances in surface passivation of perovskites using organic halide salts for efficient and stable solar cells. Surfaces and Interfaces, 2021, 26, 101420.	1.5	10
660	Enhanced performance of CH3NH3PbI3 perovskite solar cells by excess halide modification. Applied Surface Science, 2021, 564, 150464.	3.1	18
661	In Situ Management of Ions Migration to Control Hysteresis Effect for Planar Heterojunction Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, 2108417.	7.8	28
662	Comprehensive passivation strategy for achieving inverted perovskite solar cells with efficiency exceeding 23% by trap passivation and ion constraint. Nano Energy, 2021, 89, 106370.	8.2	63
663	Ionic additive engineering for stable planar perovskite solar cells with efficiency >22%. Chemical Engineering Journal, 2021, 426, 130841.	6.6	33
664	Utilizing 3,4-ethylenedioxythiophene (EDOT)-bridged non-fullerene acceptors for efficient organic solar cells. Journal of Energy Chemistry, 2022, 65, 194-204.	7.1	16
665	Direct Surface Passivation of Perovskite Film by 4-Fluorophenethylammonium Iodide toward Stable and Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 2558-2565.	4.0	71
666	Enhancing the efficiency and stability of two-dimensional Dionâ€“Jacobson perovskite solar cells using a fluorinated diammonium spacer. Journal of Materials Chemistry A, 2021, 9, 11778-11786.	5.2	27
667	Halide Ion Migration in Perovskite Nanocrystals and Nanostructures. Accounts of Chemical Research, 2021, 54, 520-531.	7.6	98
668	Electrolytes, Dyes, and Perovskite Materials in Third Generation Photovoltaic Cells. , 2022, , 621-634.		7

#	Article	IF	Citations
669	Exploring the film growth in perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 6029-6049.	5.2	20
670	Multifunctional organic ammonium salt-modified SnO₂nanoparticles toward efficient and stable planar perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 3940-3951.	5.2	146
671	Improved Efficiency and Stability of Perovskite Solar Cells Induced by Cï£¾O Functionalized Hydrophobic Ammoniumâ€Based Additives. Advanced Materials, 2018, 30, 1703670.	11.1	132
672	Steric Impediment of Ion Migration Contributes to Improved Operational Stability of Perovskite Solar Cells. Advanced Materials, 2020, 32, e1906995.	11.1	142
673	Controlling Crystal Growth via an Autonomously Longitudinal Scaffold for Planar Perovskite Solar Cells. Advanced Materials, 2020, 32, e2000617.	11.1	118
674	Electronâ€Beamâ€Related Studies of Halide Perovskites: Challenges and Opportunities. Advanced Energy Materials, 2020, 10, 1903191.	10.2	53
675	Soft Templateâ€Controlled Growth of Highâ€Quality CsPbI₃ Films for Efficient and Stable Solar Cells. Advanced Energy Materials, 2020, 10, 1903751.	10.2	82
676	Efficient and stable mesoporous perovskite solar cells using p-type poly (9-vinylcarbazole) modified the interface of perovskite/mesoporous TiO2 layers. Organic Electronics, 2020, 82, 105737.	1.4	15
677	Enhancing Chemical Stability and Suppressing Ion Migration in CH₃NH₃PbI₃ Perovskite Solar Cells <i>via</i> Direct Backbone Attachment of Polyesters on Grain Boundaries. Chemistry of Materials, 2020, 32, 5104-5117.	3.2	64
678	Planar pâ€"n homojunction perovskite solar cells with efficiency exceeding 21.3%. Nature Energy, 2019, 4, 150-159.	19.8	383
679	Scalable fabrication and coating methods for perovskite solar cells and solar modules. Nature Reviews Materials, 2020, 5, 333-350.	23.3	568
680	Interface modification effects using a halide-free lead source for perovskite solar cells. Sustainable Energy and Fuels, 2017, 1, 1358-1365.	2.5	3
681	Flexible and highly efficient perovskite solar cells with a large active area incorporating cobalt-doped poly(3-hexylthiophene) for enhanced open-circuit voltage. Journal of Materials Chemistry A, 2017, 5, 12158-12167.	5.2	54
682	A thiourea additive-based quadruple cation lead halide perovskite with an ultra-large grain size for efficient perovskite solar cells. Nanoscale, 2019, 11, 21824-21833.	2.8	53
683	Suppression of surface defects to achieve hysteresis-free inverted perovskite solar cells <i>via</i> quantum dot passivation. Journal of Materials Chemistry A, 2020, 8, 5263-5274.	5.2	67
684	Origin of Hysteresis in Perovskite Solar Cells. , 2020, , 1-1-1-42.		19
685	Hole transport free flexible perovskite solar cells with cost-effective carbon electrodes. Nanotechnology, 2021, 32, 105205.	1.3	7
686	The Path to Perovskite on Silicon PV. , 2018, 1, 1-8.		16

#	Article	IF	Citations
687	Back-Contact Perovskite Solar Cells. , 2019, 1, 1-10.		4
688	Common Phase and Structure Misidentifications in High-Resolution TEM Characterization of Perovskite Materials. Condensed Matter, 2021, 6, 1.	0.8	16
689	Recent Advances and Challenges in Halide Perovskite Crystals in Optoelectronic Devices from Solar Cells to Other Applications. Crystals, 2021, 11, 39.	1.0	17
690	Origin of High Efficiency and Long-Term Stability in Ionic Liquid Perovskite Photovoltaic. Research, 2020, 2020, 2616345.	2.8	59
691	Preparation and performance of high-efficient hole-transport-material-free carbon based perovskite solar cells. Wuli Xuebao/Acta Physica Sinica, 2018, 67, 228801.	0.2	3
692	Realization of an Artificial Visual Nervous System using an Integrated Optoelectronic Device Array. Advanced Materials, 2021, 33, e2105485.	11.1	33
693	A Regularityâ€Based Fullerene Interfacial Layer for Efficient and Stable Perovskite Solar Cells via Bladeâ€Coating. Advanced Functional Materials, 2022, 32, 2105917.	7.8	14
694	Monocrystalline Methylammonium Lead Halide Perovskite Materials for Photovoltaics. Advanced Materials, 2021, 33, e2102588.	11.1	22
695	Polymer-Passivated Inorganic Cesium Lead Halide Perovskites for High-Voltage and High-Efficiency Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
696	Counter Electrode Materials for Organic-Inorganic Perovskite Solar Cells. , 2019, , 165-225.		2
697	Dead-bolt type design for efficient and stable perovskite solar cells. , 2020, , .		0
698	A Holistic Study on the Effect of Annealing Temperature and Time on CH3NH3PbI3-Based Perovskite Solar Cell Characteristics. Frontiers in Energy Research, 2021, 9, .	1.2	3
699	Propylammonium Chloride Additive for Efficient and Stable FAPbI₃ Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2102538.	10.2	84
700	Mapping Transport Properties of Halide Perovskites via Short-Time-Dynamics Scaling Laws and Subnanosecond-Time-Resolution Imaging. Physical Review Applied, 2021, 16, .	1.5	4
701	Hydrogen-Anion-Induced Carrier Recombination in MAPbI₃ Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 10677-10683.	2.1	12
702	Charge transport affected by energy level alignment in perovskite solar cells. Journal of Renewable and Sustainable Energy, 2021, 13, 063501.	0.8	2
704	Impact of the polar optical phonon and alloy scattering on the charge-carrier mobilities of FA0.83Cs0.17Pb(I1â^'xBrx)3 hybrid perovskites. Physical Chemistry Chemical Physics, 2021, , .	1.3	3
705	Extended X-ray absorption fine structure (EXAFS) of FAPbI3 for understanding local structure-stability relation in perovskite solar cells. Journal of Energy Chemistry, 2022, 67, 549-554.	7.1	16

#	Article	IF	Citations
706	Interface Chelation Induced by Pyridineâ€Based Polymer for Efficient and Durable Airâ€Processed Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	10
707	Tailoring molecular termination for thermally stable perovskite solar cells. Journal of Semiconductors, 2021, 42, 112201.	2.0	3
708	High-Performance Perovskite Solar Cells by Doping Didodecyl Dimethyl Ammonium Bromide in the Hole Transport Layer. ACS Applied Energy Materials, 2021, 4, 13471-13481.	2.5	2
709	Vaporâ€Transportâ€Deposited Orthorhombicâ€SnSe Thin Films: A Potential Costâ€Effective Absorber Material for Solarâ€Cell Applications. Solar Rrl, 2022, 6, 2100676.	3.1	10
710	Lowâ€Temperature Atomic Layer Deposited Electron Transport Layers for Coâ€Evaporated Perovskite Solar Cells. Solar Rrl, 2022, 6, 2100842.	3.1	16
711	Eco-Friendly and Efficient Luminescent Solar Concentrators Based on a Copper(I)-Halide Composite. ACS Applied Materials & Interfaces, 2021, 13, 56348-56357.	4.0	10
712	Interface Chelation Induced by Pyridineâ€Based Polymer for Efficient and Durable Airâ€Processed Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, e202112673.	7.2	33
714	Role of conducting polymers in enhancing the stability and performance of perovskite solar cells: a brief review. Materials Today Sustainability, 2022, 17, 100090.	1.9	20
715	The Effect of Energy Level of Transport Layer on the Performance of Ambient Air Prepared Perovskite Solar Cell: A SCAPS-1D Simulation Study. Crystals, 2022, 12, 68.	1.0	13
716	Ambient environment induced synergetic improvement in morphology and iodine vacancy passivation by MAI surface engineering in mixed-cation lead mixed-halide (FA0.85MA0.15PbI0.55Br0.45) perovskite solar cells. Surfaces and Interfaces, 2022, 29, 101703.	1.5	1
717	Tailor-Made Amino-Based Self-Assembled Monolayers Grafted on Electron Transport ZnO Layers: Perovskite Solar Cell Performance and Modified Interface Relationship. ACS Applied Energy Materials, 2022, 5, 1635-1645.	2.5	5
718	Constructing Monolithic Perovskite/Organic Tandem Solar Cell with Efficiency of 22.0% via Reduced Openâ€Circuit Voltage Loss and Broadened Absorption Spectra. Advanced Materials, 2022, 34, e2108829.	11.1	56
719	Development of formamidinium lead iodide-based perovskite solar cells: efficiency and stability. Chemical Science, 2022, 13, 2167-2183.	3.7	37
720	Large-area perovskite solar cells employing spiro-Naph hole transport material. Nature Photonics, 2022, 16, 119-125.	15.6	123
721	Eliminating Hysteresis of Perovskite Solar Cells with Hollow TiO2 Mesoporous Electron Transport Layer. Chemical Research in Chinese Universities, 2022, 38, 117-122.	1.3	10
722	Atomic and Molecular Hydrogen Impurities in Hybrid Perovskite Solar Cells. Journal of Physical Chemistry C, 2022, 126, 1721-1728.	1.5	7
723	Defects and passivation in perovskite solar cells. Surface Innovations, 2022, 10, 3-20.	1.4	18
724	Efficient Slot-Die-Processed Perovskite Solar Cells With 3-Allyloxy-1, 2-Propanediol Additive. IEEE Journal of Photovoltaics, 2022, 12, 634-638.	1.5	3

#	Article	IF	Citations
725	Understanding the crystallization of triple-cation perovskites assisted by mixed antisolvents for improved solar cell device performance. Journal of Materials Science: Materials in Electronics, 2022, 33, 4415-4425.	1.1	2
726	2D Nonâ€Layered In₂S₃ as Multifunctional Additive for Inverted Organicâ€Free Perovskite Solar Cells with Enhanced Performance. Solar Rrl, 2022, 6, .	3.1	12
727	Boost the efficiency of nickel oxide-based formamidinium-cesium perovskite solar cells to 21% by using coumarin 343 dye as defect passivator. Nano Energy, 2022, 94, 106935.	8.2	49
728	Double-Side healing at CsPbI2Br/ZnO interface by bipyrimidine hydroiodide enables inverted solar cells with enhanced efficiency and stability. Chemical Engineering Journal, 2022, 435, 134760.	6.6	18
729	Antiseptic Povidoneâ€"Iodine Heals the Grain Boundary of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 8984-8991.	4.0	28
730	Postâ€Treatment Passivation by Quaternary Ammonium Chloride Zwitterion for Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	3
731	Cooperative effects of Dopant-Free Hole-Transporting materials and polycarbonate film for sustainable perovskite solar cells. Chemical Engineering Journal, 2022, 437, 135197.	6.6	13
732	Photoluminescence Enhancement in Thin Two-Dimensional Ruddlesdenâ€"Popper Perovskites by Spiro-OMeTAD. Journal of Physical Chemistry C, 0, , .	1.5	1
733	First-principles calculations of defects in metal halide perovskites: A performance comparison of density functionals. Physical Review Materials, 2021, 5, .	0.9	12
734	Amino acid functionalised perylene bisimides for aqueous solution-deposited electron transporting interlayers in organic photovoltaic devices. Journal of Materials Chemistry C, 2022, 10, 3944-3950.	2.7	7
735	Sustainable development of perovskite solar cells: keeping a balance between toxicity and efficiency. Journal of Materials Chemistry A, 2022, 10, 8159-8171.	5.2	19
736	Exploring EDTA/SnO₂ Double-Layer Composite Electron Transport Layer for Perovskite Solar Cells. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.2	0
737	Azadipyrromethene Dye-Assisted Defect Passivation for Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 14388-14399.	4.0	15
738	Iodine Solution Treatment in Nonpolar Solvents as a Facile Approach to Improve the Morphology and Photostability of Perovskite Films. Journal of Physical Chemistry Letters, 2022, 13, 2695-2703.	2.1	2
739	Highly Efficient Large-Area Flexible Perovskite Solar Cells Containing Tin Oxide Vertical Nanopillars without Oxygen Vacancies. ACS Applied Energy Materials, 2022, 5, 3568-3577.	2.5	13
740	Recent Advances on Tin Oxide Electron Transport Layer for High-Performance Perovskite Solar Cells. Ceramist, 2022, 25, 31-51.	0.0	0
741	Acetylammonium chloride as an additive for crystallization control and defect passivation in MAPbI₃ based perovskite solar cells. Journal Physics D: Applied Physics, 2022, 55, 265501.	1.3	7
742	Methylamine-Based Method to Deposit MAPbI₃ Nanoscale-Thick Films for Efficient Perovskite Solar Cells with Carbon Electrodes. ACS Applied Nano Materials, 2022, 5, 4112-4118.	2.4	4

#	Article	IF	Citations
743	Embedding laser generated GaAs nanocrystals in perovskite wires for enhanced charge transport and photodetection. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1.	2.0	1
744	Efficient Surfaceâ€Defect Passivation by Sulfurousâ€Acylâ€Included Small Molecule for Highâ€Performance Perovskite Photovoltaics. Solar Rrl, 0, , 2200097.	3.1	0
745	Quasiâ€2D Bilayer Surface Passivation for High Efficiency Narrow Bandgap Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	40
746	Carrier lifetime measurement of perovskite films by differential microwave photoconductivity decay. Japanese Journal of Applied Physics, 2022, 61, 068001.	0.8	2
747	Influence of Halide Choice on Formation of Lowâ€Dimensional Perovskite Interlayer in Efficient Perovskite Solar Cells. Energy and Environmental Materials, 2022, 5, 670-682.	7.3	9
748	Quasiâ€2D Bilayer Surface Passivation for High Efficiency Narrow Bandgap Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	5
749	Passivation of iodine vacancies of perovskite films by reducing iodine to triiodide anions for high-performance photovoltaics. Chemical Engineering Journal, 2022, 438, 135647.	6.6	15
750	CuInSe2 quantum dots doped MAPbI3 films with reduced trap density for perovskite solar cells. Journal of Alloys and Compounds, 2022, 906, 164292.	2.8	9
751	Para-halogenated triphenyltriazine induced surface passivation toward efficient and stable perovskite solar cells. Applied Surface Science, 2022, 590, 153051.	3.1	6
752	Wideâ€Gap Perovskite via Synergetic Surface Passivation and Its Application toward Efficient Stacked Tandem Photovoltaics. Small, 2022, 18, e2103887.	5.2	3
753	Methylammonium Bromide Assisted Crystallization for Enhanced Leadâ€Free Double Perovskite Photovoltaic Performance. Advanced Functional Materials, 2022, 32, .	7.8	28
754	Aziridinium cation templating 3D lead halide hybrid perovskites. Chemical Communications, 2022, 58, 5745-5748.	2.2	24
755	CsPbBr3 perovskite based tandem device for CO2 photoreduction. Chemical Engineering Journal, 2022, 443, 136447.	6.6	8
757	High-performance perovskite solar cells resulting from large perovskite grain size enabled by the urea additive. Sustainable Energy and Fuels, 2022, 6, 2955-2961.	2.5	5
758	Progress of defect and defect passivation in perovskite solar cells. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 166801.	0.2	1
759	Efficient and Stable FAâ€Rich Perovskite Photovoltaics: From Material Properties to Device Optimization. Advanced Energy Materials, 2022, 12, .	10.2	16
760	Basic understanding of perovskite solar cells and passivation mechanism. AIP Advances, 2022, 12, .	0.6	13
761	Strategies for highâ€performance perovskite solar cells from materials, film engineering to carrier dynamics and photon management. InformaÄnÃ-MateriÃ¡ly, 2022, 4, .	8.5	27

#	Article	IF	Citations
762	Enhancing performance of organic-inorganic perovskite solar cells using super halogen additive. Organic Electronics, 2022, 108, 106548.	1.4	5
763	Effects of Alkaline Earth Metal Additives on Methylammoniumâ€Free Lead Halide Perovskite Thin Films and Solar Cells. Solar Rrl, 2022, 6, .	3.1	2
764	Perovskite films passivated by a dendrimer toward high efficiency and high stability devices. Journal of Power Sources, 2022, 536, 231518.	4.0	1
765	When Aggregationâ€Induced Emission Meets Perovskites: Efficient Defectâ€Passivation and Chargeâ€Transfer for Ambient Fabrication of Perovskite Solar Cells. Chemistry - A European Journal, 2022, 28, .	1.7	6
766	Stabilization and Self-Passivation of Grain Boundaries in Halide Perovskite by Rigid Body Translation. Journal of Physical Chemistry Letters, 2022, 13, 4628-4633.	2.1	5
767	Degradation and Self-Healing in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 24073-24088.	4.0	20
768	Uniaxial-oriented FAxMA1-xPbI3 films with low intragrain and structural defects for self-powered photodetectors. Journal of Materials Chemistry C, 0, , .	2.7	0
769	Imaging and quantifying non-radiative losses at 23% efficient inverted perovskite solar cells interfaces. Nature Communications, 2022, 13, .	5.8	58
770	Trap State Passivation by Barbital Additive toward Efficient Perovskite Solar Cells with 22.65% Efficiency. Energy Technology, 0, , .	1.8	1
771	Properties, performance and multidimensional applications of stable lead-free Cs2AgBiBr6 double perovskite. Materials Today Physics, 2022, 26, 100731.	2.9	19
772	Defects Passivation Strategy for Efficient and Stable Perovskite Solar Cells. Advanced Materials Interfaces, 2022, 9, .	1.9	13
773	Improving the Performance of Organic Perovskite Solar Cells by Additive Engineering with 6â€Aminonicotinic Acid. Solar Rrl, 2022, 6, .	3.1	7
774	Ion migration suppression mechanism via 4-sulfobenzoic acid monopotassium salt for 22.7% stable perovskite solar cells. Science China Materials, 2022, 65, 3368-3381.	3.5	19
775	Universal Surface Passivation of Organicâ€“Inorganic Halide Perovskite Films by Tetraoctylammonium Chloride for High-Performance and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 28044-28059.	4.0	15
776	CoOOH nanosheets ensure ratiometric fluorescence assay of acetylcholinesterase. Talanta, 2022, 249, 123664.	2.9	3
777	Physical mechanism of perovskite solar cell based on double electron transport layer. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 208802.	0.2	1
778	Ink Engineering in Bladeâ€Coating Largeâ€Area Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	39
779	KBF₄ Additive for Alleviating Microstrain, Improving Crystallinity, and Passivating Defects in Inverted Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	40

#	Article	IF	Citations
780	Nanorod-like nanocrystalline CsSnI3 and CNT composite thin filmâ€“based hybrid photodetector. Emergent Materials, 2022, 5, 1925-1943.	3.2	2
781	Customizing a coordinative crab molecule BCPâ€3N with multifunctionality for highâ€performance inverted perovskite solar cells. Solar Rrl, 0, , .	3.1	1
782	3D Networkâ€Assisted Crystallization for Fully Printed Perovskite Solar Cells with Superior Irradiation Stability. Advanced Functional Materials, 2022, 32, .	7.8	8
783	Optical simulation and design of high-absorption thin-film perovskite halide solar cells based on embedded quadrilateral cluster nanoparticles. Solar Energy, 2022, 242, 10-19.	2.9	9
784	Recent defect passivation drifts and role of additive engineering in perovskite photovoltaics. Nano Energy, 2022, 101, 107579.	8.2	46
785	Progress and challenges of halide perovskite-based solar cell- a brief review. Materials Science in Semiconductor Processing, 2022, 150, 106953.	1.9	22
786	Sellotape Exfoliated Layered Quasiâ€2D Perovskite Thin Film for Efficient Lightâ€Emitting Diodes. Advanced Optical Materials, 2022, 10, .	3.6	8
788	Recent advances of perovskite materials for surface enhanced Raman scattering and their applications. Materials Today Physics, 2022, 27, 100815.	2.9	4
789	Dual-site passivation of tin-related defects enabling efficient lead-free tin perovskite solar cells. Nano Energy, 2022, 103, 107818.	8.2	37
790	Perovskite nanowires as defect passivators and charge transport networks for efficient and stable perovskite solar cells. Chemical Engineering Journal, 2023, 451, 138920.	6.6	8
791	Simultaneous achievement of defect passivation and carrier transport promotion by using emerald salt for methylammonium-free perovskite solar cells. Chemical Science, 2022, 13, 10512-10522.	3.7	8
792	MnO₂/DNAzyme-mediated ratiometric fluorescence assay of acetylcholinesterase. Analyst, The, 2022, 147, 4008-4013.	1.7	2
793	Ultrafast Excited State Dynamics of Triphenyl Imidazole Thiophene Substituted Phthalocyanines. , 2022, , .		0
794	Stable perovskite solar cells with 25.17% efficiency enabled by improving crystallization and passivating defects synergistically. Energy and Environmental Science, 2022, 15, 4700-4709.	15.6	86
795	Fabrication of triple cation perovskite solar cells using different post-spin coating anti-solvent treatments. Journal of Materials Science: Materials in Electronics, 2022, 33, 21161-21171.	1.1	0
796	Domain Size, Temperature, and Time Dependence of Photodegradation in MAPbI₃ Probed by Raman Spectroscopy. ACS Energy Letters, 2022, 7, 3095-3103.	8.8	7
797	MXeneâ€Regulated Perovskite Vertical Growth for Highâ€Performance Solar Cells. Angewandte Chemie, 0, , .	1.6	2
798	Grain boundaries passivation of high efficiency and stable perovskite photodetector by polyoxometalate-based composite SiW ₁₁@ZIF-8. , 2022, 1, 9140003.		12

#	ARTICLE	IF	CITATIONS
799	Varied performance of printable mesoscopic perovskite solar cells by the non-stoichiometric precursor. Electrochimica Acta, 2022, 434, 141259.	2.6	3
800	MXeneâ€Regulated Perovskite Vertical Growth for Highâ€Performance Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	36
801	The Growth Dynamics of Organicâ€"Inorganic Metal Halide Perovskite Films. Journal of the American Chemical Society, 2022, 144, 17848-17856.	6.6	9
802	Addressing gain-bandwidth trade-off by a monolithically integrated photovoltaic transistor. Science Advances, 2022, 8, .	4.7	4
803	Defect passivation and electrical conductivity enhancement in perovskite solar cells using functionalized graphene quantum dots. Materials Futures, 2022, 1, 045101.	3.1	20
804	Organic Additive Engineering to Grow Highâ€Quality Inorganic CsPbX₃ Perovskite Films for Efficient and Stable Solar Cells. Solar Rrl, 2022, 6, .	3.1	7
805	Organic-inorganic hybrid electron transport layer of PVP-doped SnO2 for high-efficiency stable perovskite solar cells. Solar Energy Materials and Solar Cells, 2022, 248, 112032.	3.0	6
806	High performance perovskite solar cells synthesized by dissolving FAPbI₃ single crystal. Wuli Xuebao/Acta Physica Sinica, 2023, 72, 018801.	0.2	1
807	A multifunctional phosphorylcholine-based polymer reduces energy loss for efficient perovskite solar cells. Journal of Materials Chemistry C, 2022, 10, 16781-16788.	2.7	6
808	Recent Advances in Inverted Perovskite Solar Cells: Designing and Fabrication. International Journal of Molecular Sciences, 2022, 23, 11792.	1.8	12
809	Opportunities and Challenges for Perovskite Solar Cells Based on Vacuum Thermal Evaporation. Advanced Materials Technologies, 2023, 8, .	3.0	10
810	Structural and Morphological Properties of Single and Mixed Halide Pb-Based Perovskites. Advances in Condensed Matter Physics, 2022, 2022, 1-7.	0.4	4
811	Photovoltaically top-performing perovskite crystal facets. Joule, 2022, 6, 2626-2643.	11.7	52
812	Construction of a Highly Anisotropic Supramolecular Assembly Assisted by a Dimensional Confinement Space: Toward Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 52262-52269.	4.0	0
813	Eco-friendly MA₃Bi₂I₉ perovskite thin films based ammonia sensor. Nanotechnology, 2023, 34, 065501.	1.3	1
814	Ethylene glycol-containing ammonium salt for developing highly compatible interfaces in perovskite solar cells. Chemical Engineering Journal, 2023, 455, 140833.	6.6	2
815	Grain boundary sliding and distortion on a nanosecond timescale induce trap states in CsPbBr₃: <i>ab initio</i> investigation with machine learning force field. Nanoscale, 2022, 15, 285-293.	2.8	14
816	Saturation of Hysteretic Effect in Currentâ€"Voltage Characteristics of Perovskite Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2023, 220, .	0.8	0

#	Article	IF	Citations
817	Surface Capping Layer Prepared from the Bulky Tetradodecylammonium Bromide as an Efficient Perovskite Passivation Layer for High-Performance Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 56900-56909.	4.0	5
818	Self-powered CH₃NH₃PbI₃ perovskite photodiode with a noise-suppressible passivation layer of poly(methyl methacrylate). Optics Express, 2023, 31, 1202.	1.7	5
819	Over 24% Efficient Poly(vinylidene fluoride) (PVDF)â€Coordinated Perovskite Solar Cells with a Photovoltage up to 1.22ÂV. Advanced Functional Materials, 2023, 33, .	7.8	32
820	Effect of Organic Chloride Additives on the Photovoltaic Performance of MAâ€Free Cs_{0.1}FA_{0.9}PbI₃ Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	0
821	Dimethyl sulfoxide: a promising solvent for inorganic CsPbI3 perovskite. Science Bulletin, 2023, 68, 192-202.	4.3	12
822	A Comprehensive Analysis of Ecoâ€Friendly Cs₂SnI₆ Based Tin Halide Perovskite Solar Cell through Device Modeling. Advanced Theory and Simulations, 2023, 6, .	1.3	11
823	Radical polymeric p-doping and grain modulation for stable, efficient perovskite solar modules. Science, 2023, 379, 288-294.	6.0	59
824	Layer-Structured Anisotropic Metal Chalcogenides: Recent Advances in Synthesis, Modulation, and Applications. Chemical Reviews, 2023, 123, 3329-3442.	23.0	23
825	Single-particle optical study on the effect of chloride post-treatment of MAPbI₃ nano/microcrystals. Nanoscale, 2023, 15, 5437-5447.	2.8	2
826	Lead metal halide perovskite solar cells: Fabrication, advancement strategies, alternatives, and future perspectives. Materials Today Communications, 2023, 35, 105686.	0.9	7
827	Simultaneous defect passivation and energy level modulation by multifunctional phthalocyanine for efficient and stable perovskite solar cells. Chemical Engineering Journal, 2023, 459, 141573.	6.6	7
828	A Polymer Strategy toward Highâ€Performance Multifunctional Perovskite Optoelectronics: From Polymer Matrix to Device Applications. Advanced Optical Materials, 2023, 11, .	3.6	4
829	Orientated crystallization of FA-based perovskite via hydrogen-bonded polymer network for efficient and stable solar cells. Nature Communications, 2023, 14, .	5.8	66
830	Highly Efficient and Stable Self-Powered Perovskite Photodiode by Cathode-Side Interfacial Passivation with Poly(Methyl Methacrylate). Nanomaterials, 2023, 13, 619.	1.9	4
831	Additive engineering for highly efficient and stable perovskite solar cells. Applied Physics Reviews, 2023, 10, .	5.5	13
832	<i>In situ</i> surface regulation of 3D perovskite using diethylammonium iodide for highly efficient perovskite solar cells. Physical Chemistry Chemical Physics, 2023, 25, 9349-9356.	1.3	2
833	Multifunctional Hybrid Interfacial Layers for Highâ€Performance Inverted Perovskite Solar Cells. Advanced Materials, 2023, 35, .	11.1	26
834	Managing iodine and tin based defects for efficient and stable mixed Sn-Pb perovskite solar cells. Chemical Engineering Journal, 2023, 462, 142122.	6.6	10

#	Article	IF	Citations
835	Numerical simulation of electron-transport-layer-free CH3NH3Pb(I1â^’xBrx)3 perovskite solar cells. Optical and Quantum Electronics, 2023, 55, .	1.5	0
836	Passivation engineering via silicaâ€encapsulated quantum dots for highly sensitive photodetection. , 2023, 5, .		3
837	Wearable perovskite solar cells by aligned liquid crystal elastomers. Nature Communications, 2023, 14, .	5.8	22
838	Surface in situ reconstruction of inorganic perovskite films enabling long carrier lifetimes and solar cells with 21% efficiency. Nature Energy, 2023, 8, 372-380.	19.8	76
839	An Overview of Lead, Tin, and Mixed Tinâ€“Leadâ€Based ABI₃ Perovskite Solar Cells. Advanced Energy and Sustainability Research, 2023, 4, .	2.8	12
840	Kineticâ€Controlled Crystallization of <i>Î±</i>â€FAPbI₃ Inducing Preferred Crystallographic Orientation Enhances Photovoltaic Performance. Advanced Science, 2023, 10, .	5.6	8
841	Effect of Residual Chloride in FAPbI₃ Film on Photovoltaic Performance and Stability of Perovskite Solar Cell. ACS Energy Letters, 2023, 8, 2122-2129.	8.8	12
842	Effective Approaches for Perovskite Solar Cells; Recent Advances and Perspectives. Physica Status Solidi (A) Applications and Materials Science, 0, , .	0.8	0
896	Comprehensive Assessment of Perovskite Solar Cell Efficiency Through Holistic Edge Detection Analysis of Crystallographic Grain Size. , 2024, , .		0