Understanding the physical properties of hybrid perove

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Citation Report

#	Article	IF	CITATIONS
1	Intermediate Phase Intermolecular Exchange Triggered Defect Elimination in CH3NH3PbI3 toward Room-Temperature Fabrication of Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 40378-40385.	4.0	14
2	Colloidal engineering for monolayer CH ₃ NH ₃ PbI ₃ films toward high performance perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 24168-24177.	5.2	87
3	Defect Passivation via a Graded Fullerene Heterojunction in Low-Bandgap Pb–Sn Binary Perovskite Photovoltaics. ACS Energy Letters, 2017, 2, 2531-2539.	8.8	116
4	Gas-Induced Formation/Transformation of Organic–Inorganic Halide Perovskites. ACS Energy Letters, 2017, 2, 2166-2176.	8.8	51
5	Single-Crystal Thin Films of Cesium Lead Bromide Perovskite Epitaxially Grown on Metal Oxide Perovskite (SrTiO ₃). Journal of the American Chemical Society, 2017, 139, 13525-13532.	6.6	209
6	Effect of Low Temperature on Charge Transport in Operational Planar and Mesoporous Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 42769-42778.	4.0	4
7	Ideal Bandgap Organic–Inorganic Hybrid Perovskite Solar Cells. Advanced Materials, 2017, 29, 1704418.	11.1	133
8	Simultaneous Evolution of Uniaxially Oriented Grains and Ultralow-Density Grain-Boundary Network in CH ₃ NH ₃ Pbl ₃ Perovskite Thin Films Mediated by Precursor Phase Metastability. ACS Energy Letters, 2017, 2, 2727-2733.	8.8	82
9	Free Carrier Emergence and Onset of Electron–Phonon Coupling in Methylammonium Lead Halide Perovskite Films. Journal of the American Chemical Society, 2017, 139, 18262-18270.	6.6	78
10	Angle-dependent optical perfect absorption and enhanced photoluminescence in excitonic thin films. Optics Express, 2017, 25, 28619.	1.7	13
11	High-efficiency and stable piezo-phototronic organic perovskite solar cell. RSC Advances, 2018, 8, 8694-8698.	1.7	13
12	Characterising degradation of perovskite solar cells through in-situ and operando electron microscopy. Nano Energy, 2018, 47, 243-256.	8.2	67
13	Prediction of Novel <i>p</i> â€īype Transparent Conductors in Layered Double Perovskites: A Firstâ€Principles Study. Advanced Functional Materials, 2018, 28, 1800332.	7.8	49
14	Controlled Homoepitaxial Growth of Hybrid Perovskites. Advanced Materials, 2018, 30, e1705992.	11.1	82
15	Thermal Conductivity of Polymers and Their Nanocomposites. Advanced Materials, 2018, 30, e1705544.	11.1	442
16	Interplay between Ion Transport, Applied Bias, and Degradation under Illumination in Hybrid Perovskite p-i-n Devices. Journal of Physical Chemistry C, 2018, 122, 13986-13994.	1.5	50
17	Surface Hopping Dynamics beyond Nonadiabatic Couplings for Quantum Coherence. Journal of Physical Chemistry Letters, 2018, 9, 1097-1104.	2.1	80
18	Visualization and Studies of Ion-Diffusion Kinetics in Cesium Lead Bromide Perovskite Nanowires. Nano Letters, 2018, 18, 1807-1813.	4.5	136

#	Article	IF	CITATIONS
19	Electric-Field-Induced Dynamic Electronic Junctions in Hybrid Organic–Inorganic Perovskites for Optoelectronic Applications. ACS Omega, 2018, 3, 1445-1450.	1.6	21
20	Fabricating Highâ€Efficient Bladeâ€Coated Perovskite Solar Cells under Ambient Condition Using Lead Acetate Trihydrate. Solar Rrl, 2018, 2, 1700214.	3.1	29
21	Oxygen doping in nickel oxide for highly efficient planar perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 4721-4728.	5.2	57
22	Research progress on organic–inorganic halide perovskite materials and solar cells. Journal Physics D: Applied Physics, 2018, 51, 093001.	1.3	56
23	Subdiffraction Infrared Imaging of Mixed Cation Perovskites: Probing Local Cation Heterogeneities. ACS Energy Letters, 2018, 3, 469-475.	8.8	54
24	Design Growth of MAPbI ₃ Single Crystal with (220) Facets Exposed and Its Superior Optoelectronic Properties. Journal of Physical Chemistry Letters, 2018, 9, 216-221.	2.1	64
25	Polarization-Dependent Optoelectronic Performances in Hybrid Halide Perovskite MAPbX ₃ (X = Br, Cl) Single-Crystal Photodetectors. ACS Applied Materials & Interfaces, 2018, 10, 845-850.	4.0	55
26	Impact of Bi ³⁺ Heterovalent Doping in Organic–Inorganic Metal Halide Perovskite Crystals. Journal of the American Chemical Society, 2018, 140, 574-577.	6.6	181
27	Copper Iodide Based Hybrid Phosphors for Energyâ€Efficient General Lighting Technologies. Advanced Functional Materials, 2018, 28, 1705593.	7.8	184
28	Fabrication of single phase 2D homologous perovskite microplates by mechanical exfoliation. 2D Materials, 2018, 5, 021001.	2.0	65
29	Cyclopropenium (C ₃ H ₃) ⁺ as an Aromatic Alternative A-Site Cation for Hybrid Halide Perovskite Architectures. Journal of Physical Chemistry C, 2018, 122, 2041-2045.	1.5	12
30	Reflectivity Effects on Pump–Probe Spectra of Lead Halide Perovskites: Comparing Thin Films <i>versus</i> Nanocrystals. ACS Nano, 2018, 12, 5719-5725.	7.3	35
31	Perovskite-quantum dots interface: Deciphering its ultrafast charge carrier dynamics. Nano Energy, 2018, 49, 471-480.	8.2	23
32	Advances in Polymer-Based Photovoltaic Cells: Review of Pioneering Materials, Design, and Device Physics. , 2018, , 1-48.		1
33	Solvent engineering for efficient inverted perovskite solar cells based on inorganic CsPbI2Br light absorber. Materials Today Energy, 2018, 8, 125-133.	2.5	121
34	Single Semiconductor Nanostructure Extinction Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 16443-16463.	1.5	15
35	Cal ₂ : a more effective passivator of perovskite films than PbI ₂ for high efficiency and long-term stability of perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 7903-7912.	5.2	69
36	Achieving ordered and stable binary metal perovskite via strain engineering. Nano Energy, 2018, 48, 117-127.	8.2	60

ARTICLE IF CITATIONS # Direct or Indirect Bandgap in Hybrid Lead Halide Perovskites?. Advanced Optical Materials, 2018, 6, 37 3.6 54 1701254. Bandgap Optimization of Perovskite Semiconductors for Photovoltaic Applications. Chemistry - A 1.7 European Journal, 2018, 24, 2305-2316. Ubiquitous Short-Range Distortion of Hybrid Perovskites and Hydrogen-Bonding Role: the 39 1.5 21 MAPbCl₃ Case. Journal of Physical Chemistry C, 2018, 122, 28265-28272. Excess charge-carrier induced instability of hybrid perovskites. Nature Communications, 2018, 9, 4981. 159 Efficient two-terminal all-perovskite tandem solar cells enabled by high-quality low-bandgap absorber 41 19.8 422 layers. Nature Energy, 2018, 3, 1093-1100. Exploring the Carrier Dynamics in Zinc Oxide–Metal Halide-Based Perovskite Nanostructures: Toward Reduced Dielectric Loss and Improved Photocurrent. Journal of Physical Chemistry C, 2018, 122, 1.5 27273-27283. Crystal facet engineering induced anisotropic transport of charge carriers in a perovskite. Journal of Materials Chemistry C, 2018, 6, 11707-11713. 43 2.7 14 Illumination-Dependent Series Resistance in Perovskite Solar Cells Revealed by 44 J<inf>sc</inf>-V<inf>oc</inf> Measurements. , 2018, , . 45 Layer-edge device of two-dimensional hybrid perovskites. Nature Communications, 2018, 9, 5196. 5.8 63 Rotational Cation Dynamics in Metal Halide Perovskites: Effect on Phonons and Material Properties. 2.1 Journal of Physical Chemistry Letters, 2018, 9, 5987-5997. Surface Effect on 2D Hybrid Perovskite Crystals: Perovskites Using an Ethanolamine Organic Layer as 47 11.1 34 an Example. Advanced Materials, 2018, 30, e1804372. Slow Diffusion and Long Lifetime in Metal Halide Perovskites for Photovoltaics. Journal of Physical 1.5 Chemistry C, 2018, 122, 24570-24577. Stretching and Breaking of Ultrathin 2D Hybrid Organic–Inorganic Perovskites. ACS Nano, 2018, 12, 49 7.3 60 10347-10354. Large grain size CH3NH3PbI3 film for perovskite solar cells with hydroic acid additive. AIP Advances, 2018, 8, . Control of Charge Recombination in Perovskites by Oxidation State of Halide Vacancy. Journal of the 51 129 6.6 American Chemical Society, 2018, 140, 15753-15763. Stable and Efficient 3D-2D Perovskite-Perovskite Planar Heterojunction Solar Cell without Organic 124 Hole Transport Layer. Joule, 2018, 2, 2706-2721. Design of an Inorganic Mesoporous Holeâ€Transporting Layer for Highly Efficient and Stable Inverted 53 11.1 179 Perovskite Solar Cells. Advanced Materials, 2018, 30, e1805660. Excitonic States in Semiconducting Two-Dimensional Perovskites. ACS Applied Energy Materials, 2018, 1, 54 6361-6367.

#	Article	IF	CITATIONS
55	Carbon Nanodot Additives Realize Highâ€Performance Air‧table p–i–n Perovskite Solar Cells Providing Efficiencies of up to 20.2%. Advanced Energy Materials, 2018, 8, 1802323.	10.2	86
56	Dual Functions of Crystallization Control and Defect Passivation Enabled by Sulfonic Zwitterions for Stable and Efficient Perovskite Solar Cells. Advanced Materials, 2018, 30, e1803428.	11.1	296
57	All-inorganic cesium lead iodide perovskite solar cells with stabilized efficiency beyond 15%. Nature Communications, 2018, 9, 4544.	5.8	379
58	Research Update: Recombination and open-circuit voltage in lead-halide perovskites. APL Materials, 2018, 6, .	2.2	56
59	Intermolecular Exchange Boosts Efficiency of Airâ€Stable, Carbonâ€Based Allâ€Inorganic Planar CsPbIBr ₂ Perovskite Solar Cells to Over 9%. Advanced Energy Materials, 2018, 8, 1802080.	10.2	215
60	Plasmon-Enhanced Thin-Film Perovskite Solar Cells. Journal of Physical Chemistry C, 2018, 122, 23691-23697.	1.5	25
61	Resolving the Energy of Î ³ -Ray Photons with MAPbI ₃ Single Crystals. ACS Photonics, 2018, 5, 4132-4138.	3.2	100
62	Linear and nonlinear optical characteristics of all-inorganic perovskite CsPbBr ₃ quantum dots modified by hydrophobic zeolites. Nanoscale, 2018, 10, 22766-22774.	2.8	33
63	Controllable growth of two-dimensional perovskite microstructures. CrystEngComm, 2018, 20, 6538-6545.	1.3	14
64	Progress toward Stable Lead Halide Perovskite Solar Cells. Joule, 2018, 2, 1961-1990.	11.7	181
65	Optoelectronic Dichotomy of Mixed Halide CH ₃ NH ₃ Pb(Br _{1–<i>x</i>} Cl _{<i>x</i>}) ₃ Single Crystals: Surface versus Bulk Photoluminescence. Journal of the American Chemical Society, 2018, 140, 11811-11819.	6.6	22
66	Low-temperature, simple and efficient preparation of perovskite solar cells using Lewis bases urea and thiourea as additives: stimulating large grain growth and providing a PCE up to 18.8%. RSC Advances, 2018, 8, 19610-19615.	1.7	54
67	Plasmonic enhancement for high efficient and stable perovskite solar cells by employing "hot spots" Au nanobipyramids. Organic Electronics, 2018, 60, 1-8.	1.4	32
68	A Novel Conductive Mesoporous Layer with a Dynamic Two‣tep Deposition Strategy Boosts Efficiency of Perovskite Solar Cells to 20%. Advanced Materials, 2018, 30, e1801935.	11.1	99
69	Abnormal Synergetic Effect of Organic and Halide Ions on the Stability and Optoelectronic Properties of a Mixed Perovskite via In Situ Characterizations. Advanced Materials, 2018, 30, e1801562.	11.1	55
70	Recent Advances in Perovskite Micro―and Nanolasers. Advanced Optical Materials, 2018, 6, 1800278.	3.6	149
71	Enhanced photovoltage for inverted planar heterojunction perovskite solar cells. Science, 2018, 360, 1442-1446.	6.0	1,221
72	Ionic Additive Engineering Toward Highâ€Efficiency Perovskite Solar Cells with Reduced Grain Boundaries and Trap Density, Advanced Functional Materials, 2018, 28, 1801985	7.8	130

#	Article	IF	CITATIONS
73	Interplay of Structural and Optoelectronic Properties in Formamidinium Mixed Tin–Lead Triiodide Perovskites. Advanced Functional Materials, 2018, 28, 1802803.	7.8	63
74	Dramatically Enhanced Photoluminescence from Femtosecond Laser Induced Microâ€/Nanostructures on MAPbBr ₃ Single Crystal Surface. Advanced Optical Materials, 2018, 6, 1800411.	3.6	14
75	Widely used hardly known. An insight into electric and dynamic properties of formamidinium iodide. RSC Advances, 2018, 8, 26506-26516.	1.7	9
76	Core-expanded naphthalenediimide derivatives as non-fullerene electron transport materials for inverted perovskite solar cells. Organic Electronics, 2018, 61, 113-118.	1.4	10
77	Efficient α-CsPbI3 Photovoltaics with Surface Terminated Organic Cations. Joule, 2018, 2, 2065-2075.	11.7	280
78	Enhanced Efficiency of Flexible GaN/Perovskite Solar Cells Based on the Piezo-Phototronic Effect. ACS Applied Energy Materials, 2018, 1, 3063-3069.	2.5	22
79	Highly Air-Stable Carbon-Based α-CsPbI ₃ Perovskite Solar Cells with a Broadened Optical Spectrum. ACS Energy Letters, 2018, 3, 1824-1831.	8.8	235
80	The Impact of Hybrid Compositional Film/Structure on Organic–Inorganic Perovskite Solar Cells. Nanomaterials, 2018, 8, 356.	1.9	30
81	Effect of HCl etching on TiO2 nanorod-based perovskite solar cells. Journal of Materials Science, 2018, 53, 15257-15270.	1.7	15
82	Solution Processing of Methylammonium Lead Iodide Perovskite from Î ³ -Butyrolactone: Crystallization Mediated by Solvation Equilibrium. Chemistry of Materials, 2018, 30, 5237-5244.	3.2	100
83	Cesium Halides-Assisted Crystal Growth of Perovskite Films for Efficient Planar Heterojunction Solar Cells. Chemistry of Materials, 2018, 30, 5264-5271.	3.2	30
84	Generation of Coherent Optical Phonons in Methylammonium Lead Iodide Thin Films. Journal of Physical Chemistry C, 2018, 122, 17035-17041.	1.5	13
85	Perovskite Solar Cells: Optoelectronic Simulation and Optimization. Solar Rrl, 2018, 2, 1800126.	3.1	39
86	Competition between Polar and Antiferrodistortive Modes and Correlated Dynamics of the Methylammonium Molecules in MAPbl ₃ from Anelastic and Dielectric Measurements. Journal of Physical Chemistry Letters, 2018, 9, 4401-4406.	2.1	18
87	General Method To Define the Type of Carrier Transport Materials for Perovskite Solar Cells via Kelvin Probes Microscopy. ACS Applied Energy Materials, 2018, 1, 3984-3991.	2.5	15
88	Overcoming the Photovoltage Plateau in Large Bandgap Perovskite Photovoltaics. Nano Letters, 2018, 18, 3985-3993.	4.5	97
89	Probing the origins of photodegradation in organic–inorganic metal halide perovskites with time-resolved mass spectrometry. Sustainable Energy and Fuels, 2018, 2, 2460-2467.	2.5	84
90	Probing buried recombination pathways in perovskite structures using 3D photoluminescence tomography. Energy and Environmental Science, 2018, 11, 2846-2852.	15.6	42

#	Article	IF	CITATIONS
91	Accelerated discovery of stable lead-free hybrid organic-inorganic perovskites via machine learning. Nature Communications, 2018, 9, 3405.	5.8	442
92	Metal-Doped Lead Halide Perovskites: Synthesis, Properties, and Optoelectronic Applications. Chemistry of Materials, 2018, 30, 6589-6613.	3.2	451
93	Defects engineering for high-performance perovskite solar cells. Npj Flexible Electronics, 2018, 2, .	5.1	334
94	Trap-Limited Dynamics of Excited Carriers and Interpretation of the Photoluminescence Decay Kinetics in Metal Halide Perovskites. Journal of Physical Chemistry Letters, 2018, 9, 4955-4962.	2.1	46
95	Spin–Orbit Interactions Greatly Accelerate Nonradiative Dynamics in Lead Halide Perovskites. ACS Energy Letters, 2018, 3, 2159-2166.	8.8	114
96	Temperature-assisted crystallization for inorganic CsPbI2Br perovskite solar cells to attain high stabilized efficiency 14.81%. Nano Energy, 2018, 52, 408-415.	8.2	186
97	Performance enhancement of perovskite solar cells through interfacial engineering: Water-soluble fullerenol C60(OH)16 as interfacial modification layer. Organic Electronics, 2018, 62, 327-334.	1.4	5
98	Efficient Intraband Hot Carrier Relaxation in the Perovskite Semiconductor Cs _{1–<i>x</i>} Rb _{<i>x</i>} Snl ₃ Mediated by Strong Electron–Phonon Coupling. Journal of Physical Chemistry C, 2018, 122, 20669-20675.	1.5	21
99	Growth-Dynamic-Controllable Rapid Crystallization Boosts the Perovskite Photovoltaics' Robust Preparation: From Blade Coating to Painting. ACS Applied Materials & Interfaces, 2018, 10, 23103-23111.	4.0	17
100	Influence of Bulky Organoâ€Ammonium Halide Additive Choice on the Flexibility and Efficiency of Perovskite Lightâ€Emitting Devices. Advanced Functional Materials, 2018, 28, 1802060.	7.8	76
101	Ferroelectric and Piezoelectric Effects on the Optical Process in Advanced Materials and Devices. Advanced Materials, 2018, 30, e1707007.	11.1	159
102	Out-of-Plane Mechanical Properties of 2D Hybrid Organic–Inorganic Perovskites by Nanoindentation. ACS Applied Materials & Interfaces, 2018, 10, 22167-22173.	4.0	64
103	Giant photovoltaic response in band engineered ferroelectric perovskite. Scientific Reports, 2018, 8, 8005.	1.6	36
104	Probing the Spatial Heterogeneity of Carrier Relaxation Dynamics in CH ₃ NH ₃ Pbl ₃ Perovskite Thin Films with Femtosecond Timeâ€Resolved Nonlinear Optical Microscopy. Advanced Optical Materials, 2019, 7, 1901185.	3.6	12
105	Unidirectional Spin–Orbit Interaction Induced by the Line Defect in Monolayer Transition Metal Dichalcogenides for High-Performance Devices. Nano Letters, 2019, 19, 6005-6012.	4.5	21
106	Organic-Inorganic Hybrid Perovskites for Solar Cells Applications. Engineering Materials, 2019, , 89-101.	0.3	4
107	Toward Highly Reproducible, Efficient, and Stable Perovskite Solar Cells via Interface Engineering with CoO Nanoplates. ACS Applied Materials & Interfaces, 2019, 11, 32159-32168.	4.0	41
108	Crystalline Liquid-like Behavior: Surface-Induced Secondary Grain Growth of Photovoltaic Perovskite Thin Film. Journal of the American Chemical Society, 2019, 141, 13948-13953.	6.6	163

#	Article	IF	CITATIONS
109	Lasing from Mechanically Exfoliated 2D Homologous Ruddlesden–Popper Perovskite Engineered by Inorganic Layer Thickness. Advanced Materials, 2019, 31, e1903030.	11.1	128
110	3D asymmetric carbozole hole transporting materials for perovskite solar cells. Solar Energy, 2019, 189, 404-411.	2.9	14
111	Rational Design of Dopantâ€Free Coplanar Dâ€Ï€â€Ð Holeâ€Transporting Materials for Highâ€Performance Perovskite Solar Cells with Fill Factor Exceeding 80%. Advanced Energy Materials, 2019, 9, 1901268.	10.2	77
112	Improving the Stability of Organic–Inorganic Hybrid Perovskite Lightâ€Emitting Diodes Using Doped Electron Transport Materials. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900426.	0.8	11
113	Device Physics of the Carrier Transporting Layer in Planar Perovskite Solar Cells. Advanced Optical Materials, 2019, 7, 1900407.	3.6	34
114	Suppressing Xâ€Migrations and Enhancing the Phase Stability of Cubic FAPbX ₃ (X = Br, I). Advanced Energy Materials, 2019, 9, 1901411.	10.2	20
115	Beneficial impact of materials with reduced dimensionality on the stability of perovskite-based photovoltaics. JPhys Energy, 2019, 1, 044001.	2.3	5
116	Cesium Lead Mixed-Halide Perovskites for Low-Energy Loss Solar Cells with Efficiency Beyond 17%. Chemistry of Materials, 2019, 31, 6231-6238.	3.2	76
117	All-Inorganic CsPbBr ₃ Perovskite Solar Cells with 10.45% Efficiency by Evaporation-Assisted Deposition and Setting Intermediate Energy Levels. ACS Applied Materials & Interfaces, 2019, 11, 29746-29752.	4.0	126
118	WWMOD? What would metal oxides do?: Redefining their applicability in today's energy technologies. Polyhedron, 2019, 170, 334-358.	1.0	8
119	Ruddlesden–Popper 2D Component to Stabilize γ sPbl ₃ Perovskite Phase for Stable and Efficient Photovoltaics. Advanced Energy Materials, 2019, 9, 1902529.	10.2	111
120	2D Perovskites with Giant Excitonic Optical Nonlinearities for Highâ€Performance Subâ€Bandgap Photodetection. Advanced Materials, 2019, 31, e1904155.	11.1	70
121	Optimizing the Performance of CsPbI3-Based Perovskite Solar Cells via Doping a ZnO Electron Transport Layer Coupled with Interface Engineering. Nano-Micro Letters, 2019, 11, 91.	14.4	54
122	Conjugated Organic Cations Enable Efficient Self-Healing FASnI3 Solar Cells. Joule, 2019, 3, 3072-3087.	11.7	190
123	Molecular engineering of a conjugated polymer as a hole transporting layer for versatile p–i–n perovskite solar cells. Materials Today Energy, 2019, 14, 100341.	2.5	12
124	Recent advances in atomic imaging of organic-inorganic hybrid perovskites. Nano Materials Science, 2019, 1, 260-267.	3.9	10
125	Band structure engineering in metal halide perovskite nanostructures for optoelectronic applications. Nano Materials Science, 2019, 1, 268-287.	3.9	118
126	Core–Shell ZnO@SnO ₂ Nanoparticles for Efficient Inorganic Perovskite Solar Cells. Journal of the American Chemical Society, 2019, 141, 17610-17616.	6.6	113

#	Article	IF	CITATIONS
127	Tin fluoride assisted growth of air stable perovskite derivative Cs ₂ SnI ₆ thin film as a hole transport layer. Materials Research Express, 2019, 6, 116442.	0.8	5
128	Engineering Halide Perovskite Crystals through Precursor Chemistry. Small, 2019, 15, e1903613.	5.2	82
129	Effect of chloride substitution on interfacial charge transfer processes in MAPbI ₃ perovskite thin film solar cells: planar <i>versus</i> mesoporous. Nanoscale Advances, 2019, 1, 827-833.	2.2	21
130	The effect of phase purification on photovoltaic performance of perovskite solar cells. Applied Physics Letters, 2019, 115, 192105.	1.5	4
131	Vacuum-Deposited 2D/3D Perovskite Heterojunctions. ACS Energy Letters, 2019, 4, 2893-2901.	8.8	77
132	Ultrafast Charge Carrier Relaxation in Inorganic Halide Perovskite Single Crystals Probed by Two-Dimensional Electronic Spectroscopy. Journal of Physical Chemistry Letters, 2019, 10, 5414-5421.	2.1	16
133	Phase-Transition-Induced Carrier Mass Enhancement in 2D Ruddlesden–Popper Perovskites. ACS Energy Letters, 2019, 4, 2386-2392.	8.8	38
134	Charge-Carrier Recombination in Halide Perovskites. Chemical Reviews, 2019, 119, 11007-11019.	23.0	197
135	Simultaneous Triplet Exciton–Phonon and Exciton–Photon Photoluminescence in the Individual Weak Confinement CsPbBr ₃ Micro/Nanowires. Journal of Physical Chemistry C, 2019, 123, 25349-25358.	1.5	47
136	Revealing the Origin of Luminescence Center in 0D Cs ₄ PbBr ₆ Perovskite. Chemistry of Materials, 2019, 31, 9098-9104.	3.2	93
137	Advances in modelling and simulation of halide perovskites for solar cell applications. JPhys Energy, 2019, 1, 022001.	2.3	53
138	Reliable Measurement of Perovskite Solar Cells. Advanced Materials, 2019, 31, e1803231.	11.1	62
139	Highly efficient prismatic perovskite solar cells. Energy and Environmental Science, 2019, 12, 929-937.	15.6	54
140	All-inorganic lead-free perovskites for optoelectronic applications. Materials Chemistry Frontiers, 2019, 3, 365-375.	3.2	133
141	Green Anti-solvent Processed Efficient Flexible Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2019, 7, 4343-4350.	3.2	24
142	Exciton-enhanced infrared spectroscopy with organometallic perovskite nanoplatelets. New Journal of Chemistry, 2019, 43, 2878-2881.	1.4	1
143	High-Performance Photodetectors Based on Lead-Free 2D Ruddlesden–Popper Perovskite/MoS ₂ Heterostructures. ACS Applied Materials & Interfaces, 2019, 11, 8419-8427.	4.0	114
144	Will organic–inorganic hybrid halide lead perovskites be eliminated from optoelectronic applications?. Nanoscale Advances, 2019, 1, 1276-1289.	2.2	130

#	Article	IF	CITATIONS
145	Radiative recombination of large polarons in halide perovskites. Journal of Physics Condensed Matter, 2019, 31, 165701.	0.7	5
146	A Cu ₃ PS ₄ nanoparticle hole selective layer for efficient inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 4604-4610.	5.2	29
147	Bright perovskite light-emitting diodes with improved film morphology and reduced trap density via surface passivation using quaternary ammonium salts. Organic Electronics, 2019, 67, 187-193.	1.4	28
148	Conjugated Molecules "Bridgeâ€i Functional Ligand toward Highly Efficient and Longâ€Term Stable Perovskite Solar Cell. Advanced Functional Materials, 2019, 29, 1808119.	7.8	88
149	Insight into the reaction mechanism of water, oxygen and nitrogen molecules on a tin iodine perovskite surface. Journal of Materials Chemistry A, 2019, 7, 5779-5793.	5.2	40
150	Achievable high <i>V</i> _{oc} of carbon based all-inorganic CsPbIBr ₂ perovskite solar cells through interface engineering. Journal of Materials Chemistry A, 2019, 7, 1227-1232.	5.2	115
151	Recent progress on highly sensitive perovskite photodetectors. Journal of Materials Chemistry C, 2019, 7, 1741-1791.	2.7	353
152	Large Band Gap Narrowing and Prolonged Carrier Lifetime of (C ₄ H ₉ NH ₃) ₂ PbI ₄ under High Pressure. Advanced Science, 2019, 6, 1900240.	5.6	47
153	Amphiphilic Fullerenes Employed to Improve the Quality of Perovskite Films and the Stability of Perovskite Solar Cells. ACS Applied Materials & amp; Interfaces, 2019, 11, 24782-24788.	4.0	55
154	Electrospun Fibers Containing Emissive Hybrid Perovskite Quantum Dots. ACS Applied Materials & Interfaces, 2019, 11, 24468-24477.	4.0	13
155	Influence of Defects on Excited-State Dynamics in Lead Halide Perovskites: Time-Domain ab Initio Studies. Journal of Physical Chemistry Letters, 2019, 10, 3788-3804.	2.1	66
156	Lead-free low-dimensional tin halide perovskites with functional organic spacers: breaking the charge-transport bottleneck. Journal of Materials Chemistry A, 2019, 7, 16742-16747.	5.2	24
157	Exploring low-temperature processed a-WOx/SnO2 hybrid electron transporting layer for perovskite solar cells with efficiency >20.5%. Nano Energy, 2019, 63, 103825.	8.2	49
158	Revealing the nature of photoluminescence emission in the metal-halide double perovskite Cs ₂ AgBiBr ₆ . Journal of Materials Chemistry C, 2019, 7, 8350-8356.	2.7	149
159	Meniscus fabrication of halide perovskite thin films at high throughput for large area and low-cost solar panels. International Journal of Extreme Manufacturing, 2019, 1, 022004.	6.3	50
160	Decreasing Exciton Binding Energy in Two-Dimensional Halide Perovskites by Lead Vacancies. Journal of Physical Chemistry Letters, 2019, 10, 3820-3827.	2.1	27
161	Extrinsic Green Photoluminescence from the Edges of 2D Cesium Lead Halides. Advanced Materials, 2019, 31, e1902492.	11.1	75
162	Enhancing Efficiency and Stability of Hot Casting p–i–n Perovskite Solar Cell via Dipolar Ion Passivation. ACS Applied Energy Materials, 2019, 2, 4821-4832.	2.5	49

#	Article	IF	CITATIONS
163	Recent progress of inorganic perovskite solar cells. Energy and Environmental Science, 2019, 12, 2375-2405.	15.6	405
164	Efficient planar perovskite solar cells with low-temperature atomic layer deposited TiO2 electron transport layer and interfacial modifier. Solar Energy, 2019, 188, 239-246.	2.9	24
165	Optimizing optoelectronic performances by controlling halide compositions of MAPb(Cl _x l _{1a^^x}) ₃ single crystals. CrystEngComm, 2019, 21, 4169-4174.	1.3	9
166	Pressure-Induced Phase Transition and Band Gap Engineering in Propylammonium Lead Bromide Perovskite. Journal of Physical Chemistry C, 2019, 123, 15204-15208.	1.5	18
167	Interfacial engineering of front-contact with finely tuned polymer interlayers for high-performance large-area flexible perovskite solar cells. Nano Energy, 2019, 62, 734-744.	8.2	36
168	Post-treatment of Perovskite Films toward Efficient Solar Cells via Mixed Solvent Annealing. ACS Applied Energy Materials, 2019, 2, 4954-4963.	2.5	24
169	Aryl-Perfluoroaryl Interaction in Two-Dimensional Organic–Inorganic Hybrid Perovskites Boosts Stability and Photovoltaic Efficiency. , 2019, 1, 171-176.		63
170	Flexible, Printable Softâ€Xâ€Ray Detectors Based on Allâ€Inorganic Perovskite Quantum Dots. Advanced Materials, 2019, 31, e1901644.	11.1	221
171	Imperfections and their passivation in halide perovskite solar cells. Chemical Society Reviews, 2019, 48, 3842-3867.	18.7	1,257
172	Accumulation of Deep Traps at Grain Boundaries in Halide Perovskites. ACS Energy Letters, 2019, 4, 1321-1327.	8.8	117
173	Oligomeric Silica-Wrapped Perovskites Enable Synchronous Defect Passivation and Grain Stabilization for Efficient and Stable Perovskite Photovoltaics. ACS Energy Letters, 2019, 4, 1231-1240.	8.8	111
174	Enhanced bulk photovoltaic response in Sn doped BaTiO3 through composition dependent structural transformation. Applied Physics Letters, 2019, 114, .	1.5	23
175	The role of Mn as dopant on the optoelectronic properties of MA(Pb _{1â^x} Mn _x)Cl ₃ single crystals. Materials Research Express, 2019, 6, 086210.	0.8	3
176	Nuclei position-control and crystal growth-guidance on frozen substrates for high-performance perovskite solar cells. Nanoscale, 2019, 11, 12108-12115.	2.8	10
177	Controlling Orientation Diversity of Mixed Ion Perovskites: Reduced Crystal Microstrain and Improved Structural Stability. Journal of Physical Chemistry Letters, 2019, 10, 2898-2903.	2.1	18
178	Gradient Sn-Doped Heteroepitaxial Film of Faceted Rutile TiO ₂ as an Electron Selective Layer for Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 19638-19646.	4.0	32
179	Temperature-Dependent Ambipolar Charge Carrier Mobility in Large-Crystal Hybrid Halide Perovskite Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 20838-20844.	4.0	49
180	Ultrafast THz Probe of Photoinduced Polarons in Lead-Halide Perovskites. Physical Review Letters, 2019, 122, 166601.	2.9	98

ARTICLE IF CITATIONS # Amorphous Spiroâ€OMeTAD Prepared Flexible Films with Surface Engineering Boost Ternary Resistive 181 2.6 7 Memory Yield to 86%. Advanced Electronic Materials, 2019, 5, 1800964. Charge injection and trapping at perovskite interfaces with organic hole transporting materials of different ionization energies. APL Materials, 2019, 7, . 2.2 Organic bulk-heterojunction injected perovskite films for highly efficient solar cells. Journal of 183 2.7 9 Materials Chemistry C, 2019, 7, 6391-6397. Reducing Defects in Halide Perovskite Nanocrystals for Light-Emitting Applications. Journal of 184 Physical Chemistry Letters, 2019, 10, 2629-2640. Black Phosphorus Quantum Dots Induced Highâ€Quality Perovskite Film for Efficient and Thermally 185 3.1 49 Stable Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900132. Perovskite Solar Cells Processed by Solution Nanotechnology., 2019, , 119-174. Monitoring hot exciton dissociation in hybrid lead halide perovskite films with sub-10 fs pulses. EPJ 187 0.1 0 Web of Conferences, 2019, 205, 06019. Two-dimensional innovative materials for photovoltaics. Current Opinion in Green and Sustainable 188 3.2 Chemistry, 2019, 17, 49-56. 189 Photoâ€Supercapacitors Based on Thirdâ€Generation Solar Cells. ChemSusChem, 2019, 12, 3431-3447. 3.6 33 Extremely Low-Cost and Green Cellulose Passivating Perovskites for Stable and High-Performance Solar Cells. ACS Applied Materials & amp; Interfaces, 2019, 11, 13491-13498. A facile green solvent engineering for up-scaling perovskite solar cell modules. Solar Energy, 2019, 191 41 2.9 183, 386-391. Larger photovoltaic effect and hysteretic photocarrier dynamics in Pb[(Mg_{1/3}Nb_{2/3})_{0.70}Ti_{0.30}]O₃ crystal. 0.8 Materials Research Express, 2019, 6, 066313. Halide lead perovskites for ionizing radiation detection. Nature Communications, 2019, 10, 1066. 193 5.8 568 Pressure engineering of photovoltaic perovskites. Materials Today, 2019, 27, 91-106. 194 8.3 79 Mechanical properties of the ferroelectric metal-free perovskite 195 2.2 31 [MDABCO] (NH (sub) 4 (sub) I (sub) 3 (sub). Chemical Communications, 2019, 55, 3911-3914. Alkali Chlorides for the Suppression of the Interfacial Recombination in Inverted Planar Perovskite 236 Solar Cells. Advanced Energy Materials, 2019, 9, 1803872. Band Alignment Engineering Towards High Efficiency Carbonâ€Based Inorganic Planar 197 3.6 110 CsPblBr₂ Perovskite Solar Cells. ChemSusChem, 2019, 12, 2318-2325. First-Principles Study of Ferroelastic Twins in Halide Perovskites. Journal of Physical Chemistry 198 2.1 Letters, 2019, 10, 1416-1421.

#	Article	IF	CITATIONS
199	Solution Processed Nb ₂ O ₅ Electrodes for High Efficient Ultraviolet Light Stable Planar Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2019, 7, 7421-7429.	3.2	41
200	Photoinduced photoluminescence enhancement in self-assembled clusters of formamidinium lead bromide perovskite nanocrystals. Nanoscale, 2019, 11, 9335-9340.	2.8	14
201	Facile synthesis of composite tin oxide nanostructures for high-performance planar perovskite solar cells. Nano Energy, 2019, 60, 275-284.	8.2	57
202	Band alignment of Pb–Sn mixed triple cation perovskites for inverted solar cells with negligible hysteresis. Journal of Materials Chemistry A, 2019, 7, 9154-9162.	5.2	54
203	Solutionâ€Processable Perovskite Solar Cells toward Commercialization: Progress and Challenges. Advanced Functional Materials, 2019, 29, 1807661.	7.8	149
204	Advances in Polymer-Based Photovoltaic Cells: Review of Pioneering Materials, Design, and Device Physics. , 2019, , 1055-1101.		3
205	Structure and property tunability in monolayer halide lead-free double hybrid perovskites: effects of Rashba and biaxial strain. Journal of Materials Chemistry A, 2019, 7, 11487-11496.	5.2	5
206	Formulation and Implementation of the Spin-Restricted Ensemble-Referenced Kohn–Sham Method in the Context of the Density Functional Tight Binding Approach. Journal of Chemical Theory and Computation, 2019, 15, 3021-3032.	2.3	10
207	Water in hybrid perovskites: Bulk MAPbI3 degradation via super-hydrous state. APL Materials, 2019, 7, .	2.2	42
208	Design Growth of Triangular Pyramid MAPbBr ₃ Single Crystal and Its Photoelectric Anisotropy between (100) and (111) Facets. Journal of Physical Chemistry C, 2019, 123, 10826-10830.	1.5	39
209	Room-temperature synthesized SnO ₂ electron transport layers for efficient perovskite solar cells. RSC Advances, 2019, 9, 9946-9950.	1.7	21
210	High efficient and long-time stable planar heterojunction perovskite solar cells with doctor-bladed carbon electrode. Journal of Power Sources, 2019, 424, 61-67.	4.0	13
211	Origin of Luminescent Centers and Edge States in Low-Dimensional Lead Halide Perovskites: Controversies, Challenges and Instructive Approaches. Nano-Micro Letters, 2019, 11, 26.	14.4	42
212	CH 3 NH 3 Formed by Electron Injection at Heterojunction Inducing Peculiar Properties of CH 3 NH 3 PbI 3 Material. Chinese Physics Letters, 2019, 36, 026701.	1.3	0
213	Temperature Dependent Reflectance and Ellipsometry Studies on a CsPbBr ₃ Single Crystal. Journal of Physical Chemistry C, 2019, 123, 10564-10570.	1.5	37
214	30% Enhancement of Efficiency in Layered 2D Perovskites Absorbers by Employing Homoâ€Tandem Structures. Solar Rrl, 2019, 3, 1900083.	3.1	10
215	Improved Performance of Perovskite Light-Emitting Diodes by Dual Passivation with an Ionic Additive. ACS Applied Energy Materials, 2019, 2, 3336-3342.	2.5	21
216	Perovskite solar cells employing an eco-friendly and low-cost inorganic hole transport layer for enhanced photovoltaic performance and operational stability. Journal of Materials Chemistry A, 2019, 7, 7065-7073.	5.2	47

#	Article	IF	CITATIONS
217	Temperature-Dependent Photoluminescence and Energy-Transfer Dynamics in Mn ²⁺ -Doped (C ₄ H ₉ NH ₃) ₂ PbBr ₄ Two-Dimensional (2D) Layered Perovskite. Journal of Physical Chemistry C, 2019, 123, 4739-4748.	1.5	52
218	Bi(Sb)NCa ₃ : Expansion of Perovskite Photovoltaics into All-Inorganic Anti-Perovskite Materials. Journal of Physical Chemistry C, 2019, 123, 6363-6369.	1.5	10
219	Series Resistance Measurements of Perovskite Solar Cells Using <i>J_{sc}</i> – <i>V_{oc}</i> Measurements. Solar Rrl, 2019, 3, 1800378.	3.1	61
220	A Scalable Methylamine Gas Healing Strategy for Highâ€Efficiency Inorganic Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 5587-5591.	7.2	121
221	A Scalable Methylamine Gas Healing Strategy for Highâ€Efficiency Inorganic Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 5643-5647.	1.6	19
222	Kelvin probe force microscopy for perovskite solar cells. Science China Materials, 2019, 62, 776-789.	3.5	93
223	Perovskite films grown with green mixed anti-solvent for highly efficient solar cells with enhanced stability. Solar Energy, 2019, 181, 285-292.	2.9	41
224	An Assessment of Perovskite Solar Cells for Low-Intensity-Low-Temperature (LILT) Space Missions. , 2019, , .		1
225	The synergistic effect of cooperating solvent vapor annealing for high-efficiency planar inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 27267-27277.	5.2	24
226	Synergistic effect of charge separation and defect passivation using zinc porphyrin dye incorporation for efficient and stable perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 26334-26341.	5.2	44
227	Prediction of room-temperature half-metallicity in layered halide double perovskites. Npj Computational Materials, 2019, 5, .	3.5	19
228	Visualizing the impact of chloride addition on the microscopic carrier dynamics of MAPbI3 thin films using femtosecond transient absorption microscopy. Journal of Chemical Physics, 2019, 151, 234710.	1.2	3
229	A pencil-and-paper method for elucidating halide double perovskite band structures. Chemical Science, 2019, 10, 11041-11053.	3.7	28
230	Surface molecular doping of all-inorganic perovskite using zethrenes molecules. Nano Research, 2019, 12, 77-84.	5.8	16
231	Rational chemical doping of metal halide perovskites. Chemical Society Reviews, 2019, 48, 517-539.	18.7	196
232	Interfacial Modification in Organic and Perovskite Solar Cells. Advanced Materials, 2019, 31, e1805708.	11.1	106
233	Tuning Bandgap of Mixedâ€Halide Perovskite for Improved Photovoltaic Performance Under Monochromaticâ€Light Illumination. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800727.	0.8	8
234	Tunable surface adsorption and wettability of candle soot coated on ferroelectric ceramics. Journal of Advanced Research, 2019, 16, 35-42.	4.4	16

#	Article	IF	CITATIONS
235	Synthesis and mixing of complex halide perovskites by solvent-free solid-state methods. Journal of Solid State Chemistry, 2019, 271, 206-215.	1.4	50
236	Mix and Match: Organic and Inorganic Ions in the Perovskite Lattice. Advanced Materials, 2019, 31, e1802697.	11.1	37
237	Two-Dimensional Hybrid Halide Perovskites: Principles and Promises. Journal of the American Chemical Society, 2019, 141, 1171-1190.	6.6	999
238	Reducing Saturation urrent Density to Realize Highâ€Efficiency Lowâ€Bandgap Mixed Tin–Lead Halide Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803135.	10.2	255
239	Organohalide Lead Perovskites: More Stable than Glass under Gammaâ€Ray Radiation. Advanced Materials, 2019, 31, e1805547.	11.1	92
240	Chemical sintering reduced grain boundary defects for stable planar perovskite solar cells. Nano Energy, 2019, 56, 741-750.	8.2	65
241	Doubleâ€Sideâ€Passivated Perovskite Solar Cells with Ultraâ€Iow Potential Loss. Solar Rrl, 2019, 3, 1800296.	3.1	89
242	Efficient Charge Collection Promoted by Interface Passivation Using Amino Acid Toward High Performance Perovskite Solar Cells. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800505.	1.2	12
243	Fullerene-Anchored Core-Shell ZnO Nanoparticles for Efficient and Stable Dual-Sensitized Perovskite Solar Cells. Joule, 2019, 3, 417-431.	11.7	61
244	Optimizing reaction kinetics of sequential deposition technique for ambient air and solution processed hybrid perovskite thin films. Journal of Materials Science: Materials in Electronics, 2019, 30, 4250-4258.	1.1	5
245	From scalable solution fabrication of perovskite films towards commercialization of solar cells. Energy and Environmental Science, 2019, 12, 518-549.	15.6	269
246	Potential of High-Stability Perovskite Solar Cells for Low-Intensity–Low-Temperature (LILT) Outer Planetary Space Missions. ACS Applied Energy Materials, 2019, 2, 814-821.	2.5	34
247	Phosphomolybdic acid as an efficient hole injection material in perovskite optoelectronic devices. Dalton Transactions, 2019, 48, 30-34.	1.6	13
248	Integration of phenylammoniumiodide (PAI) as a surface coating molecule towards ambient stable MAPbI3 perovskite for solar cell application. Solar Energy Materials and Solar Cells, 2019, 191, 316-328.	3.0	17
249	Recent Advances in Energetics and Stability of Metal Halide Perovskites for Optoelectronic Applications. Advanced Materials Interfaces, 2019, 6, 1801351.	1.9	29
250	Low-temperature solution-processing high quality Nb-doped SnO ₂ nanocrystals-based electron transport layers for efficient planar perovskite solar cells. Functional Materials Letters, 2019, 12, 1850091.	0.7	21
251	Recent Progresses on Defect Passivation toward Efficient Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902650.	10.2	516
252	Triphenylamine dibenzofulvene–derived dopantâ€free hole transporting layer induces micrometerâ€sized perovskite grains for highly efficient near 20% for pâ€iâ€n perovskite solar cells. Progress in Photovoltaics: Research and Applications, 2020, 28, 49-59.	4.4	24

#	Article	IF	CITATIONS
253	Characterization of halide perovskite/titania interfaces as a function of the interlayer composition: A theoretical study. Journal of Physics and Chemistry of Solids, 2020, 138, 109243.	1.9	2
254	Review on Practical Interface Engineering of Perovskite Solar Cells: From Efficiency to Stability. Solar Rrl, 2020, 4, 1900257.	3.1	119
255	Solutionâ€Processed Ternary Oxides as Carrier Transport/Injection Layers in Optoelectronics. Advanced Energy Materials, 2020, 10, 1900903.	10.2	44
256	Carbonâ€Electrode Based Perovskite Solar Cells: Effect of Bulk Engineering and Interface Engineering on the Power Conversion Properties. Solar Rrl, 2020, 4, 1900190.	3.1	45
257	Recent Advances in Lead Halide Perovskites for Radiation Detectors. Solar Rrl, 2020, 4, 1900210.	3.1	55
258	Organicâ€Inorganic Halide Perovskites: From Crystallization of Polycrystalline Films to Solar Cell Applications. Solar Rrl, 2020, 4, 1900200.	3.1	43
259	Perovskite solar cells. , 2020, , 163-228.		8
260	Stability of all-inorganic perovskite solar cells. Nano Energy, 2020, 67, 104249.	8.2	153
261	Reducing Photovoltage Loss in Inverted Perovskite Solar Cells by Quantum Dots Alloying Modification at Cathode Contact. Solar Rrl, 2020, 4, 1900468.	3.1	19
262	Polyfluorene Copolymers as Highâ€Performance Holeâ€Transport Materials for Inverted Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900384.	3.1	21
263	Preparation and Characterization of Mixed Halide MAPbI _{3â^'<i>x</i>} Cl _{<i>x</i>} Perovskite Thin Films by Threeâ€6ource Vacuum Deposition. Energy Technology, 2020, 8, 1900784.	1.8	12
264	Two-step annealing of NiO enhances the NiO –perovskite interface for high-performance ambient-stable p–i–n perovskite solar cells. Applied Surface Science, 2020, 504, 144478.	3.1	25
265	All-Inorganic Perovskite Solar Cells With Both High Open-Circuit Voltage and Stability. Frontiers in Materials, 2020, 6, .	1.2	15
266	Vertical Orientated Dion–Jacobson Quasiâ€2D Perovskite Film with Improved Photovoltaic Performance and Stability. Small Methods, 2020, 4, 1900831.	4.6	96
267	Suppressing Vacancy Defects and Grain Boundaries via Ostwald Ripening for Highâ€₽erformance and Stable Perovskite Solar Cells. Advanced Materials, 2020, 32, e1904347.	11.1	172
268	Extending Carrier Lifetimes in Lead Halide Perovskites with Alkali Metals by Passivating and Eliminating Halide Interstitial Defects. Angewandte Chemie - International Edition, 2020, 59, 4684-4690.	7.2	78
269	Perovskite nanostructures: Leveraging quantum effects to challenge optoelectronic limits. Materials Today, 2020, 33, 122-140.	8.3	26
270	Extending Carrier Lifetimes in Lead Halide Perovskites with Alkali Metals by Passivating and Eliminating Halide Interstitial Defects. Angewandte Chemie, 2020, 132, 4714-4720.	1.6	18

#	Article	IF	CITATIONS
271	Electronic engineering of transition metal Zn-doped InGaN nanorods arrays for photoelectrochemical water splitting. Journal of Power Sources, 2020, 450, 227578.	4.0	25
272	Exciton-Polariton Properties in Planar Microcavity of Millimeter-Sized Two-Dimensional Perovskite Sheet. ACS Applied Materials & Interfaces, 2020, 12, 5081-5089.	4.0	14
273	Application of a new π-conjugated ladder-like polymer in enhancing the stability and efficiency of perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 1417-1424.	5.2	32
274	Effective Singlet Oxygen Generation in Silicaâ€Coated CsPbBr ₃ Quantum Dots through Energy Transfer for Photocatalysis. ChemSusChem, 2020, 13, 682-687.	3.6	24
275	Understanding the Enhanced Stability of Bromide Substitution in Lead Iodide Perovskites. Chemistry of Materials, 2020, 32, 400-409.	3.2	53
276	Enhanced Optical Absorption and Interfacial Carrier Separation of CsPbBr ₃ /Graphene Heterostructure: Experimental and Theoretical Insights. ACS Applied Materials & Interfaces, 2020, 12, 3086-3095.	4.0	23
277	Creation and Annihilation of Nonradiative Recombination Centers in Polycrystalline Metal Halide Perovskites by Alternating Electric Field and Light. Advanced Optical Materials, 2020, 8, 1901642.	3.6	7
278	Minimizing non-radiative recombination losses in perovskite solar cells. Nature Reviews Materials, 2020, 5, 44-60.	23.3	754
279	Improving Photovoltaic Performance Using Perovskite/Surfaceâ€Modified Graphitic Carbon Nitride Heterojunction. Solar Rrl, 2020, 4, 1900413.	3.1	38
280	Individual Electron and Hole Mobilities in Lead-Halide Perovskites Revealed by Noncontact Methods. ACS Energy Letters, 2020, 5, 47-55.	8.8	37
281	Dry Mechanochemical Synthesis of Highly Luminescent, Blue and Green Hybrid Perovskite Solids. Advanced Optical Materials, 2020, 8, 1901494.	3.6	16
282	Additives in metal halide perovskite films and their applications in solar cells. Journal of Energy Chemistry, 2020, 46, 215-228.	7.1	64
283	Firstâ€Principles Simulation of Carrier Recombination Mechanisms in Halide Perovskites. Advanced Energy Materials, 2020, 10, 1902830.	10.2	52
284	Defect passivation through electrostatic interaction for high performance flexible perovskite solar cells. Journal of Energy Chemistry, 2020, 46, 173-177.	7.1	45
285	Interfacial 2-hydrozybenzophenone passivation for highly efficient and stable perovskite solar cells. Journal of Power Sources, 2020, 475, 228665.	4.0	2
286	g-C3N4@PMo12 composite material double adjustment improves the performance of perovskite-based photovoltaic devices. Solar Energy, 2020, 209, 363-370.	2.9	13
287	Interlayer Polarization Explains Slow Charge Recombination in Two-Dimensional Halide Perovskites by Nonadiabatic Molecular Dynamics Simulation. Journal of Physical Chemistry Letters, 2020, 11, 9032-9037.	2.1	13
288	Solid-State NMR and NQR Spectroscopy of Lead-Halide Perovskite Materials. Journal of the American Chemical Society, 2020, 142, 19413-19437.	6.6	76

#	Article	IF	CITATIONS
289	Thermally Stable Passivation toward High Efficiency Inverted Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 3336-3343.	8.8	19
290	Revealing Electricalâ€Polingâ€Induced Polarization Potential in Hybrid Perovskite Photodetectors. Advanced Materials, 2020, 32, e2005481.	11.1	23
291	Origin of pressure-induced band gap tuning in tin halide perovskites. Materials Advances, 2020, 1, 2840-2845.	2.6	20
292	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
293	In situ NMR Investigation of the Photoresponse of Perovskite Crystal. Matter, 2020, 3, 2042-2054.	5.0	12
294	Toward ideal hole transport materials: a review on recent progress in dopant-free hole transport materials for fabricating efficient and stable perovskite solar cells. Energy and Environmental Science, 2020, 13, 4057-4086.	15.6	241
295	Arrays of Plasmonic Nanostructures for Absorption Enhancement in Perovskite Thin Films. Nanomaterials, 2020, 10, 1342.	1.9	13
296	Improvement in solar cell efficiency based on the MAPbI3 films extracted by a mixed anti-solvent. Applied Physics Letters, 2020, 117, .	1.5	10
297	Low-voltage room-temperature electrochemical deposition of perovskite films for solar cell devices. Solar Energy, 2020, 212, 275-281.	2.9	6
298	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
299	External Field-Tunable Internal Orbit–Orbit Interaction in Flexible Perovskites. Journal of Physical Chemistry Letters, 2020, 11, 10323-10328.	2.1	2
300	Self-Elimination of Intrinsic Defects Improves the Low-Temperature Performance of Perovskite Photovoltaics. Joule, 2020, 4, 1961-1976.	11.7	152
301	First-principles investigation of structural modification, fine band gap engineering, and optical response of La1â^'xBaxGaO3 for optoelectronic applications. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	8
302	Formamidinium Haloplumbate Intermediates: The Missing Link in a Chain of Hybrid Perovskites Crystallization. Chemistry of Materials, 2020, 32, 7739-7745.	3.2	35
303	Anharmonicity and Ultralow Thermal Conductivity in Lead-Free Halide Double Perovskites. Physical Review Letters, 2020, 125, 045701.	2.9	90
304	Molecular Ferroelectricsâ€Driven Highâ€Performance Perovskite Solar Cells. Angewandte Chemie, 2020, 132, 20149-20157.	1.6	16
305	Molecular Ferroelectricsâ€Driven Highâ€Performance Perovskite Solar Cells. Angewandte Chemie - International Edition, 2020, 59, 19974-19982.	7.2	71
306	Reduced Self-Doping of Perovskites Induced by Short Annealing for Efficient Solar Modules. Joule, 2020, 4, 1949-1960.	11.7	72

#	Article	IF	CITATIONS
307	Low-temperature processed rare-earth doped brookite TiO2 scaffold for UV stable, hysteresis-free and high-performance perovskite solar cells. Nano Energy, 2020, 77, 105183.	8.2	58
308	Performance improvement of perovskite heterojunction solar cell using graphene. Optical Materials, 2020, 109, 110254.	1.7	13
309	Co-Evaporated p-i-n Perovskite Solar Cells beyond 20% Efficiency: Impact of Substrate Temperature and Hole-Transport Layer. ACS Applied Materials & Interfaces, 2020, 12, 39261-39272.	4.0	79
310	Tunable spin textures in polar antiferromagnetic hybrid organic–inorganic perovskites by electric and magnetic fields. Npj Computational Materials, 2020, 6, .	3.5	22
311	<i>Ab initio</i> modeling of 2D and quasi-2D lead organohalide perovskites with divalent organic cations and a tunable band gap. Physical Chemistry Chemical Physics, 2020, 22, 20573-20587.	1.3	5
312	Toward Greener Solution Processing of Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2020, 8, 13126-13138.	3.2	41
313	Defects chemistry in high-efficiency and stable perovskite solar cells. Journal of Applied Physics, 2020, 128, .	1.1	91
314	Artificial Carbon Graphdiyne: Status and Challenges in Nonlinear Photonic and Optoelectronic Applications. ACS Applied Materials & amp; Interfaces, 2020, 12, 49281-49296.	4.0	16
315	Modulating Surface/Interface Structure of Emerging InGaN Nanowires for Efficient Photoelectrochemical Water Splitting. Advanced Functional Materials, 2020, 30, 2005677.	7.8	51
316	Deciphering the role of quantum dot size in the ultrafast charge carrier dynamics at the perovskite–quantum dot interface. Journal of Materials Chemistry C, 2020, 8, 14834-14844.	2.7	9
317	Pressure dependence of the Raman modes for orthorhombic and monoclinic phases of CsPbI3 at room temperature. Journal of Applied Physics, 2020, 128, 075106.	1.1	6
318	Perovskiteâ€Compatible Carbon Electrode Improving the Efficiency and Stability of CsPbl ₂ Br Solar Cells. Solar Rrl, 2020, 4, 2000431.	3.1	30
319	Interface passivation strategy improves the efficiency and stability of organic–inorganic hybrid metal halide perovskite solar cells. Journal of Materials Research, 2020, 35, 2166-2189.	1.2	4
320	Synergetic Effect of Plasmonic Gold Nanorods and MgO for Perovskite Solar Cells. Nanomaterials, 2020, 10, 1830.	1.9	13
321	Phenomenological mechanisms of hybrid organic–inorganic perovskite thin film deposition by RIR-MAPLE. Journal of Applied Physics, 2020, 128, 105303.	1.1	3
322	2D layered all-inorganic halide perovskites: recent trends in their structure, synthesis and properties. Nanoscale, 2020, 12, 21094-21117.	2.8	45
323	Modification Engineering in SnO ₂ Electron Transport Layer toward Perovskite Solar Cells: Efficiency and Stability. Advanced Functional Materials, 2020, 30, 2004209.	7.8	98
324	Towards commercialization: the operational stability of perovskite solar cells. Chemical Society Reviews, 2020, 49, 8235-8286.	18.7	371

#	Article	IF	CITATIONS
325	Excellent Excitonic Photovoltaic Effect in 2D CsPbBr ₃ /CdS Heterostructures. Advanced Functional Materials, 2020, 30, 2006166.	7.8	38
326	Potassium doping-induced variations in the structures and photoelectric properties of a MAPbl ₃ perovskite and a MAPbl ₃ /TiO ₂ junction. Physical Chemistry Chemical Physics, 2020, 22, 20553-20561.	1.3	6
327	Photocorrosion at Irradiated Perovskite/Electrolyte Interfaces. Journal of the American Chemical Society, 2020, 142, 21595-21614.	6.6	32
328	Stress Effects on Vibrational Spectra of a Cubic Hybrid Perovskite: A Probe of Local Strain. Journal of Physical Chemistry C, 2020, 124, 27287-27299.	1.5	7
329	The King of the New Generation Photovoltaic Technologies——Perovskite Solar Cells & the Opportunities and Challenges. IOP Conference Series: Materials Science and Engineering, 2020, 926, 012010.	0.3	5
330	Microwave Synthesis and Highâ€Mobility Charge Transport of Carbonâ€Nanotubeâ€inâ€Perovskite Single Crystals. Advanced Optical Materials, 2020, 8, 2001740.	3.6	15
331	A review of photovoltaic performance of organic/inorganic solar cells for future renewable and sustainable energy technologies. Superlattices and Microstructures, 2020, 143, 106549.	1.4	90
332	Structural Deformation Controls Charge Losses in MAPbl ₃ : Unsupervised Machine Learning of Nonadiabatic Molecular Dynamics. ACS Energy Letters, 2020, 5, 1930-1938.	8.8	55
333	Reversible Photoinduced Phase Segregation and Origin of Long Carrier Lifetime in Mixedâ€Halide Perovskite Films. Advanced Functional Materials, 2020, 30, 2002622.	7.8	37
334	Thiophene Cation Intercalation to Improve Bandâ€Edge Integrity in Reducedâ€Dimensional Perovskites. Angewandte Chemie - International Edition, 2020, 59, 13977-13983.	7.2	36
335	Imaging Electron, Hole, and Ion Transport in Halide Perovskite. Journal of Physical Chemistry C, 2020, 124, 11741-11748.	1.5	9
336	Thiophene Cation Intercalation to Improve Bandâ€Edge Integrity in Reducedâ€Dimensional Perovskites. Angewandte Chemie, 2020, 132, 14081-14087.	1.6	16
337	Comparison of Physical Isolation on Large Active Area Perovskite Solar Cells. Chemical Research in Chinese Universities, 2020, 36, 1279-1283.	1.3	4
338	Can Machines "Learn―Halide Perovskite Crystal Formation without Accurate Physicochemical Features?. Journal of Physical Chemistry C, 2020, 124, 13982-13992.	1.5	11
339	Synthesis of Twoâ€Dimensional Perovskite by Inverse Temperature Crystallization and Studies of Exciton States by Twoâ€Photon Excitation Spectroscopy. Advanced Functional Materials, 2020, 30, 2002661.	7.8	15
340	Energetics and Energy Loss in 2D Ruddlesden–Popper Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000687.	10.2	68
341	Engineering of Electron Extraction and Defect Passivation via Anion-Doped Conductive Fullerene Derivatives as Interlayers for Efficient Invert Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 24747-24755.	4.0	31
342	Metal Halide Perovskites in Quantum Dot Solar Cells: Progress and Prospects. Joule, 2020, 4, 1160-1185.	11.7	211

	CHATOM	REPORT	
#	Article	IF	CITATIONS
343	In situ studies of the degradation mechanisms of perovskite solar cells. EcoMat, 2020, 2, e12025.	6.8	123
344	Lattice-tailored low-temperature processed electron transporting materials boost the open-circuit voltage of planar CsPbBr ₃ perovskite solar cells up to 1.654 V. Journal of Materials Chemistry A, 2020, 8, 11859-11866.	5.2	37
345	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
346	Flexible optoelectronic devices based on metal halide perovskites. Nano Research, 2020, 13, 1997-2018.	5.8	52
347	Thickness-dependent carrier lifetime and mobility for MAPbBr3 single crystals. Materials Today Physics, 2020, 14, 100240.	2.9	15
348	Perovskite semiconductors for direct X-ray detection and imaging. Journal of Semiconductors, 2020, 41, 051204.	2.0	68
349	Green perovskite light-emitting diodes with simultaneous high luminance and quantum efficiency through charge injection engineering. Science Bulletin, 2020, 65, 1832-1839.	4.3	24
350	A surface modifier enhances the performance of the all-inorganic CsPbI ₂ Br perovskite solar cells with efficiencies approaching 15%. Physical Chemistry Chemical Physics, 2020, 22, 17847-17856.	1.3	23
351	CH3NH3CdCl3: A promising new leadâ€free hybrid organic–inorganic perovskite for photovoltaic applications. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 124, 114235.	1.3	24
352	Robot-Accelerated Perovskite Investigation and Discovery. Chemistry of Materials, 2020, 32, 5650-5663.	3.2	113
353	Reversible Release and Fixation of Bromine in Vacancyâ€Ordered Bromide Perovskites. Energy and Environmental Materials, 2020, 3, 535-540.	7.3	23
354	Enhanced dye adsorption and rapid photocatalysis of candle soot coated BaTiO3 ceramics. Materials Chemistry and Physics, 2020, 252, 123311.	2.0	20
355	Directionally Selective Polyhalide Molecular Glue for Stable Inverted Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000244.	3.1	4
356	First principles study of electronic and optical properties of inorganic and lead-free perovskite: Cs3Bi2X9 (X: Cl, Br, I). Materials Chemistry and Physics, 2020, 253, 123374.	2.0	9
357	Unraveling the Elastic Properties of (Quasi)Two-Dimensional Hybrid Perovskites: A Joint Experimental and Theoretical Study. ACS Applied Materials & 2020, 12, 1281-17892.	4.0	21
358	Low-temperature processed highly efficient hole transport layer free carbon-based planar perovskite solar cells with SnO2 quantum dot electron transport layer. Materials Today Physics, 2020, 13, 100204.	2.9	35
359	Synthesis and Characterization of Spinel Cobaltite (Co ₃ O ₄) Thin Films for Function as Hole Transport Materials in Organometallic Halide Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 3755-3769.	2.5	22
360	Evolution of the structure and properties of mechanochemically synthesized pyrrolidine incorporated manganese bromide powders. Journal of Materials Chemistry C, 2020, 8, 6488-6495.	2.7	49

#	Article	IF	CITATIONS
361	Unraveling the Formation Mechanism and Ferroelastic Behavior of MAPbI ₃ Perovskite Thin Films Prepared in the Presence of Chloride. Chemistry of Materials, 2020, 32, 3346-3357.	3.2	18
362	From bulk to molecularly thin hybrid perovskites. Nature Reviews Materials, 2020, 5, 482-500.	23.3	164
363	Role of Exciton Binding Energy on LO Phonon Broadening and Polaron Formation in (BA)2PbI4 Ruddlesden–Popper Films. Journal of Physical Chemistry C, 2020, 124, 9496-9505.	1.5	18
364	Hybrid Organic–Inorganic Materials and Composites for Photoelectrochemical Water Splitting. ACS Energy Letters, 2020, 5, 1487-1497.	8.8	104
365	Macroscopic and Microscopic Structures of Cesium Lead Iodide Perovskite from Atomistic Simulations. Advanced Functional Materials, 2020, 30, 1909496.	7.8	11
366	Dual effective dopant based hole transport layer for stable and efficient perovskite solar cells. Nano Energy, 2020, 72, 104673.	8.2	78
367	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
368	A Selfâ€Assembled Smallâ€Moleculeâ€Based Holeâ€Transporting Material for Inverted Perovskite Solar Cells. Chemistry - A European Journal, 2020, 26, 10276-10282.	1.7	19
370	Dual-Phase CsPbCl ₃ –Cs ₄ PbCl ₆ Perovskite Films for Self-Powered, Visible-Blind UV Photodetectors with Fast Response. ACS Applied Materials & Interfaces, 2020, 12, 32961-32969.	4.0	114
371	Interfacial Molecular Doping of Metal Halide Perovskites for Highly Efficient Solar Cells. Advanced Materials, 2020, 32, e2001581.	11.1	139
372	Theoretical Progress on the Relationship between the Structures and Properties of Perovskite Solar Cells. Advanced Theory and Simulations, 2020, 3, 2000022.	1.3	10
373	The phototransport in halide perovskites: From basic physics to applications. Journal of Applied Physics, 2020, 127, 085103.	1.1	5
374	Constructing binary electron transport layer with cascade energy level alignment for efficient CsPbI2Br solar cells. Nano Energy, 2020, 71, 104604.	8.2	56
375	Efficient Perovskite Solar Cells by Reducing Interfaceâ€Mediated Recombination: a Bulky Amine Approach. Advanced Energy Materials, 2020, 10, 2000197.	10.2	198
376	Improved performance and stability of hole-conductor-free mesoporous perovskite solar cell with new amino-acid iodide cations. Journal of Materials Science: Materials in Electronics, 2020, 31, 6109-6117.	1.1	10
377	Is Formamidinium Always More Stable than Methylammonium?. Chemistry of Materials, 2020, 32, 2501-2507.	3.2	34
378	Origin of the anomalous Pb-Br bond dynamics in formamidinium lead bromide perovskites. Physical Review B, 2020, 101, .	1.1	14
379	Excitons in Metalâ€Halide Perovskites. Advanced Energy Materials, 2020, 10, 1903659.	10.2	240

#	Article	IF	CITATIONS
380	Realizing Stable Artificial Photon Energy Harvesting Based on Perovskite Solar Cells for Diverse Applications. Small, 2020, 16, e1906681.	5.2	29
381	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
382	Ion Migrations in Lead Halide Perovskite Single Crystals with Different Halide Components. Physica Status Solidi (B): Basic Research, 2020, 257, 1900784.	0.7	8
383	Materials chemistry and engineering in metal halide perovskite lasers. Chemical Society Reviews, 2020, 49, 951-982.	18.7	263
384	Surface-defect passivation through complexation with organic molecules leads to enhanced power conversion efficiency and long term stability of perovskite photovoltaics. Science China Materials, 2020, 63, 479-480.	3.5	8
385	(1-C5H14N2Br)2MnBr4: A Lead-Free Zero-Dimensional Organic-Metal Halide With Intense Green Photoluminescence. Frontiers in Chemistry, 2020, 8, 352.	1.8	19
386	Intermolecular ï€â€"ï€ Conjugation Selfâ€Assembly to Stabilize Surface Passivation of Highly Efficient Perovskite Solar Cells. Advanced Materials, 2020, 32, e1907396.	11.1	128
387	Influence of oversized cations on electronic dimensionality of d-MAPbI ₃ crystals. Journal of Materials Chemistry C, 2020, 8, 7928-7934.	2.7	1
388	Phenylhydrazinium Iodide for Surface Passivation and Defects Suppression in Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2000778.	7.8	103
389	Controlled crystallinity and morphologies of 2D Ruddlesden-Popper perovskite films grown without anti-solvent for solar cells. Chemical Engineering Journal, 2020, 394, 124959.	6.6	33
390	Efficient defect-passivation and charge-transfer with interfacial organophosphorus ligand modification for enhanced performance of perovskite solar cells. Solar Energy Materials and Solar Cells, 2020, 211, 110527.	3.0	54
391	Scaling Laws of Exciton Recombination Kinetics in Low Dimensional Halide Perovskite Nanostructures. Journal of the American Chemical Society, 2020, 142, 8871-8879.	6.6	26
392	Room-temperature Sputtered NiOx for hysteresis-free and stable inverted Cs-FA mixed-cation perovskite solar cells. Materials Science in Semiconductor Processing, 2020, 115, 105129.	1.9	9
393	Noncontact Tunneling in Methylammonium Lead Iodide (CH ₃ NH ₃ PbI ₃): Evidence of Bipolar Resistive Switching through Defect Migration. ACS Applied Electronic Materials, 2020, 2, 1395-1401.	2.0	4
394	Degradation mechanisms in mixed-cation and mixed-halide Cs _x FA _{1â^'x} Pb(Br _y 16r'y) ₃ perovskite films under ambient conditions. Journal of Materials Chemistry A, 2020, 8, 9302-9312.	5.2	26
395	Spatially Resolved Performance Analysis for Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1904001.	10.2	30
396	Facile Strategy for Facet Competition Management to Improve the Performance of Perovskite Single-Crystal X-ray Detectors. Journal of Physical Chemistry Letters, 2020, 11, 3529-3535.	2.1	60
397	Volatile organic compound gas sensors based on methylammonium lead iodide perovskite operating at room temperature. RSC Advances, 2020, 10, 12982-12987.	1.7	48

#	Article	IF	CITATIONS
398	Electrodeposition, solvent engineering, and two-step solution deposition of the perovskite films: morphological and structural study. Journal of Materials Science: Materials in Electronics, 2021, 32, 12991-12999.	1.1	13
399	Evaporated potassium chloride for double-sided interfacial passivation in inverted planar perovskite solar cells. Journal of Energy Chemistry, 2021, 54, 493-500.	7.1	28
400	Selfâ€Powered Red/UV Narrowband Photodetector by Unbalanced Charge Carrier Transport Strategy. Advanced Functional Materials, 2021, 31, 2007016.	7.8	44
401	Unravelling the theoretical window to fabricate high performance inorganic perovskite solar cells. Sustainable Energy and Fuels, 2021, 5, 219-229.	2.5	19
402	Low-temperature grown TiO2 nanorods for MAPbI3 photovoltaics. Journal of Materials Science: Materials in Electronics, 2021, 32, 12862-12871.	1.1	0
403	Degradation of carbamazepine by MWCNTs-promoted generation of high-valent iron-oxo species in a mild system with O-bridged iron perfluorophthalocyanine dimers. Journal of Environmental Sciences, 2021, 99, 260-266.	3.2	6
404	Advanced Strategies of Passivating Perovskite Defects for Highâ€Performance Solar Cells. Energy and Environmental Materials, 2021, 4, 293-301.	7.3	15
405	Metal oxide mesocrystals and mesoporous single crystals: synthesis, properties and applications in solar energy conversion. Journal of Materials Science and Technology, 2021, 73, 9-22.	5.6	13
406	Spontaneously supersaturated nucleation strategy for high reproducible and efficient perovskite solar cells. Chemical Engineering Journal, 2021, 405, 126998.	6.6	20
407	Charge Transport Properties of Methylammonium Lead Trihalide Hybrid Perovskite Bulk Single Crystals. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000410.	1.2	1
408	Nano-interface engineering in all-solid-state lithium metal batteries: Tailoring exposed crystal facets of epitaxially grown LiNi0.5Mn1.5O4 films. Nano Energy, 2021, 79, 105480.	8.2	20
409	Expanding the OD Rb 7 M 3 X 16 (M=Sb, Bi; X=Br, I) Family: Dualâ€Band Luminescence in Rb 7 Sb 3 Br 16. Helvetica Chimica Acta, 2021, 104, e2000206.	1.0	10
410	Eliminating the electric field response in a perovskite heterojunction solar cell to improve operational stability. Science Bulletin, 2021, 66, 536-544.	4.3	10
411	Robust Inorganic Hole Transport Materials for Organic and Perovskite Solar Cells: Insights into Materials Electronic Properties and Device Performance. Solar Rrl, 2021, 5, 2000555.	3.1	34
412	Modeling Grain Boundaries in Polycrystalline Halide Perovskite Solar Cells. Annual Review of Condensed Matter Physics, 2021, 12, 95-109.	5.2	25
413	Mechanisms and Suppression of Photoinduced Degradation in Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2002326.	10.2	118
414	Boosting triplet self-trapped exciton emission in Te(IV)-doped Cs2SnCl6 perovskite variants. Nano Research, 2021, 14, 1551-1558.	5.8	127
415	In Quest of Environmentally Stable Perovskite Solar Cells: A Perspective. Helvetica Chimica Acta, 2021, 104, .	1.0	15

#	ARTICLE	IF	CITATIONS
416	Recent Tactics and Advances in the Application of Metal Sulfides as Highâ€Performance Anode Materials for Rechargeable Sodiumâ€Ion Batteries. Advanced Functional Materials, 2021, 31, 2006761.	7.8	89
417	Titanium Nanopillar Arrays Functioning as Electron Transporting Layers for Efficient, Antiâ€Aging Perovskite Solar Cells. Small, 2021, 17, e2004778.	5.2	9
418	Improved Perovskite Solar Cell Performance by High Growth Rate Spatial Atomic Layer Deposited Titanium Oxide Compact Layer. IEEE Journal of the Electron Devices Society, 2021, 9, 49-56.	1.2	4
419	Evidence of improved power conversion efficiency in lead-free CsGel3 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
420	Fully Vacuumâ€Processed Perovskite Solar Cells on Pyramidal Microtextures. Solar Rrl, 2021, 5, 2000553.	3.1	30
421	Vacancy defects on optoelectronic properties of double perovskite Cs2AgBiBr6. Materials Science in Semiconductor Processing, 2021, 123, 105541.	1.9	27
422	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
423	Ruddlesden Popper 2D perovskites as Li-ion battery electrodes. Materials Advances, 2021, 2, 3370-3377.	2.6	13
424	Designing high performance conjugated materials for photovoltaic cells with the aid of intramolecular noncovalent interactions. Chemical Communications, 2021, 57, 302-314.	2.2	65
425	A polymer-coated template-confinement CsPbBr ₃ perovskite quantum dot composite. Nanoscale, 2021, 13, 6586-6591.	2.8	34
426	Metal Halide Perovskites for X-Ray Detection and Imaging. Matter, 2021, 4, 144-163.	5.0	222
427	Perovskite solar cells: New precursors and challenges for scaling-up. , 2021, , 477-508.		1
428	An antibonding valence band maximum enables defect-tolerant and stable GeSe photovoltaics. Nature Communications, 2021, 12, 670.	5.8	58
429	Effect of Plasmonic Nanostructures on the Optical Properties of CH3NH3Pbl Perovskite Films. Frontiers in Materials, 2021, 7, .	1.2	2
430	Lead-free halide perovskites: a review of the structure–property relationship and applications in light emitting devices and radiation detectors. Journal of Materials Chemistry A, 2021, 9, 11931-11943.	5.2	42
431	An ultrafast-response and high-detectivity self-powered perovskite photodetector based on a triazine-derived star-shaped small molecule as a dopant-free hole transporting layer. Journal of Materials Chemistry C, 2021, 9, 7632-7642.	2.7	15
432	Lowâ€Dimensionalâ€Networked Perovskites with Aâ€Siteâ€Cation Engineering for Optoelectronic Devices. Small Methods, 2021, 5, e2001147.	4.6	27
433	Multicolor Output from 2D Hybrid Perovskites with Wide Band Gap: Highly Efficient White Emission, Dual-Color Afterglow, and Switch between Fluorescence and Phosphorescence. Journal of Physical Chemistry Letters, 2021, 12, 1040-1045.	2.1	31

	CITATION	REPORT	
#	Article	IF	CITATIONS
434	Metallic surface doping of metal halide perovskites. Nature Communications, 2021, 12, 7.	5.8	66
435	Frenkel defects promote polaronic exciton dissociation in methylammonium lead iodide perovskites. Physical Chemistry Chemical Physics, 2021, 23, 6583-6590.	1.3	2
436	Nanowire Waveguides and Lasers: Advances and Opportunities in Photonic Circuits. Frontiers in Chemistry, 2020, 8, 613504.	1.8	13
437	Understanding liquefaction in halide perovskites upon methylamine gas exposure. RSC Advances, 2021, 11, 20423-20428.	1.7	1
438	Fused Dithienopicenocarbazole Enabling High Mobility Dopant-Free Hole-Transporting Polymers for Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 6688-6698.	4.0	26
439	Tuning Ionic and Electronic Conductivities in the "Hollow―Perovskite { <i>en</i> }MAPbI ₃ . Chemistry of Materials, 2021, 33, 719-726.	3.2	24
440	Insights into iodoplumbate complex evolution of precursor solutions for perovskite solar cells: from aging to degradation. Journal of Materials Chemistry A, 2021, 9, 6732-6748.	5.2	26
441	Binary ligand-mediated morphological evolution of methylammonium lead bromide nanocrystals. CrystEngComm, 2021, 23, 4434-4438.	1.3	5
442	Nanoscale light- and voltage-induced lattice strain in perovskite thin films. Nanoscale, 2021, 13, 746-752.	2.8	12
443	Dualâ€Interface Modification of CsPbIBr ₂ Solar Cells with Improved Efficiency and Stability. Advanced Materials Interfaces, 2021, 8, 2001994.	1.9	12
444	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
445	Ultrafast Many-Particle Phenomena in Lead Bromide Hybrid Perovskite Nanocrystals Under Strong Optical Excitation. Journal of Physical Chemistry C, 2021, 125, 3198-3205.	1.5	9
446	Atomistic Mechanism of Passivation of Halide Vacancies in Lead Halide Perovskites by Alkali Ions. Chemistry of Materials, 2021, 33, 1285-1292.	3.2	26
447	Polarization ensitive Halide Perovskites for Polarized Luminescence and Detection: Recent Advances and Perspectives. Advanced Materials, 2021, 33, e2003615.	11.1	89
448	Influence of Fluorinated Components on Perovskite Solar Cells Performance and Stability. Small, 2021, 17, e2004081.	5.2	29
449	A computational study to explore the effects of copper doping concentration on phase stability, electronic band structure and optical properties of CsSrF ₃ fluro-perovskite. Molecular Physics, 2021, 119, e1892226.	0.8	15
450	Organic Cation Engineering for Vertical Charge Transport in Leadâ€Free Perovskite Quantum Wells. Small Science, 2021, 1, 2000024.	5.8	8
451	1D Perovskitoid as Absorbing Material for Stable Solar Cells. Crystals, 2021, 11, 241.	1.0	16

#	Article	IF	CITATIONS
452	Use of Sodium Diethyldithiocarbamate to Enhance the Open ircuit Voltage of CH ₃ NH ₃ PbI ₃ Perovskite Solar Cells. Solar Rrl, 2021, 5, 2000811.	3.1	5
453	Advances in Metal Halide Perovskite Film Preparation: The Role of Antiâ€Solvent Treatment. Small Methods, 2021, 5, e2100046.	4.6	39
454	Efficient Wide-Bandgap Mixed-Cation and Mixed-Halide Perovskite Solar Cells by Vacuum Deposition. ACS Energy Letters, 2021, 6, 827-836.	8.8	81
455	Efficient Inverted Perovskite Solar Cells with Low Voltage Loss Achieved by a Pyridineâ€Based Dopantâ€Free Polymer Semiconductor. Angewandte Chemie - International Edition, 2021, 60, 7227-7233.	7.2	107
456	Efficient Inverted Perovskite Solar Cells with Low Voltage Loss Achieved by a Pyridineâ€Based Dopantâ€Free Polymer Semiconductor. Angewandte Chemie, 2021, 133, 7303-7309.	1.6	18
457	Recent progress in two-dimensional Ruddlesden–Popper perovskite based heterostructures. 2D Materials, 2021, 8, 022006.	2.0	19
458	Leadâ€Free Cs ₂ Snl ₆ Perovskites for Optoelectronic Applications: Recent Developments and Perspectives. Solar Rrl, 2021, 5, 2000830.	3.1	25
459	Recent Progress in Optical Control of Ferroelectric Polarization. Advanced Optical Materials, 2021, 9, 2002146.	3.6	37
460	Two-dimensional overdamped fluctuations of the soft perovskite lattice in CsPbBr3. Nature Materials, 2021, 20, 977-983.	13.3	89
461	Ligand assisted growth of perovskite single crystals with low defect density. Nature Communications, 2021, 12, 1686.	5.8	110
462	Elucidating the Role of Ion Migration and Band Bending in Perovskite Solar Cell Function at Grain Boundaries via Multimodal Nanoscale Mapping. Advanced Materials Interfaces, 2021, 8, 2001992.	1.9	13
463	<i>N</i> -Bromosuccinimide as an Interfacial Alleviator for Br/l Exchange in Perovskite for Solar Cell Fabrication. ACS Applied Energy Materials, 2021, 4, 3130-3140.	2.5	4
464	High-Efficiency All-Inorganic Perovskite Solar Cells Tailored by Scalable Rutile TiO ₂ Nanorod Arrays with Excellent Stability. ACS Applied Materials & Interfaces, 2021, 13, 12091-12098.	4.0	15
465	Efficient Perovskite Solar Cells Achieved using the 2-Methoxyethanol Additive: Morphology and Composition Control of Intermediate Film. ACS Applied Energy Materials, 2021, 4, 2681-2689.	2.5	10
466	Rational design of high-quality 2D/3D perovskite heterostructure crystals for record-performance polarization-sensitive photodetection. National Science Review, 2021, 8, nwab044.	4.6	29
467	Effects of CsSnxPb1â^'xl3 Quantum Dots as Interfacial Layer on Photovoltaic Performance of Carbon-Based Perovskite Solar Cells. Nanoscale Research Letters, 2021, 16, 74.	3.1	8
468	Why Hybrid Tin-Based Perovskites Simultaneously Improve the Structural Stability and Charge Carriers' Lifetime: Ab Initio Quantum Dynamics. ACS Applied Materials & Interfaces, 2021, 13, 16567-16575.	4.0	10
469	In‣itu Hot Oxygen Cleansing and Passivation for Allâ€Inorganic Perovskite Solar Cells Deposited in Ambient to Breakthrough 19% Efficiency. Advanced Functional Materials, 2021, 31, 2101568.	7.8	42

ARTICLE IF CITATIONS Effect of methylammonium lead tribromide perovskite based-photoconductor under gamma photons 470 16 1.4 radiation. Radiation Physics and Chemistry, 2021, 181, 109337. Dielectric screening in perovskite photovoltaics. Nature Communications, 2021, 12, 2479. 471 5.8 Tunable Broad Light Emission from 3D "Hollow―Bromide Perovskites through Defect Engineering. 472 6.6 37 Journal of the American Chemical Society, 2021, 143, 7069-7080. Material exploration via designing spatial arrangement of octahedral units: a case study of lead halide perovskites. Frontiers of Optoelectronics, 2021, 14, 252-259. Spacer Engineering Using Aromatic Formamidinium in 2D/3D Hybrid Perovskites for Highly Efficient 474 7.3 99 Solar Cells. ACS Nano, 2021, 15, 7811-7820. Perovskite random lasers: a tunable coherent light source for emerging applications. Nanotechnology, 2021, 32, 282001. 1.3 Rational Design and Simulation of Two-Dimensional Perovskite Photonic Crystal Absorption Layers 476 1.6 7 Enabling Improved Light Absorption Efficiency for Solar Cells. Energies, 2021, 14, 2460. Recent Progress on Electrical and Optical Manipulations of Perovskite Photodetectors. Advanced 5.6 118 Science, 2021, 8, e2100569. Polaron Plasma in Equilibrium with Bright Excitons in 2D and 3D Hybrid Perovskites. Advanced Optical 478 3.6 14 Materials, 2021, 9, 2100295. Defect engineering on all-inorganic perovskite solar cells for high efficiency. Journal of 479 Semiconductors, 2021, 42, 050203. Enhanced Light Absorption by Facile Patterning of Nano-Grating on Mesoporous TiO2 Photoelectrode 480 1.9 6 for Cesium Lead Halide Perovskite Solar Cells. Nanomaterials, 2021, 11, 1233. Perovskite solar cells with embedded homojunction via nonuniform metal ion doping. Cell Reports 2.8 Physical Science, 2021, 2, 100415. Evaporation Deposition Strategies for Allâ€Inorganic CsPb(I_{1–<i>x</i>}Br_{<i>x</i>})₃Perovskite Solar Cells: Recent 482 3.1 24 Advances and Perspectives. Solar Rrl, 2021, 5, 2100172. CoFe2O4 nanocrystals for interface engineering to enhance performance of perovskite solar cells. Solar Energy, 2021, 220, 400-405. Ion exchange for halide perovskite: From nanocrystal to bulk materials. Nano Select, 2021, 2, 484 1.9 21 2040-2060. Role of a Solution-Processed V₂O₅ Hole Extracting Layer on the Performance 485 of CuO-ZnO-Based Solar Cells. ACS Omega, 2021, 6, 12631-12639. Moiré Perovskite Photodetector toward Highâ€Sensitive Digital Polarization Imaging. Advanced Energy 486 10.2 39 Materials, 2021, 11, 2100742. Leadâ€"halide perovskites for next-generation self-powered photodetectors: a comprehensive review. Photonics Research, 2021, 9, 968.

#	Article	IF	CITATIONS
488	Review-Emerging Applications of g-C3N4 Films in Perovskite-Based Solar Cells. ECS Journal of Solid State Science and Technology, 0, , .	0.9	10
489	An Overview for Zeroâ€Dimensional Broadband Emissive Metalâ€Halide Single Crystals. Advanced Optical Materials, 2021, 9, 2100544.	3.6	114
490	Polarizationâ€Sensitive Photodetector Using Patterned Perovskite Singleâ€Crystalline Thin Films. Advanced Optical Materials, 2021, 9, 2100524.	3.6	18
491	Symmetrical Conjugated Molecular Additive for Defect Passivation and Charge Transfer Bridge in Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 5935-5943.	2.5	14
492	Variational hysteresis and photoresponse behavior of MAPbX ₃ (X = I, Br, Cl) perovskite single crystals. Journal of Physics Condensed Matter, 2021, 33, 285703.	0.7	7
493	Sensitivity reduction mechanisms in organic perovskite X-ray detectors. Journal of Materials Science: Materials in Electronics, 2021, 32, 16824-16830.	1.1	4
494	A Physics-Based Analytical Model for Current–Voltage Characteristics of Perovskite Solar Cells Incorporating Bulk Recombination. Energies, 2021, 14, 3868.	1.6	1
495	B-Site Columnar-Ordered Halide Double Perovskites: Theoretical Design and Experimental Verification. Journal of the American Chemical Society, 2021, 143, 10275-10281.	6.6	43
496	Restricted growth and grain boundary reinforcement of MAPbBr ₃ film by graphene quantum dots with enhanced luminescence and stability. Functional Materials Letters, 2021, 14, 2151028.	0.7	0
497	Ultrafast Pumpâ€Probe Spectroscopy—A Powerful Tool for Tracking Spinâ€Quantum Dynamics in Metal Halide Perovskites. Advanced Quantum Technologies, 2021, 4, 2100052.	1.8	12
498	Unveiling Roles of Tin Fluoride Additives in Highâ€Efficiency Lowâ€Bandgap Mixed Tinâ€Lead Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2101045.	10.2	101
499	In-Plane Mechanical Properties of Two-Dimensional Hybrid Organic–Inorganic Perovskite Nanosheets: Structure–Property Relationships. ACS Applied Materials & Interfaces, 2021, 13, 31642-31649.	4.0	15
500	Electron-Beam Irradiation Induced Regulation of Surface Defects in Lead Halide Perovskite Thin Films. Research, 2021, 2021, 9797058.	2.8	9
501	On the Characteristics of Perovskite Structured BiFeO3-PbTiO3 Thin Films: Their Potential to Multifunctional Photovoltaic Applications. Brazilian Journal of Physics, 2021, 51, 1215-1223.	0.7	5
502	Perovskite Solar Cells with Polyaniline Hole Transport Layers Surpassing a 20% Power Conversion Efficiency. Chemistry of Materials, 2021, 33, 4679-4687.	3.2	34
503	Current Development toward Commercialization of Metalâ€Halide Perovskite Photovoltaics. Advanced Optical Materials, 2021, 9, 2100390.	3.6	15
504	Single-crystal halide perovskites: Opportunities and challenges. Matter, 2021, 4, 2266-2308.	5.0	35
505	Unveiling Crystal Orientation in Quasiâ€2D Perovskite Films by In Situ GIWAXS for Highâ€Performance Photovoltaics. Small, 2021, 17, e2100972.	5.2	23

#	Article	IF	CITATIONS
506	Sub- and supersolidus phase relations of formamidinium-cesium polyiodides. Mendeleev Communications, 2021, 31, 451-453.	0.6	1
507	Achieving Band Gap Reduction and Carrier Lifetime Enhancement in Metal Halide Perovskites via Mechanical Stretching. Journal of Physical Chemistry Letters, 2021, 12, 7207-7212.	2.1	6
508	Healing the defects in CsPbI3 solar cells by CsPbBr3 quantum dots. Nano Research, 2023, 16, 4888-4894.	5.8	9
509	Photo-anode surface modification using novel graphene oxide integrated with methylammonium lead iodide in organic-inorganic perovskite solar cells. Journal of Physics and Chemistry of Solids, 2021, 154, 110036.	1.9	1
510	<scp>PyUNIxMD</scp> : A <scp>Pythonâ€based</scp> excited state molecular dynamics package. Journal of Computational Chemistry, 2021, 42, 1755-1766.	1.5	24
511	The Progress of Additive Engineering for CH3NH3PbI3 Photo-Active Layer in the Context of Perovskite Solar Cells. Crystals, 2021, 11, 814.	1.0	17
512	Great Amplification of Circular Polarization Sensitivity via Heterostructure Engineering of a Chiral Two-Dimensional Hybrid Perovskite Crystal with a Three-Dimensional MAPbI ₃ Crystal. ACS Central Science, 2021, 7, 1261-1268.	5.3	41
513	Coâ€Evaporated Formamidinium Lead Iodide Based Perovskites with 1000 h Constant Stability for Fully Textured Monolithic Perovskite/Silicon Tandem Solar Cells. Advanced Energy Materials, 2021, 11, 2101460.	10.2	102
514	Solution Epitaxy of Halide Perovskite Thin Single Crystals for Stable Transistors. ACS Applied Materials & Interfaces, 2021, 13, 37840-37848.	4.0	6
515	Optical Properties on the Ferroelectric Perovskite Materials: a Study for Photovoltaic Applications. Brazilian Journal of Physics, 2021, 51, 1428-1437.	0.7	2
516	Elucidating the Spatial Dynamics of Charge Carriers in Quasi-Two-Dimensional Perovskites. ACS Applied Materials & Interfaces, 2021, 13, 35133-35141.	4.0	12
517	Effective Interface Defect Passivation via Employing 1â€Methylbenzimidazole for Highly Efficient and Stable Perovskite Solar Cells. ChemSusChem, 2021, 14, 3147-3154.	3.6	10
518	Nanodots Derived from Layered Materials: Synthesis and Applications. Advanced Materials, 2021, 33, e2006661.	11.1	29
519	Giant Bulk Photostriction and Accurate Photomechanical Actuation in Hybrid Perovskites. Advanced Optical Materials, 2021, 9, 2100837.	3.6	12
520	Crystal Chemical Insights on Lead Iodide Perovskites Doping from Revised Effective Radii of Metal Ions. , 2021, 3, 1377-1384.		3
521	Secondary crystallization strategy for highly efficient inorganic CsPbI2Br perovskite solar cells with efficiency approaching 17%. Journal of Energy Chemistry, 2021, 63, 558-565.	7.1	22
522	Bandgap engineering and thermodynamic stability of oxyhalide and chalcohalide antiperovskites. Ceramics International, 2021, 47, 32634-32640.	2.3	9
523	Control Perovskite Crystals Vertical Growth for Obtaining Highâ€Performance Monolithic Perovskite/Silicon Heterojunction Tandem Solar Cells with <i>V</i> _{OC} of 1.93 V. Solar Rrl, 2021, 5, 2100357.	3.1	15

#	Article	IF	CITATIONS
524	Reversible oxygen-induced p-doping of mixed-cation halide perovskites. APL Materials, 2021, 9, 081104.	2.2	6
525	Dopant-free hole transporting polymeric materials based on pyrroloindacenodithiophene donor unit for efficient perovskite solar cells. Dyes and Pigments, 2021, 192, 109432.	2.0	8
526	Cost-Effective High-Throughput Calculation Based on Hybrid Density Functional Theory: Application to Cubic, Double, and Vacancy-Ordered Halide Perovskites. Journal of Physical Chemistry Letters, 2021, 12, 7885-7891.	2.1	8
527	Efficient defect passivation for high performance perovskite solar cell by adding alizarin red S. Journal of Materials Science, 2021, 56, 19552-19563.	1.7	2
528	Strong Second- and Third-Harmonic Generation in 1D Chiral Hybrid Bismuth Halides. Journal of the American Chemical Society, 2021, 143, 16095-16104.	6.6	74
529	Interface passivation engineering for hybrid perovskite solar cells. Materials Reports Energy, 2021, 1, 100060.	1.7	19
530	Improving the Photovoltage of Blade-Coated MAPbI ₃ Perovskite Solar Cells via Surface and Grain Boundary Passivation with π-Conjugated Phenyl Boronic Acids. ACS Applied Materials & Interfaces, 2021, 13, 46566-46576.	4.0	15
531	Dehydration-Reaction-Based Low-Temperature Synthesis of Amorphous SnO <i>_x</i> for High-Performance Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 47603-47609.	4.0	3
532	Integrated Quasiâ€2D Perovskite/Organic Solar Cells with Efficiency over 19% Promoted by Interface Passivation. Advanced Functional Materials, 2021, 31, 2107129.	7.8	20
533	Observation of spatially resolved Rashba states on the surface of CH3NH3PbBr3 single crystals. Applied Physics Reviews, 2021, 8, .	5.5	12
534	Uniquely anisotropic mechanical and thermal responses of hybrid organic–inorganic perovskites under uniaxial strain. Journal of Chemical Physics, 2021, 155, 124703.	1.2	6
535	Efficient and Stable 2D@3D/2D Perovskite Solar Cells Based on Dual Optimization of Grain Boundary and Interface. ACS Energy Letters, 2021, 6, 3614-3623.	8.8	113
536	Atomic-scale imaging of CH3NH3PbI3 structure and its decomposition pathway. Nature Communications, 2021, 12, 5516.	5.8	36
537	Density of gap states in CH ₃ NH ₃ PbI ₃ single crystals probed with ultrahigh-sensitivity ultraviolet photoelectron spectroscopy. Journal of Physics Condensed Matter, 2021, 33, 475001.	0.7	1
538	Hot carrier redistribution, electron-phonon interaction, and their role in carrier relaxation in thin film metal-halide perovskites. Physical Review Materials, 2021, 5, .	0.9	8
539	Can We Find the Perfect A-Cations for Halide Perovskites?. ACS Energy Letters, 2021, 6, 3386-3389.	8.8	26
540	A critical review of materials innovation and interface stabilization for efficient and stable perovskite photovoltaics. Nano Energy, 2021, 87, 106141.	8.2	28
541	Stable Perovskite Solar Cells with Bulk-Mixed Electron Transport Layer by Multifunctional Defect Passivation. ACS Applied Materials & amp; Interfaces, 2021, 13, 44401-44408.	4.0	11

#	Article	IF	CITATIONS
542	Photoinduced Dynamic Defects Responsible for the Giant, Reversible, and Bidirectional Light-Soaking Effect in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 9328-9335.	2.1	13
543	Effects of frequency, temperature, and dc bias electric field on the dielectric properties of methylammonium lead iodide from the perspective of a relaxor-like ferroelectric. Acta Materialia, 2021, 219, 117235.	3.8	9
544	Optical and electrical studies on the semi-conductor compound for the photovoltaic applications. Journal of Organometallic Chemistry, 2021, 950, 121992.	0.8	3
545	Synthesis of a novel coumarin heterocyclic derivative and fabrication of hybrid nanocomposite thin film with CoOFe2O4 for optoelectronic applications. Journal of Molecular Structure, 2021, 1241, 130640.	1.8	11
546	Efficient application of intermediate phase for highly-oriented MAPbI3 perovskite solar cells in ambient air. Solar Energy, 2021, 228, 200-205.	2.9	7
547	MoO3 doped PTAA for high-performance inverted perovskite solar cells. Applied Surface Science, 2022, 571, 151301.	3.1	19
548	Large-area and efficient perovskite light-emitting diodes via low-temperature blade-coating. Nature Communications, 2021, 12, 147.	5.8	100
549	Machine Learning-Assisted Excited State Molecular Dynamics with the State-Interaction State-Averaged Spin-Restricted Ensemble-Referenced Kohn–Sham Approach. Journal of Chemical Theory and Computation, 2021, 17, 694-702.	2.3	12
550	A penetrated 2D/3D hybrid heterojunction for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 23019-23027.	5.2	23
551	Highly Mobile Large Polarons in Black Phase CsPbl ₃ . ACS Energy Letters, 2021, 6, 568-573.	8.8	40
552	Toward Perovskite Solar Cell Commercialization: A Perspective and Research Roadmap Based on Interfacial Engineering. Advanced Materials, 2018, 30, e1800455.	11.1	332
553	Simultaneously Passivating Cation and Anion Defects in Metal Halide Perovskite Solar Cells Using a Zwitterionic Amino Acid Additive. Small, 2021, 17, e2005608.	5.2	51
554	Monodisperse Long-Chain Sulfobetaine-Capped CsPbBr ₃ Nanocrystals and Their Superfluorescent Assemblies. ACS Central Science, 2021, 7, 135-144.	5.3	75
555	Tailoring interfacial carrier dynamics <i>via</i> rationally designed uniform CsPbBr _x I _{3â^'x} quantum dots for high-efficiency perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 26098-26108.	5.2	15
556	Enhanced nanoscopy of individual CsPbBr3 perovskite nanocrystals using dielectric sub-micrometric antennas. APL Materials, 2020, 8, 021109.	2.2	9
557	Defects in halide perovskite semiconductors: impact on photo-physics and solar cell performance. Journal Physics D: Applied Physics, 2020, 53, 503003.	1.3	26
558	Hot carriers in mixed Pb-Sn halide perovskite semiconductors cool slowly while retaining their electrical mobility. Physical Review B, 2020, 102, .	1.1	15
559	DFT study of the electronic properties and the cubic to tetragonal phase transition in RbCaF3. Physical Review Materials, 2018, 2, .	0.9	13

#	Article	IF	CITATIONS
560	Efficient intraband hot carrier relaxation in Sn and Pb perovskite semiconductors mediated by strong electron-phonon coupling. , 2019, , .		1
561	Enhancement of sub-bandgap light absorption in perovskite semiconductor films via critical coupling. Optics Express, 2019, 27, 25293.	1.7	5
562	Self-powered lead-free quantum dot plasmonic phototransistor with multi-wavelength response. Photonics Research, 2019, 7, 149.	3.4	6
563	A comprehensive review on defect passivation and gradient energy alignment strategies for highly efficient perovskite solar cells. Journal Physics D: Applied Physics, 2022, 55, 043001.	1.3	9
564	Machine Learning Accelerates the Discovery of Light-Absorbing Materials for Double Perovskite Solar Cells. Journal of Physical Chemistry C, 2021, 125, 22483-22492.	1.5	16
565	Allâ€Inorganic CsPbl ₂ Br Perovskite Solar Cells: Recent Developments and Challenges. Energy Technology, 2021, 9, 2100691.	1.8	11
566	Semiconductor Electrochemistry for Clean Energy Conversion and Storage. Electrochemical Energy Reviews, 2021, 4, 757-792.	13.1	77
567	Humidityâ€Induced Defectâ€Healing of Formamidiniumâ€Based Perovskite Films. Small, 2021, 17, e2104165.	5.2	10
568	Recycling lead and transparent conductors from perovskite solar modules. Nature Communications, 2021, 12, 5859.	5.8	69
569	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
570	Interfacial engineering of a thiophene-based 2D/3D perovskite heterojunction for efficient and stable inverted wide-bandgap perovskite solar cells. Nano Energy, 2021, 90, 106608.	8.2	71
571	A new and simple method for simulation of lattice mismatch on the optical properties of solar cells: A combination of DFT and FDTD simulations. Solar Energy, 2021, 230, 166-176.	2.9	5
572	Oligomeric Silica-Wrapped Perovskites Enable Synchronous Defect Passivation and Grain Stabilization for Efficient and Stable Perovskite Photovoltaics. SSRN Electronic Journal, 0, , .	0.4	1
573	Encapsulation Techniques of Perovskite Solar Cells. , 2021, , .		0
574	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
575	Deciphering the Carrier Transport Properties in Twoâ€Đimensional Perovskites via Surfaceâ€Enhanced Raman Scattering. Small, 2021, 17, e2103756.	5.2	4
576	Defect Passivation through Cyclohexylethylamine Post-treatment for High-Performance and Stable Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 12848-12857.	2.5	6
578	Intervalley polaronic biexcitons in metal halide perovskite quantum dots. Physical Review B, 2021, 104, .	1.1	15

#	Article	IF	CITATIONS
580	Leadâ€free Double Perovskite Cs ₂ AgIn _{0.9} Bi _{0.1} Cl ₆ Quantum Dots for White Lightâ€Emitting Diodes. Advanced Science, 2022, 9, e2102895.	5.6	46
581	A-Site Mixing to Adjust the Photovoltaic Performance of a Double-Cation Perovskite: It Is Not Always the Simple Way. Journal of Physical Chemistry Letters, 2021, 12, 11206-11213.	2.1	2
582	<i>In Situ</i> Epitaxial Growth of Centimeter-Sized Lead-Free (BA) ₂ CsAgBiBr ₇ /Cs ₂ AgBiBr ₆ Heterocrystals for Self-Driven X-ray Detection. Journal of the American Chemical Society, 2021, 143, 20802-20810.	6.6	65
583	Multifunctional potassium thiocyanate interlayer for eco-friendly tin perovskite indoor and outdoor photovoltaics. Chemical Engineering Journal, 2022, 433, 133832.	6.6	39
584	Crystallization Dynamics of Snâ€Based Perovskite Thin Films: Toward Efficient and Stable Photovoltaic Devices. Advanced Energy Materials, 2022, 12, 2102213.	10.2	63
585	Snâ€Pb Mixed Perovskites with Fullereneâ€Derivative Interlayers for Efficient Fourâ€Terminal Allâ€Perovskite Tandem Solar Cells. Advanced Functional Materials, 2022, 32, 2107650.	7.8	30
586	Upconversion graphene quantum dots incorporation in performance enhancement of p-i-n perovskite solar cells. Journal of Environmental Chemical Engineering, 2021, 9, 106898.	3.3	2
587	Efficient and stable perovskite solar cells doped by cesium acetate. Solar Energy, 2021, 230, 979-985.	2.9	6
588	The Role of Carbon Allotrope-Based Charge Transport Layers in Enhancing the Performance of Perovskite Solar Cells. , 2021, , 1-38.		0
589	Electronic Doping Strategy in Perovskite Solar Cells. , 2021, , 1-56.		1
590	Crystallization kinetics modulation and defect suppression of all-inorganic CsPbX ₃ perovskite films. Energy and Environmental Science, 2022, 15, 413-438.	15.6	53
591	Self-aligned CH3NH3PbBr3 perovskite nanowires via dielectrophoresis for gas sensing applications. Applied Materials Today, 2022, 26, 101307.	2.3	9
592	Te4+/Bi3+ Co-Doped Double Perovskites with Tunable Dual-Emission for Contactless Light Sensor, Encrypted Information Transmission and White Light Emitting Diodes. Chemical Engineering Journal, 2022, 431, 134135.	6.6	38
593	The role of solvents in the formation of methylammonium lead triiodide perovskite. Journal of Energy Chemistry, 2022, 68, 393-400.	7.1	10
594	A comprehensive study on piezo-phototronic effect for increasing efficiency of solar cells: A review. Optics and Laser Technology, 2022, 149, 107779.	2.2	7
595	Stable Leadâ€Free Blueâ€Emitting Cs ₃ Cu ₂ Br ₅ Single Crystal with Selfâ€Trap Exciton Emission for Optoelectronics. Advanced Photonics Research, 2022, 3, .	1.7	13
596	Coupled- and Independent-Trajectory Approaches Based on the Exact Factorization Using the PyUNIxMD Package. Topics in Current Chemistry, 2022, 380, 8.	3.0	4
597	Dimensional Control over Metal Halide Perovskite Crystallization Guided by Active Learning. Chemistry of Materials, 2022, 34, 756-767.	3.2	13

#	Article	IF	CITATIONS
598	Organic compound passivation for perovskite solar cells with improving stability and photoelectric performance. Solar Energy, 2022, 231, 414-419.	2.9	4
600	Acetone complexes for high-performance perovskite photovoltaics with reduced nonradiative recombination. Materials Advances, 2022, 3, 2047-2055.	2.6	2
601	Tunable engineering of photo- and electro-induced carrier dynamics in perovskite photoelectronic devices. Science China Materials, 2022, 65, 855-875.	3.5	9
602	Atomic and Molecular Hydrogen Impurities in Hybrid Perovskite Solar Cells. Journal of Physical Chemistry C, 2022, 126, 1721-1728.	1.5	7
603	Synergy Effect of a Ï€â€Conjugated Ionic Compound: Dual Interfacial Energy Level Regulation and Passivation to Promote <i>V</i> _{oc} and Stability of Planar Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	30
604	Defects and passivation in perovskite solar cells. Surface Innovations, 2022, 10, 3-20.	1.4	18
605	Fabrication of 2D perovskite (PMA)2PbI4 crystal and Cu ion implantation improved x-ray detector. Applied Physics Letters, 2022, 120, .	1.5	23
606	Influence of intrinsic defects on the structure and dynamics of the mixed Pb–Sn perovskite: first-principles DFT and NAMD simulations. Journal of Materials Chemistry A, 2021, 10, 234-244.	5.2	11
607	Development and Prospects of Halide Perovskite Single Crystal Films. Advanced Electronic Materials, 2022, 8, .	2.6	6
608	Synergy Effect of a Ï€â€Conjugated Ionic Compound: Dual Interfacial Energy Level Regulation and Passivation to Promote V oc and Stability of Planar Perovskite Solar Cells. Angewandte Chemie, 0, , .	1.6	4
609	Grainâ€Boundariesâ€Engineering via Laser Manufactured Laâ€Doped BaSnO ₃ Nanocrystals with Tailored Surface States Enabling Perovskite Solar Cells with Efficiency of 23.74%. Advanced Functional Materials, 2022, 32, 2112388.	7.8	16
610	Techno-economic and environmental sustainability of industrial-scale productions of perovskite solar cells. Renewable and Sustainable Energy Reviews, 2022, 158, 112146.	8.2	23
611	Ruddlesden–Popper 2D perovskites of type (C6H9C2H4NH3)2(CH3NH3)nâ^'1PbnI3n+1 (n = 1–4) f optoelectronic applications. Scientific Reports, 2022, 12, 2176.	or 1.6	30
612	Inverted Perovskite Solar Cells: The Emergence of a Highly Stable and Efficient Architecture. Energy Technology, 2022, 10, .	1.8	11
613	Crystallization Kinetics Control Enabled by a Green Ionic Liquid Additive toward Efficient and Stable Carbon-Based Mesoscopic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 9161-9171.	4.0	19
614	Synergistic effects of bithiophene ammonium salt for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2022, 10, 9971-9980.	5.2	14
615	Enhanced Efficiency and Stability of Perovskite Solar Cells Based on Carbon-Counter-Electrode Via Anti-Solvent Treatment. SSRN Electronic Journal, 0, , .	0.4	0
616	Stronger Binding Force Improving Surface Passivation of Perovskites for High-Performance Inverted Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0

#	Article	IF	CITATIONS
617	Sustainable development of perovskite solar cells: keeping a balance between toxicity and efficiency. Journal of Materials Chemistry A, 2022, 10, 8159-8171.	5.2	19
618	Theoretical comparison among perovskite, Si and ?-Se based x-ray detectors. , 2022, , .		0
619	Micro-to-Nanometer Scale Patterning of Perovskite Inks via Controlled Self-Assemblies. Materials, 2022, 15, 1521.	1.3	2
620	Complementary Triple-Ligand Engineering Approach to Methylamine Lead Bromide Nanocrystals for High-Performance Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2022, 14, 10508-10516.	4.0	10
621	Electron Dynamics in Hybrid Perovskites Reveal the Role of Organic Cations on the Screening of Local Charges. Nano Letters, 2022, 22, 2065-2069.	4.5	3
622	Combining Perovskites and Quantum Dots: Synthesis, Characterization, and Applications in Solar Cells, LEDs, and Photodetectors. Advanced Optical Materials, 2022, 10, .	3.6	23
623	Multiaxial Ferroelectricity and Ferroelasticity in a Chiral Perovskite. Chemistry of Materials, 2022, 34, 3518-3524.	3.2	23
624	Acetylammonium chloride as an additive for crystallization control and defect passivation in MAPbl ₃ based perovskite solar cells. Journal Physics D: Applied Physics, 2022, 55, 265501.	1.3	7
625	Hybrid Halide Perovskiteâ€Based Nearâ€Infrared Photodetectors and Imaging Arrays. Advanced Optical Materials, 2022, 10, .	3.6	35
626	Adenosine Triphosphate Disodium Modified Hole Transport Layer for Efficient Inverted Perovskite Solar Cells. ChemNanoMat, 2022, 8, .	1.5	2
627	Organic Amine-Bridged Quasi-2D Perovskite/PbS Colloidal Quantum Dots Composites for High-Gain Near-Infrared Photodetectors. Nano Letters, 2022, 22, 2277-2284.	4.5	16
628	How Machine Learning Predicts and Explains the Performance of Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	26
629	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
630	Quadruple-Cation Wide-Bandgap Perovskite Solar Cells with Enhanced Thermal Stability Enabled by Vacuum Deposition. ACS Energy Letters, 2022, 7, 1355-1363.	8.8	24
631	Chemical Potential Diagram Guided Rational Tuning of Electrical Properties: A Case Study of CsPbBr ₃ for Xâ€ray Detection. Advanced Materials, 2022, 34, e2110252.	11.1	24
632	Recent Advances in Colloidal Quantum Dots or Perovskite Quantum Dots as a Luminescent Downshifting Layer Embedded on Solar Cells. Nanomaterials, 2022, 12, 985.	1.9	18
633	Origin of Contrasting Emission Spectrum of Bromide versus lodide Layered Perovskite Semiconductors. Journal of Physical Chemistry Letters, 2022, 13, 2737-2743.	2.1	5
634	Zr and Mo doped YMnO3: The role of dopants on the structural, microstructural, chemical state, and dielectric properties. Ceramics International, 2022, 48, 17009-17019.	2.3	6

ARTICLE IF CITATIONS Insights from scalable fabrication to operational stability and industrial opportunities for perovskite 635 2.8 16 solar cells and modules. Cell Reports Physical Science, 2022, 3, 100827. Lead-Free Solid-State Organic–Inorganic Halide Perovskite Electrolyte for Lithium-Ion Conduction. 4.0 ACS Applied Materials & amp; Interfaces, 2022, 14, 17479-17485. Narrow Bandgap Metal Halide Perovskites: Synthesis, Characterization, and Optoelectronic 637 7 3.6 Applications. Advanced Optical Materials, 2022, 10, . Stronger binding force improving surface passivation of perovskites for High-Performance inverted 638 solar cells. Chemical Engineering Journal, 2022, 440, 135974. Cs2SnI6 nanocrystals enhancing hole extraction for efficient carbon-based CsPbI2Br perovskite solar 639 6.6 31 cells. Chemical Éngineering Journal, 2022, 440, 135710. Investigating the Sequential Deposition Route for Mixed Cation Mixed Halide Wide Bandgap Perovskite 640 1.6 Absorber Layer. Energies, 2021, 14, 8401. 641 Solubility of Hybrid Halide Perovskites in DMF and DMSO. Molecules, 2021, 26, 7541. 1.7 15 Ternary Phase Diagrams of MAl–PbI₂–DMF and MAl–PbI₂–DMSO Systems. 642 1.5 Journal of Physical Chemistry C, 2022, 126, 169-173. All in One: A Versatile n-Perovskite/p-Spiro-MeOTAD p–n Heterojunction Diode as a Photovoltaic Cell, 643 Photodetector, and Memristive Photosynapse. Journal of Physical Chemistry Letters, 2021, 12, 2.1 17 12098-12106. 644 Modification of FA0.85MA0.15Pb(I0.85Br0.15)3 Films by NH2-POSS. Crystals, 2021, 11, 1544. 1.0 Recent Progress of Critical Interface Engineering for Highly Efficient and Stable Perovskite Solar 645 10.2 78 Cells. Advanced Energy Materials, 2022, 12, . Discovery of Leadâ€Free Perovskites for Highâ€Performance Solar Cells via Machine Learning: Ultrabroadband Absorption, Low Radiative Combination, and Enhanced Thermal Conductivities. 646 5.6 Advanced Science, 2022, 9, e2103648. An Ensemble Learning Platform for the Large-Scale Exploration of New Double Perovskites. ACS 647 4.0 16 Applied Materials & amp; Interfaces, 2022, 14, 717-725. Harvesting the Triplet Excitons of Quasi-Two-Dimensional Perovskite toward Highly Efficient White 648 2.1 Light-Emitting Diodes. Journal of Physical Chemistry Letters, 2022, 13, 3674-3681 Effective Passivation with Selfâ€Organized Molecules for Perovskite Photovoltaics. Advanced 649 11.1 67 Materials, 2022, 34, e2202100. Independent trajectory mixed quantum-classical approaches based on the exact factorization. Journal 1.2 of Chemical Physics, 2022, 156, 174109. Low-Temperature Solution-Processed Cu₂AgBil₆ Films for High Performance 651 4.0 17 Photovoltaics and Photodetectors. ACS Applied Materials & amp; Interfaces, 2022, 14, 18498-18505. Device Physics of a Metal Halide Perovskite Diode: Decoupling of the Bulk from the Interface. Journal 1.5 of Physical Chemistry C, 2022, 126, 6892-6903.

	CITATION RE	PORT	
#	Article	IF	CITATIONS
655	Dataâ€Ðriven Materials Innovation and Applications. Advanced Materials, 2022, 34, e2104113.	11.1	51
656	Study on Performances of LiNi _{0.8} Co _{0.1} Mn _{0.1} O _{2Cathode Materials Prepared from Different Lithium Sources and Coated Modification of ZnO. Material Sciences. 2022. 12. 386-395.}	et;o	0
657	Numerical Simulation of 30% Efficient Lead-Free Perovskite CsSnGeI3-Based Solar Cells. Materials, 2022, 15, 3229.	1.3	25
658	Excitation-Power-Dependent Emission Color Tuning in Mn-Doped One-Dimensional Perovskite Single Crystal. Journal of Physical Chemistry C, 2022, 126, 7615-7621.	1.5	2
659	Global prediction of the energy yields for hybrid perovskite/Si tandem and Si heterojunction single solar modules. Progress in Photovoltaics: Research and Applications, 2022, 30, 1198-1218.	4.4	4
660	Charged Exciton Formation in Compact Polycrystalline Perovskite Thin Films. ACS Photonics, 2022, 9, 1614-1620.	3.2	0
661	Förster Resonance Energy Transfer Assisted Enhancement in Optoelectronic Properties of Metal Halide Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2022, 13, 4357-4364.	2.1	11
662	Understanding the Effect of Lead Iodide Excess on the Performance of Methylammonium Lead Iodide Perovskite Solar Cells. ACS Energy Letters, 2022, 7, 1912-1919.	8.8	14
663	Generalized Formulation of the Density Functional Tight Binding-Based Restricted Ensemble Kohn–Sham Method with Onsite Correction to Long-Range Correction. Journal of Chemical Theory and Computation, 2022, 18, 3391-3409.	2.3	2
664	Organic Cation Diffusion-Induced Heterogeneous Viscoelasticity in Organic–Inorganic Hybrid Perovskite Polycrystalline Films. ACS Applied Materials & Interfaces, 2022, 14, 22582-22592.	4.0	1
665	The structural versatility of proton sponge bismuth halides. Journal of Solid State Chemistry, 2022, 312, 123165.	1.4	1
666	A positive correlation between local photocurrent and grain size in a perovskite solar cell. Journal of Energy Chemistry, 2022, 72, 8-13.	7.1	3
667	Photoinduced Cross Linkable Polymerization of Flexible Perovskite Solar Cells and Modules by Incorporating Benzyl Acrylate. Advanced Functional Materials, 2022, 32, .	7.8	32
668	Microâ€Nano Structure Functionalized Perovskite Optoelectronics: From Structure Functionalities to Device Applications. Advanced Functional Materials, 2022, 32, .	7.8	25
669	Organic–inorganic hybrid perovskite scintillators for mixed field radiation detection. InformaÄnÃ- Materiály, 2022, 4, .	8.5	25
670	Stabilization and Self-Passivation of Grain Boundaries in Halide Perovskite by Rigid Body Translation. Journal of Physical Chemistry Letters, 2022, 13, 4628-4633.	2.1	5
671	Review of defect engineering in perovskites for photovoltaic application. Materials Advances, 2022, 3, 5234-5247.	2.6	28
672	Solvate phases crystallizing from hybrid halide perovskite solutions: Chemical classification and structural relations. Mendeleev Communications, 2022, 32, 311-314.	0.6	7

#	Article	IF	CITATIONS
673	Modeling Radiation Damage in Materials Relevant for Exploration and Settlement on the Moon. , 0, , .		0
674	The strategies for widening processing windows for perovskite solar cells: a mini review on the role of solvent/antisolvent. International Materials Reviews, 2023, 68, 301-322.	9.4	3
675	An Innovative Anode Interface Combination for Perovskite Solar Cells with Improved Efficiency, Stability, and Reproducibility. Solar Rrl, 2022, 6, .	3.1	3
676	Solid State Melting Confinement Reaction Synthesis of CsPbBr ₃ Quantum Dots Embedded in Mesoporous SiO ₂ Microspheres for Lightâ€Emitting Diodes. Advanced Materials Interfaces, 2022, 9, .	1.9	9
677	Selfâ€Assembly of 2D Hybrid Double Perovskites on 3D Cs ₂ AgBiBr ₆ Crystals towards Ultrasensitive Detection of Weak Polarized Light. Angewandte Chemie, 2022, 134, .	1.6	1
678	Solution-processed perovskite crystals for electronics: Moving forward. Matter, 2022, 5, 1700-1733.	5.0	3
679	Selfâ€Assembly of 2D Hybrid Double Perovskites on 3D Cs ₂ AgBiBr ₆ Crystals towards Ultrasensitive Detection of Weak Polarized Light. Angewandte Chemie - International Edition, 2022, 61, .	7.2	11
680	Mixed dimensionality of 2D/3D heterojunctions for improving charge transport and long-term stability in high-efficiency 1.63 eV bandgap perovskite solar cells. Materials Advances, 2022, 3, 5786-5795.	2.6	1
681	The high open-circuit voltage of perovskite solar cells: a review. Energy and Environmental Science, 2022, 15, 3171-3222.	15.6	181
682	Ice Assisted Electron-Beam Lithography for Halide Perovskite Optoelectronic Nanodevices. SSRN Electronic Journal, 0, , .	0.4	0
683	Phononic Fine-Tuning in a Prototype Two-Dimensional Hybrid Organic–Inorganic Perovskite System. Journal of Physical Chemistry Letters, 2022, 13, 5480-5487.	2.1	1
684	A Heatâ€Liquefiable Solid Precursor for Ambient Growth of Perovskites with High Tunability, Performance and Stability. Small Methods, 2022, 6, .	4.6	4
685	Interface modification by Fmoc-Met-OH molecule for high-efficient perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2022, 33, 15359-15368.	1.1	2
686	Enhanced efficiency and stability of perovskite solar cells based on carbon-counter-electrode via anti-solvent treatment. Journal of Alloys and Compounds, 2022, 920, 165874.	2.8	7
688	A Singleâ€Dot Perovskite Spectrometer. Advanced Materials, 2022, 34, .	11.1	26
689	Controllable Perovskite Single Crystal Heterojunction for Stable Selfâ€Powered Photoâ€Imaging and Xâ€Ray Detection. Advanced Optical Materials, 2022, 10, .	3.6	12
690	Long Carrier Diffusion Length and Efficient Charge Transport in Thick Quasi-Two-Dimensional Perovskite Solar Cells Enabled by Modulating Crystal Orientation and Phase Distribution. ACS Applied Energy Materials, 2022, 5, 8930-8939.	2.5	7
691	Organic Holeâ€Transport Layers for Efficient, Stable, and Scalable Inverted Perovskite Solar Cells. Advanced Materials, 2022, 34, .	11.1	107

#	ARTICLE Photoinduced large polaron transport and dynamics in organic–inorganic hybrid lead halide	IF	CITATIONS
692	perovskite with terahertz probes. Light: Science and Applications, 2022, 11, .	7.7	27
693	Advances in Perovskites for Photovoltaic Applications in Space. ACS Energy Letters, 2022, 7, 2490-2514.	8.8	27
694	Revisiting the Iodine Vacancy Surface Defects to Rationalize Passivation Strategies in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2022, 13, 6694-6700.	2.1	15
695	Successive Solution–Liquid–Vapor Conversion of Metallic Lead Films for Highly Efficient Perovskite Solar Cells. Russian Journal of Inorganic Chemistry, 2022, 67, 992-996.	0.3	4
696	Recent defect passivation drifts and role of additive engineering in perovskite photovoltaics. Nano Energy, 2022, 101, 107579.	8.2	46
697	Surface defect passivation by 1,8-Naphthyridine for efficient and stable Formamidinium-based 2D/3D perovskite solar cells. Chemical Engineering Journal, 2022, 449, 137806.	6.6	15
698	Perovskite films for X-ray detection. Journal of Semiconductors, 2022, 43, 070202.	2.0	1
699	Revealing the Role of Methylammonium Iodide Purity on the Vaporâ€Phase Deposition Process of Perovskites. Solar Rrl, 2022, 6, .	3.1	6
700	Alignment of Metal Halide Perovskite Nanowires and Their Application in Photodetectors. Korean Journal of Materials Research, 2022, 32, 307-312.	0.1	0
701	Mass Transfer Printing of Metalâ€Halide Perovskite Films and Nanostructures. Advanced Materials, 2022, 34, .	11.1	10
702	Interfacial Passivation Engineering for Highly Efficient Perovskite Solar Cells with a Fill Factor over 83%. ACS Nano, 2022, 16, 11902-11911.	7.3	30
703	Reductive ionic liquid-mediated crystallization for enhanced photovoltaic performance of Sn-based perovskite solar cells. Science China Chemistry, 2022, 65, 1895-1902.	4.2	4
704	Perovskite solar cells integrated with blue cut-off filters for mitigating light-induced degradation. Optics Express, 2022, 30, 31367.	1.7	4
705	Ultralong Charge Carrier Recombination Time in Methylammonium Lead Halide Perovskites. ACS Photonics, 2022, 9, 3341-3350.	3.2	1
706	Metal Halide Perovskite Nanowires: Synthesis, Integration, Properties, and Applications in Optoelectronics. Advanced Energy Materials, 2023, 13, .	10.2	18
707	Allâ€Inorganic Perovskite Singleâ€Crystal Photoelectric Anisotropy. Advanced Materials, 2022, 34, .	11.1	38
708	Thermally induced failure mechanisms in double and triple cations perovskite solar cells. AIP Advances, 2022, 12, .	0.6	2
709	Effect of UV-illumination on refractive index of PMMA/metal oxide nanocomposite films. Polymer Bulletin, 2023, 80, 7533-7543.	1.7	1

#	Article	IF	CITATIONS
710	Ice-assisted electron-beam lithography for halide perovskite optoelectronic nanodevices. Nano Energy, 2022, 102, 107692.	8.2	1
711	Effect of an ultra-thin 2D transport layer on eco-friendly Perovskite/CIGS tandem solar cell: A numerical study. , 2022, 170, 207398.		6
712	Doping engineering of carrier transporting layers for ambient-air-stable lead-free rudorffite solar cells prepared by thermal-assisted doctor blade coating. Chemical Engineering Journal, 2023, 451, 138807.	6.6	9
713	Enhancing two-dimensional perovskite photodetector performance through balancing carrier density and directional transport. Journal of Materials Chemistry A, 2022, 10, 21044-21052.	5.2	8
714	Interfacial Energy-Level Alignment Via Poly-3-Hexylthiophene-Cspbi3 Quantum Dots Hybrid Hole Conductor for Efficient Carbon-Based Cspbi2br Solar Cells. SSRN Electronic Journal, 0, , .	0.4	0
715	High grain boundary recombination velocity in polycrystalline metal halide perovskites. Science Advances, 2022, 8, .	4.7	21
716	Difluorine‣ubstituted Moleculeâ€Based Lowâ€Dimensional Structure for Highly Stable Tin Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	6
717	Jahnâ^'Teller Distortion-Stabilized Halide Double Perovskites with Unusual Rock-Salt-type Ordering of Divalent B-Site Cations. Chemistry of Materials, 2022, 34, 8207-8212.	3.2	5
718	First-Principles Study of Electronic Properties of Cesium Chloride Double Perovskites Using a DFT-1/2 Approach. Journal of Physical Chemistry C, 2022, 126, 15065-15071.	1.5	2
719	The role of plasmonic metal-oxides core-shell nanoparticles on the optical absorption of Perovskite solar cells. Optical and Quantum Electronics, 2022, 54, .	1.5	9
720	Defect passivation and electrical conductivity enhancement in perovskite solar cells using functionalized graphene quantum dots. Materials Futures, 2022, 1, 045101.	3.1	20
721	High scintillation yield and fast response to alpha particles from thin perovskite films deposited by pulsed laser deposition. Frontiers in Physics, 0, 10, .	1.0	2
722	Probing charge carrier dynamics in metal halide perovskite solar cells. EcoMat, 2023, 5, .	6.8	8
723	Intrinsic Ion Migration Dynamics in a One-Dimensional Organic Metal Halide Hybrid. ACS Energy Letters, 2022, 7, 3753-3760.	8.8	3
724	Rock-Salt-Ordered Nitrohalide Double Antiperovskites: Theoretical Design and Experimental Verification. Chemistry of Materials, 2022, 34, 9098-9103.	3.2	2
725	Molecular Rotor–Rotor Heat Diffusion at the Origin of the Enhanced Thermal Conductivity of Hybrid Perovskites at High Temperatures. Chemistry of Materials, 2022, 34, 9569-9576.	3.2	5
726	First-Principles Phonon Quasiparticle Theory Applied to a Strongly Anharmonic Halide Perovskite. Physical Review Letters, 2022, 129, .	2.9	20
727	Hybrid Block Copolymer/Perovskite Heterointerfaces for Efficient Solar Cells. Advanced Materials, 2023, 35, .	11.1	14

#	Article	IF	CITATIONS
728	Metal Halide Perovskite/Electrode Contacts in Chargeâ€Transporting‣ayerâ€Free Devices. Advanced Science, 2022, 9, .	5.6	11
729	Origin of ultralow phonon transport and strong anharmonicity in lead-free halide perovskites. Materials Today Physics, 2022, 28, 100881.	2.9	13
730	Photo-dynamics in 2D materials: Processes, tunability and device applications. Physics Reports, 2022, 993, 1-70.	10.3	4
731	Interfacial energy-level alignment via poly-3-hexylthiophene-CsPbI3 quantum dots hybrid hole conductor for efficient carbon-based CsPbI2Br solar cells. Chemical Engineering Journal, 2023, 453, 139842.	6.6	16
732	Illuminationâ€Dependent Photoelectric Anisotropy in Cs ₃ Bi ₂ I ₉ Single Crystal Sheets. Advanced Optical Materials, 0, , 2201723.	3.6	2
733	<i>n</i> â€Involved Optimization of Outâ€ofâ€Plane Optoelectronic Performances in Nanoscale Ruddlesden–Popper Perovskite. Advanced Electronic Materials, 0, , 2200893.	2.6	1
734	Strain Release and Defect Passivation in Formamidinium-Dominated Perovskite via a Novel in-Plane Thermal Gradient Assisted Crystallization Strategy. ACS Applied Materials & Interfaces, 2022, 14, 52007-52016.	4.0	6
735	Angle-resolved polarimetry of hybrid perovskite emission for photonic technologies. Nanoscale, 2022, 14, 17519-17527.	2.8	3
736	High-performance flexible and self-powered perovskite photodetector enabled by interfacial strain engineering. Journal of Materials Chemistry C, 2023, 11, 600-608.	2.7	2
737	Synergistic trifluoroacetamide regulating crystal orientation and energy alignment for tin-based perovskite solar cells. Organic Electronics, 2023, 113, 106707.	1.4	3
738	Efficient and stable MAPbI3 perovskite solar cells via green anti-solvent diethyl carbonate. Organic Electronics, 2023, 113, 106709.	1.4	6
739	Optoelectronic Properties of MAPbBr3 Perovskite Light-Emitting Diodes Using Anti-Solvent and PEDOT:PSS/PVK Double-Layer Hole Transport Layers. Micromachines, 2022, 13, 2122.	1.4	1
740	Synthesis, Structure, and Characterization of 4,4′-(Anthracene-9,10-diylbis(ethyne-2,1-diyl))bis(1-methyl-1-pyridinium) Bismuth Iodide (C ₃₀ H ₂₂ N ₂) ₃ Bi ₄ I ₁₈ , an Air, Water, and Thermally Stable 0D Hybrid Perovskite with High Photoluminescence Efficiency. Crystal	1.4	5
741	Growth and Design, 2022, 22, 7426-7433. Minimizing the transport loss and degradation of perovskite optoelectronics via grain dimerization technique. EcoMat, 2023, 5, .	6.8	4
742	On the photovoltaic effect asymmetry in ferroelectrics. Journal of Physics Condensed Matter, 2023, 35, 094001.	0.7	3
743	Extrinsic photoresponse of Ag doped MAPbBr3 perovskite crystals. Applied Surface Science, 2023, 614, 156230.	3.1	4
744	Synergistic Surface Modification of Tin–Lead Perovskite Solar Cells. Advanced Materials, 2023, 35, .	11.1	22
745	Emerging Halide Perovskite Ferroelectrics. Advanced Materials, 2023, 35, .	11.1	30

#	Article	IF	CITATIONS
746	Halide Perovskite: A Promising Candidate for Nextâ€Generation Xâ€Ray Detectors. Advanced Science, 2023, 10, .	5.6	37
747	Structural and optical investigation of novel Sr1-xNa2xZrO3 perovskite nanoparticles. Physica B: Condensed Matter, 2023, 653, 414655.	1.3	2
748	Simultaneous passivation on both A and X sites of halogen perovskite with magnesium benzoate. RSC Advances, 2023, 13, 2411-2417.	1.7	1
749	High-efficiency α-FAPbI3 perovskite solar cells based on one-dimensional TiO2 nanorod array scaffolds. Organic Electronics, 2023, 114, 106750.	1.4	3
750	Computational design and properties elucidation of new (FAPbI3)1â^'x-y(MAPbBr3)y(CsPbBr3)x photoactive systems for their application in perovskite solar cells. Materials Today Communications, 2023, 34, 105324.	0.9	0
751	Micro/Nanostructural Analyses of Efficient and Stable Perovskite Solar Cells via KF Doping. ACS Applied Energy Materials, 2023, 6, 371-377.	2.5	7
752	3D Printing of Arbitrary Perovskite Nanowire Heterostructures. Advanced Functional Materials, 2023, 33, .	7.8	5
753	Lattice-Distortion-Induced Change in the Magnetic Properties in Br-Defect Host CsPbBr ₃ Perovskite Quantum Dots. Journal of Physical Chemistry Letters, 2023, 14, 888-896.	2.1	1
754	Utilizing Angleâ€Dependent Photovoltage Effect in a CH ₃ NH ₃ PbCl ₃ /Si Heterojunction toward Highâ€Performance Polarized Light Detection in Ultraviolet Region. Advanced Optical Materials, 2023, 11, .	3.6	2
755	Polymer-based nano-inks for solar cells. , 2023, , 359-388.		0
756	Selective Control of Novel TiO ₂ Nanorods: Excellent Building Blocks for the Electron Transport Layer of Mesoscopic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2023, 15, 9447-9456.	4.0	7
757	Class Formation in Hybrid Organicâ€Inorganic Perovskites. Angewandte Chemie - International Edition, 2023, 62, .	7.2	11
758	Highly Stable and Enhanced Performance of p–i–n Perovskite Solar Cells via Cuprous Oxide Hole-Transport Layers. Nanomaterials, 2023, 13, 1363.	1.9	4
759	xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"> <mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:mrow </mml:msub> CoGeS <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si33.svg"><mml:msub><mml:mrow /><mml:mn>4</mml:mn></mml:mrow </mml:msub> for photovoltaic conversion and photocatalytic</mml:math 	2.7	4
760	applications. Materials Research Bulletin, 2023, 164, 112235. Porous and Water Stable 2D Hybrid Metal Halide with Broad Light Emission and Selective H ₂ O Vapor Sorption. Angewandte Chemie - International Edition, 2023, 62, .	7.2	3
761	Porous and Water Stable 2D Hybrid Metal Halide with Broad Light Emission and Selective H ₂ O Vapor Sorption. Angewandte Chemie, 2023, 135, .	1.6	0
762	Enhanced stability of carbon-based perovskite solar cells by using n-butylamine to assemble 2D capping layer. Organic Electronics, 2023, 115, 106757.	1.4	1
763	Enhanced Photoresponse in Few-Layer SnS ₂ Field-Effect Transistors Modified with Methylammonium Lead Iodide Perovskite. ACS Applied Electronic Materials, 2023, 5, 705-713.	2.0	3

ARTICLE IF CITATIONS # Bifunctional Cellulose Interlayer Enabled Efficient Perovskite Solar Cells with Simultaneously 5.6 13 764 Enhanced Efficiency and Stability. Advanced Science, 2023, 10, . Inhibited Crack Development by Compressive Strain in Perovskite Solar Cells with Improved Mechanical Stability. Advanced Materials, 2023, 35, . 11.1 One-stone-for-two-birds strategy to attain beyond 25% perovskite solar cells. Nature 766 5.8 74 Communications, 2023, 14, . Resonant Coherent Acoustic Oscillation in Nanoscale Ruddlesden–Popper Perovskite Films. Advanced Functional Materials, 0, , 2214542. Potential-Induced Performance Degradation (PID) Applied on a Perovskite Solar Cell: Exploring Its Effect on Cell Performance Through Numerical Simulation. Journal of Electronic Materials, 2023, 52, 768 1.0 7 3205-3218. Characterization of the defect in CIGSe solar cell by admittance spectroscopy. AIP Advances, 2023, 13, 769 025264. Highly bright and stable single-crystal perovskite light-emitting diodes. Nature Photonics, 2023, 17, 770 15.6 34 401-407. Enhancing performance of tin-based perovskite solar cells via fused-ring electron acceptor. EScience, 2023, 3, 100113. 25.0 Imaging the Terahertz Nanoscale Conductivity of Polycrystalline CsPbBr₃ Perovskite Thin 772 4.5 1 Films. Nano Letters, 2023, 23, 2074-2080. Theoretical Selection of 2D Perovskite for Constructing Efficient Heterojunction Solar Cells., 2023, 5,970-978. Optical waveguide in curved and welded perovskite nanowires. Science China Technological Sciences, 774 2.0 2 2023, 66, 1471-1479. Improved Carrier Management via a Multifunctional Modifier for Highâ€Quality Lowâ€Bandgap Sn–Pb 11.1 26 Perovskites and Efficient Allâ€Perovskite Tandem Solar Cells. Advanced Materials, 2023, 35, Synergistic Crystallization Modulation and Defects passivation via Additive Engineering Stabilize 776 7.8 15 Pérovskite Films for Efficient Solar Cells. Advanced Functional Materials, 2023, 33, . Photoelectrochemically Induced CO₂ Reduction Using Halide-Tunable Lead-Free 2.5 777 Perovskites. ACS Applied Energy Materials, 2023, 6, 3566-3578. Simulation study of CsPblxBr1-x and MAPbl3 heterojunction solar cell using SCAPS-1D. Solar Energy, 778 2.9 13 2023, 254, 137-157. Phase transition, optical, and elastic properties of a new hybrid organicâ \in inorganic perovskite: 779 2.2 [(<i>R</i>)-(+)-3-aminoquinuclidine]kl3. APL Materials, 2023, 11, . Innovative Approaches to Semi-Transparent Perovskite Solar Cells. Nanomaterials, 2023, 13, 1084. 780 1.9 7 Ligand-free template-assisted synthesis of stable perovskite nanocrystals with near-unity 781 2.8 photoluminescence quantum yield within the pores of vaterite spheres. Nanoscale, 0, , .

ARTICLE IF CITATIONS Toward a Diagnostic Method for Efficient Perovskite Solar Cells Based on Equivalent Circuit 782 1.5 2 Parameters. Journal of Physical Chemistry C, 2023, 127, 5663-5675. Enhanced Carrier Diffusion Enables Efficient Backâ€Contact Perovskite Photovoltaics. Angewandte 7.2 Chemie - International Edition, 2023, 62, . Enhanced Carrier Diffusion Enables Efficient Back ontact Perovskite Photovoltaics. Angewandte 784 0 1.6 Chemie, 0, , Stabilization of methylammonium lead iodide via SiO2 coating for photodetectors. Journal of 1.2 Materials Research, 2023, 38, 1941-1951. Recent Advances in Wide-Bandgap Organic–Inorganic Halide Perovskite Solar Cells and Tandem 786 14.4 41 Application. Nano-Micro Letters, 2023, 15, . $\label{eq:sub-3} CsPbBr₃ Quantum Dots \\ alpha \\ \end{tabular} Efficiency Perovskite Solar Cells. Solar Rrl, 2023, 7, .$ 3.1 Oxidation-resistant all-perovskite tandem solar cells in substrate configuration. Nature 788 5.8 24 Communications, 2023, 14, . Glass Formation in Hybrid Organicâ€Inorganic Perovskites. Angewandte Chemie, 0, , . 1.6 Can Nitride Perovskites Provide the Same Superior Optoelectronic Properties as Lead Halide 790 8.8 4 Perovskites?. ACS Energy Letters, 2023, 8, 2051-2057. Doped metal halide perovskite materials for solar energy., 2023, , 169-188. Efficient Inverted Perovskite Solar Cells Using Dual Fluorinated Additive Modification. Advanced 792 1 1.9 Materials Interfaces, 2023, 10, . Radiative pumping of exciton-polaritons in 2D hybrid perovskites. Optical Materials Express, 0, , . 793 1.6 Nonfullerene Agent Enables Efficient and Stable Tinâ€Based Perovskite Solar Cells. Solar Rrl, 2023, 7, . 794 3.1 2 Single-Crystal Halide Perovskites for Transistor Applications., 2023, , 265-296. 795 Light management using photonic structures towards high-index perovskite optoelectronics: 810 15.6 6 fundamentals, designing, and applications. Energy and Environmental Science, 2023, 16, 4135-4163. Phase-pure two-dimensional layered perovskite thin films. Nature Reviews Materials, 2023, 8, 533-551. Lead immobilization for environmentally sustainable perovskite solar cells. Nature, 2023, 617, 687-695. 825 13.7 25 Transition metal ion-doped cesium lead halide perovskite nanocrystals: doping strategies and 849 3.2

CITATION REPORT

luminescence design. Materials Chemistry Frontiers, 2023, 8, 192-209.

#

#	Article	IF	CITATIONS
	Halide Perovskite Materials for Photovoltaics and Lighting. Advances in Chemical and Materials Engineering Book Series, 2024, , 126-146.	0.2	0