## Minimizing non-radiative recombination losses in pero

Nature Reviews Materials 5, 44-60 DOI: 10.1038/s41578-019-0151-y

Citation Report

#	Article	IF	CITATIONS
1	Recycling of FTO/TiO <sub>2</sub> Substrates: Route toward Simultaneously High-Performance and Cost-Efficient Carbon-Based, All-Inorganic CsPbIBr <sub>2</sub> Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 4549-4557.	4.0	38
2	Exciton, Biexciton, and Hot Exciton Dynamics in CsPbBr <sub>3</sub> Colloidal Nanoplatelets. Journal of Physical Chemistry Letters, 2020, 11, 387-394.	2.1	62
3	All-Perovskite Tandem Solar Cells: A Roadmap to Uniting High Efficiency with High Stability. Accounts of Materials Research, 2020, 1, 63-76.	5.9	57
4	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
5	Zwitterionic-Surfactant-Assisted Room-Temperature Coating of Efficient Perovskite Solar Cells. Joule, 2020, 4, 2404-2425.	11.7	137
6	Fabrication Strategy for Efficient 2D/3D Perovskite Solar Cells Enabled by Diffusion Passivation and Strain Compensation. Advanced Energy Materials, 2020, 10, 2002004.	10.2	97
7	Crystallization Kinetics in 2D Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2002558.	10.2	124
8	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
9	High-performance perovskite solar cell using photonic–plasmonic nanostructure. Scientific Reports, 2020, 10, 11248.	1.6	52
10	Improving Efficiency and Stability of Perovskite Solar Cells Enabled by A Near-Infrared-Absorbing Moisture Barrier. Joule, 2020, 4, 1575-1593.	11.7	88
11	Mixed Fullerene Electron Transport Layers with Fluorocarbon Chains Assembling on the Surface: A Moisture-Resistant Coverage for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 35081-35087.	4.0	16
12	In Situ Formation of Mixedâ€Dimensional Surface Passivation Layers in Perovskite Solar Cells with Dualâ€Isomer Alkylammonium Cations. Small, 2020, 16, e2005022.	5.2	34
13	MXene-Modulated Electrode/SnO <sub>2</sub> Interface Boosting Charge Transport in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 53973-53983.	4.0	71
14	Suppressing Defectsâ€Induced Nonradiative Recombination for Efficient Perovskite Solar Cells through Green Antisolvent Engineering. Advanced Materials, 2020, 32, e2003965.	11.1	123
15	Self-Elimination of Intrinsic Defects Improves the Low-Temperature Performance of Perovskite Photovoltaics. Joule, 2020, 4, 1961-1976.	11.7	152
16	Perovskite Tandem Solar Cells: From Fundamentals to Commercial Deployment. Chemical Reviews, 2020, 120, 9835-9950.	23.0	248
17	Molecular Ferroelectricsâ€Driven Highâ€Performance Perovskite Solar Cells. Angewandte Chemie, 2020, 132, 20149-20157.	1.6	16
18	Molecular Ferroelectricsâ€Driven Highâ€Performance Perovskite Solar Cells. Angewandte Chemie - International Edition, 2020, 59, 19974- <u>19982.</u>	7.2	71

#	Article	IF	CITATIONS
19	Photoinduced Dynamics of Charge Carriers in Metal Halide Perovskites from an Atomistic Perspective. Journal of Physical Chemistry Letters, 2020, 11, 7066-7082.	2.1	41
20	Reduced bilateral recombination by functional molecular interface engineering for efficient inverted perovskite solar cells. Nano Energy, 2020, 78, 105249.	8.2	45
21	Bifunctional Surface Engineering on SnO <sub>2</sub> Reduces Energy Loss in Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2796-2801.	8.8	239
22	Defects chemistry in high-efficiency and stable perovskite solar cells. Journal of Applied Physics, 2020, 128, .	1.1	91
23	Defects and Their Passivation in Hybrid Halide Perovskites toward Solar Cell Applications. Solar Rrl, 2020, 4, 2000505.	3.1	47
24	Highâ€Performance Inverted Perovskite Solar Cells with Operational Stability via nâ€Type Small Molecule Additiveâ€Assisted Defect Passivation. Advanced Energy Materials, 2020, 10, 2001920.	10.2	45
25	Reaching 90% Photoluminescence Quantum Yield in One-Dimensional Metal Halide C <sub>4</sub> N <sub>2</sub> H <sub>14</sub> PbBr <sub>4</sub> by Pressure-Suppressed Nonradiative Loss. Journal of the American Chemical Society, 2020, 142, 16001-16006.	6.6	109
26	Methods with Nanoarchitectonics for Small Molecules and Nanostructures to Regulate Living Cells. Small Methods, 2020, 4, 2000500.	4.6	23
27	Perovskite Solar Cells: Stable under Space Conditions. Solar Rrl, 2020, 4, 2000447.	3.1	14
28	Triphenylamine–Polystyrene Blends for Perovskite Solar Cells with Simultaneous Energy Loss Suppression and Stability Improvement. Solar Rrl, 2020, 4, 2000490.	3.1	6
29	Additive Engineering Toward Highâ€Performance CsPbl <sub>3</sub> Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000380.	3.1	29
30	Interfacial Structure and Composition Managements for Highâ€Performance Methylammoniumâ€Free Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2005846.	7.8	25
31	Doping in inorganic perovskite for photovoltaic application. Nano Energy, 2020, 78, 105354.	8.2	53
32	Colloidal Quantum Dot Photovoltaics: Current Progress and Path to Gigawatt Scale Enabled by Smart Manufacturing. ACS Energy Letters, 2020, 5, 3069-3100.	8.8	61
33	Hysteretic Ion Migration and Remanent Field in Metal Halide Perovskites. Advanced Science, 2020, 7, 2001176.	5.6	29
34	Outstanding Passivation Effect by a Mixed-Salt Interlayer with Internal Interactions in Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 3159-3167.	8.8	47
35	Extraction technique of trap states based on transient photo-voltage measurement. Scientific Reports, 2020, 10, 12888.	1.6	13
36	Enhancing the Interface Contact of Stacking Perovskite Solar Cells with Hexamethylenediammonium Diiodide-Modified PEDOT:PSS as an Electrode. ACS Applied Materials & (1997) Interfaces, 2020, 12, 42321-42327.	4.0	9

#	Article	IF	CITATIONS
37	Green Solution-Bathing Process for Efficient Large-Area Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 24905-24912.	4.0	20
38	Designing Large-Area Single-Crystal Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 1797-1803.	8.8	46
39	Efficient and stable perovskite–silicon two-terminal tandem solar cells. Rare Metals, 2020, 39, 745-747.	3.6	25
40	Photoluminescenceâ€Based Characterization of Halide Perovskites for Photovoltaics. Advanced Energy Materials, 2020, 10, 1904134.	10.2	299
41	Potassiumâ€Induced Phase Stability Enables Stable and Efficient Wideâ€Bandgap Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000098.	3.1	37
42	Anti-correlation between Band gap and Carrier Lifetime in Lead Halide Perovskites under Compression Rationalized by Ab Initio Quantum Dynamics. Chemistry of Materials, 2020, 32, 4707-4715.	3.2	36
43	A Realistic Methodology for 30% Efficient Perovskite Solar Cells. CheM, 2020, 6, 1254-1264.	5.8	160
44	Defect suppression and passivation for perovskite solar cells: from the birth to the lifetime operation. EnergyChem, 2020, 2, 100032.	10.1	22
45	Suppressing intrinsic self-doping of CsPbIBr <sub>2</sub> films for high-performance all-inorganic, carbon-based perovskite solar cells. Sustainable Energy and Fuels, 2020, 4, 4506-4515.	2.5	25
46	Structurally Reinforced Allâ€Inorganic CsPbl <sub>2</sub> Br Perovskite by Nonionic Polymer via Coordination and Hydrogen Bonds. Solar Rrl, 2020, 4, 2000216.	3.1	34
47	Molecular materials as interfacial layers and additives in perovskite solar cells. Chemical Society Reviews, 2020, 49, 4496-4526.	18.7	130
48	2â€Thiopheneformamidiniumâ€Based 2D Ruddlesden–Popper Perovskite Solar Cells with Efficiency of 16.72% and Negligible Hysteresis. Advanced Energy Materials, 2020, 10, 2000694.	10.2	102
49	Interaction engineering in organic–inorganic hybrid perovskite solar cells. Materials Horizons, 2020, 7, 2208-2236.	6.4	35
50	Photon recycling in halide perovskite solar cells for higher efficiencies. MRS Bulletin, 2020, 45, 439-448.	1.7	20
51	Selfâ€Crystallized Multifunctional 2D Perovskite for Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 1910620.	7.8	68
52	Pitfalls and prospects of optical spectroscopy to characterize perovskite-transport layer interfaces. Applied Physics Letters, 2020, 116, .	1.5	28
53	Multifunctional quaternized chitosan@surface plasmon resonance Ag/N-TiO2 core-shell microsphere for synergistic adsorption-photothermal catalysis degradation of low-temperature wastewater and bacteriostasis under visible light. Chemical Engineering Journal, 2020, 393, 124781.	6.6	54
54	Methanol-induced fast CsBr release results in phase-pure CsPbBr <sub>3</sub> perovskite nanoplatelets. Nanoscale Advances, 2020, 2, 1973-1979.	2.2	16

#	Article	IF	CITATIONS
55	Spin-crossover in an organic–inorganic hybrid perovskite. Chemical Communications, 2020, 56, 4551-4554.	2.2	18
56	Analyzing Interface Recombination in Leadâ€Halide Perovskite Solar Cells with Organic and Inorganic Holeâ€Transport Layers. Advanced Materials Interfaces, 2020, 7, 2000366.	1.9	53
57	Dual-Phase CsPbCl <sub>3</sub> –Cs <sub>4</sub> PbCl <sub>6</sub> Perovskite Films for Self-Powered, Visible-Blind UV Photodetectors with Fast Response. ACS Applied Materials & Interfaces, 2020, 12, 32961-32969.	4.0	114
58	Laserâ€Generated Supranano Liquid Metal as Efficient Electron Mediator in Hybrid Perovskite Solar Cells. Advanced Materials, 2020, 32, e2001571.	11.1	46
59	Highâ€Performance and Reliable Leadâ€Free Layeredâ€Perovskite Transistors. Advanced Materials, 2020, 32, e2002717.	11.1	86
60	Front-Contact Passivation of PIN MAPbI <sub>3</sub> Solar Cells with Superior Device Performances. ACS Applied Energy Materials, 2020, 3, 6344-6351.	2.5	15
61	Inverted devices are catching up. Nature Energy, 2020, 5, 123-124.	19.8	14
62	Efficient Formamidinium-Based Planar Perovskite Solar Cells Fabricated Through a Cal <sub>2</sub> –PbI <sub>2</sub> Precursor. ACS Sustainable Chemistry and Engineering, 2020, 8, 4267-4275.	3.2	19
63	Tailoring Perovskite Adjacent Interfaces by Conjugated Polyelectrolyte for Stable and Efficient Solar Cells. Solar Rrl, 2020, 4, 2000060.	3.1	23
64	Low-Temperature Crystallization Enables 21.9% Efficient Single-Crystal MAPbI <sub>3</sub> Inverted Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 657-662.	8.8	171
65	Performance optimization of CH3NH3Pb(I1-xBrx)3 based perovskite solar cells by comparing different ETL materials through conduction band offset engineering. Optical Materials, 2020, 105, 109897.	1.7	74
66	Lowâ€Dimensional Contact Layers for Enhanced Perovskite Photodiodes. Advanced Functional Materials, 2020, 30, 2001692.	7.8	30
67	Recent progress in encapsulation strategies to enhance the stability of organometal halide perovskite solar cells. JPhys Energy, 2020, 2, 031002.	2.3	76
68	Optical properties and applications of twoâ€dimensional CdSe nanoplatelets. InformaÄnÃ-Materiály, 2020, 2, 905-927.	8.5	65
69	Combustion-processed NiO/ALD TiO2 bilayer as a novel low-temperature electron transporting material for efficient all-inorganic CsPbIBr2 solar cell. Solar Energy, 2020, 203, 10-18.	2.9	12
70	Moisture-tolerant and high-quality α-CsPbI <sub>3</sub> films for efficient and stable perovskite solar modules. Journal of Materials Chemistry A, 2020, 8, 9597-9606.	5.2	62
71	Twoâ€Dimensional Metalâ€Halide Perovskiteâ€based Optoelectronics: Synthesis, Structure, Properties and Applications. Energy and Environmental Materials, 2021, 4, 46-64.	7.3	34
72	Surface passivation using pyridinium iodide for highly efficient planar perovskite solar cells. Journal of Energy Chemistry, 2021, 52, 84-91.	7.1	95

#	Article	IF	CITATIONS
73	Multifunctional dopamine-assisted preparation of efficient and stable perovskite solar cells. Journal of Energy Chemistry, 2021, 54, 291-300.	7.1	42
74	Perovskite Solar Cells with Allâ€Inkjetâ€Printed Absorber and Charge Transport Layers. Advanced Materials Technologies, 2021, 6, 2000271.	3.0	72
75	Direct Observation of Shallow Trap States in Thermal Equilibrium with Bandâ€Edge Excitons in Strongly Confined CsPbBr <sub>3</sub> Perovskite Nanoplatelets. Advanced Optical Materials, 2021, 9, 2001308.	3.6	23
76	Tetrazole modulated perovskite films for efficient solar cells with improved moisture stability. Chemical Engineering Journal, 2021, 420, 127579.	6.6	14
77	Exploring the effect of Ga3+ doping on structural, electronic and optical properties of CH3NH3PbCl3 perovskites: an experimental study. Journal of Materials Science: Materials in Electronics, 2021, 32, 12841-12855.	1.1	7
78	Giant enhancement of photoluminescence quantum yield in 2D perovskite thin microplates by graphene encapsulation. Nano Research, 2021, 14, 1980-1984.	5.8	9
79	Minimizing Voltage Losses in Perovskite Solar Cells. Small Structures, 2021, 2, 2000050.	6.9	43
80	Spontaneously supersaturated nucleation strategy for high reproducible and efficient perovskite solar cells. Chemical Engineering Journal, 2021, 405, 126998.	6.6	20
81	Lead-free perovskite Cs2AgBiBr6@g-C3N4 Z-scheme system for improving CH4 production in photocatalytic CO2 reduction. Applied Catalysis B: Environmental, 2021, 282, 119570.	10.8	195
82	Kinetics of light-induced degradation in semi-transparent perovskite solar cells. Solar Energy Materials and Solar Cells, 2021, 219, 110776.	3.0	29
83	Engineering of dendritic dopant-free hole transport molecules: enabling ultrahigh fill factor in perovskite solar cells with optimized dendron construction. Science China Chemistry, 2021, 64, 41-51.	4.2	55
84	Emerging perovskite quantum dot solar cells: feasible approaches to boost performance. Energy and Environmental Science, 2021, 14, 224-261.	15.6	94
85	Light Stability Enhancement of Perovskite Solar Cells Using <i>1H</i> , <i>1H</i> , <i>2H</i> , <i>2H</i> %€Perfluorooctyltriethoxysilane Passivation. Solar Rrl, 2021, 5, 2000650.	3.1	7
86	Inorganic Electron Transport Materials in Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2008300.	7.8	105
87	Modeling Grain Boundaries in Polycrystalline Halide Perovskite Solar Cells. Annual Review of Condensed Matter Physics, 2021, 12, 95-109.	5.2	25
88	Unraveling the Impact of Halide Mixing on Crystallization and Phase Evolution in CsPbX3 Perovskite Solar Cells. Matter, 2021, 4, 313-327.	5.0	49
89	Titanium Nanopillar Arrays Functioning as Electron Transporting Layers for Efficient, Antiâ€Aging Perovskite Solar Cells. Small, 2021, 17, e2004778.	5.2	9
90	Deep surface passivation for efficient and hydrophobic perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 2919-2927.	5.2	74

#	Article	IF	Citations
91	Crown Etherâ€Assisted Growth and Scaling Up of FACsPbI <sub>3</sub> Films for Efficient and Stable Perovskite Solar Modules. Advanced Functional Materials, 2021, 31, 2008760.	7.8	50
92	Undoped 2,2′,7,7′-tetrakis (N,N-p-dimethoxy-phenylamino)-9,9′-spirobifluorene and PbS binary hole-transporter for efficient and stable planar perovskite solar cells. Journal of Power Sources, 2021, 481, 229149.	4.0	7
93	Design of Low Crystallinity Spiro-Typed Hole Transporting Material for Planar Perovskite Solar Cells to Achieve 21.76% Efficiency. Chemistry of Materials, 2021, 33, 285-297.	3.2	57
94	An overview of rare earth coupled lead halide perovskite and its application in photovoltaics and light emitting devices. Progress in Materials Science, 2021, 120, 100737.	16.0	35
95	Generic Water-Based Spray-Assisted Growth for Scalable, High-Efficiency Carbon-Electrode, All-Inorganic Perovskite Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
96	Perovskite Single-Crystal Solar Cells: Going Forward. ACS Energy Letters, 2021, 6, 631-642.	8.8	74
97	Optical and Electronic Losses Arising from Physically Mixed Interfacial Layers in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 4923-4934.	4.0	14
98	Two birds with one stone: dual grain-boundary and interface passivation enables >22% efficient inverted methylammonium-free perovskite solar cells. Energy and Environmental Science, 2021, 14, 5875-5893.	15.6	180
99	<i>Ab initio</i> nonadiabatic molecular dynamics of charge carriers in metal halide perovskites. Nanoscale, 2021, 13, 10239-10265.	2.8	70
100	Advent of alkali metal doping: a roadmap for the evolution of perovskite solar cells. Chemical Society Reviews, 2021, 50, 2696-2736.	18.7	90
101	Review of blue perovskite light emitting diodes with optimization strategies for perovskite film and device structure. Opto-Electronic Advances, 2021, 4, 20001901-20001915.	6.4	27
102	Elemental Pb initiated in situ Cl doping for improved photovoltaic performances of perovskite. Journal of Renewable and Sustainable Energy, 2021, 13, 013503.	0.8	3
103	Recent progress on defect passivation in perovskites for solar cell application. Materials Science for Energy Technologies, 2021, 4, 282-289.	1.0	8
104	Nanoarchitectonics: what's coming next after nanotechnology?. Nanoscale Horizons, 2021, 6, 364-378.	4.1	221
105	Efficient and stable perovskite solar cells based on a quasi-point-contact and rear-reflection structure with 22.5% efficiency. Journal of Materials Chemistry A, 2021, 9, 14877-14887.	5.2	8
106	Carbonâ€Based Printable Perovskite Solar Cells with a Mesoporous TiO <sub>2</sub> Electron Transporting Layer Derived from Metal–Organic Framework NH <sub>2</sub> â€MILâ€125. Energy Technology, 2021, 9, 2000957.	1.8	11
107	Defect tolerant device geometries for lead-halide perovskites. Materials Advances, 2021, 2, 3655-3670.	2.6	17
108	Precious Metal-Free LaMnO <sub>3</sub> Perovskite Catalyst with an Optimized Nanostructure for Aerobic C–H Bond Activation Reactions: Alkylarene Oxidation and Naphthol Dimerization. ACS Applied Materials & amp: Interfaces, 2021, 13, 5099-5110	4.0	15

	CITATION	Report	
# 109	ARTICLE Drastic Change of Surface Morphology of Cesium–Formamidinium Perovskite Solar Cells by Antisolvent Processing. ACS Applied Energy Materials, 2021, 4, 1069-1077.	IF 2.5	Citations
110	Enhancing the Photovoltaic Performance and Moisture Stability of Perovskite Solar Cells <i>Via</i> Polyfluoroalkylated Imidazolium Additives. ACS Applied Materials & Interfaces, 2021, 13, 4553-4559.	4.0	28
111	Dynamic halide perovskite heterojunction generates direct current. Energy and Environmental Science, 2021, 14, 374-381.	15.6	31
112	Ternary copolymers containing 3,4-dicyanothiophene for efficient organic solar cells with reduced energy loss. Journal of Materials Chemistry A, 2021, 9, 13522-13530.	5.2	23
113	Buried Interfaces in Halide Perovskite Photovoltaics. Advanced Materials, 2021, 33, e2006435.	11.1	214
114	Pushing commercialization of perovskite solar cells by improving their intrinsic stability. Energy and Environmental Science, 2021, 14, 3233-3255.	15.6	166
116	Interfacial passivation of wide-bandgap perovskite solar cells and tandem solar cells. Journal of Materials Chemistry A, 2021, 9, 21939-21947.	5.2	19
117	Insights into iodoplumbate complex evolution of precursor solutions for perovskite solar cells: from aging to degradation. Journal of Materials Chemistry A, 2021, 9, 6732-6748.	5.2	26
118	Mitigating Open-Circuit Voltage Loss in Pb–Sn Low-Bandgap Perovskite Solar Cells via Additive Engineering. ACS Applied Energy Materials, 2021, 4, 1731-1742.	2.5	43
119	Atomistic Mechanism of Passivation of Halide Vacancies in Lead Halide Perovskites by Alkali Ions. Chemistry of Materials, 2021, 33, 1285-1292.	3.2	26
120	Influence of Fluorinated Components on Perovskite Solar Cells Performance and Stability. Small, 2021, 17, e2004081.	5.2	29
121	Synergistic Effect of Fluorinated Passivator and Hole Transport Dopant Enables Stable Perovskite Solar Cells with an Efficiency Near 24%. Journal of the American Chemical Society, 2021, 143, 3231-3237.	6.6	152
122	Electroluminescence Principle and Performance Improvement of Metal Halide Perovskite Lightâ€Emitting Diodes. Advanced Optical Materials, 2021, 9, 2002167.	3.6	49
123	Intramolecular Electric Field Construction in Metal Phthalocyanine as Dopantâ€Free Hole Transporting Material for Stable Perovskite Solar Cells with >21 % Efficiency. Angewandte Chemie, 2021, 133, 6364-6369.	1.6	11
124	Intramolecular Electric Field Construction in Metal Phthalocyanine as Dopantâ€Free Hole Transporting Material for Stable Perovskite Solar Cells with >21 % Efficiency. Angewandte Chemie - International Edition, 2021, 60, 6294-6299.	7.2	101
125	Guanidinium Chloride Passivated Perovskites for Efficient Solar Cells: The Role of Passivating Solvent. Journal of Physical Chemistry C, 2021, 125, 2866-2874.	1.5	18
126	Quantum defect-assisted multiphonon Raman scattering in metal halide perovskites. Journal of Physics Condensed Matter, 2021, 33, 145702.	0.7	5
127	In Situ Surface Fluorination of TiO <sub>2</sub> Nanocrystals Reinforces Interface Binding of Perovskite Layer for Highly Efficient Solar Cells with Dramatically Enhanced Ultravioletâ€Light Stability. Advanced Science, 2021, 8, 2004662.	5.6	61

#	Article	IF	CITATIONS
128	How Deep Hole Traps Affect the Charge Dynamics and Collection in Bare and Bilayers of Methylammonium Lead Bromide. ACS Applied Materials & Interfaces, 2021, 13, 16309-16316.	4.0	11
129	Effect of Monovalent Metal Iodide Additives on the Optoelectric Properties of Two-Dimensional Sn-Based Perovskite Films. Chemistry of Materials, 2021, 33, 2498-2505.	3.2	28
130	Efficient Inverted Perovskite Solar Cells Enabled by Dopant-Free Hole-Transporting Materials Based on Dibenzofulvene-Bridged Indacenodithiophene Core Attaching Varying Alkyl Chains. ACS Applied Materials & Interfaces, 2021, 13, 13254-13263.	4.0	19
131	Modification of Energy Level Alignment for Boosting Carbonâ€Based CsPbI <sub>2</sub> Br Solar Cells with 14% Certified Efficiency. Advanced Functional Materials, 2021, 31, 2011187.	7.8	89
132	Review of Interface Passivation of Perovskite Layer. Nanomaterials, 2021, 11, 775.	1.9	25
133	Organic Ammonium Halide Modulators as Effective Strategy for Enhanced Perovskite Photovoltaic Performance. Advanced Science, 2021, 8, 2004593.	5.6	57
134	High-Efficiency (>14%) and Air-Stable Carbon-Based, All-Inorganic CsPbl <sub>2</sub> Br Perovskite Solar Cells through a Top-Seeded Growth Strategy. ACS Energy Letters, 0, , 1500-1510.	8.8	106
135	Slow halide exchange in CsPbIBr2 films for high-efficiency, carbon-based, all-inorganic perovskite solar cells. Science China Materials, 2021, 64, 2107-2117.	3.5	10
136	Acid Dissociation Constant: A Criterion for Selecting Passivation Agents in Perovskite Solar Cells. ACS Energy Letters, 0, , 1612-1621.	8.8	99
137	Nanoscale Heterogeneity in CsPbBr <sub>3</sub> and CsPbBr <sub>3</sub> :KI Perovskite Films Revealed by Cathodoluminescence Hyperspectral Imaging. ACS Applied Energy Materials, 2021, 4, 2707-2715.	2.5	8
138	High stable bifacial irradiated triple-mesoporous perovskite solar cells based on AgNWs@PEDOT composite electrodes. Materials Letters, 2021, 288, 129348.	1.3	5
139	Efficient and Stable Perovskite Solar Cells Achieved by Using Bifunctional Interfacial Materials to Modify SnO <sub>2</sub> and MAPbl <sub>3–<i>x</i></sub> Cl <sub><i>x</i></sub> Simultaneously. ACS Applied Energy Materials, 2021, 4, 3794-3802.	2.5	10
140	Understanding Transient Photoluminescence in Halide Perovskite Layer Stacks and Solar Cells. Advanced Energy Materials, 2021, 11, 2003489.	10.2	117
141	Low-Temperature Induced Enhancement of Photoelectric Performance in Semiconducting Nanomaterials. Nanomaterials, 2021, 11, 1131.	1.9	10
142	A Novel Remote Multi-Sensing Energy Management System Based on Power-Over-Fiber Transmission. , 2021, , .		3
143	Metalâ€Organic Frameworks Nanocomposites with Different Dimensionalities for Energy Conversion and Storage. Advanced Energy Materials, 2022, 12, 2100346.	10.2	86
144	Enhanced Charge Extraction in Metal–Perovskite–Metal Back-Contact Solar Cell Structure Through Electrostatic Doping: A Numerical Study. IEEE Transactions on Electron Devices, 2021, 68, 1757-1763.	1.6	33
145	Dielectric screening in perovskite photovoltaics. Nature Communications, 2021, 12, 2479.	5.8	88

#	Article	IF	CITATIONS
146	Photoferroelectric perovskite solar cells: Principles, advances and insights. Nano Today, 2021, 37, 101062.	6.2	54
147	Revealing the internal luminescence quantum efficiency of perovskite films via accurate quantification of photon recycling. Matter, 2021, 4, 1391-1412.	5.0	35
148	Interface engineering for high-efficiency perovskite solar cells. Journal of Applied Physics, 2021, 129, .	1.1	38
149	Structural Stability of Formamidinium- and Cesium-Based Halide Perovskites. ACS Energy Letters, 2021, 6, 1942-1969.	8.8	76
150	In Situ Interface Engineering with a Spiroâ€OMeTAD/CoO Hierarchical Structure via Oneâ€Step Spinâ€Coating for Efficient and Stable Perovskite Solar Cells. Advanced Materials Interfaces, 2021, 8, 2002041.	1.9	2
151	cPCN-Regulated SnO2 Composites Enables Perovskite Solar Cell with Efficiency Beyond 23%. Nano-Micro Letters, 2021, 13, 101.	14.4	31
152	Controlled Structural Transformation in Sbâ€Doped Indium Halides A <sub>3</sub> InCl <sub>6</sub> and A <sub>2</sub> InCl <sub>5</sub> â^™H <sub>2</sub> O Yields Reversible Greenâ€toâ€Yellow Emission Switch. Advanced Optical Materials, 2021, 9, 2002267.	3.6	55
153	Boosting the Performance of One-Step Solution-Processed Perovskite Solar Cells Using a Natural Monoterpene Alcohol as a Green Solvent Additive. ACS Applied Electronic Materials, 2021, 3, 1813-1825.	2.0	22
154	Perovskite Solar Cells for Space Applications: Progress and Challenges. Advanced Materials, 2021, 33, e2006545.	11.1	184
155	Overcoming the performance deadlock by ideal-bandgap perovskites. Matter, 2021, 4, 1445-1447.	5.0	0
156	Efficient and stable inverted perovskite solar cells incorporating 4-Fluorobenzylammonium iodide. Organic Electronics, 2021, 92, 106124.	1.4	10
157	Vacant Manganeseâ€Based Perovskite Fluorides@Reduced Graphene Oxides for Naâ€ion Storage with Pseudocapacitive Conversion/Insertion Dual Mechanisms. Chemistry - A European Journal, 2021, 27, 9954-9960.	1.7	7
158	Enhanced Efficiency of Inorganic CsPbl <sub>3â^'</sub> <i><sub>x</sub></i> Br <i><sub>x</sub></i> Perovskite Solar Cell via Selfâ€Regulation of Antisite Defects. Advanced Energy Materials, 2021, 11, 2100403.	10.2	45
159	Understanding the Effects of Fluorine Substitution in Lithium Salt on Photovoltaic Properties and Stability of Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 2218-2228.	8.8	51
160	Molecularly Engineered Interfaces in Metal Halide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 4882-4901.	2.1	21
161	Naphthylmethylamine post-treatment of MAPbI3 perovskite solar cells with simultaneous defect passivation and stability improvement. Solar Energy, 2021, 220, 18-23.	2.9	10
162	Methods of Stability Control of Perovskite Solar Cells for High Efficiency. Energies, 2021, 14, 2918.	1.6	12
163	In situ growth of Z-scheme CuS/CuSCN heterojunction to passivate surface defects and enhance charge transport. Journal of Colloid and Interface Science, 2021, 590, 407-414.	5.0	16

#	Article	IF	Citations
164	A conjugated ligand interfacial modifier for enhancing efficiency and operational stability of planar perovskite solar cells. Chemical Engineering Journal, 2021, 412, 128680.	6.6	17
165	Surface Reconstruction Engineering with Synergistic Effect of Mixedâ€Salt Passivation Treatment toward Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2102902.	7.8	57
166	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
167	Role of Polyhedron Unit in Distinct Photophysics of Zero-Dimensional Organic–Inorganic Hybrid Tin Halide Compounds. Journal of Physical Chemistry Letters, 2021, 12, 5765-5773.	2.1	10
168	Giant Huang–Rhys Factor for Electron Capture by the Iodine Intersitial in Perovskite Solar Cells. Journal of the American Chemical Society, 2021, 143, 9123-9128.	6.6	37
169	Recent Advances in Synthesis, Properties, and Applications of Metal Halide Perovskite Nanocrystals/Polymer Nanocomposites. Advanced Materials, 2021, 33, e2005888.	11.1	108
170	A facile light managing strategy in inverted perovskite solar cells. JPhys Energy, 2021, 3, 035004.	2.3	3
171	Impact of Amine Additives on Perovskite Precursor Aging: A Case Study of Light-Emitting Diodes. Journal of Physical Chemistry Letters, 2021, 12, 5836-5843.	2.1	6
172	Additive Engineering by 6-Aminoquinoline Monohydrochloride for High-Performance Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 7083-7090.	2.5	9
173	Assessing the Impact of Ambient Fabrication Temperature on the Performance of Planar CH 3 NH 3 PbI 3 Perovskite Solar Cells. European Journal of Inorganic Chemistry, 2021, 2021, 2533-2538.	1.0	3
174	Design of small molecular hole-transporting materials for stable and high-performance perovskite solar cells. Chemical Physics Reviews, 2021, 2, .	2.6	22
175	State of the Art and Prospects for Halide Perovskite Nanocrystals. ACS Nano, 2021, 15, 10775-10981.	7.3	705
176	Structural Analysis and Carrier Relaxation Dynamics of 2D CsPbBr <sub>3</sub> Nanoplatelets. Journal of Physical Chemistry C, 2021, 125, 12214-12223.	1.5	23
177	Highâ€Performance ITOâ€Free Perovskite Solar Cells Enabled by Singleâ€Walled Carbon Nanotube Films. Advanced Functional Materials, 2021, 31, 2104396.	7.8	30
178	All-Evaporated, All-Inorganic CsPbI <sub>3</sub> Perovskite-Based Devices for Broad-Band Photodetector and Solar Cell Applications. ACS Applied Electronic Materials, 2021, 3, 3023-3033.	2.0	12
179	Tailored Local Bandgap Modulation as a Strategy to Maximize Luminescence Yields in Mixedâ€Halide Perovskites. Advanced Optical Materials, 2021, 9, 2100635.	3.6	5
180	Multifunctional passivation strategy based on tetraoctylammonium bromide for efficient inverted perovskite solar cells. Nano Energy, 2021, 84, 105882.	8.2	46 2 Td (ymlaeu
181		2.5	4

#	Article	IF	CITATIONS
182	Understanding the synergistic effect of mixed solvent annealing on perovskite film formation*. Chinese Physics B, 2021, 30, 068103.	0.7	0
183	A New Type of Hybrid Copper lodide as Nontoxic and Ultrastable LED Emissive Layer Material. ACS Energy Letters, 2021, 6, 2565-2574.	8.8	46
184	Elimination of Charge Recombination Centers in Metal Halide Perovskites by Strain. Journal of the American Chemical Society, 2021, 143, 9982-9990.	6.6	52
185	Recent Progress on Perovskite Surfaces and Interfaces in Optoelectronic Devices. Advanced Materials, 2021, 33, e2006004.	11.1	86
186	CO2 doping of organic interlayers for perovskite solar cells. Nature, 2021, 594, 51-56.	13.7	120
187	Single-crystal halide perovskites: Opportunities and challenges. Matter, 2021, 4, 2266-2308.	5.0	35
188	Overcoming Ni <sup>3+</sup> â€Induced Nonâ€Radiative Recombination at Perovskiteâ€Nickel Oxide Interfaces to Boost Voltages in Perovskite Solar Cells. Advanced Materials Interfaces, 2021, 8, 2100920.	1.9	25
189	Laserâ€induced recoverable fluorescence quenching of perovskite films at a microscopic grainâ€scale. Energy and Environmental Materials, 0, , .	7.3	2
190	Multifunctional Conjugated Ligand Engineering for Stable and Efficient Perovskite Solar Cells. Advanced Materials, 2021, 33, e2100791.	11.1	99
191	Modulate the work function of Nb2CTx MXene as the hole transport layer for perovskite solar cells. Applied Physics Letters, 2021, 119, .	1.5	24
192	Mesoporous Au@Cu <sub>2â^'<i>x</i></sub> S Core–Shell Nanoparticles with Double Localized Surface Plasmon Resonance and Ligand Modulation for Holeâ€6elective Passivation in Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100358.	3.1	13
193	Carrier management makes perovskite solar cells approaching Shockley-Queisser limit. Science Bulletin, 2021, 66, 1372-1374.	4.3	12
194	2D/3D perovskite engineering eliminates interfacial recombination losses in hybrid perovskite solar cells. CheM, 2021, 7, 1903-1916.	5.8	108
195	Enhanced Performance of Nanotextured Silicon Solar Cells with Excellent Light-Trapping Properties. Photonics, 2021, 8, 272.	0.9	3
196	Coâ€Evaporated MAPbI <sub>3</sub> with Graded Fermi Levels Enables Highly Performing, Scalable, and Flexible pâ€iâ€n Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2103252.	7.8	40
197	Triplet exciton formation for non-radiative voltage loss in high-efficiency nonfullerene organic solar cells. Joule, 2021, 5, 1832-1844.	11.7	98
198	Defect Passivation of Perovskite Films for Highly Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, 2100295.	3.1	58
199	Efficient and stable inverted perovskite solar cells with very high fill factors via incorporation of star-shaped polymer. Science Advances, 2021, 7, .	4.7	195

#	Article	IF	CITATIONS
200	Highâ€Performance Stable Perovskite Solar Cell via Defect Passivation With Constructing Tunable Graphitic Carbon Nitride. Solar Rrl, 2021, 5, 2100257.	3.1	9
201	Colorful conducting polymers for vivid solar panels. Nano Energy, 2021, 85, 105937.	8.2	16
202	Strong Electron Acceptor of a Fluorine-Containing Group Leads to High Performance of Perovskite Solar Cells. ACS Applied Materials & amp; Interfaces, 2021, 13, 41149-41158.	4.0	24
203	The Contribution of NMR Spectroscopy in Understanding Perovskite Stabilization Phenomena. Nanomaterials, 2021, 11, 2024.	1.9	11
204	Synergistical Dipole–Dipole Interaction Induced Selfâ€Assembly of Phenoxazineâ€Based Holeâ€Transporting Materials for Efficient and Stable Inverted Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 20600-20605.	1.6	11
205	Dopantâ€Free Ternary Conjugated Polymeric Holeâ€Transporting Materials for Efficient Inverted Planar Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100506.	3.1	8
206	Dynamic structural views in solar energy materials by femtosecond electron diffraction. MRS Bulletin, 2021, 46, 704-710.	1.7	5
207	Brightening of Dark States in CsPbBr <sub>3</sub> Quantum Dots Caused by Lightâ€Induced Magnetism. Small, 2021, 17, e2101527.	5.2	5
208	Pressure-Tuned Quantum Well Configuration in Two-Dimensional PA <sub>8</sub> Pb <sub>5</sub> 1 <sub>18</sub> Perovskites for Highly Efficient Yellow Fluorescence. ACS Applied Energy Materials, 2021, 4, 10003-10011.	2.5	7
209	Indoor Perovskite Photovoltaics for the Internet of Things—Challenges and Opportunities toward Market Uptake. Advanced Energy Materials, 2021, 11, 2101854.	10.2	52
210	Interfacial defect passivation and stress release by multifunctional KPF6 modification for planar perovskite solar cells with enhanced efficiency and stability. Chemical Engineering Journal, 2021, 418, 129375.	6.6	157
211	Defect passivation and crystallization control of perovskite films for photovoltaic application. Materials Today Nano, 2021, 15, 100118.	2.3	9
212	Efficient defect passivation for high performance perovskite solar cell by adding alizarin red S. Journal of Materials Science, 2021, 56, 19552-19563.	1.7	2
213	Combined Bulk and Surface Passivation in Dimensionally Engineered 2Dâ€3D Perovskite Films via Chlorine Diffusion. Advanced Functional Materials, 2021, 31, 2104251.	7.8	37
214	Passivation Strategies through Surface Reconstruction toward Highly Efficient and Stable Perovskite Solar Cells on n-i-p Architecture. Energies, 2021, 14, 4836.	1.6	13
215	Synergistical Dipole–Dipole Interaction Induced Selfâ€Assembly of Phenoxazineâ€Based Holeâ€Transporting Materials for Efficient and Stable Inverted Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 20437-20442.	7.2	66
216	Lightâ€Emitting Perovskite Solar Cells: A Tale of Two States. Energy Technology, 2021, 9, 2100394.	1.8	0
217	The better photoelectric performance of thin-film TiO2/c-Si heterojunction solar cells based on surface plasmon resonance. Results in Physics, 2021, 28, 104628.	2.0	27

	CITATION	CITATION REPORT	
# 218	ARTICLE Efficient and Stable FAPbBr <sub>3</sub> Perovskite Solar Cells via Interface Modification by a Low-Dimensional Perovskite Layer. ACS Applied Energy Materials, 2021, 4, 9276-9282.	IF 2.5	Citations
219	Exploring the Effect of Lewis-Base Additives on the Performance and Stability of Mesoscopic Carbon-Electrode Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 8810-8823.	2.5	7
220	Enhanced charge transport in low temperature carbon-based n-i-p perovskite solar cells with NiOx-CNT hole transport material. Solar Energy Materials and Solar Cells, 2021, 230, 111241.	3.0	19
221	Multifunctional 2D perovskite capping layer using cyclohexylmethylammonium bromide for highly efficient and stable perovskite solar cells. Materials Today Physics, 2021, 21, 100543.	2.9	14
222	Robust, High-Performing Maize–Perovskite-Based Solar Cells with Improved Stability. ACS Applied Energy Materials, 2021, 4, 11194-11203.	2.5	11
223	Defects in CsPbX <sub>3</sub> Perovskite: From Understanding to Effective Manipulation for Highâ€Performance Solar Cells. Small Methods, 2021, 5, e2100725.	4.6	37
224	Steric effect of amino-acids as additives for perovskite solar cells. Journal of Alloys and Compounds, 2021, 876, 160140.	2.8	19
225	Identification of lead vacancy defects in lead halide perovskites. Nature Communications, 2021, 12, 5566.	5.8	51
226	Atomic-scale understanding on the physics and control of intrinsic point defects in lead halide perovskites. Applied Physics Reviews, 2021, 8, .	5.5	36
227	Moltenâ€Saltâ€Assisted CsPbl <sub>3</sub> Perovskite Crystallization for Nearly 20%â€Efficiency Solar Cells. Advanced Materials, 2021, 33, e2103770.	11.1	81
228	High efficient and stable Tin-based perovskite solar cells via short-chain ligand modification. Organic Electronics, 2021, 96, 106198.	1.4	5
229	Role of defects in organic–inorganic metal halide perovskite: detection and remediation for solar cell applications. Emergent Materials, 2022, 5, 987-1020.	3.2	10
230	Leadâ€Free Double Perovskite Cs <sub>2</sub> AgBiBr <sub>6</sub> : Fundamentals, Applications, and Perspectives. Advanced Functional Materials, 2021, 31, 2105898.	7.8	166
231	Recent advances in carbon nanomaterial-optimized perovskite solar cells. Materials Today Energy, 2021, 21, 100769.	2.5	14
232	Perovskite Origami for Programmable Microtube Lasing. Advanced Functional Materials, 2021, 31, 2109080.	7.8	14
233	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
234	High efficiency reduction of CO2 to CO and CH4 via photothermal synergistic catalysis of lead-free perovskite Cs3Sb2I9. Applied Catalysis B: Environmental, 2021, 294, 120236.	10.8	48
235	Cation-size mismatch and interface stabilization for efficient NiOx-based inverted perovskite solar cells with 21.9% efficiency. Nano Energy, 2021, 88, 106285.	8.2	66

		CITATION R	EPORT	
#	ARTICLE		IF	Citations
236	Comprehensive passivation strategy for achieving inverted perovskite solar cells with ef exceeding 23% by trap passivation and ion constraint. Nano Energy, 2021, 89, 106370.	ficiency	8.2	63
237	Size mismatch induces cation segregation in CsPbI3: Forming energy level gradient and heterojunction promotes the efficiency of carbon-based perovskite solar cells to over 15 Energy, 2021, 89, 106411.	3D/2D 5%. Nano	8.2	39
238	Theoretical analysis of effects of doping MAPbI into p-n homojunction on several types of solar cells. Optical Materials, 2021, 121, 111491.	of perovskite	1.7	12
239	Organic nanocrystals induced surface passivation towards high-efficiency and stable pe solar cells. Nano Energy, 2021, 89, 106445.	rovskite	8.2	19
240	Simultaneous bulk defect passivation and enhanced electron extraction in inverted perc cells via nonfullerene Y6 anti-solvent assisted gradient heterostructure. Journal of Power 2021, 514, 230534.	vyskite solar r Sources,	4.0	4
241	Methylammonium- and bromide-free perovskites enable efficient and stable photovoltai Energy Chemistry, 2021, 63, 12-24.	cs. Journal of	7.1	1
242	High-effective SnO2-based perovskite solar cells by multifunctional molecular additive e Journal of Alloys and Compounds, 2021, 886, 161352.	ngineering.	2.8	25
243	Benzotriazole derivative inhibits nonradiative recombination and improves the UV-stabil inverted MAPbI3 perovskite solar cells. Journal of Energy Chemistry, 2022, 65, 592-599.	ity of	7.1	18
244	A design strategy of additive molecule for PSCs: Anchoring intrinsic properties of function by suppressing long-range conjugation effect. Chemical Engineering Journal, 2022, 427	onal groups , 131676.	6.6	8
245	Enhancing efficiency of perovskite solar cells from surface passivation of Co2+ doped C nanocrystals. Journal of Colloid and Interface Science, 2022, 607, 1280-1286.	uGaO2	5.0	11
246	A synopsis of progressive transition in precursor inks development for metal halide perc photovoltaic technology. Journal of Materials Chemistry A, 2021, 9, 26650-26668.	vskites-based	5.2	6
247	Metal Halide Perovskite/2D Material Heterostructures: Syntheses and Applications. Sma 2021, 5, e2000937.	ll Methods,	4.6	24
248	Reduced energy loss enabled by thiophene-based interlayers for high performance and s perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 4138-4149.	table	5.2	80
249	22.8%-Efficient single-crystal mixed-cation inverted perovskite solar cells with a near-op bandgap. Energy and Environmental Science, 2021, 14, 2263-2268.	timal	15.6	149
250	Design of surface termination for high-performance perovskite solar cells. Journal of Ma Chemistry A, 2021, 9, 23597-23606.	terials	5.2	25
251	Bandgap tuning strategy by cations and halide ions of lead halide perovskites learned fr learning. RSC Advances, 2021, 11, 15688-15694.	om machine	1.7	36
252	Cation optimization for <i>burn-in loss-free</i> perovskite solar devices. Journal of Mate Chemistry A, 2021, 9, 5374-5380.	rials	5.2	6
253	Photo-response of Two-Dimensional Ruddlesden-Popper Perovskite Films for Photovolta of Conferences, 2021, 257, 03020.	ics. E3S Web	0.2	0

#	Article	IF	CITATIONS
254	Constructing highly efficient all-inorganic perovskite solar cells with efficiency exceeding 17% by using dopant-free polymeric electron-donor materials. Nano Energy, 2020, 75, 104933.	8.2	50
255	Suppression of the interface-dependent nonradiative recombination by using 2-methylbenzimidazole as interlayer for highly efficient and stable perovskite solar cells. Nano Energy, 2020, 76, 105127.	8.2	76
256	Enhanced Perovskite Solar Cell Efficiency Via the Electric-Field-Induced Approach. ACS Applied Materials & Interfaces, 2020, 12, 27258-27267.	4.0	19
257	Low dark current and high-performance hybrid perovskite photodetectors with a PBDB-T:IHIC ultrathin passivation layer. Optics Letters, 2020, 45, 5860.	1.7	9
258	Photon recycling in perovskite solar cells and its impact on device design. Nanophotonics, 2021, 10, 2023-2042.	2.9	29
259	Depth-dependent defect manipulation in perovskites for high-performance solar cells. Energy and Environmental Science, 2021, 14, 6526-6535.	15.6	114
260	Reply to the â€~Comment on "Tremendously enhanced photocurrent enabled by triplet–triplet annihilation up-conversion for high-performance perovskite solar cellsâ€â€™ by L. Nienhaus and T. W. Schmidt, <i>Energy Environ. Sci.</i> , 2021, <b>14</b> , 10.1039/D1EE01446C. Energy and Environmental Science, 2021, 14, 6053-6054.	15.6	2
261	Achieving Efficient and Stable Perovskite Solar Cells in Ambient Air Through Nonâ€Halide Engineering. Advanced Energy Materials, 2021, 11, 2102169.	10.2	35
262	Identifying and Passivating Killer Defects in Pb-Free Double Cs <sub>2</sub> AgBiBr <sub>6</sub> Perovskite. Journal of Physical Chemistry Letters, 2021, 12, 10581-10588.	2.1	17
263	Interfacial Passivation Engineering of Perovskite Solar Cells with Fill Factor over 82% and Outstanding Operational Stability on n-i-p Architecture. ACS Energy Letters, 2021, 6, 3916-3923.	8.8	115
264	A comprehensive review on defect passivation and gradient energy alignment strategies for highly efficient perovskite solar cells. Journal Physics D: Applied Physics, 2022, 55, 043001.	1.3	9
265	Defect suppression and energy level alignment in formamidinium-based perovskite solar cells. Journal of Energy Chemistry, 2022, 67, 65-72.	7.1	19
266	ITO/SnO <sub>2</sub> Interface Defect Passivation via Atomic Layer Deposited Al <sub>2</sub> O <sub>3</sub> for Highâ€Efficiency Perovskite Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100406.	0.8	3
267	Interfacial Engineering of Perovskite Solar Cells with Evaporated PbI <sub>2</sub> Ultrathin Layers. ACS Applied Materials & Interfaces, 2021, 13, 53282-53288.	4.0	12
268	PCBM/Ag interface dipole management in inverted perovskite solar cells. Applied Physics Letters, 2021, 119, .	1.5	10
269	Improving interfacial charge transfer by multi-functional additive for high-performance carbon-based perovskite solar cells. Applied Physics Letters, 2021, 119, .	1.5	11
270	Improving upconversion efficiency of NaLuF4:Yb,Er by doping Gd3+ and application for perovskite solar cells. Journal of Materials Science: Materials in Electronics, 0, , 1.	1.1	0
272	Humidityâ€Induced Defectâ€Healing of Formamidiniumâ€Based Perovskite Films. Small, 2021, 17, e2104165. 	5.2	10

#	Article	IF	Citations
273	Combined <i>in Situ</i> Photoluminescence and X-ray Scattering Reveals Defect Formation in Lead-Halide Perovskite Films. Journal of Physical Chemistry Letters, 2021, 12, 10156-10162.	2.1	15
274	Effect of cation vacancy on lattice and luminescence properties in CsPbBr3 quantum dots. Ceramics International, 2022, 48, 3383-3389.	2.3	9
275	Control of the Surface Disorder by Ionâ€Exchange to Achieve High Openâ€Circuit Voltage in HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> Perovskite Solar Cell. Small Methods, 2021, 5, e2101079.	4.6	7
276	Controlling Quantum-Well Width Distribution and Crystal Orientation in Two-Dimensional Tin Halide Perovskites via a Strong Interlayer Electrostatic Interaction. ACS Applied Materials & Interfaces, 2021, 13, 49907-49915.	4.0	13
277	Silicon heterojunction-based tandem solar cells: past, status, and future prospects. Nanophotonics, 2021, 10, 2001-2022.	2.9	21
278	Dual-functional passivators for highly efficient and hydrophobic FA-based perovskite solar cells. Chemical Engineering Journal, 2022, 433, 133227.	6.6	11
279	Plasmon-induced trap filling at grain boundaries in perovskite solar cells. Light: Science and Applications, 2021, 10, 219.	7.7	30
280	Generic water-based spray-assisted growth for scalable high-efficiency carbon-electrode all-inorganic perovskite solar cells. IScience, 2021, 24, 103365.	1.9	10
281	Hydrogen-Anion-Induced Carrier Recombination in MAPbI <sub>3</sub> Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 10677-10683.	2.1	12
282	Progress in Perovskite Solar Cells towards Commercialization—A Review. Materials, 2021, 14, 6569.	1.3	10
283	Hydroxylated non-fullerene acceptor for highly efficient inverted perovskite solar cells. Energy and Environmental Science, 2021, 14, 6536-6545.	15.6	33
284	Hydrophobic ï€-conjugated organic small molecule as a multi-functional interface material enables efficient and stable perovskite solar cells. Chemical Engineering Journal, 2022, 430, 133065.	6.6	15
285	Synergistic passivation by alkali metal and halogenoid ions for high efficiency HTM-free carbon-based CsPbI2Br solar cells. Chemical Engineering Journal, 2022, 430, 133083.	6.6	26
286	Charge Carrier and Mobile ion Dynamic Processes in Perovskite Solar Cells: Progress and Prospect. , 2020, , 1-34.		0
287	Interfacial Defect Passivation and Charge Carrier Management for Efficient Perovskite Solar Cells via a Highly Crystalline Small Molecule. ACS Energy Letters, 2021, 6, 4209-4219.	8.8	63
288	Surface Reconstruction and In Situ Formation of 2D Layer for Efficient and Stable 2D/3D Perovskite Solar Cells. Small Methods, 2021, 5, e2101000.	4.6	33
289	Effect of recombination process in femtosecond laser-induced modification on Ge crystal*. Chinese Physics B, 2020, 29, 114208.	0.7	0
290	Construction of nanostructured CH3NH3PbI3 layer for high-performance perovskite solar cells by Ar plasma etching. Materials Research Bulletin, 2022, 147, 111666.	2.7	7

#	Article	IF	CITATIONS
291	Interface Chelation Induced by Pyridineâ€Based Polymer for Efficient and Durable Airâ€Processed Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	10
292	Lewis adduct approach for self-assembled block copolymer perovskite quantum dots composite toward optoelectronic application: Challenges and prospects. Chemical Engineering Journal, 2022, 431, 133701.	6.6	19
294	A Comparison of Charge Carrier Dynamics in Organic and Perovskite Solar Cells. Advanced Materials, 2022, 34, e2101833.	11.1	55
295	Nâ€Type Conjugated Polymer as Multiâ€Functional Interfacial Layer for Highâ€Performance and Ultraâ€Stable Selfâ€Powered Photodetectors Based on Perovskite Nanowires. Advanced Functional Materials, 0, , 2108356.	7.8	8
296	Mechanochemistry Advances Highâ€Performance Perovskite Solar Cells. Advanced Materials, 2022, 34, e2107420.	11.1	51
297	Energy Resonance Transfer between Quantum Defects in Metal Halide Perovskites. Journal of Physical Chemistry Letters, 2021, 12, 11182-11190.	2.1	2
298	Self-assembled donor-acceptor hole contacts for inverted perovskite solar cells with an efficiency approaching 22%: The impact of anchoring groups. Journal of Energy Chemistry, 2022, 68, 87-95.	7.1	28
299	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
300	Reversible Manipulation of Photoconductivity Caused by Surface Oxygen Vacancies in Perovskite Stannates with Ultraviolet Light. Advanced Materials, 2022, 34, e2107650.	11.1	17
301	Hole transporting materials in inorganic CsPbI3â^'Br solar cells: Fundamentals, criteria and opportunities. Materials Today, 2022, 52, 250-268.	8.3	20
302	Snâ€Pb Mixed Perovskites with Fullereneâ€Derivative Interlayers for Efficient Fourâ€Terminal Allâ€Perovskite Tandem Solar Cells. Advanced Functional Materials, 2022, 32, 2107650.	7.8	30
303	Probing the Origin of the Open Circuit Voltage in Perovskite Quantum Dot Photovoltaics. ACS Nano, 2021, 15, 19334-19344.	7.3	18
304	Field‣ffect Control in Hole Transport Layer Composed of Li:NiO/NiO for Highly Efficient Inverted Planar Perovskite Solar Cells. Advanced Materials Interfaces, 2022, 9, 2101562.	1.9	12
305	Room-temperature multiple ligands-tailored SnO2 quantum dots endow in situ dual-interface binding for upscaling efficient perovskite photovoltaics with high VOC. Light: Science and Applications, 2021, 10, 239.	7.7	40
306	Reducing energy loss via adjusting the anode work function and perovskite layer morphology for the efficient and stable hole transporting layer-free perovskite solar cells. Chemical Engineering Journal, 2022, 431, 133948.	6.6	17
307	Impedance spectroscopy for perovskite solar cells: characterisation, analysis, and diagnosis. Journal of Materials Chemistry C, 2022, 10, 742-761.	2.7	68
308	<i>In situ</i> polymer-covered annealing strategy for high-efficiency carbon-electrode CsPbIBr <sub>2</sub> solar cells. New Journal of Chemistry, 2021, 45, 22661-22667.	1.4	2
309	Charge Transport Layers in Halide Perovskite Photonic Devices. , 2021, , 1-32.		0

#	Article	IF	CITATIONS
310	The Role of Carbon Allotrope-Based Charge Transport Layers in Enhancing the Performance of Perovskite Solar Cells. , 2021, , 1-38.		0
311	Excited-State Dynamics in Metal Halide Perovskites: A Theoretical Perspective. , 2021, , 1-54.		0
312	Crystallization kinetics modulation and defect suppression of all-inorganic CsPbX <sub>3</sub> perovskite films. Energy and Environmental Science, 2022, 15, 413-438.	15.6	53
313	Design of dopant-free small molecular hole transport materials for perovskite solar cells: a viewpoint from defect passivation. Journal of Materials Chemistry A, 2022, 10, 1150-1178.	5.2	44
314	Tailoring Phase Purity in the 2D/3D Perovskite Heterostructures Using Lattice Mismatch. ACS Energy Letters, 2022, 7, 550-559.	8.8	23
315	Robust heterojunction to strengthen the performances of FAPbI3 perovskite solar cells. Chemical Engineering Journal, 2022, 432, 134311.	6.6	7
316	Annealing-free perovskite films by EDOT-assisted anti-solvent strategy for flexible indoor and outdoor photovoltaics. Nano Energy, 2022, 94, 106866.	8.2	12
317	Defects and doping engineering towards high performance lead-free or lead-less perovskite solar cells. Journal of Energy Chemistry, 2022, 68, 420-438.	7.1	27
318	Double Inorganic Hole Extraction Layer of Cs:NiO <sub>x</sub> /CuInS <sub>2</sub> for Perovskite Solar Cells with Enhanced Efficiency and Stability. SSRN Electronic Journal, 0, , .	0.4	0
319	Surface Passivation Toward Efficient and Stable Perovskite Solar Cells. Energy and Environmental Materials, 2023, 6, .	7.3	46
320	Perovskite Quantum Dots in Solar Cells. Advanced Science, 2022, 9, e2104577.	5.6	49
321	Perovskite Nanocomposite Layers Engineering for Efficient and Stable Solar Cells. Journal of Nano Research, 0, 71, 71-109.	0.8	4
322	Perovskite Nanowires for Next-Generation Optoelectronic Devices: Lab to Fab. ACS Applied Energy Materials, 2022, 5, 1342-1377.	2.5	9
323	All-perovskite tandem solar cells with improved grain surface passivation. Nature, 2022, 603, 73-78.	13.7	544
324	Interfacial Chemistry Triggers Ultrafast Radiative Recombination in Metal Halide Perovskites. Angewandte Chemie, 2022, 134, .	1.6	1
325	Methylthiophene terminated D–π–D molecular semiconductors as multifunctional interfacial materials for high performance perovskite solar cells. Journal of Materials Chemistry C, 2022, 10, 1862-1869.	2.7	4
326	Direct measurement of radiative decay rates in metal halide perovskites. Energy and Environmental Science, 2022, 15, 1211-1221.	15.6	7
328	Quantifying Efficiency Limitations in Allâ€Inorganic Halide Perovskite Solar Cells. Advanced Materials, 2022, 34, e2108132.	11.1	44

#	Article	IF	CITATIONS
329	Tunable engineering of photo- and electro-induced carrier dynamics in perovskite photoelectronic devices. Science China Materials, 2022, 65, 855-875.	3.5	9
330	Photothermal synergy for efficient dry reforming of CH <sub>4</sub> by an Ag/AgBr/CsPbBr <sub>3</sub> composite. Catalysis Science and Technology, 2022, 12, 1628-1636.	2.1	9
331	Emergence of Deep Traps in Long-Term Thermally Stressed CH3NH3PbI3 Perovskite Revealed by Thermally Stimulated Currents. Journal of Physical Chemistry Letters, 2022, 13, 552-558.	2.1	6
332	Inspired from Spiro-OMeTAD: developing ambipolar spirobifluorene derivatives as effective passivation molecules for perovskite solar cells. Journal of Materials Chemistry C, 2022, 10, 1357-1364.	2.7	10
333	Ionic Liquids Modulating CsPbI <sub>3</sub> Colloidal Quantum Dots Enable Improved Mobility for High-Performance Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 4061-4070.	4.0	17
334	Interfacial Chemistry Triggers Ultrafast Radiative Recombination in Metal Halide Perovskites. Angewandte Chemie - International Edition, 2022, 61, .	7.2	22
335	Review on efficiency improvement effort of perovskite solar cell. Solar Energy, 2022, 233, 421-434.	2.9	74
336	Dual Modification Engineering via Lanthanideâ€Based Halide Quantum Dots and Black Phosphorus Enabled Efficient Perovskite Solar Cells with High Openâ€Voltage of 1.235ÂV. Advanced Functional Materials, 2022, 32, .	7.8	22
337	Dual bulk and interface engineering with ionic liquid for enhanced performance of ambient-processed inverted CsPbI3 perovskite solar cells. Journal of Materials Science and Technology, 2022, 114, 165-171.	5.6	14
338	Predicting the photon energy of quasi-2D lead halide perovskites from the precursor composition through machine learning. Nanoscale Advances, 2022, 4, 1632-1638.	2.2	6
339	Recent advancements and applications in 3D printing of functional optics. Additive Manufacturing, 2022, 52, 102682.	1.7	33
340	Emerging Newâ€Generation Detecting and Sensing of Metal Halide Perovskites. Advanced Electronic Materials, 2022, 8, .	2.6	17
341	Small amines bring big benefits to perovskite-based solar cells and light-emitting diodes. CheM, 2022, 8, 351-383.	5.8	35
342	Antiseptic Povidone–lodine Heals the Grain Boundary of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 8984-8991.	4.0	28
343	Lewis Base Plays a Double-Edged-Sword Role in Trap State Engineering of Perovskite Polycrystals. Journal of Physical Chemistry Letters, 2022, 13, 1571-1577.	2.1	11
344	Blind Image Separation Using the JADE Method. Engineering Proceedings, 2022, 14, .	0.4	0
345	Interfacial Engineering with Aluminum Oxide toward an Improved Selfâ€Powered Narrowband Visibleâ€Light Photodetection in Lead Halide Perovskite CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> /p‣i Heterojunctions. Advanced Materials	1.9	9
346	Achieve Better Performance of Inverted Perovskite Solar Cells by Using the Fluorinated Polymer as the Electron Transporting Layer. ACS Applied Energy Materials, 0, , .	2.5	2

#	Article	IF	CITATIONS
347	Guanidinium-assisted crystallization modulation and reduction of open-circuit voltage deficit for efficient planar FAPbBr3 perovskite solar cells. Chemical Engineering Journal, 2022, 437, 135181.	6.6	15
348	Role of π-conjugated-length-regulated perovskite intergrain interconnecting in the photovoltaic performance of perovskite solar cells. Applied Surface Science, 2022, 585, 152670.	3.1	5
349	Perovskite Solar Cells on Sn-Doped In2o3 Electrodes with Artificially Controlled (222) Preferred Orientation. SSRN Electronic Journal, 0, , .	0.4	0
350	Deep level defects passivated by small molecules for the enhanced efficiency and stability of inverted perovskite solar cells. Journal of Materials Chemistry C, 2022, 10, 5922-5928.	2.7	14
351	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
352	Boosting Radiation of Stacked Halide Layer for Perovskite Solar Cells With Efficiency Over 25%. SSRN Electronic Journal, 0, , .	0.4	0
353	A Review of Three-Dimensional Tin Halide Perovskites as Solar Cell Materials. Materials Research, 0, 25,	0.6	5
354	Disorder control enhances ultrathin solar cells. Nature Photonics, 2022, 16, 176-177.	15.6	2
355	Efficient and Stable Large Bandgap MAPbBr <sub>3</sub> Perovskite Solar Cell Attaining an Open Circuit Voltage of 1.65 V. ACS Energy Letters, 2022, 7, 1112-1119.	8.8	21
356	Interface Engineering in Solution-Processed Thin-Film Solar Cells. Accounts of Materials Research, 2022, 3, 272-282.	5.9	27
357	Combining Perovskites and Quantum Dots: Synthesis, Characterization, and Applications in Solar Cells, LEDs, and Photodetectors. Advanced Optical Materials, 2022, 10, .	3.6	23
358	Engineering Surface Orientations for Efficient and Stable Hybrid Perovskite Single-Crystal Solar Cells. ACS Energy Letters, 2022, 7, 1544-1552.	8.8	24
359	Acetylammonium chloride as an additive for crystallization control and defect passivation in MAPbI <sub>3</sub> based perovskite solar cells. Journal Physics D: Applied Physics, 2022, 55, 265501.	1.3	7
360	Using Ligand Engineering to Produce Efficient and Stable Pb–Sn Perovskite Solar Cells with Antioxidative 2D Capping Layers. ACS Applied Materials & Interfaces, 2022, 14, 14729-14738.	4.0	8
361	Aminoâ€Functionalized Niobiumâ€Carbide MXene Serving as Electron Transport Layer and Perovskite Additive for the Preparation of Highâ€Performance and Stable Methylammoniumâ€Free Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	55
362	Origin of Efficiency Enhancement by Lattice Expansion in Hybrid-Perovskite Solar Cells. Physical Review Letters, 2022, 128, 136401.	2.9	28
363	Deciphering the Reduced Loss in High Fill Factor Inverted Perovskite Solar Cells with Methoxy-Substituted Poly(Triarylamine) as the Hole Selective Contact. ACS Applied Materials & Interfaces, 2022, 14, 12640-12651.	4.0	11
364	Manipulating Crystallization Kinetics in Highâ€Performance Bladeâ€Coated Perovskite Solar Cells via Cosolventâ€Assisted Phase Transition. Advanced Materials, 2022, 34, e2200276.	11.1	64

#	Article	IF	CITATIONS
365	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
366	Predicting Experimental Formability of Hybrid Organic–Inorganic Perovskites via Imbalanced Learning. Journal of Physical Chemistry Letters, 2022, 13, 3032-3038.	2.1	9
367	Insights from scalable fabrication to operational stability and industrial opportunities for perovskite solar cells and modules. Cell Reports Physical Science, 2022, 3, 100827.	2.8	16
368	Perovskite Films Treated with Polyvinyl Pyrrolidone for High-Performance Inverted Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 4448-4460.	2.5	12
369	A multifunctional flame retardant enabling efficient and stable formamidine-cesium perovskite solar cells. Solar Energy Materials and Solar Cells, 2022, 238, 111641.	3.0	4
370	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
371	Cs2SnI6 nanocrystals enhancing hole extraction for efficient carbon-based CsPbI2Br perovskite solar cells. Chemical Engineering Journal, 2022, 440, 135710.	6.6	31
372	Synergistic effect of amide and fluorine of polymers assist stable inverted perovskite solar cells with fill factorÂ>Â83%. Chemical Engineering Journal, 2022, 442, 136136.	6.6	29
373	Quantification of Losses in a Photovoltaic System: A Review. , 2021, 11, .		4
374	Interfacial defect passivation by novel phosphonium salts yields 22% efficiency perovskite solar cells: Experimental and theoretical evidence. EcoMat, 2022, 4, .	6.8	35
375	Aiming at the industrialization of perovskite solar cells: Coping with stability challenge. Applied Physics Letters, 2021, 119, .	1.5	3
376	Perovskite Solar Cells Go Bifacial—Mutual Benefits for Efficiency and Durability. Advanced Materials, 2022, 34, e2106805.	11.1	31
377	Optical spectra of the quantum defects in metal halide perovskites. Applied Physics Letters, 2021, 119, 232102.	1.5	0
378	Recent Progress and Future Prospects on All-Organic Polymer Dielectrics for Energy Storage Capacitors. Chemical Reviews, 2022, 122, 3820-3878.	23.0	240
379	Recent Progress of Critical Interface Engineering for Highly Efficient and Stable Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	78
380	Ionicâ€Liquidâ€Perovskite Capping Layer for Stable 24.33%â€Efficient Solar Cell. Advanced Energy Materials, 2022, 12, .	10.2	80
381	Mixed cation 2D perovskite: a novel approach for enhanced perovskite solar cell stability. Sustainable Energy and Fuels, 2022, 6, 2471-2477.	2.5	9
382	A review on monolithic perovskite/c-Si tandem solar cells: progress, challenges, and opportunities. Journal of Materials Chemistry A, 2022, 10, 10811-10828.	5.2	11

#	Article	IF	CITATIONS
383	Optimized carrier extraction at interfaces for 23.6% efficient tin–lead perovskite solar cells. Energy and Environmental Science, 2022, 15, 2096-2107.	15.6	172
384	Superhalogen Passivation for Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	23
385	Strain Modulation for Light‣table n–i–p Perovskite/Silicon Tandem Solar Cells. Advanced Materials, 2022, 34, e2201315.	11.1	45
386	Buried Interface Modification in Perovskite Solar Cells: A Materials Perspective. Advanced Energy Materials, 2022, 12, .	10.2	87
387	Organic-semiconductor-assisted dielectric screening effect for stable and efficient perovskite solar cells. Science Bulletin, 2022, 67, 1243-1252.	4.3	23
388	Pseudohalide Anions to Suppress Oxidative Degradation for Efficient Formamidinium-Based Sn–Pb Halide Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 18302-18312.	4.0	16
389	CH <sub>3</sub> NH <sub>3</sub> <sup>+</sup> and Pb Immobilization Through PbI <sub>2</sub> Binding by Organic Molecule Doping for Homogeneous Organometal Halide Perovskite Films. Journal of Materials Chemistry A, 0, , .	5.2	1
390	NaBr-Modified CsPbI <sub>2</sub> Br Improves the Comprehensive Performance of the Solar Cells. IEEE Journal of Photovoltaics, 2022, 12, 948-953.	1.5	6
391	Development of <scp>MXene</scp> / <scp> WO <sub>3</sub> </scp> embedded <scp>PEDOT</scp> : <scp>PSS</scp> hole transport layers for highly efficient perovskite solar cells and Xâ€ray detectors. International Journal of Energy Research, 2022, 46, 12485-12497.	2.2	13
392	Azoâ€Initiatorâ€Induced Cascade Defect Passivation for Efficient and Stable Planar Perovskite Solar Cells. Solar Rrl, 0, , 2200238.	3.1	4
393	A multifunctional piperidine-based modulator for printable mesoscopic perovskite solar cells. Chemical Engineering Journal, 2022, 446, 136967.	6.6	13
394	Numerical and experimental performance evaluation of a laser-concentrated photovoltaic-thermoelectric generator hybrid system. Optics Express, 2022, 30, 19465.	1.7	4
395	Minimizing voltage deficit in Methylammonium-Free perovskite solar cells via surface reconstruction. Chemical Engineering Journal, 2022, 444, 136622.	6.6	22
396	Charge-carrier dynamics and regulation strategies in perovskite light-emitting diodes: From materials to devices. Applied Physics Reviews, 2022, 9, .	5.5	20
397	Yb-doped SnO <sub>2</sub> electron transfer layer assisting the fabrication of high-efficiency and stable perovskite solar cells in air. RSC Advances, 2022, 12, 14631-14638.	1.7	3
398	Efficient passivation on halide perovskite by tailoring the organic molecular functional groups: First-principles investigation. Applied Surface Science, 2022, 597, 153716.	3.1	6
399	Double inorganic hole extraction layer of Cs: <scp> NiO <sub>x</sub> </scp> / <scp> CuInS <sub>2</sub> </scp> for efficiency and stability enhancement of perovskite solar cells. International Journal of Energy Research, 0, , .	2.2	0
400	Embedding SnO <sub>2</sub> Thin Shell Protected Ag Nanowires in SnO <sub>2</sub> ETL to Enhance the Performance of Perovskite Solar Cells. Langmuir, 2022, 38, 6752-6760.	1.6	8

#	Article	IF	CITATIONS
401	Microstrain and Urbach Energy Relaxation in FAPbl <sub>3</sub> -Based Solar Cells through Powder Engineering and Perfluoroalkyl Phosphate Ionic Liquid Additives. ACS Applied Materials & Interfaces, 2022, 14, 24546-24556.	4.0	10
402	Selfâ€Healing Perovskite Films Enabled by Fluorinated Crossâ€Linked Network Targeting Flexible Lightâ€Emitting Diode. Advanced Optical Materials, 2022, 10, .	3.6	5
403	Above 23% Efficiency by Binary Surface Passivation of Perovskite Solar Cells Using Guanidinium and Octylammonium Spacer Cations. Solar Rrl, 2022, 6, .	3.1	22
404	Photovoltaic performance of bifacial perovskite/c-Si tandem solar cells. Journal of Power Sources, 2022, 540, 231622.	4.0	3
405	Experimental Investigation on Photothermal Conversion Properties of Collagen Solution-Based Carbon Black Nanofluid. SSRN Electronic Journal, 0, , .	0.4	0
406	Review of defect engineering in perovskites for photovoltaic application. Materials Advances, 2022, 3, 5234-5247.	2.6	28
407	Enhancement on charge transfer properties of Cu <sub>12</sub> Sb <sub>4</sub> S <sub>13</sub> quantum dots hole transport materials by surface ligand modulation in perovskite solar cells. New Journal of Chemistry, 2022, 46, 11751-11758.	1.4	3
408	Solution-processed perovskite crystals for electronics: Moving forward. Matter, 2022, 5, 1700-1733.	5.0	3
409	Calibrating Out-of-Equilibrium Electron–Phonon Couplings in Photoexcited MoS <sub>2</sub> . Nano Letters, 2022, 22, 4800-4806.	4.5	10
410	Efficient and stable perovskite solar cells based on mesoscopic architecture with nanoparticles additive treatment. Materials Science in Semiconductor Processing, 2022, 148, 106832.	1.9	2
411	The high open-circuit voltage of perovskite solar cells: a review. Energy and Environmental Science, 2022, 15, 3171-3222.	15.6	181
412	Grain Boundary Passivation Modulated by Molecular Doping for High-Performance Perovskite Solar Cells. Journal of Renewable Materials, 2022, .	1.1	0
413	Current state-of-the-art characterization methods for probing defect passivation towards efficient perovskite solar cells. Journal of Materials Chemistry A, 2022, 10, 19278-19303.	5.2	10
414	Metal Halide Perovskites for Redâ€Emission Lightâ€Emitting Diodes. Small Structures, 2022, 3, .	6.9	15
415	Eliminating Radiative Losses in Long-Range Exciton Transport. PRX Quantum, 2022, 3, .	3.5	5
416	Oneâ€Step Thermal Gradient†and Antisolventâ€Free Crystallization of Allâ€Inorganic Perovskites for Highly Efficient and Thermally Stable Solar Cells. Advanced Science, 2022, 9, .	5.6	17
417	Light Management through Organic Bulk Heterojunction and Carrier Interfacial Engineering for Perovskite Solar Cells with 23.5% Efficiency. Advanced Functional Materials, 2022, 32, .	7.8	16
418	Molecular Doping Enabling Mobility Boosting of 2D Sn <sup>2+</sup> â€Based Perovskites. Advanced Functional Materials, 2022, 32, .	7.8	18

#	Article	IF	CITATIONS
419	Inverse Design of Hybrid Organic–Inorganic Perovskites with Suitable Bandgaps via Proactive Searching Progress. ACS Omega, 2022, 7, 21583-21594.	1.6	14
420	A theoretical exploration of lead-free double perovskite La2NiMnO6 based solar cell via SCAPS-1D. Optical Materials, 2022, 131, 112611.	1.7	21
421	Ionogel-perovskite matrix enabling highly efficient and stable flexible solar cells towards fully-R2R fabrication. Energy and Environmental Science, 2022, 15, 3439-3448.	15.6	20
422	A trifluorothymine interlayer reduces the degradation of perovskite and controls the cracks of hole transport layers. Journal of Materials Chemistry A, 2022, 10, 16080-16086.	5.2	4
423	Understanding and minimizing non-radiative recombination losses in perovskite light-emitting diodes. Journal of Materials Chemistry C, 2022, 10, 13590-13610.	2.7	29
424	Introduction of cadmium chloride additive to improve the performance and stability of perovskite solar cells. RSC Advances, 2022, 12, 20461-20470.	1.7	40
425	Modulating the Electron Transporting Properties of Subphthalocyanines for Inverted Perovskite Solar Cells. Frontiers in Chemistry, 0, 10, .	1.8	5
426	4-Hydroxy-2,2,6,6-tetramethylpiperidine as a Bifunctional Interface Modifier for High-Efficiency and Stable Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 6754-6763.	2.5	3
427	A Multifunctional Fluorinated Polymer Enabling Efficient MAPbl <sub>3</sub> -Based Inverted Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 31285-31295.	4.0	7
428	High-Performance 1 cm <sup>2</sup> Perovskite-Organic Tandem Solar Cells with a Solvent-Resistant and Thickness-Insensitive Interconnecting Layer. ACS Applied Materials & Interfaces, 2022, 14, 29896-29904.	4.0	3
429	Efficient Environmentâ€friendly Leadâ€free Tin Perovskite Solar Cells Enabled by Incorporating <scp>4â€Fluorobenzylammonium</scp> Iodide Additives. Energy and Environmental Materials, 2023, 6, .	7.3	10
430	Improved efficiency and stability of organic-inorganic hybrid perovskite solar cell via dithizone surface passivation effect. Organic Electronics, 2022, , 106604.	1.4	1
431	Surface modified NiOx as an efficient hole transport layer in inverted perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2022, 33, 18522-18532.	1.1	2
432	Synergistic Crystallization and Passivation by a Single Molecular Additive for Highâ€Performance Perovskite Solar Cells. Advanced Materials, 2022, 34, .	11.1	37
433	Enhancing the Hot Carrier Injection of Perovskite Solar Cells by Incorporating a Molecular Dipole Interlayer. Advanced Functional Materials, 2022, 32, .	7.8	38
434	Defect Passivation by a Multifunctional Phosphate Additive toward Improvements of Efficiency and Stability of Perovskite Solar Cells. ACS Applied Materials & amp; Interfaces, 2022, 14, 31911-31919.	4.0	6
435	Atomistic Mechanism of Surface-Defect Passivation: Toward Stable and Efficient Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2022, 13, 6686-6693.	2.1	12
436	Sequential vacuum-evaporated perovskite solar cells with more than 24% efficiency. Science Advances, 2022, 8, .	4.7	118

#	Article	IF	CITATIONS
437	Recent defect passivation drifts and role of additive engineering in perovskite photovoltaics. Nano Energy, 2022, 101, 107579.	8.2	46
438	Ultra-high moisture stability perovskite films, soaking in water over 360Âmin. Chemical Engineering Journal, 2022, 450, 138028.	6.6	5
439	Bulk Restructure of Perovskite Films via Surface Passivation for Highâ€Performance Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	32
440	Perovskite solar cells: recent progress and strategies developed for minimizing interfacial recombination. Frontiers of Materials Science, 2022, 16, .	1.1	3
441	Multistrategy Preparation of Efficient and Stable Environment-Friendly Lead-Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 35513-35521.	4.0	9
442	A synergistic effect of the ion beam sputtered NiO <sub>x</sub> hole transport layer and MXene doping on inverted perovskite solar cells. Nanotechnology, 2022, 33, 425202.	1.3	7
443	Electrochemically Prepared Polyaniline as an Alternative to Poly(3,4-ethylenedioxythiophene)-poly(styrenesulfonate) for Inverted Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 9351-9360.	2.5	2
444	Renewed Prospects for Organic Photovoltaics. Chemical Reviews, 2022, 122, 14180-14274.	23.0	323
445	Analysing low speed efficiency of switched reluctance motor material grade for electric vehicle. Materials Today: Proceedings, 2022, 68, 1845-1852.	0.9	7
446	Efficient and Stable 3D/2D Perovskite Solar Cells through Vertical Heterostructures with (BA) <sub>4</sub> AgBiBr <sub>8</sub> Nanosheets. Advanced Materials, 2022, 34, .	11.1	22
447	Wide Bandgap Perovskite Photovoltaic Cells for Stray Light Recycling in a System Emitting Broadband Polarized Light. Advanced Energy Materials, 2022, 12, .	10.2	2
448	Enhanced Efficiency and Stability of nâ€iâ€p Perovskite Solar Cells by Incorporation of Fluorinated Graphene in the Spiroâ€OMeTAD Hole Transport Layer. Advanced Energy Materials, 2022, 12, .	10.2	41
449	Recognizing the Importance of Fast Nonisothermal Crystallization for High-Performance Two-Dimensional Dion–Jacobson Perovskite Solar Cells with High Fill Factors: A Comprehensive Mechanistic Study. Journal of the American Chemical Society, 2022, 144, 14897-14906.	6.6	21
450	Isomeric Dithienothiopheneâ€Based Hole Transport Materials: Role of Sulphur Atoms Positions on Photovoltaic Performance of Inverted Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	15
451	Direct and stable $\hat{l}\pm$ -phase formation via ionic liquid solvation for formamidinium-based perovskite solar cells. Joule, 2022, 6, 2203-2217.	11.7	51
452	A Universal Method of Perovskite Surface Passivation for CsPbX <sub>3</sub> Solar Cells with <i>V</i> <sub>OC</sub> over 90% of the Sâ€Q limit. Advanced Functional Materials, 2022, 32, .	7.8	35
453	Role of Moisture and Oxygen in Defect Management and Orderly Oxidation Boosting Carbonâ€Based CsPbl <sub>2</sub> Br Solar Cells to a New Record Efficiency. Advanced Materials, 2022, 34, .	11.1	32
454	Experimental investigation on photothermal conversion properties of collagen solution-based carbon black nanofluid. Case Studies in Thermal Engineering, 2022, 38, 102371.	2.8	6

#	Article	IF	CITATIONS
455	Tailoring multifunctional anion modifiers to modulate interfacial chemical interactions for efficient and stable perovskite solar cells. Nano Energy, 2022, 102, 107747.	8.2	73
456	3-Chloroperoxybenzoic acid doping spiroOMeTAD for improving the performance of perovskite solar cells. Chemical Engineering Journal, 2022, 450, 138313.	6.6	29
457	Fabrication and Modification Strategies of Metal Halide Perovskite Absorbers. Journal of Renewable Materials, 2023, 11, 61-77.	1.1	1
458	Passivation of surface defects in FAPbI3 perovskite by methimazole molecule: A first-principles investigation. Applied Surface Science, 2022, 605, 154829.	3.1	3
459	Investigating the Effect of Nonideal Conditions on the Performance of a Planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -Based Perovskite Solar Cell Through SCAPS-1D Simulation. SSRN Electronic Journal, 0, , .	0.4	0
460	Dual-layer synergetic optimization of high-efficiency planar perovskite solar cells using nitrogen-rich nitrogen carbide as an additive. Journal of Materials Chemistry A, 2022, 10, 21390-21400.	5.2	9
461	Compositional engineering for lead halide perovskite solar cells. Journal of Semiconductors, 2022, 43, 080202.	2.0	8
462	Surface reaction for efficient and stable inverted perovskite solar cells. Nature, 2022, 611, 278-283.	13.7	435
463	Comparative architecture in monolithic perovskite/silicon tandem solar cells. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	2.0	3
464	How to get high-efficiency lead chalcogenide quantum dot solar cells?. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	2.0	4
465	Polar Species for Effective Dielectric Regulation to Achieve Highâ€Performance CsPbl <sub>3</sub> Solar Cells. Advanced Materials, 2022, 34, .	11.1	27
466	Enabling full-scale grain boundary mitigation in polycrystalline perovskite solids. Science Advances, 2022, 8, .	4.7	34
467	Surface Chelation Enabled by Polymer-Doping for Self-Healable Perovskite Solar Cells. Nanomaterials, 2022, 12, 3125.	1.9	3
468	Double-side modification strategy for efficient carbon-based, all-inorganic CsPbIBr2 perovskite solar cells with high photovoltage. Journal of Materiomics, 2023, 9, 35-43.	2.8	2
469	Solvent Effect on Film Formation and Trap States of Two-Dimensional Dion–Jacobson Perovskite. Nano Letters, 2022, 22, 7545-7553.	4.5	31
470	Robust Nonspiroâ€Based Hole Conductors for Highâ€Efficiency Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	11
471	Great Influence of Organic Cation Motion on Charge Carrier Dynamics in Metal Halide Perovskite Unraveled by Unsupervised Machine Learning. Journal of Physical Chemistry Letters, 2022, 13, 8537-8545.	2.1	10
472	Suppression of Phase Transitions in Perovskite Thin Films through Cryogenic Electron Beam Irradiation. Nano Letters, 2022, 22, 7449-7456.	4.5	0

		CITATION REPORT		
#	Article		IF	CITATIONS
473	Defect Passivation via Isoxazole Doping in Perovskite Solar Cells. ACS Omega, 2022, 7,	34278-34285.	1.6	2
474	Reduced interfacial recombination in perovskite solar cells by structural engineering sim Journal of Optics (United Kingdom), 2022, 24, 115901.	ulation.	1.0	4
475	Spiroâ€OMeTADâ€Based Hole Transport Layer Engineering toward Stable Perovskite Sc Methods, 2022, 6, .	ılar Cells. Small	4.6	21
476	Interfacial Engineering for Highâ€Performance PTAAâ€Based Inverted 3D Perovskite Sol 2022, 6, .	ar Cells. Solar Rrl,	3.1	5
477	Facile Synthesized Acetamidine Thiocyanate with Synergistic Passivation and Crystalliza Efficient Perovskite Solar Cells. Solar Rrl, 2022, 6, .	tion for	3.1	5
478	Anchoring of halogen-cleaved organic ligands on perovskite surfaces. Energy and Enviro Science, 2022, 15, 5340-5349.	nmental	15.6	6
479	Reduced Open ircuit Voltage Loss of Perovskite Solar Cells via Forming p/p <sup>+<!--<br-->Homojunction and Interface Electric Field on the Surfaces of Perovskite Film. Advanced Materials, 2022, 12, .</sup>	sup> Energy	10.2	33
480	Strategic Approach for Frustrating Charge Recombination of Perovskite Solar Cells in Lc Indoor Light: Insertion of Polar Small Molecules at the Interface of the Electron Transpor Applied Energy Materials, 2022, 5, 13234-13242.	w-Intensity t Layer. ACS	2.5	2
481	(3-Aminopropyl)trimethoxysilane Surface Passivation Improves Perovskite Solar Cell Per Reducing Surface Recombination Velocity. ACS Energy Letters, 2022, 7, 4081-4088.	formance by	8.8	17
482	Anionic surfactant anchoring enables 23.4% efficient and stable perovskite solar cells. S Materials, 2022, 65, 3361-3367.	cience China	3.5	2
483	Active Manipulation of Luminescent Dynamics via Au NPs sPbBr <sub>3</sub> Interf Laser and Photonics Reviews, 2023, 17, .	acial Engineering.	4.4	6
484	Efficient Inverted Perovskite Solar Cells with a Lowâ€Dimensional Halide/Perovskite Het Advanced Energy Materials, 2022, 12, .	erostructure.	10.2	14
485	Hydroxyl substituted Spiro-OMeTAD as multi-site defect healing and carrier extraction e surface passivator toward efficient perovskite solar cells. Materials Today Energy, 2022,	nhanced 30, 101191.	2.5	3
486	Multifunctional anchoring of Oâ€ligands for highâ€performance and stable inverted per cells. InformaÄnÃ-MateriA¡ly, 2023, 5, .	rovskite solar	8.5	14
487	Surface Characterization of the Solutionâ€Processed Organic–Inorganic Hybrid Perov Small, 0, , 2204271.	skite Thin Films.	5.2	1
488	Conductive Passivator for Efficient Monolithic Perovskite/Silicon Tandem Solar Cell on Commercially Textured Silicon. Advanced Energy Materials, 2022, 12, .		10.2	23
489	Impact of radiation-induced point defects on thermal carrier decay processes in GaAs. A 2023, 242, 118480.	cta Materialia,	3.8	1
490	Refining Perovskite Heterojunctions for Effective Lightâ€Emitting Solar Cells. Advanced 35, .	Materials, 2023,	11.1	4

ARTICLE IF CITATIONS Photovoltaically top-performing perovskite crystal facets. Joule, 2022, 6, 2626-2643. 491 11.7 52 A Thiourea Competitive Crystallization Strategy for FAâ€Based Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, . Formate diffusion engineering of hole transport layer for highly efficient N-I-P perovskite solar cells. 493 2.9 1 Materials Today Physics, 2022, 28, 100886. Robust and Highly Conductive Water-Stable Copper Iodide-Based Hybrid Single Crystals. Chemistry of 494 Materials, 2022, 34, 10040-10049. Perovskite solar cells on Sn-doped In2O3 electrodes with artificially controlled (222) preferred 495 4.0 3 orientation. Journal of Power Sources, 2022, 551, 232198. Nonlinear absorption, refraction and optical limiting properties of CsPbBr3 perovskite quantum dot organic glass. Optical Materials, 2022, 134, 113090. 496 1.7 Study on the long time aging behavior of MAPbI<sub>3</sub>: from experiment to first-principles 497 1.7 0 simulation. RSC Advances, 2022, 12, 32979-32985. Recent progress in perovskite solar cells: from device to commercialization. Science China Chemistry, 2022, 65, 2369-2416. 498 4.2 Numerical Investigation of Photo-Generated Carrier Recombination Dynamics on the Device 499 Characteristics for the Perovskite/Carbon Nitride Absorber-Layer Solar Cell. Nanomaterials, 2022, 12, 0 1.9 4012. Investigating the effect of non-ideal conditions on the performance of a planar CH3NH3PbI3-based 1.4 perovskite solar cell through SCAPS-1D simulation. Heliyon, 2022, 8, e11471. Multidentate Coordination Induced Crystal Growth Regulation and Trap Passivation Enables over 24% 501 10.2 31 Efficiency in Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, . Molecularly Functionalized SnO<sub>2</sub> Films by Carboxylic Acids for High-Performance 4.0 Perovskite Solar Cells. ACS Applied Materials & amp; Interfaces, 2022, 14, 52838-52848. Recent review of interfacial engineering for perovskite solar cells: effect of functional groups on 503 1.7 8 the stability and efficiency. Materials Today Chemistry, 2022, 26, 101224. High Photoluminescence Intensity of Heterostructure AlGaN-based DUV-LED through Uniform Carrier 504 1.2 Distribution. Physica Scripta, 0, , First-principles study of structural, electronic, elastic and optical properties of alkali lead iodides 505 9.7 1 MPbl3 (M = Li, Na, K). Ukrainian Journal of Physical Optics, 2023, 24, 1-21. Low-intensity low-temperature analysis of perovskite solar cells for deep space applications. Energy 1.4 Advances, 2023, 2, 298-307. Recent Progress of Surface Passivation Molecules for Perovskite Solar Cell Applications. Journal of 507 1.1 2 Renewable Materials, 2023, 11, 1533-1554. Amorphous antimony sulfide nanoparticles construct multi-contact electron transport layers for efficient carbon-based all-inorganic CsPbI2Br perovskite solar cells. Chemical Engineering Journal, 6.6 2023, 455, 140871.

#	Article	IF	CITATIONS
509	Chemical approaches for electronic doping in photovoltaic materials beyond crystalline silicon. Chemical Society Reviews, 2022, 51, 10016-10063.	18.7	11
510	Manipulating Halide Perovskite Passivation by Controlling Amino Acid Derivative Isoelectric Point for Stable and Efficient Inverted Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	8
511	Enhanced Perovskite Solar Cell Stability and Efficiency via Multiâ€Functional Quaternary Ammonium Bromide Passivation. Advanced Materials Interfaces, 2023, 10, .	1.9	8
512	Efficient and Moistureâ€Stable Inverted Perovskite Solar Cells via nâ€Type Smallâ€Moleculeâ€Assisted Surface Treatment. Advanced Science, 2023, 10, .	5.6	16
513	Dual-Functional 3-Acetyl-2,5-dimethylthiophene Additive-Assisted Crystallization Control and Trap State Passivation for High-Performance Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 14701-14711.	2.5	4
514	Identification of Asymmetric Interfacial Recombination in Perovskite Solar Cells through Impedance Spectroscopy. ACS Applied Energy Materials, 2022, 5, 14760-14768.	2.5	1
515	Boosting radiation of stacked halide layer for perovskite solar cells with efficiency over 25%. Joule, 2023, 7, 112-127.	11.7	27
516	Nexuses Between the Chemical Design and Performance of Small Molecule Dopantâ€Free Hole Transporting Materials in Perovskite Solar Cells. Small, 2023, 19, .	5.2	19
517	Triboelectric nanogenerators for smart agriculture. InformaÄnÃ-Materiály, 2023, 5, .	8.5	12
518	Highâ€Radiance Nearâ€Infrared Perovskite Lightâ€Emitting Diodes with Improved Rollâ€Off Degradation. Advanced Optical Materials, 2023, 11, .	3.6	4
519	Modulating Residual Lead Iodide via Functionalized Buried Interface for Efficient and Stable Perovskite Solar Cells. ACS Energy Letters, 2023, 8, 666-676.	8.8	34
520	Evolution of Structure and Optoelectronic Properties During Halide Perovskite Vapor Deposition. Journal of Physical Chemistry Letters, 2022, 13, 11905-11912.	2.1	5
521	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
522	Solar utilization beyond photosynthesis. Nature Reviews Chemistry, 2023, 7, 91-105.	13.8	54
523	Highly Efficient White Emission from Semiconductor Ink Based on Copper Iodide Nanoclusters. Journal of Physical Chemistry Letters, 2022, 13, 11936-11941.	2.1	5
524	Synergistic Surface Modification of Tin–Lead Perovskite Solar Cells. Advanced Materials, 2023, 35, .	11.1	22
525	Recent progress in perovskite solar cells: material science. Science China Chemistry, 2023, 66, 10-64.	4.2	53
526	A bioinspired flexible neuromuscular system based thermal-annealing-free perovskite with passivation. Nature Communications, 2022, 13, .	5.8	29

ARTICLE IF CITATIONS # Efficient Inverted Perovskite Solar Cells via Improved Sequential Deposition. Advanced Materials, 2023, 527 11.1 15 35, . Blue Halide Perovskite Materials: Preparation, Progress, and Challenges. Laser and Photonics Reviews, 528 4.4 2023, 17, . Go beyond the limit: Rationally designed mixed-dimensional perovskite/semiconductor 529 5.2 8 heterostructures and their applications. Innovation(China), 2023, 4, 100363. A Universal Surface Treatment for p–i–n Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 56290-56297. Modifying the buried interface with azodicarbonamide for high-efficiency MA-free perovskite solar 531 2.5 2 cells. Materials Today Energy, 2023, 31, 101227. Hole-Transporting Self-Assembled Monolayer Enables Efficient Single-Crystal Perovskite Solar Cells with Enhanced Stability. ACS Energy Letters, 2023, 8, 950-956. 8.8 24 Wideâ€Bandgap Perovskite Solar Cell Using a Fluorideâ€Assisted Surface Gradient Passivation Strategy. 533 7.2 41 Angewandte Chemie - International Edition, 2023, 62, . Towards micro-PeLED displays. Nature Reviews Materials, 2023, 8, 341-353. 23.3 534 535 The nonhalides in perovskite solar cells. Materials Chemistry Frontiers, 2023, 7, 789-805. 3.2 6 Research on the photovoltaic conversion efficiency of power over fiber transmission based on OPGW power cable. , 2023, , . Wideâ€Bandgap Perovskite Solar Cell Using a Fluorideâ€Assisted Surface Gradient Passivation Strategy. 537 1.6 0 Angewandte Chemie, 2023, 135, . Synergetic Passivation of Metalâ€Halide Perovskite with Fluorinated Phenmethylammonium toward 28 Efficient Solar Cells and Modules. Advanced Energy Materials, 2023, 13, . Halide perovskite for light-emitting diodes., 2023, , 267-300. 539 0 Depthâ€Dependent Postâ€Treatment for Reducing Voltage Loss in Printable Mesoscopic Perovskite Solar 540 5.6 Cells. Advanced Science, 2023, 10, . The Influence of Different Recombination Pathways on Hysteresis in Perovskite Solar Cells with Ion 541 1.2 0 Migration. Inorganics, 2023, 11, 52. Synergistic Effects of Interfacial Energy Level Regulation and Stress Relaxation via a Buried Interface for Highly Efficient Perovskite Solar Cells. ACS Nano, 2023, 17, 2802-2812. 542 19 A study on theoretical models for investigating time-resolved photoluminescence in halide 543 1.36 perovskites. Physical Chemistry Chemical Physics, 2023, 25, 7574-7588. Challenges in the development of metal-halide perovskite single crystal solar cells. Journal of 544 5.2 Materials Chemistry A, 2023, 11, 3822-3848.

#	Article	IF	CITATIONS
545	Interface and Defect Engineering of a Hollow TiO <sub>2</sub> @ZnIn <sub>2</sub> S <sub>4</sub> Heterojunction for Highly Enhanced CO <sub>2</sub> Photoreduction Activity. ACS Sustainable Chemistry and Engineering, 2023, 11, 2531-2540.	3.2	11
546	Energy conversion materials for the space solar power station. Chinese Physics B, 2023, 32, 078802.	0.7	1
547	Passivating detrimental grain boundaries in perovskite films with strongly interacting polymer for achieving high-efficiency and stable perovskite solar cells. Applied Surface Science, 2023, 626, 157209.	3.1	6
548	3D printing and solar cell fabrication methods: A review of challenges, opportunities, and future prospects. Results in Optics, 2023, 11, 100385.	0.9	6
549	Effect of molecular configuration of additives on perovskite crystallization and hot carriers behavior in perovskite solar cells. Chemical Engineering Journal, 2023, 463, 142449.	6.6	13
550	Unraveling abnormal buried interface anion defect passivation mechanisms depending on cation-induced steric hindrance for efficient and stable perovskite solar cells. Journal of Energy Chemistry, 2023, 80, 1-9.	7.1	7
551	Round-comb Fe2O3@SnO2 heterostructures enable efficient light harvesting and charge extraction for high-performance all-inorganic perovskite solar cells. Journal of Colloid and Interface Science, 2023, 640, 918-927.	5.0	4
552	Study on carrier dynamics of perovskite solar cells via transient absorption. Journal of Alloys and Compounds, 2023, 952, 170051.	2.8	3
553	Probing the Genuine Carrier Dynamics of Semiconducting Perovskites under Sunlight. Jacs Au, 2023, 3, 441-448.	3.6	6
554	Quantifying electrochemical losses in perovskite solar cells. Journal of Materials Chemistry C, 2023, 11, 2911-2920.	2.7	1
555	Down-converting luminescent optoelectronics and their applications. APL Photonics, 2023, 8, .	3.0	6
556	Enhancement in Power Conversion Efficiency of Perovskite Solar Cells by Reduced Non-Radiative Recombination Using a Brij C10-Mixed PEDOT:PSS Hole Transport Layer. Polymers, 2023, 15, 772.	2.0	2
557	Universal Band Alignment Rule for Perovskite/Organic Heterojunction Interfaces. ACS Energy Letters, 2023, 8, 1313-1321.	8.8	8
558	Highly Efficient and Stable FAâ€Based Quasiâ€2D Ruddlesden–Popper Perovskite Solar Cells by the Incorporation of βâ€Fluorophenylethanamine Cations. Advanced Materials, 2023, 35, .	11.1	23
559	Shedding Light on the Moisture Stability of Halide Perovskite Thin Films. Energy Technology, 2023, 11, .	1.8	14
560	Functional Layers of Inverted Flexible Perovskite Solar Cells and Effective Technologies for Device Commercialization. Small Structures, 2023, 4, .	6.9	32
561	Comparative study of the optical, structural, and solar cell performance of (MAPbBr3)x(FAPbI3)1-x(MACl)0.33 mixed perovskite solar cells: With and without the passivation layer. Optical Materials, 2023, 137, 113558.	1.7	1
562	Organic Passivation of Deep Defects in Cu(In,Ga)Se <sub>2</sub> Film for Geometry-Simplified Compound Solar Cells. Research, 2023, 6, .	2.8	3

#	ARTICLE	IF	CITATIONS
563	Suppressing Nonradiative Recombination by Electron-Donating Substituents in 2D Conjugated Triphenylamine Polymers toward Efficient Perovskite Optoelectronics. Nano Letters, 2023, 23, 1954-1960.	4.5	7
564	Decreased uncoordinated Pb2+ defects induced by Lewis base for high-quality PSCs with much improved carrier transportation. Journal of Materials Science: Materials in Electronics, 2023, 34, .	1.1	0
565	Probing the influence of the passivation layer of 4-Hydroxyphenethylammonium iodide on the optical, structural and solar cell performance of (FAMACs)Pb(IBr)3 perovskite solar cells. Optical Materials, 2023, 137, 113544.	1.7	1
566	DMSOè',æ°"è¾åЩ退ç«å⁻¹CsPbBr3钙钛矿å≇€~³èf½ç"µæ±æ€§èf½çš"影哕 Chinese Science Bulletin, 2	2023, , .	0
567	Beyond Ti-based MXenes: A review of emerging non-Ti based metal-MXene structure, properties, and applications. Materials Today, 2023, 63, 313-338.	8.3	39
568	Enhancing hole extraction via carbon nanotubes/poly(3-hexylthiophene) composite for carbon-based CsPbI2Br solar cells with a new record efficiency. Science China Materials, 2023, 66, 1727-1735.	3.5	5
569	Photoluminescence Characterization of Halide Perovskite Films according to Measuring Conditions. Korean Journal of Materials Research, 2022, 32, 419-424.	0.1	0
570	Analysis of Iodide Transport on Methyl Ammonium Lead Iodide Perovskite Solar Cell Structure Through Operando Hard X-ray Photoelectron Spectroscopy. Chemistry of Materials, 2023, 35, 1948-1960.	3.2	4
571	Opportunities and challenges of hole transport materials for highâ€performance inverted hybridâ€perovskite solar cells. Exploration, 2023, 3, .	5.4	8
572	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
573	Importance of Low Humidity and Selection of Halide Ions of Octylammonium Halide in 2D–3D Perovskite Solar Cells Fabricated in Air. Advanced Materials Interfaces, 2023, 10, .	1.9	2
574	Prospects and challenges for perovskite-organic tandem solar cells. Joule, 2023, 7, 484-502.	11.7	20
575	Efficient Charge-Transfer Studies for Selective Detection of Bilirubin Biomolecules Using CsPbBr <sub>3</sub> as the Fluorescent Probe. Journal of Physical Chemistry B, 2023, 127, 2138-2145.	1.2	3
576	Advancing Lead-Free Cs2AgBiBr6 perovskite solar cells: Challenges and strategies. Solar Energy, 2023, 253, 563-583.	2.9	14
577	Application of Natural Molecules in Efficient and Stable Perovskite Solar Cells. Materials, 2023, 16, 2163.	1.3	3
578	Discrete Donor–Acceptor Pair Transitions in CH <sub>3</sub> NH <sub>3</sub> Pbl <sub>3</sub> Perovskite Single Crystals. Physica Status Solidi - Rapid Research Letters, 0, , 2300005.	1.2	1
579	MDACl2-Modified SnO2 Film for Efficient Planar Perovskite Solar Cells. Molecules, 2023, 28, 2668.	1.7	3
580	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

#	Article	IF	CITATIONS
581	Origin of Enhanced Nonradiative Carrier Recombination Induced by Oxygen in Hybrid Sn Perovskite. Journal of Physical Chemistry Letters, 2023, 14, 2950-2957.	2.1	2
582	3,5-dichlorobenzylamine lead high-performance and stable 2D/3D perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2023, 34, .	1.1	1
583	Chemical Chelation-Assisted Highly Oriented Perovskite Solar Cells with Reduced Non-radiative Loss. ACS Sustainable Chemistry and Engineering, 2023, 11, 5589-5596.	3.2	7
584	Recent Advances in Wide-Bandgap Organic–Inorganic Halide Perovskite Solar Cells and Tandem Application. Nano-Micro Letters, 2023, 15, .	14.4	41
585	Buried interface passivation strategies for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2023, 11, 8573-8598.	5.2	10
586	Giant Humidity Effect of 2D Perovskite on Paper Substrate: Optoelectronic Performance and Mechanical Flexibility. Advanced Optical Materials, 2023, 11, .	3.6	1
587	Mobile defects as mediated states for charge-carrier trapping in metal halide perovskites quantum dots. Applied Physics Letters, 2023, 122, 132102.	1.5	0
588	Highly Efficient 2D/3D Mixed-Dimensional Cs2PbI2Cl2/CsPbI2.5Br0.5 Perovskite Solar Cells Prepared by Methanol/Isopropanol Treatment. Nanomaterials, 2023, 13, 1239.	1.9	4
589	Exploring Solar Cells Based on Lead- and Iodide-Deficient Halide Perovskite (d-HP) Thin Films. Nanomaterials, 2023, 13, 1245.	1.9	1
590	Myth behind Metastable and Stable <i>n</i> -Hexylammonium Bromide-Based Low-Dimensional Perovskites. Journal of the American Chemical Society, 2023, 145, 8209-8217.	6.6	8
591	Halidesâ€Enhanced Buried Interfaces for Stable and Extremely Lowâ€Voltageâ€Deficit Perovskite Solar Cells. Advanced Materials, 2023, 35, .	11.1	11
592	Highâ€Efficiency Wideâ€Bandgap Perovskite Solar Cells for Laser Energy Transfer Underwater. Energy Technology, 2023, 11, .	1.8	2
593	Effect of Residual Chloride in FAPbI <sub>3</sub> Film on Photovoltaic Performance and Stability of Perovskite Solar Cell. ACS Energy Letters, 2023, 8, 2122-2129.	8.8	12
594	Transient model and parameters matching of a segmented solar thermoelectric system. International Journal of Green Energy, 2024, 21, 521-534.	2.1	0
595	Elucidating the Role of Contact-Induced Gap States and Passivation Molecules at Perovskite/Metal Contacts. ACS Applied Energy Materials, 2023, 6, 4111-4118.	2.5	2
596	Application of Single-molecule Liquid Crystal Additives in CH(NH <sub>2</sub> ) <sub>2</sub> Pbl <sub>3</sub> Perovskite Solar Cells. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2023, , 777.	0.6	0
597	Prospects for Tin-Containing Halide Perovskite Photovoltaics. , 2023, 1, 69-82.		8
598	Investigating the Effect of Nonideal Conditions on the Performance of a Planar Sb <sub>2</sub> Se <sub>3</sub> -Based Solar Cell through SCAPS-1D Simulation. Energy & Fuels, 2023, 37, 6722-6732.	2.5	2

ARTICLE IF CITATIONS # lonic liquids tailoring crystal orientation and electronic properties for stable perovskite solar cells. 599 8.2 14 Nano Energy, 2023, 112, 108449. Binary hole transport layer enables stable perovskite solar cells with PCE exceeding 24%., 2023, 1, 9 100004. Tungstateâ€mediated Inâ€situ Passivation of Grain Boundary Grooves in Perovskite Solar Cells. 601 0 1.6 Angewandte Chemie, 2023, 135, . How Do Surface Polar Molecules Contribute to High Openâ€Circuit Voltage in Perovskite Solar Cells?. Advanced Science, 2023, 10, . Single-Crystal Halide Perovskites for Transistor Applications., 2023, , 265-296. 603 0  $\label{eq:linear} Ultraviolet \ensuremath{\widehat{a} \in \mathbb{S}} hort \ens$ 604 5.2 Surface Passivation of FAPbI<sub>3</sub>-Rich Perovskite with Cesium Iodide Outperforms Bulk 614 8.8 14 Incorporation. ACS Energy Letters, 2023, 8, 2456-2462. Recent Progress in Interfacial Dipole Engineering for Perovskite Solar Cells. Nano-Micro Letters, 2023, 643 14.4 10 Synergy of 3D and 2D Perovskites for Durable, Efficient Solar Cells and Beyond. Chemical Reviews, 645 23.0 21 2023, 123, 9565-9652. Tailoring passivators for highly efficient and stable perovskite solar cells. Nature Reviews Chemistry, 13.8 2023, 7, 632-652. Long-term operating stability in perovskite photovoltaics. Nature Reviews Materials, 2023, 8, 569-586. 659 23.3 31 Optical properties of CsPbBr3 quantum dots in PMMA matrix., 2023,,. 660 High-performance metal halide perovskite transistors. Nature Electronics, 2023, 6, 559-571. 661 13.1 4 Dimension-dependent intrinsic point defect characteristic of binary photovoltaic materials. Materials 3.2 Chemistry Frontiers, 0, , . Modular design of solar-powered photocathodic metal protection device., 2023, 2, . 688 0 An open-cage bis[60]fulleroid as an electron transport material for tin halide perovskite solar cells. 729 2.2 Chemical Communications, 2024, 60, 2172-2175. The impact of moisture on the stability and degradation of perovskites in solar cells. Materials 734 2.6 0 Advances, 2024, 5, 2200-2217.