Understanding Degradation Mechanisms and Improvin Photovoltaics

Chemical Reviews 119, 3418-3451

DOI: 10.1021/acs.chemrev.8b00336

Citation Report

#	Article	IF	CITATIONS
1	Divergent Optical Properties in an Isomorphous Family of Multinary Iodido Pentelates. Inorganic Chemistry, 2019, 58, 10983-10990.	1.9	17
2	Quantifying multiple crystallite orientations and crystal heterogeneities in complex thin film materials. CrystEngComm, 2019, 21, 5707-5720.	1.3	17
3	Perovskite semiconductors for next generation optoelectronic applications. APL Materials, 2019, 7, .	2.2	21
4	Adsorption of Formic Acid on CH3NH3PbI3 Lead–Halide Organic–Inorganic Perovskites. Journal of Physical Chemistry C, 2019, 123, 22873-22886.	1.5	5
5	Highly stable hybrid perovskite light-emitting diodes based on Dion-Jacobson structure. Science Advances, 2019, 5, eaaw8072.	4.7	188
6	How to Make a Most Stable Perovskite Solar Cell. Matter, 2019, 1, 562-564.	5.0	13
7	Butyldithiocarbamate acid solution processing: its fundamentals and applications in chalcogenide thin film solar cells. Journal of Materials Chemistry C, 2019, 7, 11068-11084.	2.7	31
8	Scalable Fabrication of Metal Halide Perovskite Solar Cells and Modules. ACS Energy Letters, 2019, 4, 2147-2167.	8.8	161
9	Stability of Selected Hydrogen Bonded Semiconductors in Organic Electronic Devices. Chemistry of Materials, 2019, 31, 6315-6346.	3.2	55
10	Rare earth double perovskites: a fertile soil in the field of perovskite oxides. Inorganic Chemistry Frontiers, 2019, 6, 2226-2238.	3.0	57
11	LiTFSIâ€Free Spiroâ€OMeTADâ€Based Perovskite Solar Cells with Power Conversion Efficiencies Exceeding 19%. Advanced Energy Materials, 2019, 9, 1901519.	10.2	85
12	Multiple Roles of Cobalt Pyrazol-Pyridine Complexes in High-Performing Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2019, 10, 4675-4682.	2.1	13
13	Beneficial impact of materials with reduced dimensionality on the stability of perovskite-based photovoltaics. JPhys Energy, 2019, 1, 044001.	2.3	5
14	High performance perovskite solar cells using Cu9S5 supraparticles incorporated hole transport layers. Nanotechnology, 2019, 30, 445401.	1.3	9
15	Μethylammonium Chloride: A Key Additive for Highly Efficient, Stable, and Up‧calable Perovskite Solar Cells. Energy and Environmental Materials, 2019, 2, 79-92.	7.3	79
16	Lattice Anharmonicity: A Double-Edged Sword for 3D Perovskite-Based Optoelectronics. ACS Energy Letters, 2019, 4, 1888-1897.	8.8	34
17	Light induced degradation in mixed-halide perovskites. Journal of Materials Chemistry C, 2019, 7, 9326-9334.	2.7	67
18	Thermochemical Stability of Hybrid Halide Perovskites. ACS Energy Letters, 2019, 4, 2859-2870.	8.8	91

#	Article	IF	CITATIONS
19	Interfacial Residual Stress Relaxation in Perovskite Solar Cells with Improved Stability. Advanced Materials, 2019, 31, e1904408.	11.1	259
20	Application of Perovskite‧tructured Materials in Fieldâ€Effect Transistors. Advanced Electronic Materials, 2019, 5, 1900444.	2.6	43
21	Energy level tuning of aromatic polyamines by [2 + 2] cycloaddition-retroelectrocyclization for the optimization of device performances. Synthetic Metals, 2019, 257, 116179.	2.1	3
22	Dopantâ€Free Squaraineâ€Based Polymeric Holeâ€Transporting Materials with Comprehensive Passivation Effects for Efficient Allâ€Inorganic Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 17888-17894.	1.6	18
23	Surface Silylation of Hybrid Benzidinium Lead Perovskite and its Influence on the Photocatalytic Activity. ChemCatChem, 2019, 11, 6384-6390.	1.8	6
24	Recent advances in atomic imaging of organic-inorganic hybrid perovskites. Nano Materials Science, 2019, 1, 260-267.	3.9	10
25	Double-Helicene-Based Hole-Transporter for Perovskite Solar Cells with 22% Efficiency and Operation Durability. ACS Energy Letters, 2019, 4, 2683-2688.	8.8	56
26	Enhanced Nearâ€Infrared Photoresponse of Inverted Perovskite Solar Cells Through Rational Design of Bulkâ€Heterojunction Electronâ€Transporting Layers. Advanced Science, 2019, 6, 1901714.	5.6	23
27	Dopantâ€Free Squaraineâ€Based Polymeric Holeâ€Transporting Materials with Comprehensive Passivation Effects for Efficient Allâ€Inorganic Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 17724-17730.	7.2	118
28	Toward Highly Thermal Stable Perovskite Solar Cells by Rational Design of Interfacial Layer. IScience, 2019, 22, 534-543.	1.9	38
29	Impact of PbI ₂ Passivation and Grain Size Engineering in CH ₃ NH ₃ PbI ₃ Solar Absorbers as Revealed by Carrierâ€Resolved Photoâ€Hall Technique. Advanced Energy Materials, 2019, 9, 1902706.	10.2	52
30	An agar sandwich method for patterning transparent conducting oxides. Journal of Materials Science: Materials in Electronics, 2019, 30, 20734-20740.	1.1	1
31	Redoxâ€Active Guanidines with One or Two Guanidino Groups and Their Integration in Lowâ€Dimensional Perovskite Structures. European Journal of Inorganic Chemistry, 2019, 2019, 4147-4160.	1.0	5
32	Electron Versus Hole Extraction: Self Doping Induced Performance Bottleneck in Perovskite Solar Cells. IEEE Electron Device Letters, 2019, 40, 1784-1787.	2.2	5
33	Reducing Defects in Perovskite Solar Cells with White Light Illumination-Assisted Synthesis. ACS Energy Letters, 2019, 4, 2821-2829.	8.8	29
34	Enhanced Nucleation of Atomic Layer Deposited Contacts Improves Operational Stability of Perovskite Solar Cells in Air. Advanced Energy Materials, 2019, 9, 1902353.	10.2	47
35	Sulfur-fused perylene diimide electron transport layers allow >400 h operational lifetime of methylammonium lead iodide photovoltaics. Journal of Materials Chemistry C, 2019, 7, 11126-11133.	2.7	6
36	Toward clean production of plastic perovskite solar cell: Composition-tailored perovskite absorber made from aqueous lead nitrate precursor. Nano Energy, 2019, 65, 104036.	8.2	15

#	Article	IF	CITATIONS
37	Barium acetate as an additive for high performance perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 11411-11418.	2.7	7
38	Spatially Resolved Analysis of Defect Annihilation and Recovery Dynamics in Metal Halide Perovskite Single Crystals. ACS Applied Energy Materials, 2019, 2, 6967-6972.	2.5	15
39	Temperature-driven anion migration in gradient halide perovskites. Journal of Chemical Physics, 2019, 151, 134703.	1.2	31
40	Organic composition tailored perovskite solar cells and light-emitting diodes: Perspectives and advances. Materials Today Energy, 2019, 14, 100338.	2.5	9
41	Multivariate approach for studying the degradation of perovskite solar cells. Solar Energy, 2019, 193, 12-19.	2.9	4
42	All-inorganic lead-free perovskites for optoelectronic applications. Materials Chemistry Frontiers, 2019, 3, 365-375.	3.2	133
43	Doping strategies for small molecule organic hole-transport materials: impacts on perovskite solar cell performance and stability. Chemical Science, 2019, 10, 1904-1935.	3.7	279
44	Solarâ€Driven Rechargeable Lithium–Sulfur Battery. Advanced Science, 2019, 6, 1900620.	5.6	59
45	Low-temperature thermodynamic properties of Al(C5HF6O2)3. Journal of Chemical Thermodynamics, 2019, 138, 98-103.	1.0	3
46	Influence of a Hole-Transport Layer on Light-Induced Degradation of Mixed Organic–Inorganic Halide Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 5039-5049.	2.5	34
47	Recent progress of inorganic perovskite solar cells. Energy and Environmental Science, 2019, 12, 2375-2405.	15.6	405
48	Temperature-Dependent Local Electrical Properties of Organic–Inorganic Halide Perovskites: In Situ KPFM and c-AFM Investigation. ACS Applied Materials & Interfaces, 2019, 11, 21627-21633.	4.0	42
49	Could Nanocomposites Continue the Success of Halide Perovskites?. ACS Energy Letters, 2019, 4, 1446-1454.	8.8	9
50	A structure–property study of fluoranthene-cored hole-transporting materials enables 19.3% efficiency in dopant-free perovskite solar cells. Chemical Science, 2019, 10, 6899-6907.	3.7	79
51	Boosting the Efficiency of SnO ₂ â€īriple Cation Perovskite System Beyond 20% Using Nonhalogenated Antisolvent. Advanced Functional Materials, 2019, 29, 1903213.	7.8	66
52	Interfacial Effects during Rapid Lamination within MAPbI ₃ Thin Films and Solar Cells. ACS Applied Energy Materials, 2019, 2, 5083-5093.	2.5	41
53	Liquid metal acetate assisted preparation of high-efficiency and stable inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 14136-14144.	5.2	40
54	Copper lodide Interlayer for Improved Charge Extraction and Stability of Inverted Perovskite Solar Cells. Materials, 2019, 12, 1406.	1.3	35

#	Article	IF	CITATIONS
55	Caffeine Improves the Performance and Thermal Stability of Perovskite Solar Cells. Joule, 2019, 3, 1464-1477.	11.7	448
56	A chemically inert bismuth interlayer enhances long-term stability of inverted perovskite solar cells. Nature Communications, 2019, 10, 1161.	5.8	225
57	Water in hybrid perovskites: Bulk MAPbI3 degradation via super-hydrous state. APL Materials, 2019, 7, .	2.2	42
58	White light emission in low-dimensional perovskites. Journal of Materials Chemistry C, 2019, 7, 4956-4969.	2.7	163
59	Twoâ€Ðimensional Halide Perovskites in Solar Cells: 2D or not 2D?. ChemSusChem, 2019, 12, 1560-1575.	3.6	195
60	Intrinsic stability enhancement and ionic migration reduction by fluorinated cations incorporated in hybrid lead halide perovskites. Journal of Materials Chemistry C, 2019, 7, 5299-5306.	2.7	17
61	Formation and Composition-Dependent Properties of Alloys of Cubic Halide Perovskites. Chemistry of Materials, 2019, 31, 2497-2506.	3.2	48
62	Liquid water-induced growth of the 1D morphology of CH ₃ NH ₃ PbI ₃ hybrid perovskites. CrystEngComm, 2019, 21, 7365-7372.	1.3	11
63	Design of low bandgap tin–lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability. Nature Energy, 2019, 4, 939-947.	19.8	235
64	Carbon-based materials for stable, cheaper and large-scale processable perovskite solar cells. Energy and Environmental Science, 2019, 12, 3437-3472.	15.6	223
65	Thermal stability of mobility in methylammonium lead iodide. JPhys Materials, 2020, 3, 014003.	1.8	14
66	Review on Practical Interface Engineering of Perovskite Solar Cells: From Efficiency to Stability. Solar Rrl, 2020, 4, 1900257.	3.1	119
67	Ethyl acetate green antisolvent process for high-performance planar low-temperature SnO2-based perovskite solar cells made in ambient air. Chemical Engineering Journal, 2020, 379, 122298.	6.6	95
68	XPS evidence of degradation mechanism in CH ₃ NH ₃ PbI ₃ hybrid perovskite. Journal of Physics Condensed Matter, 2020, 32, 095501.	0.7	15
69	Zinc Phthalocyanine Conjugated Dimers as Efficient Dopantâ€Free Hole Transporting Materials in Perovskite Solar Cells. ChemPhotoChem, 2020, 4, 307-314.	1.5	19
70	Inhibited aggregation of lithium salt in spiro-OMeTAD toward highly efficient perovskite solar cells. Nano Energy, 2020, 70, 104483.	8.2	64
71	3 D NiO Nanowall Holeâ€Transporting Layer for the Passivation of Interfacial Contact in Inverted Perovskite Solar Cells. ChemSusChem, 2020, 13, 1006-1012.	3.6	30
72	Recycling of FTO/TiO ₂ Substrates: Route toward Simultaneously High-Performance and Cost-Efficient Carbon-Based, All-Inorganic CsPbIBr ₂ Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 4549-4557.	4.0	38

#	Article	IF	CITATIONS
73	Star-shaped triarylamine-based hole-transport materials in perovskite solar cells. Sustainable Energy and Fuels, 2020, 4, 779-787.	2.5	5
74	Divalent chromium in the octahedral positions of the novel hybrid perovskites CH3NH3Pb1-Cr (Br,Cl)3 (xÂ= 0.25, 0.5): Induction of narrow bands inside the bandgap. Journal of Alloys and Compounds, 2020, 821, 153414.	2.8	11
75	Inverse Temperature Crystallization of Formamidinium Tin Iodide: Indirect Transition State and Restriction of Cation Motion. Crystal Growth and Design, 2020, 20, 874-883.	1.4	7
76	Synthesis and characterisation of methylammonium lead tri-bromide perovskites thin films by sequential physical vapor deposition. Physica B: Condensed Matter, 2020, 578, 411884.	1.3	12
77	How Interplay between Photo and Thermal Activation Dictates Halide Ion Segregation in Mixed Halide Perovskites. ACS Energy Letters, 2020, 5, 56-63.	8.8	123
78	Perfluorinated Self-Assembled Monolayers Enhance the Stability and Efficiency of Inverted Perovskite Solar Cells. ACS Nano, 2020, 14, 1445-1456.	7.3	115
79	Effective Singlet Oxygen Generation in Silica oated CsPbBr ₃ Quantum Dots through Energy Transfer for Photocatalysis. ChemSusChem, 2020, 13, 682-687.	3.6	24
80	Crucial role of charge transporting layers on ion migration in perovskite solar cells. Journal of Energy Chemistry, 2020, 47, 132-137.	7.1	14
81	Insights into the Mechanism of Solid-State Metal Organic Complexes as Controllable and Stable p-Type Dopants in Efficient Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 546-555.	4.0	15
82	X-ray diffraction and Raman spectroscopy for lead halide perovskites. , 2020, , 23-47.		2
83	Rapid and room temperature synthesis of MAPb1â^'xSnxBr3â^'2xCl2x perovskite quantum dots with enhanced lifetime in warm WLEDs: A step towards environmental friendly perovskite light harvester. Chemical Engineering Journal, 2020, 391, 123629.	6.6	16
84	Structural Evolution During Perovskite Crystal Formation and Degradation: In Situ and Operando Xâ€Ray Diffraction Studies. Advanced Energy Materials, 2020, 10, 1903074.	10.2	33
85	Stabilizing the MAPbI3 perovksite via the in-situ formed lead sulfide layer for efficient and robust solar cells. Journal of Energy Chemistry, 2020, 47, 62-65.	7.1	30
86	Research Direction toward Scalable, Stable, and High Efficiency Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903106.	10.2	193
87	lon Migration: A "Doubleâ€Edged Sword―for Halideâ€Perovskiteâ€Based Electronic Devices. Small Methods, 2020, 4, 1900552.	4.6	127
88	Enhanced electron transport induced by a ferroelectric field in efficient halide perovskite solar cells. Solar Energy Materials and Solar Cells, 2020, 206, 110318.	3.0	19
89	The chemistry and energetics of the interface between metal halide perovskite and atomic layer deposited metal oxides. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	10
90	A data review on certified perovskite solar cells efficiency and I-V metrics: Insights into materials selection and process scaling up. Solar Energy, 2020, 209, 21-29.	2.9	5

#	Article	IF	CITATIONS
91	Tuning the Surface-Passivating Ligand Anchoring Position Enables Phase Robustness in CsPbI ₃ Perovskite Quantum Dot Solar Cells. ACS Energy Letters, 2020, 5, 3322-3329.	8.8	89
92	Influence of Temperature, Pressure, and Humidity on the Stabilities and Transition Kinetics of the Various Polymorphs of FAPbI ₃ . Journal of Physical Chemistry C, 2020, 124, 22972-22980.	1.5	18
93	Reversible multicolor chromism in layered formamidinium metal halide perovskites. Nature Communications, 2020, 11, 5234.	5.8	48
94	Advances in Phase Stability of Cesium Lead Halide Perovskites. Solar Rrl, 2020, 4, 2000495.	3.1	13
95	Tellurium complex polyhalides: narrow bandgap photoactive materials for electronic applications. Journal of Materials Chemistry A, 2020, 8, 21988-21992.	5.2	8
96	Suppression of phase transitions and glass phase signatures in mixed cation halide perovskites. Nature Communications, 2020, 11, 5103.	5.8	46
97	Optical tunability of lead free double perovskite Cs ₂ AgInCl ₆ <i>via</i> composition variation. New Journal of Chemistry, 2020, 44, 18656-18661.	1.4	14
98	Photoinduced ion-redistribution in CH ₃ NH ₃ PbI ₃ perovskite solar cells. Physical Chemistry Chemical Physics, 2020, 22, 25118-25125.	1.3	13
99	Mechanistic Understanding of Cetyltrimethylammonium Bromide-Assisted Durable CH ₃ NH ₃ Pbl ₃ Film for Stable ZnO-Based Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 9856-9865.	2.5	8
100	Chemical Robotics Enabled Exploration of Stability in Multicomponent Lead Halide Perovskites via Machine Learning. ACS Energy Letters, 2020, 5, 3426-3436.	8.8	66
101	Surface Treatment of Cu:NiOx Hole-Transporting Layer Using β-Alanine for Hysteresis-Free and Thermally Stable Inverted Perovskite Solar Cells. Nanomaterials, 2020, 10, 1961.	1.9	8
102	Formingâ€Free, Nonvolatile, and Flexible Resistive Randomâ€Access Memory Using Bismuth Iodide/van der Waals Materials Heterostructures. Advanced Materials Interfaces, 2020, 7, 2001146.	1.9	13
103	Impedance Spectroscopy of Perovskite Solar Cells: Studying the Dynamics of Charge Carriers Before and After Continuous Operation. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000291.	0.8	54
104	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
105	Review on Sensing Applications of Perovskite Nanomaterials. Chemosensors, 2020, 8, 55.	1.8	105
106	Interdiffusion Stomatal Movement in Efficient Multiple-Cation-Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 35105-35112.	4.0	8
107	Investigation of hysteresis in hole transport layer free metal halide perovskites cells under dark conditions. Nanotechnology, 2020, 31, 445201.	1.3	17
108	Lowâ€Dimensional Hybrid Perovskites for Fieldâ€Effect Transistors with Improved Stability: Progress and Challenges. Advanced Electronic Materials, 2020, 6, 2000137.	2.6	45

#	Article	IF	CITATIONS
109	Identifying the Soft Nature of Defective Perovskite Surface Layer and Its Removal Using a Facile Mechanical Approach. Joule, 2020, 4, 2661-2674.	11.7	81
110	Bottom Contact Metal Oxide Interface Modification Improving the Efficiency of Organic Light Emitting Diodes. Materials, 2020, 13, 5082.	1.3	6
111	Advances in piezoelectric halide perovskites for energy harvesting applications. Journal of Materials Chemistry A, 2020, 8, 24353-24367.	5.2	45
112	Thermosetting Polyurethane Resins as Low-Cost, Easily Scalable, and Effective Oxygen and Moisture Barriers for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 54862-54875.	4.0	30
113	Understanding and harnessing the potential of layered perovskite-based absorbersÂfor solar cells. Emergent Materials, 2020, 3, 751-778.	3.2	13
114	How the Structures and Properties of Pristine and Anion Vacancy Defective Organic–Inorganic Hybrid Double Perovskites MA ₂ AgIn(Br _{<i>x</i>} I _{1–<i>x</i>}) ₆ Vary with Br Content <i>x</i> . Journal of Physical Chemistry Letters, 2020, 11, 10315-10322.	2.1	6
115	Time-Resolved Changes in Dielectric Constant of Metal Halide Perovskites under Illumination. Journal of the American Chemical Society, 2020, 142, 19799-19803.	6.6	14
116	Semiconductor physics of organic–inorganic 2D halide perovskites. Nature Nanotechnology, 2020, 15, 969-985.	15.6	268
117	Self-Doping a Hole-Transporting Layer Based on a Conjugated Polyelectrolyte Enables Efficient and Stable Inverted Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 11724-11731.	2.5	10
118	Perovskite Tandem Solar Cells: From Fundamentals to Commercial Deployment. Chemical Reviews, 2020, 120, 9835-9950.	23.0	248
119	Hybrid Perovskites with Larger Organic Cations Reveal Autocatalytic Degradation Kinetics and Increased Stability under Light. Inorganic Chemistry, 2020, 59, 12176-12186.	1.9	12
120	Barrier Designs in Perovskite Solar Cells for Longâ€Term Stability. Advanced Energy Materials, 2020, 10, 2001610.	10.2	84
121	In situ TEM observation of the heat–induced degradation of single– and triple–cation planar perovskite solar cells. Nano Energy, 2020, 77, 105164.	8.2	25
122	Effects of the methylammonium ion substitution by 5-ammoniumvaleric acid in lead trihalide perovskite solar cells: a combined experimental and theoretical investigation. New Journal of Chemistry, 2020, 44, 14642-14649.	1.4	4
123	Unique phonon modes of a CH3NH3PbBr3 hybrid perovskite film without the influence of defect structures: an attempt toward a novel THz-based application. NPG Asia Materials, 2020, 12, .	3.8	20
124	Effect of solvent vapour annealing on bismuth triiodide film for photovoltaic applications and its optoelectronic properties. Journal of Materials Chemistry C, 2020, 8, 12173-12180.	2.7	19
125	Highly Efficient Charge Transfer between Perovskite Nanocrystals and g ₃ N ₄ Nanosheets. Physica Status Solidi (B): Basic Research, 2020, 257, 2000198.	0.7	12
126	Physical and optoelectronic features of lead-free A ₂ AgRhBr ₆ (A = Cs, Rb, K,) Tj ETQq1 12968-12983.	l 0.78431 2.7	4 rgBT /Overl 19

#	Article	IF	CITATIONS
127	Defects chemistry in high-efficiency and stable perovskite solar cells. Journal of Applied Physics, 2020, 128, .	1.1	91
128	Recent Advances of Dopant-Free Polymer Hole-Transporting Materials for Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 10282-10302.	2.5	50
129	Scalable open-air deposition of compact ETL TiO _x on perovskite for fullerene-free solar cells. Journal of Materials Chemistry A, 2020, 8, 22858-22866.	5.2	6
130	Incorporating quantum dots for high efficiency and stable perovskite photovoltaics. Journal of Materials Chemistry A, 2020, 8, 25017-25027.	5.2	24
131	Ambient Pressure X-ray Photoelectron Spectroscopy Investigation of Thermally Stable Halide Perovskite Solar Cells via Post-Treatment. ACS Applied Materials & Interfaces, 2020, 12, 43705-43713.	4.0	34
132	Photo-assisted deposited titanium dioxide for all-inorganic CsPbl2Br perovskite solar cells with high efficiency exceeding 13.6%. Applied Physics Letters, 2020, 117, 093902.	1.5	2
133	Ultrastable Perovskite–Zeolite Composite Enabled by Encapsulation and Inâ€Situ Passivation. Angewandte Chemie - International Edition, 2020, 59, 23100-23106.	7.2	75
134	Doping in inorganic perovskite for photovoltaic application. Nano Energy, 2020, 78, 105354.	8.2	53
135	Chemical vapor deposited polymer layer for efficient passivation of planar perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 20122-20132.	5.2	27
136	Interaction of the Cation and Vacancy in Hybrid Perovskites Induced by Light Illumination. ACS Applied Materials & Interfaces, 2020, 12, 42369-42377.	4.0	9
137	Perovskiteâ€Compatible Carbon Electrode Improving the Efficiency and Stability of CsPbI ₂ Br Solar Cells. Solar Rrl, 2020, 4, 2000431.	3.1	30
138	Novel amphiphilic corannulene additive for moisture-resistant perovskite solar cells. Chemical Communications, 2020, 56, 11997-12000.	2.2	15
139	Recent Advances in Organic Hole Transporting Materials for Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000461.	3.1	49
140	Thermal Evaporation–Oxidation Deposited Aluminum Oxide as an Interfacial Modifier to Improve the Performance and Stability of Zinc Oxide-Based Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 9618-9627.	2.5	6
141	Ultrastable Perovskite–Zeolite Composite Enabled by Encapsulation and Inâ€Situ Passivation. Angewandte Chemie, 2020, 132, 23300-23306.	1.6	7
142	Developing Low-Cost, High Performance, Robust and Sustainable Perovskite Electrocatalytic Materials in the Electrochemical Sensors and Energy Sectors: "An Overview― Catalysts, 2020, 10, 938.	1.6	24
143	Towards commercialization: the operational stability of perovskite solar cells. Chemical Society Reviews, 2020, 49, 8235-8286.	18.7	371
144	Allâ€inorganic Snâ€based Perovskite Solar Cells: Status, Challenges, and Perspectives. ChemSusChem, 2020, 13, 6477-6497.	3.6	35

	CITATION R	EPORT	
#	Article	IF	Citations
145	Thermal properties of metal-halide perovskites. Journal of Materials Chemistry C, 2020, 8, 14289-14311.	2.7	74
146	Introducing Ion Migration and Light-Induced Secondary Ion Redistribution for Phase-Stable and High-Efficiency Inorganic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 40364-40371.	4.0	21
147	Effective Surface Treatment for High-Performance Inverted CsPbI2Br Perovskite Solar Cells with Efficiency of 15.92%. Nano-Micro Letters, 2020, 12, 170.	14.4	41
148	Fast and low temperature processed CsPbI3 perovskite solar cells with ZnO as electron transport layer. Journal of Power Sources, 2020, 480, 229134.	4.0	10
149	Choose Your Own Adventure: Fabrication of Monolithic Allâ€Perovskite Tandem Photovoltaics. Advanced Materials, 2020, 32, e2003312.	11.1	39
150	Alternative Organic Spacers for More Efficient Perovskite Solar Cells Containing Ruddlesden–Popper Phases. Journal of the American Chemical Society, 2020, 142, 19705-19714.	6.6	83
151	Perovskite Puzzle for Revolutionary Functional Materials. Frontiers in Chemistry, 2020, 8, 550625.	1.8	5
152	Shapeâ€Designable and Sizeâ€Tunable Organic–Inorganic Hybrid Perovskite Microâ€Ring Resonator Arrays. Advanced Materials Technologies, 2020, 5, 2000051.	3.0	7
153	Photoemission Spectroscopy Characterization of Halide Perovskites. Advanced Energy Materials, 2020, 10, 1904007.	10.2	66
154	Monolithic Perovskite Tandem Solar Cells: A Review of the Present Status and Advanced Characterization Methods Toward 30% Efficiency. Advanced Energy Materials, 2020, 10, 1904102.	10.2	321
155	Electron irradiation induced aging effects on radiative recombination properties of quadruple cation organic-inorganic perovskite layers. Emergent Materials, 2020, 3, 133-160.	3.2	4
156	A review: crystal growth for high-performance all-inorganic perovskite solar cells. Energy and Environmental Science, 2020, 13, 1971-1996.	15.6	156
157	Applications of atomic layer deposition and chemical vapor deposition for perovskite solar cells. Energy and Environmental Science, 2020, 13, 1997-2023.	15.6	102
158	High-humidity processed perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 10481-10518.	5.2	56
159	Mechanisms of exceptional grain growth and stability in formamidinium lead triiodide thin films for perovskite solar cells. Acta Materialia, 2020, 193, 10-18.	3.8	27
160	Open-Air Plasma-Deposited Multilayer Thin-Film Moisture Barriers. ACS Applied Materials & Interfaces, 2020, 12, 26405-26412.	4.0	22
161	Efficient Trap Passivation of MAPbI ₃ via Multifunctional Anchoring for Highâ€Performance and Stable Perovskite Solar Cells. Advanced Sustainable Systems, 2020, 4, 2000078.	2.7	42
162	Imaging Electron, Hole, and Ion Transport in Halide Perovskite. Journal of Physical Chemistry C, 2020, 124, 11741-11748.	1.5	9

#	Article	IF	CITATIONS
163	Nonâ€Conjugated Polymer Based on Polyethylene Backbone as Dopantâ€Free Holeâ€Transporting Material for Efficient and Stable Inverted Quasiâ€2D Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000184.	3.1	12
164	A time-domain view of charge carriers in semiconductor nanocrystal solids. Chemical Science, 2020, 11, 5157-5167.	3.7	8
165	Preventing phase segregation in mixed-halide perovskites: a perspective. Energy and Environmental Science, 2020, 13, 2024-2046.	15.6	221
166	A two-fold engineering approach based on Bi ₂ Te ₃ flakes towards efficient and stable inverted perovskite solar cells. Materials Advances, 2020, 1, 450-462.	2.6	21
167	Solvent vapour annealing of methylammonium lead halide perovskite: what's the catch?. Journal of Materials Chemistry A, 2020, 8, 10943-10956.	5.2	11
168	A Realistic Methodology for 30% Efficient Perovskite Solar Cells. CheM, 2020, 6, 1254-1264.	5.8	160
169	Boosting the power conversion efficiency of perovskite solar cells based on Sn doped TiO2 electron extraction layer via modification the TiO2 phase junction. Solar Energy, 2020, 205, 390-398.	2.9	13
170	Highly stable and Efficient Perovskite Solar Cells Based on FAMAâ€Perovskite u:NiO Composites with 20.7% Efficiency and 80.5% Fill Factor. Advanced Energy Materials, 2020, 10, 2000967.	10.2	47
171	High-Performance Lead-Free Solar Cells Based on Tin-Halide Perovskite Thin Films Functionalized by a Divalent Organic Cation. ACS Energy Letters, 2020, 5, 2223-2230.	8.8	96
172	A review of flexible halide perovskite solar cells towards scalable manufacturing and environmental sustainability. Journal of Semiconductors, 2020, 41, 041603.	2.0	20
173	Progress toward Applications of Perovskite Solar Cells. Energy & amp; Fuels, 2020, 34, 6624-6633.	2.5	31
174	Electrogenerated Chemiluminescence and Spectroelectrochemistry Characteristics of Blue Photoluminescence Perovskite Quantum Dots. ACS Applied Materials & Interfaces, 2020, 12, 27443-27452.	4.0	10
175	In situ studies of the degradation mechanisms of perovskite solar cells. EcoMat, 2020, 2, e12025.	6.8	123
176	Defect suppression and passivation for perovskite solar cells: from the birth to the lifetime operation. EnergyChem, 2020, 2, 100032.	10.1	22
177	Unprecedentedly high indoor performance (efficiency > 34 %) of perovskite photovoltaics with controlled bromine doping. Nano Energy, 2020, 75, 104984.	8.2	55
178	Lewis-base containing spiro type hole transporting materials for high-performance perovskite solar cells with efficiency approaching 20%. Nanoscale, 2020, 12, 13157-13164.	2.8	30
179	Gas chromatography–mass spectrometry analyses of encapsulated stable perovskite solar cells. Science, 2020, 368, .	6.0	306
180	Acetamidinium Cation to Confer Ion Immobilization and Structure Stabilization of Organometal Halide Perovskite Toward Long Life and Highâ€Efficiency pâ€iâ€n Planar Solar Cell via Airâ€Processable Method. Solar Rrl, 2020, 4, 2000197.	3.1	12

#	Article	IF	CITATIONS
181	Research progress on hybrid organic–inorganic perovskites for photo-applications. Chinese Chemical Letters, 2020, 31, 3055-3064.	4.8	52
182	Impact of Moisture on Mobility in Methylammonium Lead Iodide and Formamidinium Lead Iodide. Journal of Physical Chemistry Letters, 2020, 11, 4976-4983.	2.1	17
183	The 2020 photovoltaic technologies roadmap. Journal Physics D: Applied Physics, 2020, 53, 493001.	1.3	274
184	Electron-beam-induced cracking in organic-inorganic halide perovskite thin films. Scripta Materialia, 2020, 187, 88-92.	2.6	16
185	The Molybdenum Oxide Interface Limits the High-Temperature Operational Stability of Unencapsulated Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2349-2360.	8.8	49
186	Doping and ion substitution in colloidal metal halide perovskite nanocrystals. Chemical Society Reviews, 2020, 49, 4953-5007.	18.7	269
187	Novel dopant-free hole-transporting materials for efficient perovskite solar cells. Solar Energy, 2020, 206, 279-286.	2.9	15
188	Interface Engineering Driven Stabilization of Halide Perovskites against Moisture, Heat, and Light for Optoelectronic Applications. Advanced Energy Materials, 2020, 10, 2000768.	10.2	62
189	Dual Interfacial Engineering Enables Efficient and Reproducible CsPbI ₂ Br All-Inorganic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 31659-31666.	4.0	38
190	Perovskite Singleâ€Crystal Microwireâ€Array Photodetectors with Performance Stability beyond 1 Year. Advanced Materials, 2020, 32, e2001998.	11.1	130
191	Perovskite Test: A High Throughput Method to Screen Ambient Encapsulation Conditions. Energy Technology, 2020, 8, 2000041.	1.8	4
192	Perovskite Materials: Recent Advancements and Challenges. , 2020, , .		3
193	Stable and luminescent halide perovskite fabricated in water. Light: Science and Applications, 2020, 9, 106.	7.7	18
194	Understanding the effect of light and temperature on the optical properties and stability of mixed-ion halide perovskites. Journal of Materials Chemistry C, 2020, 8, 9714-9723.	2.7	13
195	External quantum efficiency measurements used to study the stability of differently deposited perovskite solar cells. Journal of Applied Physics, 2020, 127, .	1.1	15
196	Ligand modification of Cu ₂ ZnSnS ₄ nanoparticles boosts the performance of low temperature paintable carbon electrode based perovskite solar cells to 17.71%. Journal of Materials Chemistry A, 2020, 8, 12080-12088.	5.2	25
197	First-Principles Study on the Oxygen–Light-Induced Iodide Vacancy Formation in FASnI ₃ Perovskite. Journal of Physical Chemistry C, 2020, 124, 14147-14157.	1.5	17
198	Directionally Selective Polyhalide Molecular Glue for Stable Inverted Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000244.	3.1	4

#	Article	IF	CITATIONS
199	High-stability fluorescent perovskites embedded in PbBrOH triggered by imidazole derivatives in water. Journal of Materials Chemistry C, 2020, 8, 5594-5599.	2.7	24
200	Defect-Tolerant Sodium-Based Dopant in Charge Transport Layers for Highly Efficient and Stable Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 1198-1205.	8.8	33
201	Ultraviolet-ozone modification on TiO2 surface to promote both efficiency and stability of low-temperature planar perovskite solar cells. Chemical Engineering Journal, 2020, 393, 124731.	6.6	29
202	Regulating strain in perovskite thin films through charge-transport layers. Nature Communications, 2020, 11, 1514.	5.8	346
203	Polarons in Halide Perovskites: A Perspective. Journal of Physical Chemistry Letters, 2020, 11, 3271-3286.	2.1	110
204	UV degradation of the interface between perovskites and the electron transport layer. RSC Advances, 2020, 10, 11551-11556.	1.7	24
205	Multi-component engineering to enable long-term operational stability of perovskite solar cells. JPhys Energy, 2020, 2, 024008.	2.3	13
206	Local Structure and Dynamics in Methylammonium, Formamidinium, and Cesium Tin(II) Mixed-Halide Perovskites from ¹¹⁹ Sn Solid-State NMR. Journal of the American Chemical Society, 2020, 142, 7813-7826.	6.6	66
207	Choline Chloride-Modified SnO ₂ Achieving High Output Voltage in MAPbl ₃ Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 3504-3511.	2.5	57
208	Degradation Mechanism of Perovskite Lightâ€Emitting Diodes: An In Situ Investigation via Electroabsorption Spectroscopy and Device Modelling. Advanced Functional Materials, 2020, 30, 1910464.	7.8	41
209	Reducing photovoltage loss at the anode contact of methylammonium-free inverted perovskite solar cells by conjugated polyelectrolyte doping. Journal of Materials Chemistry A, 2020, 8, 7309-7316.	5.2	28
210	Triple-halide wide–band gap perovskites with suppressed phase segregation for efficient tandems. Science, 2020, 367, 1097-1104.	6.0	669
211	Solar-Driven Metal Halide Perovskite Photocatalysis: Design, Stability, and Performance. ACS Energy Letters, 2020, 5, 1107-1123.	8.8	400
212	Engineered electronic properties of the spin-coated MAPI for hole-transport-free perovskite solar cell (HT-free PSC): Spinning time and PSC performance relationship. Chemical Physics Letters, 2020, 754, 137718.	1.2	32
213	Crystallographic phase changes and damage thresholds of CsPbI ₃ microwire waveguides through continuous wave photoablation. Materials Advances, 2020, 1, 161-166.	2.6	0
214	Light-Induced Passivation in Triple Cation Mixed Halide Perovskites: Interplay between Transport Properties and Surface Chemistry. ACS Applied Materials & Interfaces, 2020, 12, 34784-34794.	4.0	25
215	Interface Matters: Enhanced Photoluminescence and Long-Term Stability of Zero-Dimensional Cesium Lead Bromide Nanocrystals <i>via</i> Gas-Phase Aluminum Oxide Encapsulation. ACS Applied Materials & Interfaces, 2020, 12, 35598-35605.	4.0	14
216	Enhanced stability in CH3NH3PbI3 hybrid perovskite from mechano-chemical synthesis: structural, microstructural and optoelectronic characterization. Scientific Reports, 2020, 10, 11228.	1.6	19

#	Article	IF	CITATIONS
217	Overcoming Redox Reactions at Perovskite-Nickel Oxide Interfaces to Boost Voltages in Perovskite Solar Cells. Joule, 2020, 4, 1759-1775.	11.7	284
218	Microscopic Degradation in Formamidinium-Cesium Lead Iodide Perovskite Solar Cells under Operational Stressors. Joule, 2020, 4, 1743-1758.	11.7	156
219	Theoretical Progress on the Relationship between the Structures and Properties of Perovskite Solar Cells. Advanced Theory and Simulations, 2020, 3, 2000022.	1.3	10
220	Organicâ€Saltâ€Assisted Crystal Growth and Orientation of Quasiâ€2D Ruddlesden–Popper Perovskites for Solar Cells with Efficiency over 19%. Advanced Materials, 2020, 32, e2001470.	11.1	162
221	Controlled nâ€Doping in Airâ€Stable CsPbI ₂ Br Perovskite Solar Cells with a Record Efficiency of 16.79%. Advanced Functional Materials, 2020, 30, 1909972.	7.8	282
222	Modifying Mesoporous TiO2 by Ammonium Sulfonate Boosts Performance of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 12696-12705.	4.0	32
223	The strain effects in 2D hybrid organic–inorganic perovskite microplates: bandgap, anisotropy and stability. Nanoscale, 2020, 12, 6644-6650.	2.8	15
224	A perovskite solar cell textile that works at â~'40 to 160 °C. Journal of Materials Chemistry A, 2020, 8, 5476-5483.	5.2	25
225	Stability of Perovskite Light Sources: Status and Challenges. Advanced Optical Materials, 2020, 8, 1902012.	3.6	54
226	Impact of environmental variables on the degradation of photovoltaic components and perspectives for the reliability assessment methodology. Solar Energy, 2020, 199, 425-436.	2.9	41
227	Several economical and eco-friendly bio-carbon electrodes for highly efficient perovskite solar cells. Carbon, 2020, 162, 267-272.	5.4	48
228	Investigating the Effects of Chemical Gradients on Performance and Reliability within Perovskite Solar Cells with TOF IMS. Advanced Energy Materials, 2020, 10, 1903674.	10.2	52
229	Interfacing Lowâ€Temperature Atomic Layer Deposited TiO ₂ Electron Transport Layers with Metal Electrodes. Advanced Materials Interfaces, 2020, 7, 1902054.	1.9	6
230	Optical Absorptionâ€Based In Situ Characterization of Halide Perovskites. Advanced Energy Materials, 2020, 10, 1903587.	10.2	42
231	Is Formamidinium Always More Stable than Methylammonium?. Chemistry of Materials, 2020, 32, 2501-2507.	3.2	34
232	Excellent Moisture Stability and Efficiency of Inverted All-Inorganic CsPbIBr ₂ Perovskite Solar Cells through Molecule Interface Engineering. ACS Applied Materials & Interfaces, 2020, 12, 13931-13940.	4.0	52
233	Enhanced moisture stability of cesium lead iodide perovskite solar cells – a first-principles molecular dynamics study. Physical Chemistry Chemical Physics, 2020, 22, 5693-5701.	1.3	29
234	Correlating Hysteresis and Stability with Organic Cation Composition in the Two-Step Solution-Processed Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 10588-10596.	4.0	27

#	Article	IF	CITATIONS
235	High voltage vacuum-processed perovskite solar cells with organic semiconducting interlayers. RSC Advances, 2020, 10, 6640-6646.	1.7	13
236	Atmosphere dependent gas-solid reaction for high-quality MAPbBr3 perovskite solar cells. Applied Surface Science, 2020, 510, 145356.	3.1	11
237	Materials chemistry and engineering in metal halide perovskite lasers. Chemical Society Reviews, 2020, 49, 951-982.	18.7	263
238	Halide perovskites: current issues and new strategies to push material and device stability. JPhys Energy, 2020, 2, 021005.	2.3	40
239	Facile healing of cracks in organic–inorganic halide perovskite thin films. Acta Materialia, 2020, 187, 112-121.	3.8	51
240	Lead-free hybrid organic-inorganic perovskites for solar cell applications. Journal of Chemical Physics, 2020, 152, 014104.	1.2	6
241	1000 h Operational Lifetime Perovskite Solar Cells by Ambient Melting Encapsulation. Advanced Energy Materials, 2020, 10, 1902472.	10.2	98
242	Solvent Engineering of a Dopant-Free Spiro-OMeTAD Hole-Transport Layer for Centimeter-Scale Perovskite Solar Cells with High Efficiency and Thermal Stability. ACS Applied Materials & Interfaces, 2020, 12, 8260-8270.	4.0	42
243	Dual-Protection Strategy for High-Efficiency and Stable CsPbI ₂ Br Inorganic Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 676-684.	8.8	119
244	Degradation Mechanism of Silver Metal Deposited on Lead Halide Perovskites. ACS Applied Materials & Interfaces, 2020, 12, 7212-7221.	4.0	85
245	Ligand-assisted cation-exchange engineering for high-efficiency colloidal Cs1â^'xFAxPbI3 quantum dot solar cells with reduced phase segregation. Nature Energy, 2020, 5, 79-88.	19.8	412
246	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. Nature Energy, 2020, 5, 35-49.	19.8	797
247	Plasmonic metal–semiconductor heterostructures for hot-electron-driven photochemistry. MRS Bulletin, 2020, 45, 37-42.	1.7	14
248	Solutionâ€Processable 2D Materials Applied in Lightâ€Emitting Diodes and Solar Cells. Advanced Materials Technologies, 2020, 5, 1900972.	3.0	40
249	Water driven photoluminescence enhancement and recovery of CH3NH3PbBr3/Silicon oil/PDMS-urea composite. Journal of Alloys and Compounds, 2020, 834, 155088.	2.8	7
250	Effect of Grain Size on the Fracture Behavior of Organic-Inorganic Halide Perovskite Thin Films for Solar Cells. Scripta Materialia, 2020, 185, 47-50.	2.6	32
251	Stable Luminescent Composite Microspheres Based on Porous Silica with Embedded CsPbBr ₃ Perovskite Nanocrystals. ChemNanoMat, 2020, 6, 1080-1085.	1.5	12
252	Interfacial Voids Trigger Carbon-Based, All-Inorganic CsPbIBr2 Perovskite Solar Cells with Photovoltage Exceeding 1.33ÂV. Nano-Micro Letters, 2020, 12, 87.	14.4	84

#	Article	IF	CITATIONS
253	Characterizing photovoltaic backsheet adhesion degradation using the wedge and single cantilever beam tests, Part II: Accelerated tests. Solar Energy Materials and Solar Cells, 2020, 211, 110524.	3.0	13
254	Tetraphenylbutadiene-Based Symmetric 3D Hole-Transporting Materials for Perovskite Solar Cells: A Trial Trade-off between Charge Mobility and Film Morphology. ACS Applied Materials & Interfaces, 2020, 12, 21088-21099.	4.0	35
255	Heterogeneous Cation–Lattice Interaction and Dynamics in Triple-Cation Perovskites Revealed by Infrared Vibrational Nanoscopy. ACS Energy Letters, 2020, 5, 1636-1643.	8.8	27
256	Development of Halide Perovskite Single Crystal for Radiation Detection Applications. Frontiers in Chemistry, 2020, 8, 268.	1.8	25
257	Recent progress in encapsulation strategies to enhance the stability of organometal halide perovskite solar cells. JPhys Energy, 2020, 2, 031002.	2.3	76
258	Making fully printed perovskite solar cells stable outdoor with inorganic superhydrophobic coating. Journal of Energy Chemistry, 2020, 50, 332-338.	7.1	18
259	Accurately Stoichiometric Regulating Oxidation States in Hole Transporting Material to Enhance the Hole Mobility of Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000127.	3.1	5
260	Interfacial engineering revolutionizers: perovskite nanocrystals and quantum dots accentuated performance enhancement in perovskite solar cells. Critical Reviews in Solid State and Materials Sciences, 2021, 46, 251-279.	6.8	35
261	A naphthalene diimide side-chain polymer as an electron-extraction layer for stable perovskite solar cells. Materials Chemistry Frontiers, 2021, 5, 450-457.	3.2	11
262	Developing D–ï€â€"D hole-transport materials for perovskite solar cells: the effect of the ï€-bridge on device performance. Materials Chemistry Frontiers, 2021, 5, 876-884.	3.2	33
263	Perovskite Passivation Strategies for Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, .	3.1	23
264	Simple hole-transporting materials containing twin-carbazole moiety and unconjugated flexible linker for efficient and stable perovskite solar cells. Chemical Engineering Journal, 2021, 405, 126434.	6.6	21
265	Strain Engineering of Metal Halide Perovskites on Coupling Anisotropic Behaviors. Advanced Functional Materials, 2021, 31, 2006243.	7.8	71
266	Suppressing Ion Migration across Perovskite Grain Boundaries by Polymer Additives. Advanced Functional Materials, 2021, 31, 2006802.	7.8	66
267	Defect passivation strategy for inorganic CsPbI2Br perovskite solar cell with a high-efficiency of 16.77%. Journal of Materials Science and Technology, 2021, 82, 40-46.	5.6	12
268	Encapsulation for perovskite solar cells. Science Bulletin, 2021, 66, 100-102.	4.3	18
269	Conjugated Polymers for Photon-to-Electron and Photon-to-Fuel Conversions. ACS Applied Polymer Materials, 2021, 3, 60-92.	2.0	43
270	Efficient and stable perovskite solar cells via surface passivation of an ultrathin hydrophobic organic molecular layer. Chemical Engineering Journal, 2021, 405, 126712.	6.6	42

#	Article	IF	CITATIONS
271	Allâ€Inorganic CsPbl ₃ Quantum Dot Solar Cells with Efficiency over 16% by Defect Control. Advanced Functional Materials, 2021, 31, 2005930.	7.8	101
272	Environmental risks and strategies for the long-term stability of carbon-based perovskite solar cells. Materials Today Energy, 2021, 19, 100590.	2.5	14
273	Kilogramâ€5cale Crystallogenesis of Halide Perovskites for Gammaâ€Rays Dose Rate Measurements. Advanced Science, 2021, 8, 2001882.	5.6	21
274	Fluorescenceâ€enhanced Cs 4 PbBr 6 /CsPbBr 3 composites films synthesized by doubleâ€films solid phase reaction method. Luminescence, 2021, 36, 631-641.	1.5	4
275	Mechanisms and Suppression of Photoinduced Degradation in Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2002326.	10.2	118
276	In Quest of Environmentally Stable Perovskite Solar Cells: A Perspective. Helvetica Chimica Acta, 2021, 104, .	1.0	15
277	One-step method for the fabrication of high-quality perovskite thin-films under ambient conditions: Stability, morphological, optical, and electrical evaluation. Thin Solid Films, 2021, 717, 138438.	0.8	2
278	Structural Properties and Stability of Inorganic CsPbI ₃ Perovskites. Small Structures, 2021, 2, 2000089.	6.9	39
279	Encapsulation of perovskite solar cells for enhanced stability: Structures, materials and characterization. Journal of Power Sources, 2021, 485, 229313.	4.0	82
280	Scanning Kelvin Probe Microscopy Reveals That Ion Motion Varies with Dimensionality in 2D Halide Perovskites. ACS Energy Letters, 2021, 6, 100-108.	8.8	23
281	Strain Engineering of Metal–Halide Perovskites toward Efficient Photovoltaics: Advances and Perspectives. Solar Rrl, 2021, 5, 2000672.	3.1	33
282	Dopant-free dicyanofluoranthene-based hole transporting material with low cost enables efficient flexible perovskite solar cells. Nano Energy, 2021, 82, 105701.	8.2	68
283	Lowâ€Dimensional Metal Halide Perovskite Photodetectors. Advanced Materials, 2021, 33, e2003309.	11.1	319
284	Moistureâ€Resistant FAPbI ₃ Perovskite Solar Cell with 22.25 % Power Conversion Efficiency through Pentafluorobenzyl Phosphonic Acid Passivation. ChemSusChem, 2021, 14, 1176-1183.	3.6	101
285	Lithium doping induced self-crystallization of CsPbBr3 nanocrystal glass with improved quantum yield and stability. Chemical Engineering Journal, 2021, 421, 127777.	6.6	46
286	Evidence of improved power conversion efficiency in lead-free CsGeI3 based perovskite solar cell heterostructure via <scp>scaps</scp> simulation. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2021, 39, .	0.6	75
287	Acute effects of CH3NH3PbI3 perovskite on Scenedesmus obliquus and Daphnia magana in aquatic environment. Ecotoxicology and Environmental Safety, 2021, 208, 111677.	2.9	8
288	Degradation of perovskite solar cells by the doping level decrease of HTL revealed by capacitance spectroscopy. Solar Energy Materials and Solar Cells, 2021, 220, 110854.	3.0	12

#	Article	IF	CITATIONS
289	Recent Advances in Carbon Nanotube Utilizations in Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2004765.	7.8	37
290	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
291	Perovskite indoor photovoltaics: opportunity and challenges. Chemical Science, 2021, 12, 11936-11954.	3.7	72
292	4-Chlorobenzylamine-based 2D/3D Perovskite Solar Cell. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2021, , 199.	0.6	1
293	Overcoming photovoltage deficit <i>via</i> natural amino acid passivation for efficient perovskite solar cells and modules. Journal of Materials Chemistry A, 2021, 9, 5857-5865.	5.2	43
294	Stable lead-halide perovskite quantum dots as efficient visible light photocatalysts for organic transformations. Nanoscale Advances, 2021, 3, 1464-1472.	2.2	17
295	Abnormal spatial heterogeneity governing the charge-carrier mechanism in efficient Ruddlesden–Popper perovskite solar cells. Energy and Environmental Science, 2021, 14, 4915-4925.	15.6	24
296	Organic Hole Transport Material Ionization Potential Dictates Diffusion Kinetics of Iodine Species in Halide Perovskite Devices. ACS Energy Letters, 2021, 6, 501-508.	8.8	28
297	The 2D Halide Perovskite Rulebook: How the Spacer Influences Everything from the Structure to Optoelectronic Device Efficiency. Chemical Reviews, 2021, 121, 2230-2291.	23.0	506
298	A polymer-coated template-confinement CsPbBr ₃ perovskite quantum dot composite. Nanoscale, 2021, 13, 6586-6591.	2.8	34
299	Organic–inorganic hybrid and inorganic halide perovskites: structural and chemical engineering, interfaces and optoelectronic properties. Journal Physics D: Applied Physics, 2021, 54, 133002.	1.3	27
301	X-ray stability and degradation mechanism of lead halide perovskites and lead halides. Physical Chemistry Chemical Physics, 2021, 23, 12479-12489.	1.3	33
302	Two-dimensional halide perovskites: synthesis, optoelectronic properties, stability, and applications. Nanoscale, 2021, 13, 12394-12422.	2.8	38
303	Passivation and process engineering approaches of halide perovskite films for high efficiency and stability perovskite solar cells. Energy and Environmental Science, 2021, 14, 2906-2953.	15.6	170
304	Design optimization of CsPbBr ₃ nanocrystals into zeolite Beta composites as ultra-stable green emitters for backlight display applications. Journal of Materials Chemistry C, 2021, 9, 12118-12123.	2.7	22
305	Optoelectronic devices based on the integration of halide perovskites with silicon-based materials. Journal of Materials Chemistry A, 2021, 9, 20919-20940.	5.2	19
306	An antibonding valence band maximum enables defect-tolerant and stable GeSe photovoltaics. Nature Communications, 2021, 12, 670.	5.8	58
307	Tin halide perovskites for efficient lead-free solar cells. , 2021, , 259-285.		0

#	Article	IF	CITATIONS
308	Rapid hybrid perovskite film crystallization from solution. Chemical Society Reviews, 2021, 50, 7108-7131.	18.7	77
309	Ambient Prepared Mesoporous Perovskite Solar Cells with Longer Stability. Journal of Electronic Materials, 2021, 50, 1535-1543.	1.0	2
310	Recent advances in radiation detection technologies enabled by metal-halide perovskites. Materials Advances, 2021, 2, 6744-6767.	2.6	20
311	Colloidal quantum dots and metal halide perovskite hybridization for solar cell stability and performance enhancement. Journal of Materials Chemistry A, 2021, 9, 15522-15541.	5.2	8
312	Lowâ€Dimensionalâ€Networked Perovskites with Aâ€Siteâ€Cation Engineering for Optoelectronic Devices. Small Methods, 2021, 5, e2001147.	4.6	27
313	Pushing commercialization of perovskite solar cells by improving their intrinsic stability. Energy and Environmental Science, 2021, 14, 3233-3255.	15.6	166
314	Peptide-based novel small molecules and polymers: unexplored optoelectronic materials. Journal of Materials Chemistry C, 2021, 9, 12462-12488.	2.7	8
315	Photon-induced deactivations of multiple traps in CH ₃ NH ₃ PbI ₃ perovskite films by different photon energies. Physical Chemistry Chemical Physics, 2021, 23, 10919-10925.	1.3	3
316	High-performance carbon- based CsPbIBr ₂ perovskite solar cells fabricated by precursor film preparation process. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 228801.	0.2	2
317	Observing and Understanding the Corrosion of Silver Nanowire Electrode by Precursor Reagents and MAPbl ₃ Film in Different Environmental Conditions. Advanced Materials Interfaces, 2021, 8, 2001669.	1.9	5
318	Kinetic evidence for the transiently shifted acidity constant of histidine linked to paramagnetic tyrosine probed by intramolecular electron transfer in oxidized peptides. Physical Chemistry Chemical Physics, 2021, 23, 16698-16706.	1.3	1
319	Suppressing Halide Phase Segregation in CsPblBr ₂ Films by Polymer Modification for Hysteresis-Less All-Inorganic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 2868-2878.	4.0	34
320	Using steric hindrance to manipulate and stabilize metal halide perovskites for optoelectronics. Chemical Science, 2021, 12, 7231-7247.	3.7	31
321	Hierarchical computational screening of layered lead-free metal halide perovskites for optoelectronic applications. Journal of Materials Chemistry A, 2021, 9, 6476-6486.	5.2	15
322	Compact TiO2 blocking-layer prepared by LbL for perovskite solar cells. Solar Energy, 2021, 214, 510-516.	2.9	7
323	Improving Photostability of Cesium-Doped Formamidinium Lead Triiodide Perovskite. ACS Energy Letters, 2021, 6, 574-580.	8.8	22
324	Emergent materials and concepts for solar cell applications. , 2021, , 37-70.		1
325	The Impact of PbI 2 :KI Alloys on the Performance of Sequentially Deposited Perovskite Solar Cells. European Journal of Inorganic Chemistry, 2021, 2021, 821-830.	1.0	5

#	Article	IF	CITATIONS
326	Merocyanine with Hole-Transporting Ability and Efficient Defect Passivation Effect for Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 869-876.	8.8	64
327	Polyhydroxy Ester Stabilized Perovskite for Low Noise and Large Linear Dynamic Range of Self-Powered Photodetectors. Nano Letters, 2021, 21, 1500-1507.	4.5	33
328	Toward efficient and stable operation of perovskite solar cells: Impact of sputtered metal oxide interlayers. Nano Select, 2021, 2, 1417-1436.	1.9	10
329	Excellent Intrinsic Longâ€Term Thermal Stability of Coâ€Evaporated MAPbI ₃ Solar Cells at 85 °C. Advanced Functional Materials, 2021, 31, 2100557.	7.8	36
330	Formation and Stabilization of Inorganic Halide Perovskites for Photovoltaics. Matter, 2021, 4, 528-551.	5.0	28
331	Organic Cation Engineering for Vertical Charge Transport in Leadâ€Free Perovskite Quantum Wells. Small Science, 2021, 1, 2000024.	5.8	8
332	Recent Progress in Perovskite Solar Cells Modified by Sulfur Compounds. Solar Rrl, 2021, 5, 2000713.	3.1	17
333	Terahertz Analysis of CH ₃ NH ₃ Pbl ₃ Perovskites Associated with Graphene and Silver Nanowire Electrodes. ACS Applied Materials & Interfaces, 2021, 13, 9224-9231.	4.0	3
334	Twoâ€Dimensional Metal–Organic Frameworksâ€Based Grain Termination Strategy Enables Highâ€Efficiency Perovskite Photovoltaics with Enhanced Moisture and Thermal Stability. Advanced Functional Materials, 2021, 31, 2010368.	7.8	51
335	Potassium Thiocyanateâ€Assisted Enhancement of Slotâ€Dieâ€Coated Perovskite Films for Highâ€Performance Solar Cells. Small Science, 2021, 1, 2000044.	5.8	26
336	Grain Transformation and Degradation Mechanism of Formamidinium and Cesium Lead Iodide Perovskite under Humidity and Light. ACS Energy Letters, 2021, 6, 934-940.	8.8	90
337	Distinct Carrier Transport Properties Across Horizontally vs Vertically Oriented Heterostructures of 2D/3D Perovskites. Journal of the American Chemical Society, 2021, 143, 4969-4978.	6.6	52
338	<i>p</i> â€Type Charge Transfer Doping of Graphene Oxide with (NiCo) _{1â^'<i>y</i>} Fe _{<i>y</i>} O _{<i>x</i>} for Airâ€Stable, Allâ€Inorganic CsPblBr ₂ Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 10608-10613.	7.2	89
339	Multiple Roles of 1,4-Diazabicyclo[2.2.2]octane in the Solvothermal Synthesis of Iodobismuthates. Inorganic Chemistry, 2021, 60, 5333-5342.	1.9	8
340	Suppression of hysteresis in all-inorganic perovskite solar cells by the incorporation of PCBM. Applied Physics Letters, 2021, 118, .	1.5	18
341	Strain in perovskite solar cells: origins, impacts and regulation. National Science Review, 2021, 8, nwab047.	4.6	127
342	Stabilization of 3-D trigonal phase in guanidinium (C(NH2)3) lead triiodide (GAPbI3) films. Applied Surface Science, 2021, 542, 148575.	3.1	12
343	Strategies for High-Performance Large-Area Perovskite Solar Cells toward Commercialization. Crystals, 2021, 11, 295.	1.0	23

#	ARTICLE	IF	Citations
344	On the relation between mobile ion kinetics, device design, and doping in double-cation perovskite solar cells. Applied Physics Letters, 2021, 118, .	1.5	5
345	Halide Perovskite Lightâ€Emitting Diode Technologies. Advanced Optical Materials, 2021, 9, 2002128.	3.6	100
346	High-Efficiency (>14%) and Air-Stable Carbon-Based, All-Inorganic CsPbI ₂ Br Perovskite Solar Cells through a Top-Seeded Growth Strategy. ACS Energy Letters, 0, , 1500-1510.	8.8	106
347	Suppression of ion migration through cross-linked PDMS doping to enhance the operational stability of perovskite solar cells. Solar Energy, 2021, 217, 105-112.	2.9	10
348	Interâ€Sample and Intraâ€Sample Variability in Electronic Properties of Methylammonium Lead Iodide. Advanced Functional Materials, 2021, 31, 2101843.	7.8	4
349	Origin of Efficiency and Stability Enhancement in Highâ€Performing Mixed Dimensional 2Dâ€3D Perovskite Solar Cells: A Review. Advanced Functional Materials, 2022, 32, 2009164.	7.8	96
350	<i>p</i> â€Type Charge Transfer Doping of Graphene Oxide with (NiCo) _{1â^'<i>y</i>} Fe _{<i>y</i>} O _{<i>x</i>} for Airâ€6table, Allâ€norganic CsPblBr ₂ Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 10702-10707.	1.6	6
351	First-principles investigation of intrinsic point defects in perovskite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CsSnBr</mml:mi><mml:mn>3Physical Review Materials, 2021, 5, .</mml:mn></mml:msub></mml:math 	ml <mark>or9</mark> 1> <td>nm#msub><!--</td--></td>	nm#msub> </td
352	Interfacial interactions and enhanced optoelectronic properties of GaN/perovskite heterostructures: insight from first-principles calculations. Journal of Materials Science, 2021, 56, 11352-11363.	1.7	7
353	Gentle Materials Need Gentle Fabrication: Encapsulation of Perovskites by Gas-Phase Alumina Deposition. Journal of Physical Chemistry Letters, 2021, 12, 2348-2357.	2.1	8
354	Printing strategies for scaling-up perovskite solar cells. National Science Review, 2021, 8, nwab075.	4.6	48
355	A data fusion approach to optimize compositional stability of halide perovskites. Matter, 2021, 4, 1305-1322.	5.0	75
356	Innovation of Materials, Devices, and Functionalized Interfaces in Organic Spintronics. Advanced Functional Materials, 2021, 31, 2100550.	7.8	47
357	Azahomofullerenes as New n-Type Acceptor Materials for Efficient and Stable Inverted Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 20296-20304.	4.0	13
358	Polymer strategies for high-efficiency and stable perovskite solar cells. Nano Energy, 2021, 82, 105712.	8.2	64
359	Review on persistent challenges of perovskite solar cells' stability. Solar Energy, 2021, 218, 469-491.	2.9	80
360	Impact of P3HT Regioregularity and Molecular Weight on the Efficiency and Stability of Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2021, 9, 5061-5073.	3.2	29
361	Unraveling the Charge Transport Mechanism in Mechanochemically Processed Hybrid Perovskite Solar Cell. Langmuir, 2021, 37, 5513-5521.	1.6	11

ARTICLE IF CITATIONS Charge-Carrier Mobility and Localization in Semiconducting Cu₂AgBil₆ for 362 8.8 41 Photovoltaic Applications. ACS Energy Letters, 2021, 6, 1729-1739. Photoemission Studies on the Environmental Stability of Thermal Evaporated MAPbI3 Thin Films and 1.6 MAPbBr3 Single Crystals. Energies, 2021, 14, 2005. When iodide meets bromide: Halide mixing facilitates the light-induced decomposition of perovskite 364 8.2 12 absorber films. Nano Energy, 2021, 86, 106082. Photodegradation pathways of CH3NH3PbI3 organic perovskite polycrystalline film observed by in-situ 3.1 scanning probe microscopy. Applied Surface Science, 2021, 545, 149081. Study of perovskite CH3NH3PbI3 thin films under thermal exposure. Bulletin of Materials Science, 2021, 366 0.8 3 44.1. Improving the Photovoltaic Performance of Flexible Solar Cells with Semitransparent Inorganic Perovskite Active Layers by Interface Engineering. ACS Applied Materials & amp; Interfaces, 2021, 13, 4.0 20034-20042. Boosting the Performance of One-Step Solution-Processed Perovskite Solar Cells Using a Natural 368 2.0 22 Monoterpene Alcohol as a Green Solvent Additive. ACS Applied Electronic Materials, 2021, 3, 1813-1825. Toward Real Setting Applications of Organic and Perovskite Solar Cells: A Comparative Review. Energy Technology, 2021, 9, 2000901. 1.8 Dopant-Free All-Organic Small-Molecule HTMs for Perovskite Solar Cells: Concepts and 370 1.6 18 Structureâ€"Property Relationships. Energies, 2021, 14, 2279. Global Property Prediction: A Benchmark Study on Open-Source, Perovskite-like Datasets. ACS Omega, 371 1.6 2021, 6, 12722-12732. Durable Defect Passivation of the Grain Surface in Perovskite Solar Cells with π-Conjugated Sulfamic 372 4.035 Acid Additives. ACS Applied Materials & amp; Interfaces, 2021, 13, 26013-26022. Insights into the Development of Monolithic Perovskite/Silicon Tandem Solar Cells. Advanced Energy Materials, 2022, 12, 2003628. Interfacial stabilization for inverted perovskite solar cells with long-term stability. Science Bulletin, 374 4.3 45 2021, 66, 991-1002. Probing the Electron Beam-Induced Structural Evolution of Halide Perovskite Thin Films by Scanning 1.5 Transmission Electron Microscopy. Journal of Physical Chemistry C, 2021, 125, 10786-10794. Recent advancements in halide perovskite nanomaterials and their optoelectronic applications. 376 8.5 25 InformaÄnÃ-MateriÃ; ly, 2021, 3, 962-986. Real-Time Investigation of Sn(II) Oxidation in Pb-Free Halide Perovskites by X-ray Absorption and Mössbauer Spectroscopy. ACS Applied Energy Materials, 2021, 4, 4327-4332. Regulating the Film Growth and Reducing the Defects for Efficient CsPbIBr₂ Solar Cells. 378 4.0 21 ACS Applied Materials & amp; Interfaces, 2021, 13, 24654-24661. Singlet fission and tandem solar cells reduce thermal degradation and enhance lifespan. Progress in 379 4.4

CITATION REPORT

Photovoltaics: Research and Applications, 2021, 29, 899-906.

#

#	Article	IF	CITATIONS
380	Polymeric Dopant-Free Hole Transporting Materials for Perovskite Solar Cells: Structures and Concepts towards Better Performances. Polymers, 2021, 13, 1652.	2.0	24
381	Molecularly Engineered Interfaces in Metal Halide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 4882-4901.	2.1	21
382	A Study of Interfacial Electronic Structure at the CuPc/CsPbI2Br Interface. Crystals, 2021, 11, 547.	1.0	2
383	Investigation of the Selectivity of Carrier Transport Layers in Wideâ€Bandgap Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100107.	3.1	13
384	The Past, Present, and Future of Metal Halide Perovskite Lightâ€Emitting Diodes. Small Science, 2021, 1, 2000072.	5.8	37
385	Multiple-Noncovalent-Interaction-Stabilized Layered Dion–Jacobson Perovskite for Efficient Solar Cells. Nano Letters, 2021, 21, 5788-5797.	4.5	59
386	Morphology-Dependent Ambient-Condition Growth of Perovskite Nanocrystals for Enhanced Stability in Photoconversion Device. Journal of Physical Chemistry Letters, 2021, 12, 5631-5638.	2.1	12
387	Halide Engineering for Mitigating Ion Migration and Defect States in Hot-Cast Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2021, 9, 7993-8001.	3.2	21
388	Decoupling the Effects of Interfacial Chemistry and Grain Size in Perovskite Stability. , 2021, , .		0
389	Robust Molecular Dipoleâ€Enabled Defect Passivation and Control of Energyâ€Level Alignment for Highâ€Efficiency Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 17805-17811.	1.6	22
390	Robust Molecular Dipoleâ€Enabled Defect Passivation and Control of Energyâ€Level Alignment for Highâ€Efficiency Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 17664-17670.	7.2	69
391	Temperature Effects on the Energy Yield of Perovskite Solar Cells. , 2021, , .		0
392	Impact of carbon-based charge transporting layer on the performance of perovskite solar cells. Solar Energy, 2021, 221, 254-274.	2.9	7
393	Synthesis of Chemically Stable Ultrathin SiO ₂ -Coated Core–Shell Perovskite QDs via Modulation of Ligand Binding Energy for All-Solution-Processed Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2021, 13, 29798-29808.	4.0	35
394	CO2 doping of organic interlayers for perovskite solar cells. Nature, 2021, 594, 51-56.	13.7	120
395	Single-crystal halide perovskites: Opportunities and challenges. Matter, 2021, 4, 2266-2308.	5.0	35
396	Development of all-inorganic lead halide perovskites for carbon dioxide photoreduction. Renewable and Sustainable Energy Reviews, 2021, 145, 111047.	8.2	28
397	Multifunctional Conjugated Ligand Engineering for Stable and Efficient Perovskite Solar Cells. Advanced Materials, 2021, 33, e2100791.	11.1	99

#	Article	IF	CITATIONS
398	Protecting Perovskite Solar Cells against Moisture-Induced Degradation with Sputtered Inorganic Barrier Layers. ACS Applied Energy Materials, 2021, 4, 7571-7578.	2.5	20
399	Chalcogenide perovskite BaZrS3 thin-film electronic and optoelectronic devices by low temperature processing. Nano Energy, 2021, 85, 105959.	8.2	46
400	Impact of Humidity and Temperature on the Stability of the Optical Properties and Structure of MAPbI3, MA0.7FA0.3PbI3 and (FAPbI3)0.95(MAPbBr3)0.05 Perovskite Thin Films. Materials, 2021, 14, 4054.	1.3	10
401	Transformation and degradation of metal halide perovskites induced by energetic electrons and their practical implications. Nano Futures, 2021, 5, 032001.	1.0	4
402	Modification of compact TiO2 layer by TiCl4-TiCl3 mixture treatment and construction of high-efficiency carbon-based CsPbl2Br perovskite solar cells. Journal of Energy Chemistry, 2021, 63, 442-451.	7.1	17
403	Revealing the Mechanism behind the Catastrophic Failure of nâ€iâ€p Type Perovskite Solar Cells under Operating Conditions and How to Suppress It. Advanced Functional Materials, 2021, 31, 2103820.	7.8	22
404	Phase Diagram and Cation Dynamics of Mixed MA _{1–<i>x</i>} FA <i>_x</i> PbBr ₃ Hybrid Perovskites. Chemistry of Materials, 2021, 33, 5926-5934.	3.2	16
405	Influence of Atmospheric Constituents on Spectral Instability and Defect-Mediated Carrier Recombination in Hybrid Perovskite Nanoplatelets. Journal of Physical Chemistry C, 2021, 125, 17133-17143.	1.5	10
406	Defect Passivation of Perovskite Films for Highly Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, 2100295.	3.1	58
407	Conjugated Polyelectrolyte-Passivated Stable Perovskite Solar Cells for Efficiency Beyond 20%. Chemistry of Materials, 2021, 33, 5709-5717.	3.2	33
408	Beyond the Limit of Goldschmidt Tolerance Factor: Crystal Surface Engineering to Boost the αâ€Phase Stability of Formamidiniumâ€Only Hybrid Inorganic–Organic Perovskites. Solar Rrl, 2021, 5, 2100188.	3.1	8
409	Ion mobility independent large signal switching of perovskite devices. Applied Physics Letters, 2021, 119,	1.5	5
410	Charge Transport in 2D Layered Mixed Sn–Pb Perovskite Thin Films for Fieldâ€Effect Transistors. Advanced Electronic Materials, 2021, 7, 2100384.	2.6	22
411	Mechanism of Enhancement in Perovskite Solar Cells by Organosulfur Amine Constructed 2D/3D Heterojunctions. Journal of Physical Chemistry C, 2021, 125, 16428-16434.	1.5	23
412	A Review on Emerging Barrier Materials and Encapsulation Strategies for Flexible Perovskite and Organic Photovoltaics. Advanced Energy Materials, 2021, 11, 2101383.	10.2	57
413	Stability of Perovskite Solar Cells: Degradation Mechanisms and Remedies. Frontiers in Electronics, 2021, 2, .	2.0	75
414	Dopantâ€Free Hole Transport Materials Afford Efficient and Stable Inorganic Perovskite Solar Cells and Modules. Angewandte Chemie, 2021, 133, 20652-20660.	1.6	6
415	Progress in ambient air-processed perovskite solar cells: Insights into processing techniques and stability assessment. Solar Energy, 2021, 224, 1369-1395.	2.9	43

#	Article	IF	CITATIONS
416	Perovskite Passivation with a Bifunctional Molecule 1,2â€Benzisothiazolinâ€3â€One for Efficient and Stable Planar Solar Cells. Solar Rrl, 2021, 5, 2100472.	3.1	5
417	Multi-Walled Carbon Nanotube-Assisted Encapsulation Approach for Stable Perovskite Solar Cells. Molecules, 2021, 26, 5060.	1.7	8
418	Superiority of two-step deposition over one-step deposition for perovskite solar cells processed in high humidity atmosphere. Optical Materials, 2021, 118, 111288.	1.7	9
419	The Impact of Detection Volume on Hybrid Halide Perovskite-Based Radiation Detectors. , 2022, , 55-79.		0
420	Recent Progress on Metal Halide Perovskite Solar Minimodules. Solar Rrl, 2022, 6, 2100458.	3.1	21
421	Operational and Spectral Stability of Perovskite Light-Emitting Diodes. ACS Energy Letters, 2021, 6, 3114-3131.	8.8	46
422	Metal Oxide-Induced Instability and Its Mitigation in Halide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 8495-8506.	2.1	22
423	The broadband and omnidirectional antireflective performance of perovskite solar cells with curved nanostructures. Solar Energy, 2021, 224, 10-17.	2.9	15
424	Dopantâ€Free Hole Transport Materials Afford Efficient and Stable Inorganic Perovskite Solar Cells and Modules. Angewandte Chemie - International Edition, 2021, 60, 20489-20497.	7.2	56
425	Mixed Halide Perovskite Films by Vapor Anion Exchange for Spectrally Stable Blue Stimulated Emission. Small, 2021, 17, e2103169.	5.2	11
426	Robust Unencapsulated Perovskite Solar Cells Protected by a Fluorinated Fullerene Electron Transporting Layer. ACS Energy Letters, 2021, 6, 3376-3385.	8.8	27
427	Humidity-resistant perovskite solar cells via the incorporation of halogenated graphene particles. Solar Energy, 2021, 224, 787-797.	2.9	13
428	Study and characterization of γ-ray doses dependent properties of CuPbI3 perovskite thin films. Journal of Materials Research and Technology, 2021, 14, 108-120.	2.6	7
429	Smelting recrystallization of CsPbBrl2 perovskites for indoor and outdoor photovoltaics. EScience, 2021, 1, 53-59.	25.0	54
430	Perovskite Quantum Dots with Ultrahigh Solid-State Photoluminescence Quantum Efficiency, Superior Stability, and Uncompromised Electrical Conductivity. Journal of Physical Chemistry Letters, 2021, 12, 9115-9123.	2.1	6
431	Humidity-Assisted Chlorination with Solid Protection Strategy for Efficient Air-Fabricated Inverted CsPbl ₃ Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 3661-3668.	8.8	45
432	Organic Matrix Assisted Lowâ€ŧemperature Crystallization of Black Phase Inorganic Perovskites. Angewandte Chemie, 2022, 134, .	1.6	3
433	Application of quantum dots in perovskite solar cells. Nanotechnology, 2021, 32, 482003.	1.3	6

#	Article	IF	CITATIONS
434	Azaacenes Based Electroactive Materials: Preparation, Structure, Electrochemistry, Spectroscopy and Applications—A Critical Review. Materials, 2021, 14, 5155.	1.3	9
435	Atomic-scale understanding on the physics and control of intrinsic point defects in lead halide perovskites. Applied Physics Reviews, 2021, 8, .	5.5	36
436	Ferrocene Induced Perpetual Recovery on All Elemental Defects in Perovskite Solar Cells. Angewandte Chemie, 0, , .	1.6	0
437	Mini-Review on Efficiency and Stability of Perovskite Solar Cells with Spiro-OMeTAD Hole Transport Layer: Recent Progress and Perspectives. Energy & Fuels, 2021, 35, 18915-18927.	2.5	45
438	Thermal- and Light-Induced Evolution of the 2D/3D Interface in Lead-Halide Perovskite Films. ACS Applied Materials & Interfaces, 2022, 14, 34180-34188.	4.0	19
439	A critical review on the moisture stability of halide perovskite films and solar cells. Chemical Engineering Journal, 2022, 430, 132701.	6.6	31
440	Toward Commercialization of Efficient and Stable Perovskite Solar Modules. Solar Rrl, 2022, 6, 2100600.	3.1	16
441	Ferroceneâ€Induced Perpetual Recovery on All Elemental Defects in Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 25567-25574.	7.2	34
442	Understanding degradation mechanisms of perovskite solar cells due to electrochemical metallization effect. Solar Energy Materials and Solar Cells, 2021, 230, 111278.	3.0	20
443	A critical review of materials innovation and interface stabilization for efficient and stable perovskite photovoltaics. Nano Energy, 2021, 87, 106141.	8.2	28
444	Strain analysis and engineering in halide perovskite photovoltaics. Nature Materials, 2021, 20, 1337-1346.	13.3	220
445	Quasiparticle Band Structure and Phonon-Induced Band Gap Renormalization of the Lead-Free Halide Double Perovskite Cs ₂ InAgCl ₆ . Journal of Physical Chemistry C, 2021, 125, 21689-21700.	1.5	13
446	Design of NiO <i>_x</i> /Carbon Heterostructure Interlayer to Improve Hole Extraction Efficiency of Inverted Perovskite Solar Cells. Advanced Materials Interfaces, 2021, 8, 2100862.	1.9	8
447	Organic Matrix Assisted Lowâ€ŧemperature Crystallization of Black Phase Inorganic Perovskites. Angewandte Chemie - International Edition, 2022, 61, .	7.2	32
448	Understanding the surface passivation effects of Lewis base in perovskite solar cells. Applied Surface Science, 2021, 563, 150267.	3.1	25
449	Materials, methods and strategies for encapsulation of perovskite solar cells: From past to present. Renewable and Sustainable Energy Reviews, 2021, 151, 111608.	8.2	45
450	Undercoordinated Pb2+ defects passivation via tetramethoxysilane-modified for efficient and stable perovskite solar cells. Organic Electronics, 2021, 99, 106332.	1.4	6
451	Recent strategies to improve moisture stability in metal halide perovskites materials and devices. Journal of Energy Chemistry, 2022, 65, 219-235.	7.1	23

#	Article	IF	CITATIONS
452	Dynamic temperature effects in perovskite solar cells and energy yield. Sustainable Energy and Fuels, 0, , .	2.5	5
453	Inverted perovskite solar cells with enhanced lifetime and thermal stability enabled by a metallic tantalum disulfide buffer layer. Nanoscale Advances, 2021, 3, 3124-3135.	2.2	23
454	Unraveling the compositional heterogeneity and carrier dynamics of alkali cation doped 3D/2D perovskites with improved stability. Materials Advances, 2021, 2, 1253-1262.	2.6	23
455	A computational approach to investigate the suitable ETL for lead-free CsGeI3 based perovskite solar cell. Materials Today: Proceedings, 2021, 47, 1564-1569.	0.9	23
456	A new molecular material as a dopant-free hole-transporting layer for stable perovskite solar cells. Materials Chemistry Frontiers, 0, , .	3.2	4
457	Electron/hole blocking layers as ionic blocking layers in perovskite solar cells. Journal of Materials Chemistry C, 2021, 9, 1888-1894.	2.7	11
458	Different Degradation Mechanism of CH ₃ NH ₃ PbI ₃ Based Perovskite Solar Cells under Ultraviolet and Visible Light Illumination. Acta Chimica Sinica, 2021, 79, 344.	0.5	1
459	Emerging Carbon Nanomaterials for Organic and Perovskite-Based Optoelectronics Device Applications. Advances in Sustainability Science and Technology, 2021, , 419-444.	0.4	1
460	Defect quantification in metal halide perovskites: the solid-state electrochemical alternative. Energy and Environmental Science, 2021, 14, 4840-4846.	15.6	6
461	Recent progress in metal sulfide-based electron transport layers in perovskite solar cells. Nanoscale, 2021, 13, 17272-17289.	2.8	10
462	Postface: Conclusion on Renewable Energy Strategies for a Sustainable Future: Part A: Role of Energy Storage. , 2021, , 839-846.		2
463	Nanoscale interfacial engineering enables highly stable and efficient perovskite photovoltaics. Energy and Environmental Science, 2021, 14, 5552-5562.	15.6	69
464	Enhanced stability in perovskite solar cells <i>via</i> room-temperature processing. Journal of Materials Chemistry C, 2021, 9, 14749-14756.	2.7	8
465	CVD-deposited hybrid lead halide perovskite films for high-responsivity, self-powered photodetectors with enhanced photo stability under ambient conditions. Nano Energy, 2020, 74, 104872.	8.2	50
466	Local nearly non-strained perovskite lattice approaching a broad environmental stability window of efficient solar cells. Nano Energy, 2020, 75, 104940.	8.2	15
467	Surface Modification of Backsheets Using Coupling Agents for Roll-To-Roll Processed Thin-Film Solar Photovoltaic (PV) Module Packaging Application. ACS Applied Materials & Interfaces, 2021, 13, 1682-1692.	4.0	4
468	Sustainability in Perovskite Solar Cells. ACS Applied Materials & amp; Interfaces, 2021, 13, 1-17.	4.0	53
469	Halide Perovskites With Ambipolar Transport Properties for Transistor Applications. RSC Smart Materials 2020 41-82	0.1	2

		CITATION REPORT		
#	Article		IF	CITATIONS
470	Roadmap on organic–inorganic hybrid perovskite semiconductors and devices. APL Ma	aterials, 2021, 9, .	2.2	102
471	Basis and effects of ion migration on photovoltaic performance of perovskite solar cells. Physics D: Applied Physics, 2021, 54, 063001.	Journal	1.3	20
472	Influence of Annealing Temperature on Structural Properties and Stability of CsPbBr3/Ti0 Core/Shell. IOP Conference Series: Materials Science and Engineering, 0, 965, 012023.)2	0.3	2
473	Metal oxide charge transport layers in perovskite solar cells—optimising low temperatu and improving the interfaces towards low temperature processed, efficient and stable de Energy, 2021, 3, 012004.	ire processing evices. JPhys	2.3	11
474	Origin of High Efficiency and Long-Term Stability in Ionic Liquid Perovskite Photovoltaic. 2020, 2020, 2616345.	Research,	2.8	59
475	Effect of bromine doping on the charge transfer, ion migration and stability of the single MAPb(Br _{<i>x</i>} Ia^' <i>x</i>) ₃ photodetector. J Materials Chemistry C, 2021, 9, 15189-15200.	crystalline ournal of	2.7	23
476	Organic additives in all-inorganic perovskite solar cells and modules: from moisture endu enhanced efficiency and operational stability. Journal of Energy Chemistry, 2022, 67, 36		7.1	21
477	"Coffee ring―controlment in spray prepared >19% efficiency Cs0.19FA0.81Pbl2 solar cells. Journal of Energy Chemistry, 2022, 67, 201-208.	5Br0.5 perovskite	7.1	14
478	Metal Halide Perovskites as Emerging Thermoelectric Materials. ACS Energy Letters, 202	1, 6, 3882-3905.	8.8	40
479	Machine Learning Accelerates the Discovery of Light-Absorbing Materials for Double Pero Cells. Journal of Physical Chemistry C, 2021, 125, 22483-22492.	ovskite Solar	1.5	16
480	Chemical and Electronic Investigation of Buried NiO _{1â[~]î´} , PCBM, and PTAA/MAPbI _{3–<i>x</i>} Cl _{<i>x</i>} Interfaces Using Hard X-ra Spectroscopy and Transmission Electron Microscopy. ACS Applied Materials & Inter 50481-50490.		4.0	5
481	A Peryleneâ€Based Conjugated Polymer Endows Perovskite Solar Cells with 85°C Dur of Gas Permeation. Advanced Functional Materials, 2022, 32, 2108855.	ability: The Control	7.8	19
482	Interplay of Structure, Chargeâ€Carrier Localization and Dynamics in Copperâ€5ilverâ€8 Semiconductors. Advanced Functional Materials, 2022, 32, .	ismuthâ€Halide	7.8	19
483	Emerging Perovskite Solar Cell Technology: Remedial Actions for the Foremost Challenge Energy Materials, 2021, 11, .	es. Advanced	10.2	40
484	Near-Surface Composition, Structure, and Energetics of TiO ₂ Thin Films: Ch of Stress-Induced Defect States in Oxides Prepared via Chemical Vapor Deposition versu Deposition from Sol–Gel Precursors. Journal of Physical Chemistry C, 2021, 125, 2401	s Solution	1.5	3
485	Enhanced electron transfer dynamics in perylene diimide passivated efficient and stable solar cells. EcoMat, 2021, 3, e12146.	perovskite	6.8	24
486	Multimodal Approach towards Large Area Fully Semitransparent Perovskite Solar Module Energy Materials, 2021, 11, 2102276.	2. Advanced	10.2	11
487	Improved Operational Stability of Perovskite Solar Cells via Au Barrier Layer Incorporation Applied Energy Materials, 2021, 4, 11062-11068.	n. ACS	2.5	9

#	Article	IF	CITATIONS
488	Bimolecular Generation of Excitonic Luminescence from Dark Photoexcitations in Ruddlesden–Popper Hybrid Metal-Halide Perovskites. Journal of Physical Chemistry Letters, 2021, 12, 10450-10456.	2.1	6
489	Insights into Accelerated Degradation of Perovskite Solar Cells under Continuous Illumination Driven by Thermal Stress and Interfacial Junction. ACS Applied Energy Materials, 2021, 4, 11121-11132.	2.5	29
490	Hydrophobic Fluorinated Conjugated Polymer as a Multifunctional Interlayer for High-Performance Perovskite Solar Cells. ACS Photonics, 2021, 8, 3185-3192.	3.2	17
491	Improving the Longâ€Term Stability of Doped Spiroâ€Type Holeâ€Transporting Materials in Planar Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100650.	3.1	6
492	Solar-Driven Water Splitting at 13.8% Solar-to-Hydrogen Efficiency by an Earth-Abundant Electrolyzer. ACS Sustainable Chemistry and Engineering, 2021, 9, 14070-14078.	3.2	15
493	Highly Stable Thin Films Based on Novel Hybrid 1D (PRSH)PbX3 Pseudo-Perovskites. Nanomaterials, 2021, 11, 2765.	1.9	0
494	Interfacial engineering of quasi-2-D formamidinium lead iodide nanosheets for perovskite solar cell by mechanochemical approach. Surfaces and Interfaces, 2021, 27, 101551.	1.5	4
495	Advancing 2D Perovskites for Efficient and Stable Solar Cells: Challenges and Opportunities. Advanced Materials, 2022, 34, e2105849.	11.1	104
496	Conjugated push-pull type oligomer as a new electron transport material for improved stability p-i-n perovskite solar cells. Synthetic Metals, 2021, 281, 116921.	2.1	1
497	Ultra-stable all-inorganic silver bismuth sulfide colloidal nanocrystal photovoltaics using pin type architecture. Journal of Power Sources, 2021, 514, 230585.	4.0	11
498	Highly Efficient and Stable Perovskite-Silicon Tandem Solar Cells. , 2019, , .		0
499	Open-Air Plasma-Deposited Multilayer Thin Film Moisture Barriers for Perovskite Solar Cells. , 2020, , .		0
500	Exploring the physics of cesium lead halide perovskite quantum dots via Bayesian inference of the photoluminescence spectra in automated experiment. Nanophotonics, 2021, 10, 1977-1989.	2.9	15
501	Encapsulation Techniques of Perovskite Solar Cells. , 2021, , .		0
502	Impact of <i>n</i> -Butylammonium Bromide on the Chemical and Electronic Structure of Double-Cation Perovskite Thin Films. ACS Applied Materials & Interfaces, 2021, 13, 53202-53210.	4.0	7
503	Thermally Stable Allâ€Perovskite Tandem Solar Cells Fully Using Metal Oxide Charge Transport Layers and Tunnel Junction. Solar Rrl, 2021, 5, 2100814.	3.1	24
504	Strategy for Crystallization Management of Perovskite: Incorporation of FAI in a PbI ₂ Precursor for a Two-Step Spin-Coating Process. ACS Applied Energy Materials, 2021, 4, 12091-12098.	2.5	6
505	Study of Electron Transport Layerâ€Free and Hole Transport Layerâ€Free Inverted Perovskite Solar Cells. Solar Rrl, 2022, 6, 2100578.	3.1	7

#	Article	IF	CITATIONS
506	Efficient and stable mesoscopic perovskite solar cell in high humidity by localized Dion-Jacobson 2Dâ€3D heterostructures. Nano Energy, 2022, 91, 106666.	8.2	42
507	Observation of elastic heterogeneity and phase evolution in 2D layered perovskites using coherent acoustic phonons. Nanophotonics, 2021, 10, 4009-4017.	2.9	5
508	Organic ammonium salt-assisted pinhole-free CuSCN films for carbon-based perovskite solar cells. New Journal of Chemistry, 2021, 45, 21382-21388.	1.4	2
509	Few-layer fluorine-functionalized graphene hole-selective contacts for efficient inverted perovskite solar cells. Chemical Engineering Journal, 2022, 430, 132831.	6.6	13
510	Electron transport improvement of perovskite solar cells via intercalation of Na doped TiO2 from metal-organic framework MIL-125(Ti). Applied Surface Science, 2022, 574, 151735.	3.1	8
511	Perovskite Quantum Dots for Photovoltaic Applications. Springer Series in Materials Science, 2020, , 243-254.	0.4	1
512	Light and Humidity Induced Degradation and Grain Transformation in Mixed Cation Perovskites. , 2021, ,		1
513	The Impact of Detection Volume on Hybrid Halide Perovskite-Based Radiation Detectors. , 0, , .		0
514	Outdoor Performance of Perovskite Photovoltaic Technology. , 0, , .		2
515	Twoâ€Dimensional Halide Perovskites: Approaches to Improve Optoelectronic Properties. Chemistry - an Asian Journal, 2022, 17, .	1.7	15
516	Flexible and Wearable Optoelectronic Devices Based on Perovskites. Advanced Materials Technologies, 2022, 7, .	3.0	26
517	Molecular Bond Engineering and Feature Learning for the Design of Hybrid Organic–Inorganic Perovskite Solar Cells with Strong Noncovalent Halogen–Cation Interactions. Journal of Physical Chemistry C, 2021, 125, 25316-25326.	1.5	6
518	Observing the stability evolution of β-DMAxCs1-xPbl2Br through precursor incubation. Organic Electronics, 2020, 84, 105800.	1.4	2
519	Impact of the polar optical phonon and alloy scattering on the charge-carrier mobilities of FA0.83Cs0.17Pb(I1â ^{~3} xBrx)3 hybrid perovskites. Physical Chemistry Chemical Physics, 2021, , .	1.3	3
520	On the crystal structure thermal evolution of formamidinium lead tribromide, CH(NH ₂) ₂ PbBr ₃ . Journal of Materials Chemistry C, 2021, 9, 17003-17011.	2.7	6
521	Spin-coating thermal-pressed strategy for the preparation of inorganic perovskite quasi-single-crystal thin films with giant single-/two-photon responses. Nano Energy, 2022, 92, 106719.	8.2	7
522	Halide perovskite-based indoor photovoltaics: recent development and challenges. Materials Today Energy, 2022, 23, 100907.	2.5	27
523	Improved Performance and Stability of Perovskite Solar Modules by Regulating Interfacial Ion Diffusion with Nonionic Crossâ€Linked 1D Leadâ€lodide. Advanced Energy Materials, 2022, 12, .	10.2	24

#	Article	IF	CITATIONS
524	Perovskite intermediate phases fundamentally address the urgent stability issue. CheM, 2021, 7, 2862-2865.	5.8	2
525	Defect Behaviors in Perovskite Light-Emitting Diodes. , 2021, 3, 1702-1728.		27
526	Enhanced Stability of Tin Halide Perovskite Photovoltaics Using a Bathocuproine—Copper Top Electrode. Advanced Energy Materials, 2021, 11, 2102766.	10.2	12
527	Interface Chelation Induced by Pyridineâ€Based Polymer for Efficient and Durable Airâ€Processed Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	10
528	Structural modulation and assembling of metal halide perovskites for solar cells and lightâ€emitting diodes. InformaÄnÃ-Materiály, 2021, 3, 1218-1250.	8.5	7
529	Diammonium Molecular Configurationâ€Induced Regulation of Crystal Orientation and Carrier Dynamics for Highly Efficient and Stable 2D/3D Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	68
530	Auger Electron Spectroscopy Analysis of the Thermally Induced Degradation of MAPbI ₃ Perovskite Films. ACS Omega, 2021, 6, 34606-34614.	1.6	5
531	Unassisted selective solar hydrogen peroxide production by an oxidised buckypaper-integrated perovskite photocathode. Nature Communications, 2021, 12, 6644.	5.8	23
532	A methylammonium iodide healing method for CH ₃ NH ₃ PbI ₃ perovskite solar cells with high fill factor over 80%. Journal of Semiconductors, 2021, 42, 112202.	2.0	2
533	Long-term stable perovskite solar cells prepared by doctor blade coating technology using bilayer structure and non-toxic solvent. Organic Electronics, 2022, 101, 106400.	1.4	5
534	Diammonium Molecular Configurationâ€Induced Regulation of Crystal Orientation and Carrier Dynamics for Highly Efficient and Stable 2D/3D Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	28
535	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
536	Perovskite White Light Emitting Diodes: Progress, Challenges, and Opportunities. ACS Nano, 2021, 15, 17150-17174.	7.3	101
537	Potential lead toxicity and leakage issues on lead halide perovskite photovoltaics. Journal of Hazardous Materials, 2022, 426, 127848.	6.5	100
538	Crystallization Dynamics of Snâ€Based Perovskite Thin Films: Toward Efficient and Stable Photovoltaic Devices. Advanced Energy Materials, 2022, 12, 2102213.	10.2	63
540	Stabilization Techniques of Lead Halide Perovskite for Photovoltaic Applications. Solar Rrl, 2022, 6, .	3.1	8
541	hBN Flake Embedded Al2O3 Thin Film for Flexible Moisture Barrier. Materials, 2021, 14, 7373.	1.3	1
542	Cooperative Effects of Dopant-Free Hole-Transporting Materials and Polycarbonate Film for Sustainable Perovskite Solar Cells. SSRN Electronic Journal, 0, , .	0.4	Ο

#	Article	IF	CITATIONS
543	Dualâ€Functional Quantum Dot Seeding Growth of Highâ€Quality Airâ€Processed CsPbI ₂ Br Film for Carbonâ€Based Perovskite Solar Cells. Solar Rrl, 2022, 6, 2100989.	3.1	20
544	Multistrategy Toward Highly Efficient and Stable CsPbI ₂ Br Perovskite Solar Cells Based on Dopantâ€Free Poly(3â€Hexylthiophene). Solar Rrl, 2022, 6, .	3.1	16
545	Fabrication of stable perovskite solar cells with efficiency over 20% in open air using <i>in situ</i> polymerized bi-functional additives. Journal of Materials Chemistry A, 2022, 10, 3688-3697.	5.2	16
546	The recent process and future of perovskite solar cells materials. Journal of Inclusion Phenomena and Macrocyclic Chemistry, 0, , 1.	0.9	1
547	Synergistic stabilization of CsPbI3 inorganic perovskite via 1D capping and secondary growth. Journal of Energy Chemistry, 2022, 68, 387-392.	7.1	16
548	Perovskite Nanocomposite Layers Engineering for Efficient and Stable Solar Cells. Journal of Nano Research, 0, 71, 71-109.	0.8	4
549	Managing big data. Nature Energy, 0, , .	19.8	1
550	Improved performance and stability of perovskite solar modules by interface modulating with graphene oxide crosslinked CsPbBr ₃ quantum dots. Energy and Environmental Science, 2022, 15, 244-253.	15.6	33
551	C ₆₀ Thin Films in Perovskite Solar Cells: Efficient or Limiting Charge Transport Layer?. ACS Applied Energy Materials, 2022, 5, 1646-1655.	2.5	6
552	Molecular Engineering in Perovskite Solar Cells: A Computational Study on 2â€Mercaptopyridine Derivatives as Surface Passivators against Water. Advanced Materials Interfaces, 2022, 9, .	1.9	11
553	An Acetylene-Linked 9,9′-Bicarbazole-Based Hole-Transporting Material for Efficient Perovskite Solar Cells. Energy & Fuels, 2022, 36, 2086-2094.	2.5	10
554	Lanthanide-doped inorganic halide perovskites (CsPbX ₃): novel properties and emerging applications. Journal of Materials Chemistry C, 2022, 10, 3647-3676.	2.7	25
555	Progress and challenges on scaling up of perovskite solar cell technology. Sustainable Energy and Fuels, 2022, 6, 243-266.	2.5	59
556	Competitive Displacement Triggering DBP Photoelectrochemical Aptasensor via Cetyltrimethylammonium Bromide Bridging Aptamer and Perovskite. Analytical Chemistry, 2022, 94, 1742-1751.	3.2	30
557	4-tert-butyl pyridine additive for moisture-resistant wide bandgap perovskite solar cells. Optical Materials, 2022, 123, 111876.	1.7	12
558	Encapsulation and Stability Testing of Perovskite Solar Cells for Real Life Applications. ACS Materials Au, 2022, 2, 215-236.	2.6	41
559	Probe of the excitonic transitions and lifetimes in quasi-2D organic–inorganic halide perovskites. AlP Advances, 2022, 12, .	0.6	2
560	Molecular interactions and functionalities of an organic additive in a perovskite semiconducting device: a case study towards high performance solar cells. Journal of Materials Chemistry A, 2022, 10, 2876-2887	5.2	14

#	Article	IF	CITATIONS
561	Effects of temperature-dependent burn-in decay on the performance of triple cation mixed halide perovskite solar cells. AIP Advances, 2022, 12, 015122.	0.6	6
562	Surface Passivation Using 2D Perovskites toward Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2022, 34, e2105635.	11.1	221
563	Ferroelectric polymer blends for optoelectronic applications. , 2022, , 113-151.		1
564	Stability Improvement of Perovskite Solar Cells by the Moisture-Resistant PMMA:Spiro-OMeTAD Hole Transport Layer. Polymers, 2022, 14, 343.	2.0	14
565	Monolithic Perovskite‣ilicon Tandem Solar Cells: From the Lab to Fab?. Advanced Materials, 2022, 34, e2106540.	11.1	92
566	Reversible Methanolation of Metal Halide Perovskites. Journal of the American Chemical Society, 2022, 144, 667-672.	6.6	23
567	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
568	Scratching the Surface: Passivating Perovskite Nanocrystals for Future Device Integration. Journal of Physical Chemistry Letters, 2022, 13, 982-990.	2.1	10
569	Ultrastable and highly efficient green-emitting perovskite quantum dot composites for Mini-LED displays or backlights. Nano Energy, 2022, 95, 107003.	8.2	49
570	Surface passivation for enhancing photovoltaic performance of carbon-based CsPbI3 perovskite solar cells. Journal of Solid State Chemistry, 2022, 308, 122891.	1.4	15
571	Techno-economic and environmental sustainability of industrial-scale productions of perovskite solar cells. Renewable and Sustainable Energy Reviews, 2022, 158, 112146.	8.2	23
572	Phenylfluorenamine-functionalized poly(N-vinylcarbazole)s as dopant-free polymer hole-transporting materials for inverted quasi-2D perovskite solar cells. Journal of Energy Chemistry, 2022, 69, 123-131.	7.1	7
573	Metal Halide Perovskites Demonstrate Radiation Hardness and Defect Healing in Vacuum. ACS Applied Materials & Interfaces, 2022, 14, 9352-9362.	4.0	7
574	Self-assembled interlayer aiming at the stability of NiO based perovskite solar cells. Journal of Energy Chemistry, 2022, 69, 211-220.	7.1	20
575	Cooperative effects of Dopant-Free Hole-Transporting materials and polycarbonate film for sustainable perovskite solar cells. Chemical Engineering Journal, 2022, 437, 135197.	6.6	13
576	Towards Up-Scaling the 4-Terminal All-Perovskite Tandem Solar Modules on Flexible Substrates. SSRN Electronic Journal, 0, , .	0.4	0
577	Towards Up-Scaling the 4-Terminal All-Perovskite Tandem Solar Modules on Flexible Substrates. SSRN Electronic Journal, 0, , .	0.4	0
578	Improving the Efficiency and Stability of In-Air Fabricated Perovskite Solar Cells Using the Mixed Antisolvent of Methyl Acetate and Chloroform. SSRN Electronic Journal, 0, , .	0.4	0

#	Article	IF	CITATIONS
579	A triple helicene based molecular semiconductor characteristic of a fully fused conjugated backbone for perovskite solar cells. Energy and Environmental Science, 2022, 15, 1630-1637.	15.6	28
580	Highly Efficient Inverted Planar Solar Cell Using Formamidinium-Based Quasi-Two Dimensional Perovskites. SSRN Electronic Journal, 0, , .	0.4	Ο
581	More Effective Perovskite Surface Passivation Strategy Via Optimized Functional Groups Enables Efficient P-I-N Perovskite Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
582	In Situ Microscopic Degradation Mechanisms of All-Inorganic Perovskites Under Humidity Exposure. SSRN Electronic Journal, 0, , .	0.4	0
583	Enhancing operational stability in perovskite solar cells by solvent-free encapsulation method. Sustainable Energy and Fuels, 2022, 6, 2264-2275.	2.5	5
584	Inhibited Aggregation of Lithium Salt in Spiro-OMeTAD for Perovskite Solar Cells. Crystals, 2022, 12, 290.	1.0	5
585	Cryogenic Focused Ion Beam Enables Atomic-Resolution Imaging of Local Structures in Highly Sensitive Bulk Crystals and Devices. Journal of the American Chemical Society, 2022, 144, 3182-3191.	6.6	28
586	In Situ Ethanolamine ZnO Nanoparticle Passivation for Perovskite Interface Stability and Highly Efficient Solar Cells. Nanomaterials, 2022, 12, 823.	1.9	3
587	Mechanism of Photoinduced Phase Segregation in Mixed-Halide Perovskite Microplatelets and Its Application in Micropatterning. ACS Applied Materials & amp; Interfaces, 2022, 14, 12412-12422.	4.0	13
588	Importance and Advancement of Modification Engineering in Perovskite Solar Cells. Solar Rrl, 2022, 6,	3.1	8
589	Inorganic CsPbBr ₃ Perovskite Nanocrystals as Interfacial Ion Reservoirs to Stabilize FAPbI ₃ Perovskite for Efficient Photovoltaics. Advanced Energy Materials, 2022, 12, .	10.2	22
590	Strategies to Enhance Light Emission from Two-Dimensional Perovskite Light-Emitting Diodes: Challenges and Future Opportunities. ACS Applied Electronic Materials, 2022, 4, 1469-1484.	2.0	8
591	Delineation and Passivation of Grainâ€Boundary Channels in Metal Halide Perovskite Thin Films for Solar Cells. Advanced Materials Interfaces, 2022, 9, .	1.9	4
592	Crystal Growth Regulation of 2D/3D Perovskite Films for Solar Cells with Both High Efficiency and Stability. Advanced Materials, 2022, 34, e2200705.	11.1	91
593	What Happens When Halide Perovskites Meet with Water?. Journal of Physical Chemistry Letters, 2022, 13, 2281-2290.	2.1	70
594	Nearâ€Infrared and Visibleâ€Range Optoelectronics in 2D Hybrid Perovskite/Transition Metal Dichalcogenide Heterostructures. Advanced Materials Interfaces, 2022, 9, .	1.9	6
595	Moistureâ€Induced Nonâ€Equilibrium Phase Segregation in Triple Cation Mixed Halide Perovskite Monitored by <i>In Situ</i> Characterization Techniques and Solidâ€State NMR. Energy and Environmental Materials, 2023, 6, .	7.3	7
596	0D/2D Mixed Dimensional Lead-Free Caesium Bismuth Iodide Perovskite for Solar Cell Application. Materials, 2022, 15, 2180.	1.3	10

#	Article	IF	CITATIONS
597	Waterâ€induced CsBr crystalline transition to CsPbBr ₃ and the change of luminescence properties in borophosphate glass. Journal of the American Ceramic Society, 2022, 105, 4699-4708.	1.9	8
598	Airâ€Processed Carbonâ€Based Cs _{0.5} FA _{0.5} Pbl ₃ –Cs ₄ Pbl ₆ Heterostructure Perovskite Solar Cells with Efficiency Over 16%. Solar Rrl, 2022, 6, .	3.1	11
599	Broad-Band-Enhanced Plasmonic Perovskite Solar Cells with Irregular Silver Nanomaterials. ACS Applied Materials & Interfaces, 2022, 14, 16269-16278.	4.0	16
600	Hierarchically Ordered Perovskites with High Photoâ€Electronic and Environmental Stability via Nanoimprinting Guided Block Copolymer Selfâ€Assembly. Advanced Materials Interfaces, 2022, 9, .	1.9	11
601	Influence of Annealing and Composition on the Crystal Structure of Mixed-Halide, Ruddlesden–Popper Perovskites. Chemistry of Materials, 2022, 34, 3109-3122.	3.2	27
602	Controlling the Decomposition of Hybrid Perovskite by a Dithienopyrrole-Based Hole Transport Layer toward Thermostable Solar Cells. , 2022, 4, 600-608.		1
603	A Mixed Antisolvent-Assisted Crystallization Strategy for Efficient All-Inorganic CsPbIBr ₂ Perovskite Solar Cells by a Low-Temperature Process. ACS Applied Energy Materials, 2022, 5, 2881-2889.	2.5	18
604	Highâ€Throughput Aging System for Parallel Maximum Power Point Tracking of Perovskite Solar Cells. Energy Technology, 2022, 10, .	1.8	11
605	Advances in Organic and Perovskite Photovoltaics Enabling a Greener Internet of Things. Advanced Functional Materials, 2022, 32, .	7.8	24
606	Degradation of Perovskite Photovoltaics Manifested in the Cross-Sectional Potential Profile Studied by Quantitative Kelvin Probe Force Microscopy. ACS Applied Energy Materials, 2022, 5, 4232-4239.	2.5	5
607	Improved water repellency and environmental stability of perovskite solar cells by encapsulating with paraffin wax. Materials Chemistry and Physics, 2022, 282, 125954.	2.0	7
608	Investigation of the role of back contact work function for hole transporting layer free perovskite solar cells applications. Optik, 2022, 256, 168749.	1.4	19
609	Research Progress on the Stability of Organic–Inorganic Halide Perovskite Photodetectors in a Humid Environment Through the Modification of Perovskite Layers. Journal of Electronic Materials, 2022, 51, 2801-2818.	1.0	9
610	Intrinsically Low Thermal Conductivity in the n-Type Vacancy-Ordered Double Perovskite Cs ₂ Snl ₆ : Octahedral Rotation and Anharmonic Rattling. Chemistry of Materials, 2022, 34, 3301-3310.	3.2	32
611	Light-induced halide segregation in perovskites with wrinkled morphology. Journal of Energy Chemistry, 2022, 71, 83-88.	7.1	2
612	Highâ€Resolution Multicolor Patterning of Metal Halide Perovskite Nanocrystal Thin Films through Rapidâ€Evaporationâ€Assisted Strategy. Advanced Materials Technologies, 2022, 7, .	3.0	6
613	Progress on the stability and encapsulation techniques of perovskite solar cells. Organic Electronics, 2022, 106, 106515.	1.4	22
614	Perovskite films passivated by poly[(R)-3-hydroxybutyric acid] for improved photovoltaic performance. Organic Electronics, 2022, 104, 106487.	1.4	3

#	Article	IF	CITATIONS
615	Directly purifiable Pre-oxidation of Spiro-OMeTAD for stability enhanced perovskite solar cells with efficiency over 23%. Chemical Engineering Journal, 2022, 437, 135457.	6.6	14
616	High-efficiency and ultraviolet stable carbon-based CsPbIBr2 solar cells from single crystal three-dimensional anatase titanium dioxide nanoarrays with ultraviolet light shielding function. Journal of Colloid and Interface Science, 2022, 616, 201-209.	5.0	9
617	High-performance Self-powered Perovskite Photodetector Based On Cesium Iodide Doped Spiro-OMeTAD Hole Transport Material. Journal of Alloys and Compounds, 2022, 907, 164432.	2.8	10
618	Azide additive acting as a powerful locker for Li+ and TBP in spiro-OMeTAD toward highly efficient and stable perovskite solar cells. Nano Energy, 2022, 96, 107072.	8.2	29
619	Multifunctional nanostructured host-guest POM@MOF with lead sequestration capability induced stable and efficient perovskite solar cells. Nano Energy, 2022, 97, 107184.	8.2	37
620	CuInSe2 quantum dots doped MAPbI3 films with reduced trap density for perovskite solar cells. Journal of Alloys and Compounds, 2022, 906, 164292.	2.8	9
621	Designing highly sensitive formaldehyde sensors via A-site cation deficiency in LaFeO3 hollow nanofibers. Applied Surface Science, 2022, 590, 153085.	3.1	25
622	Improving thermal stability of perovskite solar cell through interface modification by PbS quantum dots. , 2021, , .		0
623	Phase-Pure Layered Perovskite Films for Photodetectors with Enhanced Performance and Stability. ACS Applied Electronic Materials, 2022, 4, 326-333.	2.0	3
624	The emergence of concentrator photovoltaics for perovskite solar cells. Applied Physics Reviews, 2021, 8, .	5.5	8
625	Aiming at the industrialization of perovskite solar cells: Coping with stability challenge. Applied Physics Letters, 2021, 119, .	1.5	3
626	Multiâ€Level Passivation of MAPbI ₃ Perovskite for Efficient and Stable Photovoltaics. Advanced Functional Materials, 2022, 32, .	7.8	36
627	Oxidized Spiro-OMeTAD: Investigation of Stability in Contact with Various Perovskite Compositions. ACS Applied Energy Materials, 2021, 4, 13696-13705.	2.5	24
628	Millimeterâ€Sized Clusters of Triple Cation Perovskite Enables Highly Efficient and Reproducible Rollâ€toâ€Roll Fabricated Inverted Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	36
629	In Situ Stabilized CsPbI ₃ for Airâ€Fabricated Inverted Inorganic Perovskite Photovoltaics with Wide Humidity Operating Window. Advanced Functional Materials, 2022, 32, .	7.8	29
630	Degradation of Perovskite Thin Films and Solar Cells with Candle Soot C/Ag Electrode Exposed in a Control Ambient. Nanomaterials, 2021, 11, 3463.	1.9	7
631	Perovskite Solar Cells Go Bifacial—Mutual Benefits for Efficiency and Durability. Advanced Materials, 2022, 34, e2106805.	11.1	31
632	Beyond the Phase Segregation: Probing the Irreversible Phase Reconstruction of Mixedâ€Halide Perovskites. Advanced Science, 2022, 9, e2103948.	5.6	17

#	Article	IF	CITATIONS
633	High-Detectivity and Stable Planar MAPblâ, <i>f</i> /IDT-BT Photodetectors With Assisted MoOâ, <i>f</i> Interlayer. IEEE Transactions on Electron Devices, 2021, 68, 6266-6272.	1.6	0
634	Perovskites: weaving a network of knowledge beyond photovoltaics. Journal of Materials Chemistry A, 2022, 10, 19046-19066.	5.2	5
635	Perovskite fiber-shaped optoelectronic devices for wearable applications. Journal of Materials Chemistry C, 2022, 10, 6957-6991.	2.7	18
636	Highly Orientational Order Perovskite Induced by In situâ€generated 1D Perovskitoid for Efficient and Stable Printable Photovoltaics. Small, 2022, 18, e2200130.	5.2	10
637	Environmentalâ€Friendly Polymer for Efficient and Stable Inverted Perovskite Solar Cells with Mitigating Lead Leakage. Advanced Functional Materials, 2022, 32, .	7.8	59
638	Recent advances in lead-free double perovskites for x-ray and photodetection. Nanotechnology, 2022, 33, 312001.	1.3	22
639	Discovering equations that govern experimental materials stability under environmental stress using scientific machine learning. Npj Computational Materials, 2022, 8, .	3.5	6
640	Pressure-Driven Abnormal Emission Blue-Shift of Lead-Free Halide Double Perovskite Cs ₂ AgInCl ₆ Nanocrystals. Inorganic Chemistry, 2022, 61, 6488-6492.	1.9	5
641	Single-crystalline TiO2 nanoparticles for stable and efficient perovskite modules. Nature Nanotechnology, 2022, 17, 598-605.	15.6	121
642	Insertion of metal cations into hybrid organometallic halide perovskite nanocrystals for enhanced stability: eco-friendly synthesis, lattice strain engineering, and defect chemistry studies. Nanoscale Advances, 2022, 4, 2729-2743.	2.2	5
643	Efficient and Stable FAâ€Rich Perovskite Photovoltaics: From Material Properties to Device Optimization. Advanced Energy Materials, 2022, 12, .	10.2	16
644	Multifunctional Polymer Capping Frameworks Enable High-Efficiency and Stable All-Inorganic Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 6432-6441.	2.5	12
645	Strategies for highâ€performance perovskite solar cells from materials, film engineering to carrier dynamics and photon management. InformaÄnÃ-Materiály, 2022, 4, .	8.5	27
646	A Doped Hole Transport Layer Qualified for 100°Câ€Tolerant Perovskite Solar Cells. Advanced Optical Materials, 0, , 2200515.	3.6	0
647	Restricting the Formation of Pb–Pb Dimer via Surface Pb Site Passivation for Enhancing the Light Stability of Perovskite. Small, 2022, 18, e2201831.	5.2	15
648	Systematic Characterization on Optical and Phonon Properties of Cs[Pb _{<i>x</i>} Sn _{1–<i>x</i>}]I ₃ Alloyed Perovskites via First-Principles Modeling. Journal of Physical Chemistry C, 2022, 126, 8832-8838.	1.5	1
649	Spacer Cation Engineering of Two-Dimensional Hybrid Perovskites with Tunable Band Alignment and Optoelectronic Properties. Journal of Physical Chemistry C, 2022, 126, 8408-8416.	1.5	10
650	Impact of Nickel Oxide/Perovskite Interfacial Contact on the Crystallization and Photovoltaic Performance of Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	10

#	Article	IF	CITATIONS
651	Improving Heat Transfer Enables Durable Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	15
652	Charge-selective-contact-dependent halide phase segregation in CsPbIBr2 perovskite solar cells and its correlation to device degradation. Applied Surface Science, 2022, 595, 153544.	3.1	4
653	Stable organic-inorganic hybrid bismuth-halide: Exploration of crystal-structural, morphological, thermal, spectroscopic and optoelectronic properties. Journal of Molecular Structure, 2022, 1264, 133102.	1.8	8
654	Recent advancement in perovskite solar cell with imidazole additive. Materials Science in Semiconductor Processing, 2022, 148, 106788.	1.9	7
655	Yb-doped SnO ₂ 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
656	Improving the efficiency and stability of in-air fabricated perovskite solar cells using the mixed antisolvent of methyl acetate and chloroform. Organic Electronics, 2022, 107, 106552.	1.4	2
657	Triphenyllead Hydroperoxide: A 1D Coordination Peroxo Polymer, Single-Crystal-to-Single-Crystal Disproportionation to a Superoxo/Hydroxo Complex, and Application in Catalysis. Inorganic Chemistry, 2022, 61, 8193-8205.	1.9	5
658	Image processing with a multi-level ultra-fast three dimensionally integrated perovskite nanowire array. Nanoscale Horizons, 2022, 7, 759-769.	4.1	5
659	Characterization of interfaces: Lessons from the past for the future of perovskite solar cells. Journal of Semiconductors, 2022, 43, 051202.	2.0	6
660	Encapsulation Protocol for Flexible Perovskite Solar Cells Enabling Stability in Accelerated Aging Tests. Energy and Environmental Materials, 2023, 6, .	7.3	6
661	Characterization of a New Low Temperature Encapsulation Method with Ethylene-Vinyl Acetate under UV Irradiation for Perovskite Solar Cells. Applied Sciences (Switzerland), 2022, 12, 5228.	1.3	8
662	Long term stability assessment of perovskite solar cell via recycling of metal contacts under ambient conditions. Materials Letters, 2022, 322, 132490.	1.3	4
663	Degradation conceptualization of an innovative perovskite solar cell fabricated using SnO2 and P3HT as electron and hole transport layers. New Journal of Chemistry, 0, , .	1.4	1
664	A dopant-free 2,7-dioctyl[1]benzothieno[3,2- <i>b</i>][1]benzothiophene (C8-BTBT)-based hole transporting layer for highly stable perovskite solar cells with efficiency over 22%. Journal of Materials Chemistry A, 2022, 10, 12464-12472.	5.2	14
665	Stability investigation of the titanium-based eco-friendly perovskite-like antifluorite Cs ₂ TiBr ₆ . Journal of Materials Chemistry C, 2022, 10, 9301-9309.	2.7	6
666	In situ growth of graphene on both sides of a Cu–Ni alloy electrode for perovskite solar cells with improved stability. Nature Energy, 2022, 7, 520-527.	19.8	68
667	Impact of Halide Anions in CsX (X = I, Br, Cl) on the Microstructure and Photovoltaic Performance of FAPbI ₃ â€Based Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	4
668	Modeling Radiation Damage in Materials Relevant for Exploration and Settlement on the Moon. , 0, , .		0

C 1-		Dee	ODT
		- IK F F	ORT
<u> </u>		1.001	

#	Article	IF	CITATIONS
669	Multidimensional Function Upgradation of Allâ€Inorganic CsPbIBr ₂ Perovskite Film by Doping an Ionic Additive for Carbon–Electrodeâ€Based Solar Cells. Energy Technology, 2022, 10, .	1.8	3
670	Resolve deep-rooted challenges of halide perovskite for sustainable energy development and environmental remediation. Nano Energy, 2022, 99, 107401.	8.2	14
671	Deciphering perovskite decomposition in a humid atmosphere with TOF-GISANS. Energy Reports, 2022, 8, 23-33.	2.5	5
672	Photonic Nanostructures Mimicking Floral Epidermis for High Efficiency Perovskite Solar Cells with Excellent Ultraviolet Light Stability. SSRN Electronic Journal, 0, , .	0.4	0
673	A first-principles study on environmental stability and optoelectronic properties of bismuth oxychloride/cesium lead chloride van der Waals heterojunctions. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.2	0
675	Engineering van der Waals Materials for Advanced Metaphotonics. Chemical Reviews, 2022, 122, 15204-15355.	23.0	33
676	Dibenzoâ€18â€crownâ€6â€assisted inhibition of cationâ€migration for stable perovskite solar cells. Solar Rrl, 0, , .	3.1	3
677	Low-Temperature Hydrothermal Growth of ZnO Nanowires on AZO Substrates for FACsPb(IBr)3 Perovskite Solar Cells. Nanomaterials, 2022, 12, 2093.	1.9	3
678	Progress of Backlight Devices: Emergence of Halide Perovskite Quantum Dots/Nanomaterials. Frontiers in Nanotechnology, 0, 4, .	2.4	3
679	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
680	TowardÂup-scaling the four-terminal all-perovskite tandem solar modules on flexible substrates. Materials Today Energy, 2022, 28, 101073.	2.5	5
681	Grain Boundary Chemical Anchoring via Bidirectional Active Site Additive Enables Efficient and Stable Perovskite Solar Cells. Advanced Materials Interfaces, 2022, 9, .	1.9	8
682	Thermally-induced drift of A-site cations at solid–solid interface in physically paired lead halide perovskites. Scientific Reports, 2022, 12, .	1.6	2
683	In Situ Microscopic Observation of Humidity-Induced Degradation in All-Inorganic Perovskite Films. ACS Applied Energy Materials, 2022, 5, 8092-8102.	2.5	4
684	Application of Quantum Dot Interface Modification Layer in Perovskite Solar Cells: Progress and Perspectives. Nanomaterials, 2022, 12, 2102.	1.9	13
685	Recent Progress in Mixed Aâ€Site Cation Halide Perovskite Thinâ€Films and Nanocrystals for Solar Cells and Lightâ€Emitting Diodes. Advanced Optical Materials, 2022, 10, .	3.6	47
686	Introduction of cadmium chloride additive to improve the performance and stability of perovskite solar cells. RSC Advances, 2022, 12, 20461-20470.	1.7	40
687	Recent advances in dopant-free organic hole-transporting materials for efficient, stable and low-cost perovskite solar cells. Energy and Environmental Science, 2022, 15, 3630-3669.	15.6	58

#	Article	IF	CITATIONS
688	Transient Analysis of Ion-Migration Current for Degradation Diagnostics of Perovskite Solar Cells. IEEE Journal of Photovoltaics, 2022, 12, 1170-1174.	1.5	4
689	Thermal decomposition kinetics of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>FAPbI</mml:mi>thin films. Physical Review Materials, 2022, 6, .</mml:mrow></mml:msub></mml:math 	ml :m9 ow>	<mml:mn>3</mml:mn>
690	Passivating Lead Halide Perovskites Using Pyridinium Salts with Superhalogen Atoms. Journal of Physical Chemistry Letters, 2022, 13, 6074-6078.	2.1	3
691	Combatting temperature and reverse-bias challenges facing perovskite solar cells. Joule, 2022, 6, 1782-1797.	11.7	23
692	More effective perovskite surface passivation strategy via optimized functional groups enables efficient p-i-n perovskite solar cells. Applied Surface Science, 2022, 602, 154248.	3.1	5
693	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
694	Building perovskite solar cells that last. Science, 2022, 377, 265-266.	6.0	7
695	A water-soluble luminescent cesium-lead perovskite nanocrystal probe for sensitive detection of penicillamine. Dyes and Pigments, 2022, 205, 110537.	2.0	10
696	Enhanced efficiency, photocurrent and device stabilities of guanidinium chloride-based double cation mixed halide perovskite solar cells fabricated under humid conditions. Materials Science in Semiconductor Processing, 2022, 149, 106880.	1.9	3
697	Recent defect passivation drifts and role of additive engineering in perovskite photovoltaics. Nano Energy, 2022, 101, 107579.	8.2	46
698	A Highly integrated flexible photo-rechargeable system based on stable ultrahigh-rate quasi-solid-state zinc-ion micro-batteries and perovskite solar cells. Energy Storage Materials, 2022, 51, 239-248.	9.5	29
699	Highly efficient inverted planar solar cell using formamidinium-based quasi-two dimensional perovskites. Journal of Alloys and Compounds, 2022, 921, 166139.	2.8	6
700	Efficient Idealâ€Bandgap Tin–Lead Alloyed Inorganic Perovskite Solar Cells Enabled by Structural Dimension Engineering. Advanced Optical Materials, 2022, 10, .	3.6	3
701	A Conductive Molecular Semiconductor Composite with Over 160°C Glass Transition Temperature for Heatâ€Resistant Perovskite Solar Cells. Advanced Electronic Materials, 0, , 2200425.	2.6	2
702	Interplay of Kinetic and Thermodynamic Reaction Control Explains Incorporation of Dimethylammonium lodide into CsPbI ₃ . ACS Energy Letters, 2022, 7, 2745-2752.	8.8	11
703	Photo-electro-striction in halide perovskite semiconductors. Applied Physics Letters, 2022, 121, .	1.5	1
704	Data-Driven Analysis of Hole-Transporting Materials for Perovskite Solar Cells Performance. Journal of Physical Chemistry C, 2022, 126, 13053-13061.	1.5	13
705	Photoâ€Induced Degradation of 2D Dionâ^'Jacobson Perovskites under Continuous Light Illumination. Solar Rrl, 0, , 2200359.	3.1	3

	Сітаті	on Report	
#	Article	IF	CITATIONS
706	Photo Stabilization of pâ \in iâ \in n Perovskite Solar Cells with Bathocuproine: MXene. Small, 2022, 18, .	5.2	8
707	Photonic nanostructures mimicking floral epidermis for perovskite solar cells. Cell Reports Physical Science, 2022, 3, 101019.	2.8	3
708	Lowâ€Dimensional Metalâ€Halide Perovskites as Highâ€Performance Materials for Memory Applications. Small, 2022, 18, .	5.2	38
709	Selection, Preparation and Application of Quantum Dots in Perovskite Solar Cells. International Journal of Molecular Sciences, 2022, 23, 9482.	1.8	9
710	Intensity Modulated Photocurrent Microspectrosopy for Next Generation Photovoltaics. Small Methods, 2022, 6, .	4.6	9
711	Application of Ionic Liquids and Derived Materials to High-Efficiency and Stable Perovskite Solar Cells. , 2022, 4, 1684-1715.		18
712	Halide Remixing under Device Operation Imparts Stability on Mixed ation Mixedâ€Halide Perovskite So Cells. Advanced Materials, 2022, 34, .	lar 11.1	8
713	Overcoming Perovskite Corrosion and De-Doping Through Chemical Binding of Halogen Bonds Toward Efficient and Stable Perovskite Solar Cells. Nano-Micro Letters, 2022, 14, .	14.4	10
714	Highly Orientated Perovskite Quantum Dot Solids for Efficient Solar Cells. Advanced Materials, 2022, 34, .	11.1	28
715	Functional polymer passivating FA0.85PEA0.15SnI3 for efficient and stable lead-free perovskite solar cells. Nano Research, 2023, 16, 481-488.	5.8	3
716	Effect of out-gassing from polymeric encapsulant materials on the lifetime of perovskite solar cells. Solar Energy Materials and Solar Cells, 2022, 246, 111887.	3.0	3
717	Numerical investigation of a novel solar cell based on a modified perovskite with PPP polymer. Optical Materials, 2022, 133, 112894.	1.7	3
718	2D Ruddlesden-Popper perovskite ferroelectric film for high-performance, self-powered and ultra-stable UV photodetector boosted by ferro-pyro-phototronic effect and surface passivation. Nano Energy, 2022, 102, 107714.	8.2	14
719	Simple harmonic oscillation model explaining MA torsional locking in surface passivated MAPbI3 crystal. Chemical Physics Letters, 2022, 806, 139967.	1.2	2
720	lodide and charge migration at defective surfaces of methylammonium lead triiodide perovskites: The role of hydrogen bonding. Applied Surface Science, 2022, 604, 154501.	3.1	2
721	Development of Solution-Processed Perovskite Semiconductors Lasers. Crystals, 2022, 12, 1274.	1.0	1
722	Low-Temperature Removal of Residual Dimethylammonium via Surface Molecular Oligomerization for CsPbl ₃ Perovskite Solar Cells. ACS Energy Letters, 2022, 7, 3227-3234.	8.8	15
723	Prospective on the Doping Engineering of Vacancy-Ordered Halide Double Perovskites for Enhanced Optoelectronic Properties. Journal of Physical Chemistry C, 2022, 126, 15501-15508.	1.5	5

	C	itation Repo	RT	
#	ARTICLE	IF	-	CITATIONS
724	Plasma-treatment applications for fabricating third-generation solar cells. , 2022, , 137-166.			0
725	Experimental evidence of ion migration in aged inorganic perovskite solar cells using non-destructive RBS depth profiling. Materials Advances, 2022, 3, 7846-7853.	2	.6	2
726	Mechanical-load and temperature-engendered degradation of α-CsPbI ₃ : reactive molected dynamics simulation. Journal of Materials Chemistry C, 2022, 10, 12091-12105.	ular 2	.7	3
727	Spiers Memorial Lecture: Next generation chalcogenide-based absorbers for thin-film solar cells. Faraday Discussions, 0, 239, 9-37.	1	.6	10
728	[PbX ₆] ^{4â^'} modulation and organic spacer construction for stable perovski solar cells. Energy and Environmental Science, 2022, 15, 4470-4510.	te 1	5.6	16
729	Thermal instability originating from the interface between organic–inorganic hybrid perovskites an oxide electron transport layers. Energy and Environmental Science, 2022, 15, 4836-4849.	d 1	5.6	26
730	Emerging Metal-Halide Perovskite Materials for Enhanced Solar Cells and Light-Emitting Applications. Engineering Materials, 2022, , 45-85.	C	0.3	1
731	Lamination methods for the fabrication of perovskite and organic photovoltaics. Materials Horizons, 2022, 9, 2473-2495.	6	.4	6
732	Efficient inverted CsPbI3 perovskite solar cells fabricated in common air. Chemical Engineering Journal, 2023, 452, 139495.	6	.6	14
733	The mechanical behavior of metal-halide perovskites: Elasticity, plasticity, fracture, and creep. Scripta Materialia, 2023, 223, 115064.	2	.6	7
734	Graphene-based Nanocomposites for Electro-optic Devices. Current and Future Developments in Nanomaterials and Carbon Nanotubes, 2022, , 190-204.	C	0.1	0
735	Encapsulation against Extrinsic Degradation Factors and Stability Testing of Perovskite Solar Cells. , 0, , .			0
736	Role of Aâ€ S ite Composition in Charge Transport in Lead Iodide Perovskites. Advanced Energy and Sustainability Research, 2022, 3, .	2	.8	3
737	Outstanding cooperation of all-inorganic CsPbI3 perovskite with TiO2 forming composites and heterostructures for photodegradation. Journal of Materials Science, 2022, 57, 17363-17379.	1	.7	0
738	Optical Simulations in Perovskite Devices: A Critical Analysis. ACS Photonics, 2022, 9, 3196-3214.	3	.2	3
739	Progress and Perspective on Inorganic CsPbI ₂ Br Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	1	0.2	39
740	How to Make 20% Efficient Perovskite Solar Cells in Ambient Air and Encapsulate Them for 500 h of Operational Stability. Chemistry of Materials, 2022, 34, 8112-8118.	3	.2	14
741	Improved Absorber Phase Stability, Performance, and Lifetime in Inorganic Perovskite Solar Cells with Alkyltrimethoxysilane Strain-Release Layers at the Perovskite/TiO ₂ Interface. ACS Energy Letters, 2022, 7, 3531-3538.	/ 8	.8	17

#	Article	IF	CITATIONS
742	Lead Halide Perovskite Quantum Dots for Photovoltaics and Photocatalysis: A Review. ACS Applied Nano Materials, 2022, 5, 14092-14132.	2.4	18
743	Impeded degradation of perovskite solar cells via the dual interfacial modification of siloxane. Science China Chemistry, 2022, 65, 2299-2306.	4.2	2
744	Highâ€Performance Perovskite Photovoltaics by Heterovalent Substituted Mixed Perovskites. Advanced Functional Materials, 2022, 32, .	7.8	8
745	Encapsulation of Perovskite Solar Cells with Thin Barrier Films. , 0, , .		2
746	Band Alignment Boosts over 17% Efficiency Quasi-2D Perovskite Solar Cells via Bottom-Side Phase Manipulation. ACS Energy Letters, 2022, 7, 3187-3196.	8.8	17
747	Surface Chelation Enabled by Polymer-Doping for Self-Healable Perovskite Solar Cells. Nanomaterials, 2022, 12, 3125.	1.9	3
748	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
749	Improving the stability of inverted perovskite solar cells towards commercialization. Communications Materials, 2022, 3, .	2.9	29
750	Assessing the Drawbacks and Benefits of Ion Migration in Lead Halide Perovskites. ACS Energy Letters, 2022, 7, 3401-3414.	8.8	46
751	Addressing the stability challenge of metal halide perovskite based photocatalysts for solar fuel production. JPhys Energy, 2022, 4, 042005.	2.3	2
752	Restructuring and Reshaping of CsPbX ₃ Perovskites by Lithium Salts. Advanced Materials Interfaces, 2022, 9, .	1.9	3
753	Grain Boundary Passivation Using D131 Organic Dye Molecule for Efficient and Thermally Stable Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2022, 10, 13825-13834.	3.2	12
754	Multifunctionality of Li ₂ SrNb ₂ O ₇ : Memristivity, Tunable Rectification, Ferroelasticity, and Ferroelectricity. Advanced Materials, 2022, 34, .	11.1	7
755	Organic Additive Engineering to Grow Highâ€Quality Inorganic CsPbX ₃ Perovskite Films for Efficient and Stable Solar Cells. Solar Rrl, 2022, 6, .	3.1	7
756	Cage Molecules Stabilize Lead Halide Perovskite Thin Films. Chemistry of Materials, 2022, 34, 9384-9391.	3.2	8
757	Proton Transport in the Gadolinium-Doped Layered Perovskite BaLaInO4. Materials, 2022, 15, 7351.	1.3	4
758	Recent Advances in Leadâ \in Safe Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	19
759	Perovskiteâ€Based Photovoltaics for Artificial Indoor Light Harvesting: A Critical Review. Solar Rrl, 2023, 7, .	3.1	3

#	Article	IF	CITATIONS
760	Dynamics of Internal Electric Field Screening in Hybrid Perovskite Solar Cells Probed Using Electroabsorption. Physical Review Applied, 2022, 18, .	1.5	5
761	Highâ€Performance Directly Patterned Nanograting Perovskite Photodetector with Interdigitated Electrodes. Advanced Optical Materials, 2022, 10, .	3.6	6
762	Passivating Defects of Perovskite Solar Cells with Functional Donorâ€Acceptor–Donor Type Hole Transporting Materials. Advanced Functional Materials, 2023, 33, .	7.8	7
763	Terahertz Nanoimaging of Perovskite Solar Cell Materials. ACS Photonics, 2022, 9, 3550-3556.	3.2	12
764	Anionic surfactant anchoring enables 23.4% efficient and stable perovskite solar cells. Science China Materials, 2022, 65, 3361-3367.	3.5	2
765	Active Manipulation of Luminescent Dynamics via Au NPs sPbBr ₃ Interfacial Engineering. Laser and Photonics Reviews, 2023, 17, .	4.4	6
766	Phaseâ€Transitionâ€Cycleâ€Induced Recrystallization of FAPbI3 Film in An Open Environment Toward Excellent Photodetectors with High Reproducibility. Advanced Science, 2022, 9, .	5.6	6
767	Highâ€Performance Inverted Perovskite Solar Devices Enabled by a Polyfullerene Electron Transporting Material. Angewandte Chemie - International Edition, 2022, 61, .	7.2	13
768	Highâ€Performance Inverted Perovskite Solar Devices Enabled by a Polyfullerene Electron Transporting Material. Angewandte Chemie, 2022, 134, .	1.6	2
769	Boosting Perovskite Solar Cells Efficiency and Stability: Interfacial Passivation of Crosslinked Fullerene Eliminates the "Burnâ€in―Decay. Advanced Materials, 2023, 35, .	11.1	18
770	Three-dimensional (3D) and two-dimensional (2D) lead iodide-based perovskite materials: A comparison of material stability and ammonia gas sensitivity. Chemical Physics Impact, 2022, 5, 100116.	1.7	1
771	Progress and challenges in the fabrication of lead-free all-inorganic perovskites solar cells using solvent and compositional engineering Techniques-A review. Journal of Solid State Chemistry, 2023, 317, 123608.	1.4	4
772	An illustrative understanding on strengthening in stability and efficiency of perovskite solar cells: Utilization of the perovskite-constructed polymer hybrid system of PHQACI-CN inclusion. Journal of Materials Chemistry C, 0, , .	2.7	0
773	Computational insights into the superior efficiency of Cs2AgGa(Cl,Br)6 double halide perovskite solar cells. Materials Chemistry and Physics, 2023, 294, 126978.	2.0	6
774	Negligible Ion Migration in Tinâ€Based and Tinâ€Đoped Perovskites. Angewandte Chemie - International Edition, 2023, 62, .	7.2	17
775	Recent progress in perovskite solar cells: from device to commercialization. Science China Chemistry, 2022, 65, 2369-2416.	4.2	53
776	Photoelectric properties of cubic mixed-cation lead halide perovskites (Cs MA1-PbI3) from First-Principles. Materials Today Communications, 2022, , 104898.	0.9	0
777	Direct in situ photolithography of perovskite quantum dots based on photocatalysis of lead bromide complexes. Nature Communications, 2022, 13, .	5.8	40

	CITATION R	EPORT	
#	Article	IF	CITATIONS
778	Negligible Ion Migration in Tinâ \in Based and Tinâ \in Doped Perovskites. Angewandte Chemie, 2023, 135, .	1.6	6
779	Machine learning-driven design of promising perovskites for photovoltaic applications: A review. Surfaces and Interfaces, 2022, 35, 102470.	1.5	4
780	Recent review of interfacial engineering for perovskite solar cells: effect of functional groups on the stability and efficiency. Materials Today Chemistry, 2022, 26, 101224.	1.7	8
781	Review on Perovskite-Type Compound Using Machine Learning. Science of Advanced Materials, 2022, 14, 1001-1017.	0.1	2
782	Suppressing ion migration in metal halide perovskite via interstitial doping with a trace amount of multivalent cations. Nature Materials, 2022, 21, 1396-1402.	13.3	74
783	In Situ Process Monitoring and Multichannel Imaging for Vacuumâ€Assisted Growth Control of Inkjetâ€Printed and Bladeâ€Coated Perovskite Thinâ€Films. Advanced Materials Technologies, 2023, 8, .	3.0	7
784	Amorphous antimony sulfide nanoparticles construct multi-contact electron transport layers for efficient carbon-based all-inorganic CsPbI2Br perovskite solar cells. Chemical Engineering Journal, 2023, 455, 140871.	6.6	1
785	Perovskite solar cells: Thermal and chemical stability improvement, and economic analysis. Materials Today Chemistry, 2023, 27, 101284.	1.7	5
786	Distinction of mechanisms causing experimental degradation of perovskite solar cells by simulating associated pathways. Energy and Environmental Science, 2023, 16, 190-200.	15.6	2
787	Investigation of the optoelectronics properties and stability of Formamidinium lead mixed halides perovskite. Optical Materials, 2023, 135, 113334.	1.7	10
788	Vitamin needed: Lanthanides in optoelectronic applications of metal halide perovskites. Materials Science and Engineering Reports, 2023, 152, 100710.	14.8	12
789	Achieving high open circuit voltage for hole transport layer free ambient perovskite solar cells utilizing electric double layer effect. Solar Energy Materials and Solar Cells, 2023, 251, 112148.	3.0	4
790	(INVITED) Roadmap on perovskite nanophotonics. Optical Materials: X, 2023, 17, 100214.	0.3	5
791	Optimized optical/electrical/mechanical properties of ultrathin metal films for flexible transparent conductor applications: review [Invited]. Optical Materials Express, 2023, 13, 304.	1.6	7
792	Emerging Chalcohalide Materials for Energy Applications. Chemical Reviews, 2023, 123, 327-378.	23.0	34
793	Singleâ€Crystalline Layered Metalâ€Halide Perovskite Microwires with Intercalated Molecules for Ultraviolet Photodetectors. Advanced Materials Technologies, 2023, 8, .	3.0	2
794	How to stabilize standard perovskite solar cells to withstand operating conditions under an ambient environment for more than 1000 hours using simple and universal encapsulation. Journal of Energy Chemistry, 2023, 78, 246-252.	7.1	10
795	Reconfigurable self-powered deep UV photodetectors based on ultrawide bandgap ferroelectric ScAlN. APL Materials, 2022, 10, .	2.2	10

#	Article	IF	CITATIONS
796	Tailoring Two-Dimensional Ruddlesden–Popper Perovskite via 1D Perovskitoid Enables Efficient and Stable Solar Cells. ACS Energy Letters, 2023, 8, 637-646.	8.8	7
797	Photothermally induced, reversible phase transition in methylammonium lead triiodide. Matter, 2023, 6, 460-474.	5.0	3
798	An In-SituÂFormed Tunneling Layer Enriches the Options of Anode for Efficient and Stable Regular Perovskite Solar Cells. Nano-Micro Letters, 2023, 15, .	14.4	5
799	Big data driven perovskite solar cell stability analysis. Nature Communications, 2022, 13, .	5.8	25
800	A Universal Surface Treatment for p–i–n Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 56290-56297.	4.0	13
801	The Stability of Hybrid Perovskites with UiO-66 Metal–Organic Framework Additives with Heat, Light, and Humidity. Nanomaterials, 2022, 12, 4349.	1.9	3
802	In-situ structural degradation study of quadruple-cation perovskite solar cells with nanostructured charge transfer layer. Ceramics International, 2023, 49, 24475-24486.	2.3	1
803	The current state of the art in internal additive materials and quantum dots for improving efficiency and stability against humidity in perovskite solar cells. Heliyon, 2022, 8, e11878.	1.4	2
804	Metal Halide Perovskite Alloy: Fundamental, Optoelectronic Properties and Applications. Advanced Photonics Research, 2023, 4, .	1.7	4
805	Flexible, stable, and self-powered photodetectors embedded with chemical vapor deposited lead-free bismuth mixed halide perovskite films. Chemical Engineering Journal, 2023, 458, 141473.	6.6	13
806	Performance of Monolithic Two―and Threeâ€Terminal Perovskite/Silicon Tandem Solar Cells Under Varying Illumination Conditions. Solar Rrl, 2023, 7, .	3.1	6
807	Greenâ€solvent Processable Dopantâ€free Hole Transporting Materials for Inverted Perovskite Solar Cells. Angewandte Chemie, 2023, 135, .	1.6	0
808	Greenâ€solvent Processable Dopantâ€free Hole Transporting Materials for Inverted Perovskite Solar Cells. Angewandte Chemie - International Edition, 2023, 62, .	7.2	24
809	A halide perovskite/lead sulfide heterostructure with enhanced photoelectrochemical performance for the sensing of alkaline phosphatase (ALP). Chemical Communications, 2023, 59, 1361-1364.	2.2	6
810	Metal Halide Perovskite for next-generation optoelectronics: progresses and prospects. ELight, 2023, 3, .	11.9	74
811	Stability challenges for the commercialization of perovskite–silicon tandem solar cells. Nature Reviews Materials, 2023, 8, 261-281.	23.3	77
812	Organic ammonium iodide salts as passivation for buried interface enables efficient and stable NiO _{<i>x</i>} based p-i-n perovskite solar cells. Journal of Materials Chemistry C, 0, , .	2.7	2
813	A Comparative Study on the Perovskite/Silicon Tandem Solar Cell's Module Configuration. , 2022, , .		ο

#	Article	IF	CITATIONS
814	Physical Mechanism and Chemical Trends in the Thermal Expansion of Inorganic Halide Perovskites. Journal of Physical Chemistry Letters, 2023, 14, 190-198.	2.1	6
815	Perovskite-based nanomaterials for CO2 conversion. , 2023, , 181-209.		1
816	Organolead Halide-Based Coordination Polymers: Intrinsic Stability and Photophysical Applications. Accounts of Chemical Research, 2023, 56, 452-461.	7.6	11
817	Gamma-Ray Irradiation Stability of Zero-Dimensional Cs ₃ Cu ₂ I ₅ Metal Halide Scintillator Single Crystals. Journal of Physical Chemistry Letters, 2023, 14, 1165-1173.	2.1	6
818	Lowâ€Temperature Synthesis of SnO ₂ Nanocrystals as Electron Transport Layers for Highâ€Efficiency CsPbI ₂ Br Perovskite Solar Cells. Small Science, 2023, 3, .	5.8	1
819	Tailoring Multifunctional Selfâ€Assembled Hole Transporting Molecules for Highly Efficient and Stable Inverted Perovskite Solar Cells. Advanced Functional Materials, 2023, 33, .	7.8	17
820	The degradation of perovskite precursor. Journal of Semiconductors, 2023, 44, 010201.	2.0	1
821	IR Spectroscopic Degradation Study of Thin Organometal Halide Perovskite Films. Molecules, 2023, 28, 1288.	1.7	8
822	A universal multi-additive strategy to enhance efficiency and stability in inverted perovskite solar cells. Nano Energy, 2023, 109, 108268.	8.2	7
823	Crosslinking and densification by plasma-enhanced molecular layer deposition for hermetic seal of flexible perovskite solar cells. Nano Energy, 2023, 109, 108232.	8.2	5
824	Abnormal In-Plane Thermomechanical Behavior of Two-Dimensional Hybrid Organic–Inorganic Perovskites. ACS Applied Materials & Interfaces, 2023, 15, 7919-7927.	4.0	3
825	Phase Transition and Dynamics of Defects in the Molecular Piezoelectric TMCM-MnCl3 and the Effect of Partial Substitutions of Mn. Crystals, 2023, 13, 409.	1.0	1
826	Roadmap on commercialization of metal halide perovskite photovoltaics. JPhys Materials, 2023, 6, 032501.	1.8	16
827	Ultra-thin thermally grown silicon dioxide nanomembrane for waterproof perovskite solar cells. Journal of Power Sources, 2023, 563, 232810.	4.0	3
828	Mxene regulates the stress of perovskite and improves interface contact for high-efficiency carbon-based all-inorganic solar cells. Chemical Engineering Journal, 2023, 461, 141895.	6.6	19
829	Strained induced metallic to semiconductor transitions in 2D Ruddlesden Popper perovskites: A GGAÂ+ÂSOC approach. Applied Surface Science, 2023, 627, 157244.	3.1	0
830	Disentangling the effect of the hole-transporting layer, the bottom, and the top device on the fill factor in monolithic CIGSe-perovskite tandem solar cells by using spectroscopic and imaging tools. JPhys Energy, 2023, 5, 024014.	2.3	0
831	Brief Outlook on Top Cell Absorber of Siliconâ€Based Tandem Solar Cells. Solar Rrl, 2023, 7, .	3.1	2

#	Article	IF	CITATIONS
832	Building optimistic perovskite-polymer composite solar cells: Feasible involvement of a BLP inclusion to efficiently stable perovskite films. Materials Science in Semiconductor Processing, 2023, 160, 107409.	1.9	0
833	Study of lead-free perovskite photoconverting structures by impedance spectroscopy. Energy, 2023, 273, 127141.	4.5	4
834	Aging phenomena of backsheet materials of photovoltaic systems for future zero-carbon energy and the improvement pathway. Journal of Materials Science and Technology, 2023, 153, 106-119.	5.6	13
835	Ultra-low-energy catalytic degradation of ozone by off-stoichiometric delafossite Cu–Cr–O for highly selective low-temperature solid-state O3 sensors. Materials Today Advances, 2023, 18, 100366.	2.5	0
836	Green synthesis of 3D cesium lead halide perovskite nanocrystals and 2D Ruddlesden–Popper nanoplatelets in menthol-based deep eutectic solvents. Materials Chemistry Frontiers, 2023, 7, 753-764.	3.2	2
837	Can Alternative Module Design Help to Overcome Stability Problems of Perovskite Photovoltaics?. ACS Energy Letters, 2023, 8, 1147-1151.	8.8	3
838	Perovskite solar cells: Recent development and perspectives. Tehnika, 2022, 77, 667-679.	0.0	0
839	Instability of solution-processed perovskite films: origin and mitigation strategies. Materials Futures, 2023, 2, 012102.	3.1	11
840	Certified high-efficiency "large-area―perovskite solar module for Fresnel lens-based concentrated photovoltaics. IScience, 2023, 26, 106079.	1.9	3
841	Orientated crystallization of FA-based perovskite via hydrogen-bonded polymer network for efficient and stable solar cells. Nature Communications, 2023, 14, .	5.8	66
842	Structural Study of Paraffin-Stabilized Methylammonium Lead Bromide Magic-Sized Clusters. Journal of Physical Chemistry C, 2023, 127, 3367-3376.	1.5	4
843	Inhibited Crack Development by Compressive Strain in Perovskite Solar Cells with Improved Mechanical Stability. Advanced Materials, 2023, 35, .	11.1	18
844	Preserving Bond Ionicity under Illumination to Achieve Photostable Halide Perovskites. Journal of Physical Chemistry C, 2023, 127, 3750-3759.	1.5	2
845	An open-source environmental chamber for materials-stability testing using an optical proxy. , 2023, 2, 422-440.		5
846	Boosting the stability and growth of methylammonium lead bromide perovskites film doped with FA for solar cells. Optical Materials, 2023, 137, 113563.	1.7	9
847	Alq3/MgF2 Multilayered Encapsulation Film for Enhanced Stability of Perovskite Solar Cells. , 2022, 1, 225-233.		0
848	Rational design of Lewis base molecules for stable and efficient inverted perovskite solar cells. Science, 2023, 379, 690-694.	6.0	147
849	Effective light management, stretchable and transparent nanofiber electrode via the incorporation of phosphors into composite nanofibers for wearable perovskite solar cells. Textile Reseach Journal, 2023, 93, 3228-3239.	1.1	1

#	Article	IF	CITATIONS
850	Remarkable performance recovery in highly defective perovskite solar cells by photo-oxidation. Journal of Materials Chemistry C, 2023, 11, 8007-8017.	2.7	3
851	Nanoengineering Triplet–Triplet Annihilation Upconversion: From Materials to Real-World Applications. ACS Nano, 2023, 17, 3259-3288.	7.3	33
852	lssues of phase segregation in wide-bandgap perovskites. Materials Chemistry Frontiers, 2023, 7, 1896-1911.	3.2	4
853	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
854	Probing proton diffusion as a guide to environmental stability in powder-engineered FAPbI3 and CsFAPbI3 perovskites. Cell Reports Physical Science, 2023, 4, 101304.	2.8	2
855	Designing stable lead halide perovskite nanocrystals: From a single particle to nanocomposites. Applied Materials Today, 2023, 31, 101775.	2.3	4
856	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
857	Addressing the stability challenge of photo(electro)catalysts towards solar water splitting. Chemical Science, 2023, 14, 3415-3427.	3.7	8
858	Recycling Useful Materials of Perovskite Solar Cells toward Sustainable Development. Advanced Sustainable Systems, 2023, 7, .	2.7	4
859	Mixedâ€Addenda Dawsonâ€Type Polyoxometalates as Highâ€Performance Anode Interlayer Materials for Efficient Organic Optoelectronic Devices. Advanced Energy Materials, 2023, 13, .	10.2	9
860	A sharp interface. Nature Energy, 2023, 8, 224-225.	19.8	1
861	Stress and Strain in Perovskite/Silicon Tandem Solar Cells. Nano-Micro Letters, 2023, 15, .	14.4	5
862	Oligo(ethylene glycol)-incorporated hole transporting polymers for efficient and stable inverted perovskite solar cells. Journal of Materials Chemistry A, 2023, 11, 6615-6624.	5.2	3
863	<i>In Situ</i> and <i>Operando</i> Characterizations of Metal Halide Perovskite and Solar Cells: Insights from Lab-Sized Devices to Upscaling Processes. Chemical Reviews, 2023, 123, 3160-3236.	23.0	15
864	Chemical Reaction Kinetics of the Decomposition of Low-Bandgap Tin–Lead Halide Perovskite Films and the Effect on the Ambipolar Diffusion Length. ACS Energy Letters, 2023, 8, 1688-1696.	8.8	5
865	A functionalized polyamide acid additive for perovskite solar cells with high efficiency and stability. Journal of Materials Chemistry A, 2023, 11, 8791-8797.	5.2	2
866	Evaluation of Hybrid Perovskite Prototypes After 10â€Month Space Flight on the International Space Station. Advanced Energy Materials, 2023, 13, .	10.2	10
867	Leveraging Low-Energy Structural Thermodynamics in Halide Perovskites. ACS Energy Letters, 2023, 8, 1705-1715.	8.8	8

#	Article	IF	CITATIONS
868	Copper Organometallic Iodide Arrays for Efficient X-ray Imaging Scintillators. ACS Central Science, 2023, 9, 668-674.	5.3	16
869	Approaching the Fill Factor Limit in Dopant-Free Hole Transporting Layer-Based All-Inorganic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 0, , .	4.0	0
870	Improved Carrier Management via a Multifunctional Modifier for Highâ€Quality Lowâ€Bandgap Sn–Pb Perovskites and Efficient Allâ€Perovskite Tandem Solar Cells. Advanced Materials, 2023, 35, .	11.1	26
871	UV-Blocking and Transparent Polydimethylsiloxane Film for Improving Stability of Perovskite Photovoltaics. , 2023, 1, 1208-1216.		0
872	Functional organic cation induced 3D-to-0D phase transformation and surface reconstruction of CsPbI3 inorganic perovskite. Science Bulletin, 2023, 68, 706-712.	4.3	8
873	Multifunctional Conjugated Molecular Additives for Highly Efficient Perovskite Lightâ€Emitting Diodes. Advanced Materials, 2023, 35, .	11.1	10
874	Stress compensation based on interfacial nanostructures for stable perovskite solar cells. , 2023, 2, 348-359.		11
875	Toward a Diagnostic Method for Efficient Perovskite Solar Cells Based on Equivalent Circuit Parameters. Journal of Physical Chemistry C, 2023, 127, 5663-5675.	1.5	2
876	Combined Stress Testing of Perovskite Solar Cells for Stable Operation in Space. ACS Applied Energy Materials, 2023, 6, 10319-10326.	2.5	2
877	Strain-Induced Modification of Photoluminescence in Quasi-2D Perovskite Thin Films. Journal of Physical Chemistry C, 2023, 127, 6371-6379.	1.5	1
878	Anti-corrosion strategy to improve the stability of perovskite solar cells. Nanoscale, 2023, 15, 8473-8490.	2.8	2
879	Examining a Year-Long Chemical Degradation Process and Reaction Kinetics in Pristine and Defect-Passivated Lead Halide Perovskites. Chemistry of Materials, 2023, 35, 2904-2917.	3.2	3
880	Recent Advances in Wide-Bandgap Organic–Inorganic Halide Perovskite Solar Cells and Tandem Application. Nano-Micro Letters, 2023, 15, .	14.4	41
881	High-Efficiency CsPbI ₂ Br Perovskite Solar Cells with over 83% Fill Factor by Synergistic Effects of a Multifunctional Additive. Inorganic Chemistry, 2023, 62, 5408-5414.	1.9	10
882	All-inorganic lead halide perovskite nanocrystals applied in advanced display devices. Materials Horizons, 2023, 10, 1969-1989.	6.4	5
883	Oxidation-resistant all-perovskite tandem solar cells in substrate configuration. Nature Communications, 2023, 14, .	5.8	24
884	In situ growth of perovskite single-crystal thin films with low trap density. Cell Reports Physical Science, 2023, 4, 101363.	2.8	4
885	Mapping the pathways of photo-induced ion migration in organic-inorganic hybrid halide perovskites. Nature Communications, 2023, 14, .	5.8	15

#	Article	IF	CITATIONS
886	Light Soaking Effects in Perovskite Solar Cells: Mechanism, Impacts, and Elimination. ACS Applied Energy Materials, 2023, 6, 10303-10318.	2.5	5
887	Organic ligands/dyes as photon-downshifting materials for clean energy. , 2023, , 265-280.		0
888	Contact Engineering of Halide Perovskites: Gold is Not Good Enough; Metalloid is Better. Small Methods, 0, , .	4.6	0
889	The role of different dopants of Spiro-OMeTAD hole transport material on the stability of perovskite solar cells: A mini review. Vacuum, 2023, 214, 112076.	1.6	9
890	Advantageous properties of halide perovskite quantum dots towards energy-efficient sustainable applications. Green Energy and Environment, 2023, , .	4.7	4
891	Inhibition of Ion Migration for Highly Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2023, 35, .	11.1	8
892	Identification and Mitigation of Transient Phenomena That Complicate the Characterization of Halide Perovskite Photodetectors. ACS Applied Energy Materials, 2023, 6, 10233-10242.	2.5	3
893	Inhibiting Interfacial Diffusion in Heterojunction Perovskite Solar Cells by Replacing Lowâ€Dimensional Perovskite with Uniformly Anchored Quaternized Polystyrene. Small, 2023, 19, .	5.2	8
894	Highâ€Quality Lead Acetate–Based Ruddlesden–Popper Perovskite Films for Efficient Solar Cells. Solar Rrl, 2023, 7, .	3.1	1
895	Covalent bonding strategy to enable non-volatile organic cation perovskite for highly stable and efficient solar cells. Joule, 2023, 7, 1033-1050.	11.7	13
896	Perovskite Light-Emitting Diodes. , 2023, , 53-71.		0
898	UV Encapsulated Monolithic Perovskite/Silicon Tandem Solar Cells for Hundred-Watt Power System. ACS Energy Letters, 2023, 8, 2414-2422.	8.8	1
904	Sustainable Energy, Fuel and Chemicals. , 2021, , 488-588.		0
914	Toward Nonepitaxial Laser Diodes. Chemical Reviews, 2023, 123, 7548-7584.	23.0	4
949	Synergy of 3D and 2D Perovskites for Durable, Efficient Solar Cells and Beyond. Chemical Reviews, 2023, 123, 9565-9652.	23.0	21
950	Advances in the Application of Perovskite Materials. Nano-Micro Letters, 2023, 15, .	14.4	40
954	Tailoring passivators for highly efficient and stable perovskite solar cells. Nature Reviews Chemistry, 2023, 7, 632-652.	13.8	36
966	Long-term operating stability in perovskite photovoltaics. Nature Reviews Materials, 2023, 8, 569-586.	23.3	31

#	Article	IF	CITATIONS
969	Research progress of transport layer of perovskite solar cells. , 2023, , .		0
993	Modeling and Analysis of a Novel HTL-Free CsGeI ₃ Inorganic Perovskite Solar Cell Structure. , 2023, , .		0
1024	Methylammonium-free wide-bandgap metal halide perovskites for tandem photovoltaics. Nature Reviews Materials, 2023, 8, 822-838.	23.3	2
1057	Steric hindrance driven passivating cations for stable perovskite solar cells with an efficiency over 24%. Journal of Materials Chemistry A, 0, , .	5.2	0
1124	Halide Perovskite Materials for Photovoltaics and Lighting. Advances in Chemical and Materials Engineering Book Series, 2024, , 126-146.	0.2	0