Efficient ambient-air-stable solar cells with 2Dâ€“3D he butylammonium-caesium-formamidinium lead halide p

Nature Energy

2,

DOI: 10.1038/nenergy.2017.135

Citation Report

#	Article	IF	Citations
1	Controllable Synthesis of Two-Dimensional Ruddlesdenâ€“Popper-Type Perovskite Heterostructures. Journal of Physical Chemistry Letters, 2017, 8, 6211-6219.	2.1	54
2	Effects of the additives n-propylammonium or n-butylammonium iodide on the performance of perovskite solar cells. RSC Advances, 2017, 7, 55986-55992.	1.7	12
3	Anti-Solvent Crystallization Strategies for Highly Efficient Perovskite Solar Cells. Crystals, 2017, 7, 291.	1.0	144
4	Improved fill factor in inverted planar perovskite solar cells with zirconium acetate as the hole-and-ion-blocking layer. Physical Chemistry Chemical Physics, 2018, 20, 7395-7400.	1.3	7
5	Characterising degradation of perovskite solar cells through in-situ and operando electron microscopy. Nano Energy, 2018, 47, 243-256.	8.2	67
6	Synchronized-pressing fabrication of cost-efficient crystalline perovskite solar cells via intermediate engineering. Nanoscale, 2018, 10, 9628-9633.	2.8	8
7	Continuous Grain-Boundary Functionalization for High-Efficiency Perovskite Solar Cells with Exceptional Stability. CheM, 2018, 4, 1404-1415.	5.8	165
8	Perovskite seeding growth of formamidinium-lead-iodide-based perovskites for efficient and stable solar cells. Nature Communications, 2018, 9, 1607.	5.8	309
9	Present status and future prospects of perovskite photovoltaics. Nature Materials, 2018, 17, 372-376.	13.3	590
10	Recent progress in 2D/quasi-2D layered metal halide perovskites for solar cells. Journal of Materials Chemistry A, 2018, 6, 11063-11077.	5.2	183
11	Controlled surface decomposition derived passivation and energy-level alignment behaviors for high performance perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 9397-9401.	5.2	20
12	Mixed 3Dâ€“2D Passivation Treatment for Mixedâ€Cation Lead Mixedâ€Halide Perovskite Solar Cells for Higher Efficiency and Better Stability. Advanced Energy Materials, 2018, 8, 1703392.	10.2	289
13	Electronic implications of organic nitrogen lone pairs in lead iodide perovskites. Journal of Materials Chemistry C, 2018, 6, 4765-4768.	2.7	1
14	Reduced Efficiency Roll-Off and Enhanced Stability in Perovskite Light-Emitting Diodes with Multiple Quantum Wells. Journal of Physical Chemistry Letters, 2018, 9, 2038-2042.	2.1	55
15	Fully-ambient-processed mesoscopic semitransparent perovskite solar cells by islands-structure-MAPbI3-xClx-NiO composite and Al2O3/NiO interface engineering. Nano Energy, 2018, 49, 59-66.	8.2	65
16	Highly efficient perovskite solar cells for light harvesting under indoor illumination via solution processed SnO2/MgO composite electron transport layers. Nano Energy, 2018, 49, 290-299.	8.2	205
17	Unravelling Lightâ€Induced Degradation of Layered Perovskite Crystals and Design of Efficient Encapsulation for Improved Photostability. Advanced Functional Materials, 2018, 28, 1800305.	7.8	95
18	Passivation in perovskite solar cells: A review. Materials Today Energy, 2018, 7, 267-286.	2.5	170

#	Article	IF	Citations
19	Synthetic Control over Quantum Well Width Distribution and Carrier Migration in Low-Dimensional Perovskite Photovoltaics. Journal of the American Chemical Society, 2018, 140, 2890-2896.	6.6	288
20	Suppressed Ion Migration along the In-Plane Direction in Layered Perovskites. ACS Energy Letters, 2018, 3, 684-688.	8.8	240
21	Passivation of Grain Boundaries by Phenethylammonium in Formamidinium-Methylammonium Lead Halide Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 647-654.	8.8	283
22	Improved Performance of Printable Perovskite Solar Cells with Bifunctional Conjugated Organic Molecule. Advanced Materials, 2018, 30, 1705786.	11.1	209
23	Hybrid Perovskites: Prospects for Concentrator Solar Cells. Advanced Science, 2018, 5, 1700792.	5.6	76
24	Progress and Perspective in Lowâ€Dimensional Metal Halide Perovskites for Optoelectronic Applications. Solar Rrl, 2018, 2, 1700186.	3.1	98
25	Selective growth of layered perovskites for stable and efficient photovoltaics. Energy and Environmental Science, 2018, 11, 952-959.	15.6	305
26	Unraveling the Growth of Hierarchical Quasi-2D/3D Perovskite and Carrier Dynamics. Journal of Physical Chemistry Letters, 2018, 9, 1124-1132.	2.1	52
27	In Situ Growth of 2D Perovskite Capping Layer for Stable and Efficient Perovskite Solar Cells. Advanced Functional Materials, 2018, 28, 1706923.	7.8	543
28	Compositional Engineering for Efficient Wide Band Gap Perovskites with Improved Stability to Photoinduced Phase Segregation. ACS Energy Letters, 2018, 3, 428-435.	8.8	344
29	Simultaneous Improvement of Photovoltaic Performance and Stability by In Situ Formation of 2D Perovskite at (FAPbI₃)_{0.88}(CsPbBr₃)_{0.12}/CuSCN Interface. Advanced Energy Materials, 2018, 8, 1702714.	10.2	253
30	3Dâ€“2Dâ€“0D Interface Profiling for Record Efficiency Allâ€Inorganic CsPbBrI₂ Perovskite Solar Cells with Superior Stability. Advanced Energy Materials, 2018, 8, 1703246.	10.2	301
31	Tuning Charge Carrier Dynamics and Surface Passivation in Organolead Halide Perovskites with Capping Ligands and Metal Oxide Interfaces. Advanced Optical Materials, 2018, 6, 1701203.	3.6	18
32	Tailored interfaces of unencapsulated perovskite solar cells for >1,000 hour operational stability. Nature Energy, 2018, 3, 68-74.	19.8	722
33	Fabrication of single phase 2D homologous perovskite microplates by mechanical exfoliation. 2D Materials, 2018, 5, 021001.	2.0	65
34	An integrated organicâ€“inorganic hole transport layer for efficient and stable perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 2157-2165.	5.2	79
35	Effect of Cs on the Stability and Photovoltaic Performance of 2D/3D Perovskite-Based Solar Cells. ACS Energy Letters, 2018, 3, 366-372.	8.8	64
36	Improving ambient stability of BiI3-based perovskites using different phosphoniums as the organic cation. MRS Communications, 2018, 8, 878-884.	0.8	5

#	Article	IF	Citations
37	Phase Engineering in Quasi-2D Ruddlesdenâ€“Popper Perovskites. Journal of Physical Chemistry Letters, 2018, 9, 2627-2631.	2.1	82
38	Computational Study of Structural and Electronic Properties of Lead-Free CsMI₃ Perovskites (M = Ge, Sn, Pb, Mg, Ca, Sr, and Ba). Journal of Physical Chemistry C, 2018, 122, 7838-7848.	1.5	62
39	Highly Efficient and Stable Solar Cells with 2D MA₃Bi₂I₉/3D MAPbI₃ Heterostructured Perovskites. Advanced Energy Materials, 2018, 8, 1703620.	10.2	94
40	Recent developments in the texture analysis program ANAELU. Journal of Materials Science: Materials in Electronics, 2018, 29, 15376-15382.	1.1	3
41	Carrier Interfacial Engineering by Bismuth Modification for Efficient and Thermoresistant Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1703659.	10.2	59
42	Thermodynamically Selfâ€Healing 1Dâ€“3D Hybrid Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1703421.	10.2	158
43	Tailored dimensionality to regulate the phase stability of inorganic cesium lead iodide perovskites. Nanoscale, 2018, 10, 6318-6322.	2.8	104
44	Recent progress on low dimensional perovskite solar cells. Journal of Energy Chemistry, 2018, 27, 1091-1100.	7.1	28
45	Advances and challenges to the commercialization of organicâ€“inorganic halide perovskite solar cell technology. Materials Today Energy, 2018, 7, 169-189.	2.5	231
46	Degradation of encapsulated perovskite solar cells driven by deep trap states and interfacial deterioration. Journal of Materials Chemistry C, 2018, 6, 162-170.	2.7	91
47	The merit of perovskite's dimensionality; can this replace the 3D halide perovskite?. Energy and Environmental Science, 2018, 11, 234-242.	15.6	196
48	Design and Optimization of Perovskite Solar Cell with Thin ZnO Insulator Layer as Electron Transport. , 2018, , .		8
49	Narrow band gap and high mobility of lead-free perovskite single crystal Sn-doped MA₃Sb₂I₉. Journal of Materials Chemistry A, 2018, 6, 20753-20759.	5.2	67
50	High performance ambient-air-stable FAPbI₃ perovskite solar cells with molecule-passivated Ruddlesdenâ€“Popper/3D heterostructured film. Energy and Environmental Science, 2018, 11, 3358-3366.	15.6	196
51	Multi-layered hybrid perovskites templated with carbazole derivatives: optical properties, enhanced moisture stability and solar cell characteristics. Journal of Materials Chemistry A, 2018, 6, 22899-22908.	5.2	42
52	General Nondestructive Passivation by 4â€Fluoroaniline for Perovskite Solar Cells with Improved Performance and Stability. Small, 2018, 14, e1803350.	5.2	82
53	Dimensionality engineering of hybrid halide perovskite light absorbers. Nature Communications, 2018, 9, 5028.	5.8	245
54	Thiocyanate Containing Two-Dimensional Cesium Lead Iodide Perovskite, Cs₂PbI₂(SCN)₂: Characterization, Photovoltaic Application, and Degradation Mechanism. ACS Applied Materials & Interfaces, 2018, 10, 42363-42371.	4.0	40

#	Article	IF	Citations
55	Precursor Concentration Affects Grain Size, Crystal Orientation, and Local Performance in Mixed-Ion Lead Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 6801-6808.	2.5	65
56	Ruddlesdenâ€“Popper Perovskite for Stable Solar Cells. Energy and Environmental Materials, 2018, 1, 221-231.	7.3	85
57	The Role of Charge Selective Contacts in Perovskite Solar Cell Stability. Advanced Energy Materials, 2019, 9, 1803140.	10.2	120
58	Addressing the stability issue of perovskite solar cells for commercial applications. Nature Communications, 2018, 9, 5265.	5.8	527
59	Effect of High Dipole Moment Cation on Layered 2D Organicâ€“Inorganic Halide Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803024.	10.2	117
60	New Generation Hole Transporting Materials for Perovskite Solar Cells: Amideâ€Based Smallâ€Molecules with Nonconjugated Backbones. Advanced Energy Materials, 2018, 8, 1801605.	10.2	78
61	Stable, Efficient Red Perovskite Lightâ€Emitting Diodes by (Î±, Î´)â€CsPbI₃ Phase Engineering. Advanced Functional Materials, 2018, 28, 1804285.	7.8	105
62	Highly efficient flexible solar cells based on a room-temperature processed inorganic perovskite. Journal of Materials Chemistry A, 2018, 6, 20365-20373.	5.2	34
63	Efficient and Stable Perovskite Solar Cells Using Lowâ€Cost Anilineâ€Based Enamine Holeâ€Transporting Materials. Advanced Materials, 2018, 30, e1803735.	11.1	68
64	Attaining High Photovoltaic Efficiency and Stability with Multidimensional Perovskites. ChemSusChem, 2018, 11, 4193-4202.	3.6	16
65	C60-assisted crystal engineering for perovskite solar cells with enhanced efficiency and stability. Organic Electronics, 2018, 63, 276-282.	1.4	15
66	3D/2D multidimensional perovskites: Balance of high performance and stability for perovskite solar cells. Current Opinion in Electrochemistry, 2018, 11, 105-113.	2.5	59
67	Methylammonium-free, high-performance, and stable perovskite solar cells on a planar architecture. Science, 2018, 362, 449-453.	6.0	816
68	Stable and Efficient 3D-2D Perovskite-Perovskite Planar Heterojunction Solar Cell without Organic Hole Transport Layer. Joule, 2018, 2, 2706-2721.	11.7	124
69	Phase Pure 2D Perovskite for Highâ€Performance 2Dâ€“3D Heterostructured Perovskite Solar Cells. Advanced Materials, 2018, 30, e1805323.	11.1	244
70	Carbon Nanodot Additives Realize Highâ€Performance Airâ€Stable pâ€“iâ€“n Perovskite Solar Cells Providing Efficiencies of up to 20.2%. Advanced Energy Materials, 2018, 8, 1802323.	10.2	86
71	Highly Efficient Perovskite Solar Cells via Nickel Passivation. Advanced Functional Materials, 2018, 28, 1804286.	7.8	100
72	Significant Stability Enhancement of Perovskite Solar Cells by Facile Adhesive Encapsulation. Journal of Physical Chemistry C, 2018, 122, 25260-25267.	1.5	31

#	Article	IF	Citations
73	Design of High-Efficiency and Environmentally Stable Mixed-Dimensional Perovskite Solar Cells Based on Cesium-Formamidinium Lead Halide Component. Chemistry of Materials, 2018, 30, 7691-7698.	3.2	25
74	Iodineâ€Optimized Interface for Inorganic CsPbI₂Br Perovskite Solar Cell to Attain High Stabilized Efficiency Exceeding 14%. Advanced Science, 2018, 5, 1801123.	5.6	90
75	In Situ Grain Boundary Modification via Two-Dimensional Nanoplates to Remarkably Improve Stability and Efficiency of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 39802-39808.	4.0	24
76	Phase stabilization of all-inorganic perovskite materials for photovoltaics. Current Opinion in Electrochemistry, 2018, 11, 141-145.	2.5	4
77	Oriented Quasiâ€2D Perovskites for High Performance Optoelectronic Devices. Advanced Materials, 2018, 30, e1804771.	11.1	268
78	A Universal Doubleâ€Side Passivation for High Openâ€Circuit Voltage in Perovskite Solar Cells: Role of Carbonyl Groups in Poly(methyl methacrylate). Advanced Energy Materials, 2018, 8, 1801208.	10.2	387
79	All-Perovskite Emission Architecture for White Light-Emitting Diodes. ACS Nano, 2018, 12, 10486-10492.	7.3	92
80	General Post-annealing Method Enables High-Efficiency Two-Dimensional Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 33187-33197.	4.0	66
81	In-situ cross-linking strategy for efficient and operationally stable methylammoniun lead iodide solar cells. Nature Communications, 2018, 9, 3806.	5.8	227
82	Twoâ€Dimensional Organicâ€“Inorganic Hybrid Perovskites: A New Platform for Optoelectronic Applications. Advanced Materials, 2018, 30, e1802041.	11.1	138
83	Quaternary alkylammonium salt incorporated 2D/3D mixed halide perovskite with highly enhanced photoluminescence and arrested iodide/bromide phase segregation. APL Materials, 2018, 6, .	2.2	13
84	Ultrafast Carrier Transfer Promoted by Interlayer Coulomb Coupling in 2D/3D Perovskite Heterostructures. Laser and Photonics Reviews, 2018, 12, 1800128.	4.4	59
85	UV Treatment of Low-Temperature Processed SnO2 Electron Transport Layers for Planar Perovskite Solar Cells. Nanoscale Research Letters, 2018, 13, 216.	3.1	17
86	Progress toward Stable Lead Halide Perovskite Solar Cells. Joule, 2018, 2, 1961-1990.	11.7	181
87	CsPbCl₃â€Driven Lowâ€Trapâ€Density Perovskite Grain Growth for >20% Solar Cell Efficiency. Advanced Science, 2018, 5, 1800474.	5.6	65
88	Caesium for Perovskite Solar Cells: An Overview. Chemistry - A European Journal, 2018, 24, 12183-12205.	1.7	138
89	Perovskite Solar Cells with Inorganic Electronâ€•and Holeâ€Transport Layers Exhibiting Longâ€Term (â‰ˆ500) Tj ETQq0 0 0 rgBT /Overl e1801010.	11.1	174
90	Structural features and their functions in surfactant-armoured methylammonium lead iodide perovskites for highly efficient and stable solar cells. Energy and Environmental Science, 2018, 11, 2188-2197.	15.6	162

#	Article	IF	Citations
91	Stable Formamidiniumâ€Based Perovskite Solar Cells via In Situ Grain Encapsulation. Advanced Energy Materials, 2018, 8, 1800232.	10.2	78
92	Reduced-Dimensional Î±-CsPbX3 Perovskites for Efficient and Stable Photovoltaics. Joule, 2018, 2, 1356-1368.	11.7	344
93	Highly stable and water-soluble monodisperse CsPbX₃/SiO₂ nanocomposites for white-LED and cells imaging. Nanotechnology, 2018, 29, 345703.	1.3	76
94	Cation-Assisted Restraint of a Wide Quantum Well and Interfacial Charge Accumulation in Two-Dimensional Perovskites. ACS Energy Letters, 2018, 3, 1815-1823.	8.8	22
95	Fabrication of Perovskite Uniform Film in Air via Introduction of Aniline Cations. ChemistrySelect, 2018, 3, 7023-7029.	0.7	3
96	Photonics and Optoelectronics of 2D Metalâ€Halide Perovskites. Small, 2018, 14, e1800682.	5.2	168
97	Two-dimensional light-emitting materials: preparation, properties and applications. Chemical Society Reviews, 2018, 47, 6128-6174.	18.7	167
98	High-performance inverted two-dimensional perovskite solar cells using non-fullerene acceptor as electron transport layer. Organic Electronics, 2018, 62, 189-194.	1.4	13
99	2D perovskite stabilized phase-pure formamidinium perovskite solar cells. Nature Communications, 2018, 9, 3021.	5.8	575
100	High irradiance performance of metal halide perovskites for concentrator photovoltaics. Nature Energy, 2018, 3, 855-861.	19.8	180
101	Black and Stable: A Path to All-Inorganic Halide Perovskite Solar Cells. Joule, 2018, 2, 1215-1216.	11.7	8
102	Electronic Structure of Two-Dimensional Lead(II) Iodide Perovskites: An Experimental and Theoretical Study. Chemistry of Materials, 2018, 30, 4959-4967.	3.2	29
103	Defect Engineering toward Highly Efficient and Stable Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800326.	1.9	40
104	Progress in tailoring perovskite based solar cells through compositional engineering: Materials properties, photovoltaic performance and critical issues. Materials Today Energy, 2018, 9, 440-486.	2.5	58
105	Stability in Perovskite Photovoltaics: A Paradigm for Newfangled Technologies. ACS Energy Letters, 2018, 3, 2136-2143.	8.8	113
106	Analysing the Prospects of Perovskite Solar Cells within the Purview of Recent Scientific Advancements. Crystals, 2018, 8, 242.	1.0	13
107	Core-expanded naphthalenediimide derivatives as non-fullerene electron transport materials for inverted perovskite solar cells. Organic Electronics, 2018, 61, 113-118.	1.4	10
108	Efficient Î±-CsPbI3 Photovoltaics with Surface Terminated Organic Cations. Joule, 2018, 2, 2065-2075.	11.7	280

#	Article	IF	Citations
109	Opportunities and challenges for tandem solar cells using metal halide perovskite semiconductors. Nature Energy, 2018, 3, 828-838.	19.8	716
110	A fluorene-terminated hole-transporting material for highly efficient and stable perovskite solar cells. Nature Energy, 2018, 3, 682-689.	19.8	1,856
111	The Impact of Hybrid Compositional Film/Structure on Organicâ€“Inorganic Perovskite Solar Cells. Nanomaterials, 2018, 8, 356.	1.9	30
112	Suppression of atomic vacancies via incorporation of isovalent small ions to increase the stability of halide perovskite solar cells in ambient air. Nature Energy, 2018, 3, 648-654.	19.8	552
113	Surface modification of a hole transporting layer for an efficient perovskite solar cell with an enhanced fill factor and stability. Molecular Systems Design and Engineering, 2018, 3, 717-722.	1.7	31
114	Lattice Modulation of Alkali Metal Cations Doped Cs_{1â^'x}R_xPbBr₃ Halides for Inorganic Perovskite Solar Cells. Solar Rrl, 2018, 2, 1800164.	3.1	154
115	Enhanced stability and optoelectronic properties of MAPbI₃ films by a cationic surface-active agent for perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 10825-10834.	5.2	81
116	Overcoming the Photovoltage Plateau in Large Bandgap Perovskite Photovoltaics. Nano Letters, 2018, 18, 3985-3993.	4.5	97
117	Ambient-air-stable inorganic Cs₂SnI₆double perovskite thin filmsviaaerosol-assisted chemical vapour deposition. Journal of Materials Chemistry A, 2018, 6, 11205-11214.	5.2	85
118	Alloying nâ€Butylamine into CsPbBr₃ To Give a Twoâ€Dimensional Bilayered Perovskite Ferroelectric Material. Angewandte Chemie, 2018, 130, 8272-8275.	1.6	26
119	Alloying nâ€Butylamine into CsPbBr₃ To Give a Twoâ€Dimensional Bilayered Perovskite Ferroelectric Material. Angewandte Chemie - International Edition, 2018, 57, 8140-8143.	7.2	135
120	Graded Bandgap CsPbI2+Br1â^' Perovskite Solar Cells with a Stabilized Efficiency of 14.4%. Joule, 2018, 2, 1500-1510.	11.7	307
121	Efficient solar cells with enhanced humidity and heat stability based on benzylammoniumâ€“caesiumâ€“formamidinium mixed-dimensional perovskites. Journal of Materials Chemistry A, 2018, 6, 18067-18074.	5.2	24
122	Coherent Spin and Quasiparticle Dynamics in Solutionâ€Processed Layered 2D Lead Halide Perovskites. Advanced Science, 2018, 5, 1800664.	5.6	66
123	High efficiency planar-type perovskite solar cells with negligible hysteresis using EDTA-complexed SnO2. Nature Communications, 2018, 9, 3239.	5.8	1,017
124	Efficient and Stable Nonfullereneâ€Graded Heterojunction Inverted Perovskite Solar Cells with Inorganic Ga₂O₃ Tunneling Protective Nanolayer. Advanced Functional Materials, 2018, 28, 1804128.	7.8	76
125	Layered Mixed Tinâ€“Lead Hybrid Perovskite Solar Cells with High Stability. ACS Energy Letters, 2018, 3, 2246-2251.	8.8	64
126	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

#	Article	IF	Citations
127	Minimizing Current and Voltage Losses to Reach 25% Efficient Monolithic Two-Terminal Perovskiteâ€“Silicon Tandem Solar Cells. ACS Energy Letters, 2018, 3, 2173-2180.	8.8	194
128	Efficient Grain Boundary Suture by Low-Cost Tetra-ammonium Zinc Phthalocyanine for Stable Perovskite Solar Cells with Expanded Photoresponse. Journal of the American Chemical Society, 2018, 140, 11577-11580.	6.6	95
129	Water-Repellent Low-Dimensional Fluorous Perovskite as Interfacial Coating for 20% Efficient Solar Cells. Nano Letters, 2018, 18, 5467-5474.	4.5	118
130	Grainâ€Boundary â€œPatchesâ€•by In Situ Conversion to Enhance Perovskite Solar Cells Stability. Advanced Materials, 2018, 30, e1800544.	11.1	224
131	Highly Efficient 2D/3D Hybrid Perovskite Solar Cells via Lowâ€Pressure Vaporâ€Assisted Solution Process. Advanced Materials, 2018, 30, e1801401.	11.1	154
132	Outlook and Challenges of Perovskite Solar Cells toward Terawatt-Scale Photovoltaic Module Technology. Joule, 2018, 2, 1437-1451.	11.7	162
133	Enabling reliability assessments of pre-commercial perovskite photovoltaics with lessons learned from industrial standards. Nature Energy, 2018, 3, 459-465.	19.8	123
134	High-Bandgap Perovskite Materials for Multijunction Solar Cells. Joule, 2018, 2, 1421-1436.	11.7	173
135	Perovskite/câ€Si tandem solar cells with realistic inverted architecture: Achieving high efficiency by optical optimization. Progress in Photovoltaics: Research and Applications, 2018, 26, 924-933.	4.4	19
136	Realization of a Highly Oriented MAPbBr₃ Perovskite Thin Film via Ion Exchange for Ultrahigh Color Purity Green Light Emission. ACS Energy Letters, 2018, 3, 1662-1669.	8.8	38
137	Effect of Phase Transition on Optical Properties and Photovoltaic Performance in Cesium Lead Bromine Perovskite: A Theoretical Study. Journal of Physical Chemistry C, 2019, 123, 20764-20768.	1.5	2
138	I₂ vapor-induced degradation of formamidinium lead iodide based perovskite solar cells under heatâ€“light soaking conditions. Energy and Environmental Science, 2019, 12, 3074-3088.	15.6	131
139	Stable lead-free Te-based double perovskites with tunable band gaps: a first-principles study. New Journal of Chemistry, 2019, 43, 14892-14897.	1.4	32
140	Spaceâ€Confined Growth of Individual Wide Bandgap Single Crystal CsPbCl₃ Microplatelet for Nearâ€Ultraviolet Photodetection. Small, 2019, 15, e1902618.	5.2	77
141	2D Crystalâ€“Based Fibers: Status and Challenges. Small, 2019, 15, e1902691.	5.2	35
142	Hole Transport Bilayer Structure for Quasiâ€2D Perovskite Based Blue Lightâ€Emitting Diodes with High Brightness and Good Spectral Stability. Advanced Functional Materials, 2019, 29, 1905339.	7.8	92
143	Photochemically Cross-Linked Quantum Well Ligands for 2D/3D Perovskite Photovoltaics with Improved Photovoltage and Stability. Journal of the American Chemical Society, 2019, 141, 14180-14189.	6.6	107
144	Highly Efficient and Stable Planar Perovskite Solar Cells with Modulated Diffusion Passivation Toward High Power Conversion Efficiency and Ultrahigh Fill Factor. Solar Rrl, 2019, 3, 1900293.	3.1	87

#	Article	IF	Citations
145	A New Organic Interlayer Spacer for Stable and Efficient 2D Ruddlesdenâ€“Popper Perovskite Solar Cells. Nano Letters, 2019, 19, 5237-5245.	4.5	76
146	Scalable Fabrication of Metal Halide Perovskite Solar Cells and Modules. ACS Energy Letters, 2019, 4, 2147-2167.	8.8	161
147	Review of Stability Enhancement for Formamidiniumâ€Based Perovskites. Solar Rrl, 2019, 3, 1900215.	3.1	60
148	Compositional Engineering of Mixed-Cation Lead Mixed-Halide Perovskites for High-Performance Photodetectors. ACS Applied Materials & Interfaces, 2019, 11, 28005-28012.	4.0	27
149	Addition of Monovalent Silver Cations to CH₃NH₃PbBr₃ Produces Crystallographically Oriented Perovskite Thin Films. ACS Applied Energy Materials, 2019, 2, 6087-6096.	2.5	10
150	Searching for stability at lower dimensions: current trends and future prospects of layered perovskite solar cells. Energy and Environmental Science, 2019, 12, 2860-2889.	15.6	132
151	Ligand-Size Related Dimensionality Control in Metal Halide Perovskites. ACS Energy Letters, 2019, 4, 1830-1838.	8.8	38
152	High open-circuit voltages in lead-halide perovskite solar cells: experiment, theory and open questions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180286.	1.6	28
153	Planar perovskite solar cells with long-term stability using ionic liquid additives. Nature, 2019, 571, 245-250.	13.7	1,103
154	High irradiance performance of cesium-formamidinium-based mixed-halide perovskite for concentrator photovoltaics under various operating conditions. Journal of Physics and Chemistry of Solids, 2019, 135, 109093.	1.9	11
155	Mapping the space charge carrier dynamics in plasmon-based perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 19811-19819.	5.2	24
156	Enhanced stability in cesium assisted hybrid 2D/3D-perovskite thin films and solar cells prepared in ambient humidity. Solar Energy, 2019, 189, 325-332.	2.9	29
157	Recent Progress in Highâ€efficiency Planarâ€structure Perovskite Solar Cells. Energy and Environmental Materials, 2019, 2, 93-106.	7.3	45
158	Optimisation of annealing temperature for low temperature processed inverted structure Caesium Formamidinium Lead Triiodide perovskite solar cells. Materials Science in Semiconductor Processing, 2019, 102, 104580.	1.9	17
159	Lowâ€Dimensional Perovskites with Diammonium and Monoammonium Alternant Cations for Highâ€Performance Photovoltaics. Advanced Materials, 2019, 31, e1901966.	11.1	96
160	Synergistic Effect of Elevated Device Temperature and Excess Charge Carriers on the Rapid Lightâ€Induced Degradation of Perovskite Solar Cells. Advanced Materials, 2019, 31, e1902413.	11.1	90
161	Impact of Electrode Materials on Process Environmental Stability of Efficient Perovskite Solar Cells. Joule, 2019, 3, 1977-1985.	11.7	25
162	Stable 6H Organicâ€“Inorganic Hybrid Lead Perovskite and Competitive Formation of 6H and 3C Perovskite Structure with Mixed A Cations. ACS Applied Energy Materials, 2019, 2, 5427-5437.	2.5	15

#	Article	IF	Citations
163	Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS. Joule, 2019, 3, 1734-1745.	11.7	227
164	Synthesis of Polycrystalline Ruddlesdenâ€“Popper Organic Lead Halides and Their Growth Dynamics. Chemistry of Materials, 2019, 31, 9472-9479.	3.2	18
165	An Interlayer with Strong Pb-Cl Bond Delivers Ultraviolet-Filter-Free, Efficient, and Photostable Perovskite Solar Cells. IScience, 2019, 21, 217-227.	1.9	43
166	Review on Recent Progress of Allâ€Inorganic Metal Halide Perovskites and Solar Cells. Advanced Materials, 2019, 31, e1902851.	11.1	309
167	Highly Stable and Efficient FASnI₃â€Based Perovskite Solar Cells by Introducing Hydrogen Bonding. Advanced Materials, 2019, 31, e1903721.	11.1	266
168	Fine Multiâ€Phase Alignments in 2D Perovskite Solar Cells with Efficiency over 17% via Slow Postâ€Annealing. Advanced Materials, 2019, 31, e1903889.	11.1	178
169	Interfacial Residual Stress Relaxation in Perovskite Solar Cells with Improved Stability. Advanced Materials, 2019, 31, e1904408.	11.1	259
170	A 0D/3D Heterostructured Allâ€Inorganic Halide Perovskite Solar Cell with High Performance and Enhanced Phase Stability. Advanced Materials, 2019, 31, e1904735.	11.1	117
171	Ruddlesdenâ€“Popper Perovskites: Synthesis and Optical Properties for Optoelectronic Applications. Advanced Science, 2019, 6, 1900941.	5.6	112
172	Enhanced Lifetime and Photostability with Lowâ€Temperature Mesoporous ZnTiO₃/Compact SnO₂Electrodes in Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 18460-18465.	7.2	33
173	Nonconfinement Structure Revealed in Dionâ€“Jacobson Type Quasiâ€2D Perovskite Expedites Interlayer Charge Transport. Small, 2019, 15, e1905081.	5.2	51
174	Interfacial Passivation for Perovskite Solar Cells: The Effects of the Functional Group in Phenethylammonium Iodide. ACS Energy Letters, 2019, 4, 2913-2921.	8.8	176
175	Toward Phase Stability: Dionâ€“Jacobson Layered Perovskite for Solar Cells. ACS Energy Letters, 2019, 4, 2960-2974.	8.8	124
176	Introduction of a Bifunctional Cation Affords Perovskite Solar Cells Stable at Temperatures Exceeding 80 Â°C. ACS Energy Letters, 2019, 4, 2989-2994.	8.8	18
177	Vacuum-Deposited 2D/3D Perovskite Heterojunctions. ACS Energy Letters, 2019, 4, 2893-2901.	8.8	77
178	Mechanism of PbI₂ in Situ Passivated Perovskite Films for Enhancing the Performance of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 44101-44108.	4.0	100
179	Enhanced Lifetime and Photostability with Lowâ€Temperature Mesoporous ZnTiO₃/Compact SnO₂Electrodes in Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 18631-18636.	1.6	13
180	Two-Dimensional Organicâ€“Inorganic Perovskite Ferroelectric Semiconductors with Fluorinated Aromatic Spacers. Journal of the American Chemical Society, 2019, 141, 18334-18340.	6.6	157

#	Article	IF	Citations
181	The Role of Grain Boundaries in Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1901489.	10.2	202
182	Wavelength-Dependent Charge Carrier Dynamics for Single Pixel Color Sensing Using Graded Perovskite Structures. Nano Letters, 2019, 19, 6577-6584.	4.5	16
183	Nanoscale hybrid multidimensional perovskites with alternating cations for high performance photovoltaic. Nano Energy, 2019, 65, 104050.	8.2	44
184	Interfacial Engineering at the 2D/3D Heterojunction for High-Performance Perovskite Solar Cells. Nano Letters, 2019, 19, 7181-7190.	4.5	163
185	Compositional and Morphological Changes in Water-Induced Early-Stage Degradation in Lead Halide Perovskites. Coatings, 2019, 9, 535.	1.2	23
186	Understanding the Improvement in the Stability of a Self-Assembled Multiple-Quantum Well Perovskite Light-Emitting Diode. Journal of Physical Chemistry Letters, 2019, 10, 6857-6864.	2.1	42
187	High-Rubidiumâ€“Formamidinium-Ratio Perovskites for High-Performance Photodetection with Enhanced Stability. ACS Applied Materials & Interfaces, 2019, 11, 39875-39881.	4.0	21
188	Organic composition tailored perovskite solar cells and light-emitting diodes: Perspectives and advances. Materials Today Energy, 2019, 14, 100338.	2.5	9
189	Perovskite Solar Fibers: Current Status, Issues and Challenges. Advanced Fiber Materials, 2019, 1, 101-125.	7.9	42
190	Design of High-Performance Mixed-Dimensional Perovskite by Incorporating Different Halogenated Cesium Sources. ACS Sustainable Chemistry and Engineering, 2019, 7, 17507-17514.	3.2	6
191	Perovskite precursor solution chemistry: from fundamentals to photovoltaic applications. Chemical Society Reviews, 2019, 48, 2011-2038.	18.7	526
192	Enabling room-temperature processed highly efficient and stable 2D Ruddlesdenâ€“Popper perovskite solar cells with eliminated hysteresis by synergistic exploitation of additives and solvents. Journal of Materials Chemistry A, 2019, 7, 2015-2021.	5.2	55
193	Perfection of Perovskite Grain Boundary Passivation by Euâ€Porphyrin Complex for Overallâ€Stable Perovskite Solar Cells. Advanced Science, 2019, 6, 1802040.	5.6	65
194	Low cost triazatruxene hole transporting material for >20% efficiency perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 5235-5243.	2.7	50
195	Structural and optical properties of 2D Ruddlesdenâ€Popper perovskite (BA) 2 (FA) nâ€'1 Pb n I 3n+1 compounds for photovoltaic applications. Journal of the American Ceramic Society, 2019, 102, 4152-4160.	1.9	8
196	Gravureâ€Printed Flexible Perovskite Solar Cells: Toward Rollâ€toâ€Roll Manufacturing. Advanced Science, 2019, 6, 1802094.	5.6	115
197	Improvement of Csâ€(FAPbI₃)_{0.85}(MAPbBr₃)_{0.15} Quality Via DMSOâ€Moleculeâ€Control to Increase the Efficiency and Boost the Longâ€Term Stability of 1â€‰cm² Sized Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800338.	3.1	21
198	Introduction of Hydrophobic Ammonium Salts with Halogen Functional Groups for Highâ€Efficiency and Stable 2D/3D Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1807565.	7.8	90

#	Article	IF	Citations
199	Compositional and Solvent Engineering in Dionâ€“Jacobson 2D Perovskites Boosts Solar Cell Efficiency and Stability. Advanced Energy Materials, 2019, 9, 1803384.	10.2	219
200	NbF₅: A Novel Î±â€Phase Stabilizer for FAâ€Based Perovskite Solar Cells with High Efficiency. Advanced Functional Materials, 2019, 29, 1807850.	7.8	150
201	Hybrid Organic-Inorganic Perovskites as Promising Substrates for Pt Single-Atom Catalysts. Physical Review Letters, 2019, 122, 046101.	2.9	25
202	Stability progress of perovskite solar cells dependent on the crystalline structure: From 3D ABX₃ to 2D Ruddlesdenâ€“Popper perovskite absorbers. Journal of Materials Chemistry A, 2019, 7, 5898-5933.	5.2	102
203	Fatigue stability of CH3NH3PbI3 based perovskite solar cells in day/night cycling. Nano Energy, 2019, 58, 687-694.	8.2	46
204	Extrinsic and Dynamic Edge States of Two-Dimensional Lead Halide Perovskites. ACS Nano, 2019, 13, 1635-1644.	7.3	79
205	Highâ€Performance Perovskite Solar Cells with Enhanced Environmental Stability Based on a (pâ€FC₆H₄C₂H₄NH₃)₂[PbI₄] Capping Layer. Advanced Energy Materials, 2019, 9, 1802595.	10.2	213
206	Spontaneous grain polymerization for efficient and stable perovskite solar cells. Nano Energy, 2019, 58, 825-833.	8.2	64
207	Hybrid organic nanocrystal/carbon nanotube film electrodes for air- and photo-stable perovskite photovoltaics. Nanoscale, 2019, 11, 3733-3740.	2.8	14
208	Enhancement in lifespan of halide perovskite solar cells. Energy and Environmental Science, 2019, 12, 865-886.	15.6	143
209	Layered Ruddlesdenâ€“Popper Efficient Perovskite Solar Cells with Controlled Quantum and Dielectric Confinement Introduced via Doping. Advanced Functional Materials, 2019, 29, 1903293.	7.8	66
210	Chargeâ€Carrier Dynamics, Mobilities, and Diffusion Lengths of 2Dâ€“3D Hybrid Butylammoniumâ€“Cesiumâ€“Formamidinium Lead Halide Perovskites. Advanced Functional Materials, 2019, 29, 1902656.	7.8	45
211	Air-processed, large grain perovskite films with low trap density from perovskite crystal engineering for high-performance perovskite solar cells with improved ambient stability. Journal of Materials Science, 2019, 54, 12000-12011.	1.7	27
212	High-Performance Planar Perovskite Solar Cells with Negligible Hysteresis Using 2,2,2-Trifluoroethanol-Incorporated SnO2. IScience, 2019, 16, 433-441.	1.9	63
213	Decreasing Exciton Binding Energy in Two-Dimensional Halide Perovskites by Lead Vacancies. Journal of Physical Chemistry Letters, 2019, 10, 3820-3827.	2.1	27
214	Three-dimensional perovskite modulated by two-dimensional homologue as light-absorbing materials for efficient solar cells. Organic Electronics, 2019, 74, 126-134.	1.4	14
215	In Situ 2D Perovskite Formation and the Impact of the 2D/3D Structures on Performance and Stability of Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900199.	3.1	30
216	Perovskites with d-block metals for solar energy applications. Dalton Transactions, 2019, 48, 9516-9537.	1.6	24

#	Article	IF	Citations
217	Tailoring the film morphology and interface band offset of caesium bismuth iodide-based Pb-free perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 8335-8343.	2.7	78
218	Ultrahydrophobic 3D/2D fluoroarene bilayer-based water-resistant perovskite solar cells with efficiencies exceeding 22%. Science Advances, 2019, 5, eaaw2543.	4.7	524
219	Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. ACS Energy Letters, 2019, 4, 1521-1527.	8.8	130
220	Wide-bandgap, low-bandgap, and tandem perovskite solar cells. Semiconductor Science and Technology, 2019, 34, 093001.	1.0	89
221	2Dâ€“3D Mixed Organicâ€“Inorganic Perovskite Layers for Solar Cells with Enhanced Efficiency and Stability Induced by n-Propylammonium Iodide Additives. ACS Applied Materials & Interfaces, 2019, 11, 29753-29764.	4.0	83
222	Recent advances in controlling the crystallization of two-dimensional perovskites for optoelectronic device. Frontiers of Physics, 2019, 14, 1.	2.4	42
223	Aryl-Perfluoroaryl Interaction in Two-Dimensional Organicâ€“Inorganic Hybrid Perovskites Boosts Stability and Photovoltaic Efficiency. , 2019, 1, 171-176.		63
224	From 2D to 1D Electronic Dimensionality in Halide Perovskites with Stepped and Flat Layers Using Propylammonium as a Spacer. Journal of the American Chemical Society, 2019, 141, 10661-10676.	6.6	66
225	Fluorinated 2D Lead Iodide Perovskite Ferroelectrics. Advanced Materials, 2019, 31, e1901843.	11.1	137
226	A Portable and Efficient Solarâ€Rechargeable Battery with Ultrafast Photoâ€Charge/Discharge Rate. Advanced Energy Materials, 2019, 9, 1900872.	10.2	49
227	Imperfections and their passivation in halide perovskite solar cells. Chemical Society Reviews, 2019, 48, 3842-3867.	18.7	1,257
228	In Situ Observation of Crystallization Dynamics and Grain Orientation in Sequential Deposition of Metal Halide Perovskites. Advanced Functional Materials, 2019, 29, 1902319.	7.8	53
229	Heterogeneous Photon Recycling and Charge Diffusion Enhance Charge Transport in Quasi-2D Lead-Halide Perovskite Films. Nano Letters, 2019, 19, 3953-3960.	4.5	67
230	Benefiting from Spontaneously Generated 2D/3D Bulkâ€Heterojunctions in Ruddlesdenâ^'Popper Perovskite by Incorporation of Sâ€Bearing Spacer Cation. Advanced Science, 2019, 6, 1900548.	5.6	61
231	Defect and Contact Passivation for Perovskite Solar Cells. Advanced Materials, 2019, 31, e1900428.	11.1	445
232	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
233	Polyelemental, Multicomponent Perovskite Semiconductor Libraries through Combinatorial Screening. Advanced Energy Materials, 2019, 9, 1803754.	10.2	73
234	The Role of Diammonium Cation on the Structural and Optoelectronic Properties in 3D Cesiumâ€“Formamidinium Mixedâ€Cation Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900140.	3.1	16

#	Article	IF	Citations
235	Giant Nonlinear Optical Response in 2D Perovskite Heterostructures. Advanced Optical Materials, 2019, 7, 1900398.	3.6	58
236	Unique characteristics of 2D Ruddlesdenâ€“Popper (2DRP) perovskite for future photovoltaic application. Journal of Materials Chemistry A, 2019, 7, 13860-13872.	5.2	84
237	Inorganic and Layered Perovskites for Optoelectronic Devices. Advanced Materials, 2019, 31, e1807095.	11.1	94
238	Record Openâ€Circuit Voltage Wideâ€Bandgap Perovskite Solar Cells Utilizing 2D/3D Perovskite Heterostructure. Advanced Energy Materials, 2019, 9, 1803699.	10.2	325
239	In situ investigation of light soaking in organolead halide perovskite films. APL Materials, 2019, 7, .	2.2	23
240	Direct formed tri-iodide ions stabilizing colloidal precursor solution and promoting the reproducibility of perovskite solar cells by solution process. Electrochimica Acta, 2019, 311, 132-140.	2.6	9
241	Reaction Temperature and Partial Pressure Induced Etching of Methylammonium Lead Iodide Perovskite by Trimethylaluminum. Langmuir, 2019, 35, 6522-6531.	1.6	12
242	Enhancing High Humidity Stability of Quasiâ€2D Perovskite Thin Films through Mixed Cation Doping and Solvent Engineering. ChemNanoMat, 2019, 5, 1280-1288.	1.5	13
243	Pyrrole: an additive for improving the efficiency and stability of perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 11764-11770.	5.2	61
244	Self-assembled propylammonium cations at grain boundaries and the film surface to improve the efficiency and stability of perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 23739-23746.	5.2	41
245	Tuning the optical bandgap in layered hybrid perovskites through variation of alkyl chain length. APL Materials, 2019, 7, .	2.2	43
246	Monitoring the morphological evolution in mixed-dimensional lead bromide perovskite films with lamellar-stacked perovskite nanoplatelets. Nanoscale Horizons, 2019, 4, 1139-1144.	4.1	7
247	Favorable growth of well-crystallized layered hybrid perovskite by combination of thermal and solvent assistance. Journal of Power Sources, 2019, 422, 156-162.	4.0	14
248	Efficient large guanidinium mixed perovskite solar cells with enhanced photovoltage and low energy losses. Chemical Communications, 2019, 55, 4315-4318.	2.2	121
249	Synthetic control over orientational degeneracy of spacer cations enhances solar cell efficiency in two-dimensional perovskites. Nature Communications, 2019, 10, 1276.	5.8	222
250	Highly efficient and stable 2Dâ€“3D perovskite solar cells fabricated by interfacial modification. Nanotechnology, 2019, 30, 275202.	1.3	40
251	Stable and scalable 3D-2D planar heterojunction perovskite solar cells via vapor deposition. Nano Energy, 2019, 59, 619-625.	8.2	88
252	Bilateral alkylamine for suppressing charge recombination and improving stability in blade-coated perovskite solar cells. Science Advances, 2019, 5, eaav8925.	4.7	388

#	Article	IF	Citations
253	The Synthesis of 2D CH₃NH₃PbI₃ Perovskite Films with Tunable Bandgaps by Solution Deposition Route. International Journal of Photoenergy, 2019, 2019, 1-7.	1.4	5
254	Highly stable semi-transparent MAPbI3 perovskite solar cells with operational output for 4000â€¯h. Solar Energy Materials and Solar Cells, 2019, 195, 323-329.	3.0	84
255	From Large to Small Polarons in Lead, Tin, and Mixed Leadâ€“Tin Halide Perovskites. Journal of Physical Chemistry Letters, 2019, 10, 1790-1798.	2.1	72
256	Simultaneously boost diffusion length and stability of perovskite for high performance solar cells. Nano Energy, 2019, 59, 721-729.	8.2	33
257	Dionâ€“Jacobson Two-Dimensional Perovskite Solar Cells Based on Benzene Dimethanammonium Cation. Nano Letters, 2019, 19, 2588-2597.	4.5	155
258	Two-dimensional additive diethylammonium iodide promoting crystal growth for efficient and stable perovskite solar cells. RSC Advances, 2019, 9, 7984-7991.	1.7	25
259	Two-dimensional perovskite capping layer for stable and efficient tin-lead perovskite solar cells. Science China Chemistry, 2019, 62, 629-636.	4.2	43
260	Tunable Ferroelectricity in Ruddlesdenâ€“Popper Halide Perovskites. ACS Applied Materials & Interfaces, 2019, 11, 13523-13532.	4.0	32
261	Monoammonium Porphyrin for Blade-Coating Stable Large-Area Perovskite Solar Cells with >18% Efficiency. Journal of the American Chemical Society, 2019, 141, 6345-6351.	6.6	149
262	High performance low-dimensional perovskite solar cells based on a one dimensional lead iodide perovskite. Journal of Materials Chemistry A, 2019, 7, 8811-8817.	5.2	54
263	Solutionâ€Processable Perovskite Solar Cells toward Commercialization: Progress and Challenges. Advanced Functional Materials, 2019, 29, 1807661.	7.8	149
264	Planar Perovskite Solar Cells with High Efficiency and Fill Factor Obtained Using Two-Step Growth Process. ACS Applied Materials & Interfaces, 2019, 11, 15680-15687.	4.0	18
265	Excitonic states and structural stability in two-dimensional hybrid organic-inorganic perovskites. Journal of Science: Advanced Materials and Devices, 2019, 4, 189-200.	1.5	32
266	Interlayer Interaction Enhancement in Ruddlesdenâ€“Popper Perovskite Solar Cells toward High Efficiency and Phase Stability. ACS Energy Letters, 2019, 4, 1025-1033.	8.8	64
267	Recent progress of the optoelectronic properties of 2D Ruddlesden-Popper perovskites. Journal of Semiconductors, 2019, 40, 041901.	2.0	17
268	Interface engineering of low temperature processed all-inorganic CsPbI2Br perovskite solar cells toward PCE exceeding 14%. Nano Energy, 2019, 60, 583-590.	8.2	135
269	Zwitterion Coordination Induced Highly Orientational Order of CH₃NH₃PbI₃ Perovskite Film Delivers a High Open Circuit Voltage Exceeding 1.2 V. Advanced Functional Materials, 2019, 29, 1901026.	7.8	134
270	Metal halide perovskite photodetectors: Material features and device engineering. Chinese Physics B, 2019, 28, 018502.	0.7	18

#	Article	IF	Citations
271	Stability improvement under high efficiencyâ€"next stage development of perovskite solar cells. Science China Chemistry, 2019, 62, 684-707.	4.2	50
272	Intrinsic Instability of Inorganicâ€"Organic Hybrid Halide Perovskite Materials. Advanced Materials, 2019, 31, e1805337.	11.1	278
273	Perovskite Photovoltaics: The Significant Role of Ligands in Film Formation, Passivation, and Stability. Advanced Materials, 2019, 31, e1805702.	11.1	192
274	Fundamental Understanding of Photocurrent Hysteresis in Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803017.	10.2	224
275	Twoâ€Đimensional Halide Perovskites in Solar Cells: 2D or not 2D?. ChemSusChem, 2019, 12, 1560-1575.	3.6	195
276	Causes and Solutions of Recombination in Perovskite Solar Cells. Advanced Materials, 2019, 31, e1803019.	11.1	422
277	Review of Novel Passivation Techniques for Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800302.	3.1	139
278	Shedding Light on the Moisture Stability of 3D/2D Hybrid Perovskite Heterojunction Thin Films. ACS Applied Energy Materials, 2019, 2, 1011-1018.	2.5	56
279	Time-Resolved Electrical Scanning Probe Microscopy of Layered Perovskites Reveals Spatial Variations in Photoinduced Ionic and Electronic Carrier Motion. ACS Nano, 2019, 13, 2812-2821.	7.3	38
280	Facile fabrication of highly efficient ETL-free perovskite solar cells with 20% efficiency by defect passivation and interface engineering. Chemical Communications, 2019, 55, 2777-2780.	2.2	61
281	Efficient and Stable Low-Dimensional Ruddlesdenâ€"Popper Perovskite Solar Cells Enabled by Reducing Tunnel Barrier. Journal of Physical Chemistry Letters, 2019, 10, 1173-1179.	2.1	47
282	Efficient and Stable Perovskite Solar Cell with TiO<inf>2</inf> Thin Insulator Layer as Electron Transport. , 2019, , .		4
283	Mixed-cation perovskite solar cells in space. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	116
284	Halide Perovskite Photovoltaics: Background, Status, and Future Prospects. Chemical Reviews, 2019, 119, 3036-3103.	23.0	2,009
285	Discovery of an Above-Room-Temperature Antiferroelectric in Two-Dimensional Hybrid Perovskite. Journal of the American Chemical Society, 2019, 141, 3812-3816.	6.6	77
286	Self-trapped state enabled filterless narrowband photodetections in 2D layered perovskite single crystals. Nature Communications, 2019, 10, 806.	5.8	207
287	Xanthate-induced sulfur doped all-inorganic perovskite with superior phase stability and enhanced performance. Nano Energy, 2019, 59, 258-267.	8.2	61
288	Tailoring vertical phase distribution of quasi-two-dimensional perovskite films via surface modification of hole-transporting layer. Nature Communications, 2019, 10, 878.	5.8	115

#	Article	IF	Citations
289	A Review of Perovskites Solar Cell Stability. Advanced Functional Materials, 2019, 29, 1808843.	7.8	835
290	Hybrid perovskites for device applications. , 2019, , 211-256.		13
291	Boosting Photovoltaic Performance for Lead Halide Perovskites Solar Cells with BF₄^{â^'} Anion Substitutions. Advanced Functional Materials, 2019, 29, 1808833.	7.8	104
292	Pseudohalide (SCN^{â^'})-doped CsPbI₃ for high-performance solar cells. Journal of Materials Chemistry C, 2019, 7, 13736-13742.	2.7	53
293	In situ formation of a 2D/3D heterostructure for efficient and stable CsPbI₂Br solar cells. Journal of Materials Chemistry A, 2019, 7, 22675-22682.	5.2	63
294	Design of low bandgap tinâ€"lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability. Nature Energy, 2019, 4, 939-947.	19.8	235
295	Improving Photovoltaic Stability and Performance of Perovskite Solar Cells by Molecular Interface Engineering. Journal of Physical Chemistry C, 2019, 123, 1219-1225.	1.5	16
296	Rational chemical doping of metal halide perovskites. Chemical Society Reviews, 2019, 48, 517-539.	18.7	196
297	Solubilization of Carbon Nanotubes with Ethylene-Vinyl Acetate for Solution-Processed Conductive Films and Charge Extraction Layers in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 1185-1191.	4.0	31
298	Cesium-Incorporated Triple Cation Perovskites Deliver Fully Reversible and Stable Nanoscale Voltage Response. ACS Nano, 2019, 13, 1538-1546.	7.3	21
299	Mixed Dimensional 2D/3D Hybrid Perovskite Absorbers: The Future of Perovskite Solar Cells?. Advanced Functional Materials, 2019, 29, 1806482.	7.8	257
300	Two-Dimensional Hybrid Halide Perovskites: Principles and Promises. Journal of the American Chemical Society, 2019, 141, 1171-1190.	6.6	999
301	Perovskite solar cells based on polyaniline derivatives as hole transport materials. JPhys Energy, 2019, 1, 015004.	2.3	12
302	Dimensional tailoring of hybrid perovskites for photovoltaics. Nature Reviews Materials, 2019, 4, 4-22.	23.3	671
303	Recordâ€Lowâ€Threshold Lasers Based on Atomically Smooth Triangular Nanoplatelet Perovskite. Advanced Functional Materials, 2019, 29, 1805553.	7.8	52
304	Understanding Degradation Mechanisms and Improving Stability of Perovskite Photovoltaics. Chemical Reviews, 2019, 119, 3418-3451.	23.0	1,131
305	Two-dimensional perovskite materials: From synthesis to energy-related applications. Materials Today Energy, 2019, 11, 61-82.	2.5	133
306	SnO2-based electron transporting layer materials for perovskite solar cells: A review of recent progress. Journal of Energy Chemistry, 2019, 35, 144-167.	7.1	129

#	Article	IF	Citations
307	Enhancing perovskite quality and energy level alignment of TiO2 nanorod arrays-based solar cells via interfacial modification. Solar Energy Materials and Solar Cells, 2019, 191, 183-189.	3.0	19
308	Tetraâ€ammonium Zinc Phthalocyanine to Construct a Graded 2Dâ€“3D Perovskite Interface for Efficient and Stable Solar Cells. Chinese Journal of Chemistry, 2019, 37, 30-34.	2.6	16
309	Binary Solvent Engineering for High-Performance Two-Dimensional Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2019, 7, 3487-3495.	3.2	90
310	Solution-Processed All-Perovskite Multi-junction Solar Cells. Joule, 2019, 3, 387-401.	11.7	177
311	Progress and challenges in perovskite photovoltaics from single- to multi-junction cells. Materials Today Energy, 2019, 12, 70-94.	2.5	67
312	Quantum and Dielectric Confinement Effects in Lower-Dimensional Hybrid Perovskite Semiconductors. Chemical Reviews, 2019, 119, 3140-3192.	23.0	525
313	Spectrally Resolved Ultrafast Exciton Transfer in Mixed Perovskite Quantum Wells. Journal of Physical Chemistry Letters, 2019, 10, 419-426.	2.1	74
314	Perovskite Nanoparticles: Synthesis, Properties, and Novel Applications in Photovoltaics and LEDs. Small Methods, 2019, 3, 1800231.	4.6	77
315	From scalable solution fabrication of perovskite films towards commercialization of solar cells. Energy and Environmental Science, 2019, 12, 518-549.	15.6	269
316	An overview on enhancing the stability of lead halide perovskite quantum dots and their applications in phosphor-converted LEDs. Chemical Society Reviews, 2019, 48, 310-350.	18.7	845
317	Tellurium-Based Double Perovskites A₂TeX₆ with Tunable Band Gap and Long Carrier Diffusion Length for Optoelectronic Applications. ACS Energy Letters, 2019, 4, 228-234.	8.8	58
318	Selfâ€Assembled 2D Perovskite Layers for Efficient Printable Solar Cells. Advanced Energy Materials, 2019, 9, 1803258.	10.2	149
319	Merits and Challenges of Ruddlesdenâ€“Popper Soft Halide Perovskites in Electroâ€Optics and Optoelectronics. Advanced Materials, 2019, 31, e1803514.	11.1	82
320	New-type highly stable 2D/3D perovskite materials: the effect of introducing ammonium cation on performance of perovskite solar cells. Science China Materials, 2019, 62, 508-518.	3.5	31
321	Integrated Perovskite/Bulkâ€Heterojunction Organic Solar Cells. Advanced Materials, 2020, 32, e1805843.	11.1	61
322	Enhanced efficiency and stability of perovskite solar cells by 2D perovskite vapor-assisted interface optimization. Journal of Energy Chemistry, 2020, 45, 103-109.	7.1	32
323	A Review on Additives for Halide Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902492.	10.2	240
324	Recent Progresses on Defect Passivation toward Efficient Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902650.	10.2	516

#	Article	IF	Citations
325	2D and Quasiâ€2D Halide Perovskites: Applications and Progress. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900435.	1.2	37
326	Progress in Multifunctional Molecules for Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900248.	3.1	13
327	Review on Practical Interface Engineering of Perovskite Solar Cells: From Efficiency to Stability. Solar Rrl, 2020, 4, 1900257.	3.1	119
328	Aâ€Site Management for Highly Crystalline Perovskites. Advanced Materials, 2020, 32, e1904702.	11.1	62
329	Manipulation of Dipolar Polarization at Steady States for a Quasiâ€2D Organicâ€“Inorganic Hybrid Perovskite with a Nanorod Network. Solar Rrl, 2020, 4, 1900378.	3.1	6
330	Steric Mixedâ€Cation 2D Perovskite as a Methylammonium Locker to Stabilize MAPbI₃. Angewandte Chemie, 2020, 132, 1485-1489.	1.6	18
331	Steric Mixedâ€Cation 2D Perovskite as a Methylammonium Locker to Stabilize MAPbI₃. Angewandte Chemie - International Edition, 2020, 59, 1469-1473.	7.2	60
332	Revealing Crystallization Dynamics and the Compositional Control Mechanism of 2D Perovskite Film Growth by In Situ Synchrotron-Based GIXRD. ACS Energy Letters, 2020, 5, 8-16.	8.8	68
333	Dimensional tailoring of halide perovskite: A case study on Cs4PbBr6/CsPbBr3 hybrid with molecular halide perovskite. Solar Energy Materials and Solar Cells, 2020, 204, 110237.	3.0	17
334	The Effect of Constituent Ratios and Varisized Ammonium Salts on the Performance of Twoâ€Dimensional Perovskite Materials. ChemSusChem, 2020, 13, 252-259.	3.6	8
335	Dye-sensitization enhances photoelectrochemical performance of halide perovskite CH3NH3PbI3 photoanode in aqueous solution. Dyes and Pigments, 2020, 173, 108006.	2.0	7
336	Highly efficient all-inorganic perovskite solar cells with suppressed non-radiative recombination by a Lewis base. Nature Communications, 2020, 11, 177.	5.8	360
337	In situ transfer of CH₃NH₃PbI₃ single crystals in mesoporous scaffolds for efficient perovskite solar cells. Chemical Science, 2020, 11, 474-481.	3.7	19
338	Orientationally engineered 2D/3D perovskite for high efficiency solar cells. Sustainable Energy and Fuels, 2020, 4, 324-330.	2.5	35
339	Nucleation and crystal growth control for scalable solution-processed organicâ€“inorganic hybrid perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 1578-1603.	5.2	112
340	Vertical Orientated Dionâ€“Jacobson Quasiâ€2D Perovskite Film with Improved Photovoltaic Performance and Stability. Small Methods, 2020, 4, 1900831.	4.6	96
341	Highly efficient and rapid manufactured perovskite solar cells via Flash InfraRed Annealing. Materials Today, 2020, 35, 9-15.	8.3	35
342	Solarâ€Inspired Water Purification Based on Emerging 2D Materials: Status and Challenges. Solar Rrl, 2020, 4, 1900400.	3.1	133

#	Article	IF	Citations
343	New Strategies for Defect Passivation in Highâ€Efficiency Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903090.	10.2	237
344	Chemical Approaches for Stabilizing Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903249.	10.2	132
345	Machine learning analysis on stability of perovskite solar cells. Solar Energy Materials and Solar Cells, 2020, 205, 110284.	3.0	53
346	Perfluorinated Self-Assembled Monolayers Enhance the Stability and Efficiency of Inverted Perovskite Solar Cells. ACS Nano, 2020, 14, 1445-1456.	7.3	115
347	Probing Phase Distribution in 2D Perovskites for Efficient Device Design. ACS Applied Materials & Interfaces, 2020, 12, 3127-3133.	4.0	39
348	Doubleâ€Sided Surface Passivation of 3D Perovskite Film for Highâ€Efficiency Mixedâ€Dimensional Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 1907962.	7.8	130
349	Modulating Band Alignment in Mixed Dimensionality 3D/2D Perovskites by Surface Termination Ligand Engineering. Chemistry of Materials, 2020, 32, 105-113.	3.2	19
350	Polarons in Metal Halide Perovskites. Advanced Energy Materials, 2020, 10, 1902748.	10.2	84
351	Carbon nanomaterials with sp or/and sp hybridization in energy conversion and storage applications: A review. Energy Storage Materials, 2020, 26, 349-370.	9.5	55
352	Organic intercalation engineering of quasi-2D Dionâ€“Jacobson Î±-CsPbI‹sub›3‹/sub› perovskites. Materials Horizons, 2020, 7, 1042-1050.	6.4	55
353	Shallow Iodine Defects Accelerate the Degradation of Î±-Phase Formamidinium Perovskite. Joule, 2020, 4, 2426-2442.	11.7	173
354	Improvement of Colloidal Characteristics in a Precursor Solution by a PbI2-(DMSO)2 Complex for Efficient Nonstoichiometrically Prepared CsPbI2.8Br0.2 Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 48756-48764.	4.0	10
355	Naphthalenediimide Cations Inhibit 2D Perovskite Formation and Facilitate Subpicosecond Electron Transfer. Journal of Physical Chemistry C, 2020, 124, 24379-24390.	1.5	17
356	Compositional Engineering Study of Lead-Free Hybrid Perovskites for Solar Cell Applications. ACS Applied Materials & Interfaces, 2020, 12, 49636-49647.	4.0	31
357	Record-efficiency flexible perovskite solar cell and module enabled by a porous-planar structure as an electron transport layer. Energy and Environmental Science, 2020, 13, 4854-4861.	15.6	137
358	Ultrafast Exciton Transport with a Long Diffusion Length in Layered Perovskites with Organic Cation Functionalization. Advanced Materials, 2020, 32, e2004080.	11.1	34
359	Fabrication Strategy for Efficient 2D/3D Perovskite Solar Cells Enabled by Diffusion Passivation and Strain Compensation. Advanced Energy Materials, 2020, 10, 2002004.	10.2	97
360	Crystallization Kinetics in 2D Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2002558.	10.2	124

#	Article	IF	Citations
361	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
362	Traps in metal halide perovskites: characterization and passivation. Nanoscale, 2020, 12, 22425-22451.	2.8	26
363	A holistic approach to interface stabilization for efficient perovskite solar modules with over 2,000-hour operational stability. Nature Energy, 2020, 5, 596-604.	19.8	274
364	Arylammonium-Assisted Reduction of the Open-Circuit Voltage Deficit in Wide-Bandgap Perovskite Solar Cells: The Role of Suppressed Ion Migration. ACS Energy Letters, 2020, 5, 2560-2568.	8.8	131
365	Diethylammonium Iodide Assisted Grain Growth with Subâ€Grain Cluster to Passivate Grain Boundary for CH₃NH₃PbI₃ Perovskite Solar Cells. Energy Technology, 2020, 8, 2000412.	1.8	11
366	Formamidiniumâ€Based Dionâ€Jacobson Layered Hybrid Perovskites: Structural Complexity and Optoelectronic Properties. Advanced Functional Materials, 2020, 30, 2003428.	7.8	61
367	In Situ Formation of Mixedâ€Dimensional Surface Passivation Layers in Perovskite Solar Cells with Dualâ€Isomer Alkylammonium Cations. Small, 2020, 16, e2005022.	5.2	34
368	Accelerated design of photovoltaic Ruddlesdenâ€“Popper perovskite Ca6Sn4S14â^'xOx using machine learning. APL Materials, 2020, 8, .	2.2	9
369	Unraveling the Microstructure of Layered Metal Halide Perovskite Films. Small Structures, 2020, 1, 2000074.	6.9	8
370	Understanding and harnessing the potential of layered perovskite-based absorbersÂfor solar cells. Emergent Materials, 2020, 3, 751-778.	3.2	13
371	Halide Perovskite Materials for Energy Storage Applications. Advanced Functional Materials, 2020, 30, 2003653.	7.8	63
372	Templated growth of FASnI₃ crystals for efficient tin perovskite solar cells. Energy and Environmental Science, 2020, 13, 2896-2902.	15.6	165
373	Molecular mechanisms of thermal instability in hybrid perovskite light absorbers for photovoltaic solar cells. Journal of Materials Chemistry A, 2020, 8, 17765-17779.	5.2	16
374	Cascade Typeâ€II 2D/3D Perovskite Heterojunctions for Enhanced Stability and Photovoltaic Efficiency. Solar Rrl, 2020, 4, 2000282.	3.1	18
375	Quasiâ€Heteroface Perovskite Solar Cells. Small, 2020, 16, e2002887.	5.2	4
376	Toward Efficient and Stable Perovskite Solar Cells: Choosing Appropriate Passivator to Specific Defects. Solar Rrl, 2020, 4, 2000308.	3.1	31
377	High-Efficiency Perovskite Solar Cells. Chemical Reviews, 2020, 120, 7867-7918.	23.0	1,480
378	Low-frequency Raman spectrum of 2D layered perovskites: Local atomistic motion or superlattice modes?. Journal of Chemical Physics, 2020, 153, 044710.	1.2	26

#	Article	IF	Citations
379	Enhanced moisture stability of mixed cation perovskite solar cells enabled by a room-temperature solution-processed organic-inorganic bilayer hole transport layer. Journal of Alloys and Compounds, 2020, 847, 156512.	2.8	16
380	Unravelling the structural complexity and photophysical properties of adamantyl-based layered hybrid perovskites. Journal of Materials Chemistry A, 2020, 8, 17732-17740.	5.2	14
381	Understanding the Degradation of Spiroâ€OMeTADâ€Based Perovskite Solar Cells at High Temperature. Solar Rrl, 2020, 4, 2000305.	3.1	53
382	Materials and Methods for Interface Engineering toward Stable and Efficient Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2742-2786.	8.8	307
383	Scalable Allâ€Evaporation Fabrication of Efficient Lightâ€Emitting Diodes with Hybrid 2Dâ€“3D Perovskite Nanostructures. Advanced Functional Materials, 2020, 30, 2002913.	7.8	40
384	Toward Greener Solution Processing of Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2020, 8, 13126-13138.	3.2	41
385	Solid-phase hetero epitaxial growth of Î±-phase formamidinium perovskite. Nature Communications, 2020, 11, 5514.	5.8	71
386	Defects and Their Passivation in Hybrid Halide Perovskites toward Solar Cell Applications. Solar Rrl, 2020, 4, 2000505.	3.1	47
387	A Type I Heterointerface between Amorphous PbI₂ Overlayers on Crystalline CsPbI₃. ACS Applied Energy Materials, 2020, 3, 10328-10332.	2.5	4
388	The Jâ€“V Hysteresis Behavior and Solutions in Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000586.	3.1	27
389	Durable strategies for perovskite photovoltaics. APL Materials, 2020, 8, .	2.2	7
390	Imidazolium Ionic Liquid as Organic Spacer for Tuning the Excitonic Structure of 2D Perovskite Materials. ACS Energy Letters, 2020, 5, 3617-3627.	8.8	24
391	The Emergence of Halide Layered Double Perovskites. ACS Energy Letters, 2020, 5, 3591-3608.	8.8	88
392	Improving Efficiency and Stability in Quasi-2D Perovskite Light-Emitting Diodes by a Multifunctional LiF Interlayer. ACS Applied Materials & Interfaces, 2020, 12, 43018-43023.	4.0	53
393	Progress and Prospects of Solution-Processed Two-Dimensional Semiconductor Nanocrystals. Journal of Physical Chemistry C, 2020, 124, 21895-21908.	1.5	32
394	Molecular Engineering of Organic Spacer Cations for Efficient and Stable Formamidinium Perovskite Solar Cell. Advanced Energy Materials, 2020, 10, 2001759.	10.2	48
395	Design of 2D Templating Molecules for Mixed-Dimensional Perovskite Light-Emitting Diodes. Chemistry of Materials, 2020, 32, 8097-8105.	3.2	24
396	Water-resistant 2D lead(<scp>ii</scp>) iodide perovskites: correlation between optical properties and phase transitions. Materials Advances, 2020, 1, 2395-2400.	2.6	8

#	Article	IF	Citations
397	Passivation of defects in perovskite solar cell: From a chemistry point of view. Nano Energy, 2020, 77, 105237.	8.2	92
398	Photoelectrochemical and first-principles investigation on halide perovskite/TiO2 film improved by dicyano dye. Optical Materials, 2020, 109, 110350.	1.7	5
399	Superior Carrier Lifetimes Exceeding 6 Âµs in Polycrystalline Halide Perovskites. Advanced Materials, 2020, 32, e2002585.	11.1	151
400	Quasi-2D perovskite emitters: a boon for efficient blue light-emitting diodes. Journal of Materials Chemistry C, 2020, 8, 14334-14347.	2.7	40
401	Realizing Reduced Imperfections via Quantum Dots Interdiffusion in High Efficiency Perovskite Solar Cells. Advanced Materials, 2020, 32, e2003296.	11.1	50
402	Defect Tolerance and Intolerance in Metalâ€Halide Perovskites. Advanced Energy Materials, 2020, 10, 2001959.	10.2	85
403	Enhanced Efficiency and Stability of Planar Perovskite Solar Cells Using a Dual Electron Transport Layer of Gold Nanoparticles Embedded in Anatase TiO₂ Films. ACS Applied Energy Materials, 2020, 3, 9568-9575.	2.5	28
404	Defect passivation strategies in perovskites for an enhanced photovoltaic performance. Energy and Environmental Science, 2020, 13, 4017-4056.	15.6	235
405	3D/2D Bilayerd Perovskite Solar Cells with an Enhanced Stability and Performance. Materials, 2020, 13, 3868.	1.3	25
406	Recent Progress in Metal Halide Perovskiteâ€Based Tandem Solar Cells. Advanced Materials, 2020, 32, e2002228.	11.1	39
407	Towards commercialization: the operational stability of perovskite solar cells. Chemical Society Reviews, 2020, 49, 8235-8286.	18.7	371
408	Molecular Design and Operational Stability: Toward Stable 3D/2D Perovskite Interlayers. Advanced Science, 2020, 7, 2001014.	5.6	43
409	Electrochemical Impedance Spectroscopy Analysis of Hole Transporting Material Free Mesoporous and Planar Perovskite Solar Cells. Nanomaterials, 2020, 10, 1635.	1.9	54
410	Nonlinear optical properties of halide perovskites and their applications. Applied Physics Reviews, 2020, 7, .	5.5	114
411	Long-Term Stability Analysis of 3D and 2D/3D Hybrid Perovskite Solar Cells Using Electrochemical Impedance Spectroscopy. Molecules, 2020, 25, 5794.	1.7	13
412	Methylamine-assisted growth of uniaxial-oriented perovskite thin films with millimeter-sized grains. Nature Communications, 2020, 11, 5402.	5.8	71
413	Choose Your Own Adventure: Fabrication of Monolithic Allâ€Perovskite Tandem Photovoltaics. Advanced Materials, 2020, 32, e2003312.	11.1	39
414	Polar CsPbBr₃-based Dionâ€“Jacobson hybrid for promising UV photodetection. Chemical Communications, 2020, 56, 14381-14384.	2.2	16

#	Article	IF	Citations
415	Monolithic Perovskite Tandem Solar Cells: A Review of the Present Status and Advanced Characterization Methods Toward 30% Efficiency. Advanced Energy Materials, 2020, 10, 1904102.	10.2	321
416	[NH₃(CH₂)₆NH₃]PbI₄ as Dionâ€“Jacobson phase bifunctional capping layer for 2D/3D perovskite solar cells with high efficiency and excellent UV stability. Journal of Materials Chemistry A, 2020, 8, 10283-10290.	5.2	26
417	All-inorganic 0D/3D Cs₄Pb(IBr)₆/CsPbI_{3â^'x}Br_x mixed-dimensional perovskite solar cells with enhanced efficiency and stability. Journal of Materials Chemistry C, 2020, 8, 6977-6987.	2.7	23
418	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
419	Tailoring the orientation of perovskite crystals via adding two-dimensional polymorphs for perovskite solar cells. JPhys Energy, 2020, 2, 034005.	2.3	16
420	Structured Perovskite Light Absorbers for Efficient and Stable Photovoltaics. Advanced Materials, 2020, 32, e1903937.	11.1	69
421	Efficient Blue Perovskite Lightâ€Emitting Diodes Boosted by 2D/3D Energy Cascade Channels. Advanced Functional Materials, 2020, 30, 2001732.	7.8	118
422	Distinguishing Energy- and Charge-Transfer Processes in Layered Perovskite Quantum Wells with Two-Dimensional Action Spectroscopies. Journal of Physical Chemistry Letters, 2020, 11, 4570-4577.	2.1	19
423	Revealing the Role of Methylammonium Chloride for Improving the Performance of 2D Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 25980-25990.	4.0	47
424	2Dâ€“3D Cs₂PbI₂Cl₂â€“CsPbI_{2.5}Br_{0.5} Mixed-Dimensional Films for All-Inorganic Perovskite Solar Cells with Enhanced Efficiency and Stability. Journal of Physical Chemistry Letters, 2020, 11, 4138-4146.	2.1	40
425	Tin Halide Perovskite Films Made of Highly Oriented 2D Crystals Enable More Efficient and Stable Lead-free Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 1923-1929.	8.8	116
426	Thiophene Cation Intercalation to Improve Bandâ€Edge Integrity in Reducedâ€Dimensional Perovskites. Angewandte Chemie - International Edition, 2020, 59, 13977-13983.	7.2	36
427	Thiophene Cation Intercalation to Improve Bandâ€Edge Integrity in Reducedâ€Dimensional Perovskites. Angewandte Chemie, 2020, 132, 14081-14087.	1.6	16
428	Stabilization of Highly Efficient and Stable Phaseâ€Pure FAPbI₃ Perovskite Solar Cells by Molecularly Tailored 2Dâ€Overlayers. Angewandte Chemie - International Edition, 2020, 59, 15688-15694.	7.2	201
429	Identifying, understanding and controlling defects and traps in halide perovskites for optoelectronic devices: a review. Journal Physics D: Applied Physics, 2020, 53, 373001.	1.3	20
430	Moisture-Driven Formation and Growth of Quasi-2-D Organolead Halide Perovskite Crystallites. ACS Applied Energy Materials, 2020, 3, 6280-6290.	2.5	11
431	Highly stable and Efficient Perovskite Solar Cells Based on FAMAâ€Perovskiteâ€Cu:NiO Composites with 20.7% Efficiency and 80.5% Fill Factor. Advanced Energy Materials, 2020, 10, 2000967.	10.2	47
432	Energetics and Energy Loss in 2D Ruddlesdenâ€“Popper Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000687.	10.2	68

#	Article	IF	Citations
433	Stabilization of Highly Efficient and Stable Phaseâ€Pure FAPbI₃ Perovskite Solar Cells by Molecularly Tailored 2Dâ€Overlayers. Angewandte Chemie, 2020, 132, 15818-15824.	1.6	17
434	Formamidinium-Based Perovskite Solar Cells with Enhanced Moisture Stability and Performance via Confined Pressure Annealing. Journal of Physical Chemistry C, 2020, 124, 12249-12258.	1.5	23
435	Allâ€Inorganic CsPbI₂Br Perovskite Solar Cell with Openâ€Circuit Voltage over 1.3â€‰V by Balancing Electron and Hole Transport. Solar Rrl, 2020, 4, 2000016.	3.1	30
436	Progress in Materials Development for the Rapid Efficiency Advancement of Perovskite Solar Cells. Small, 2020, 16, e1907531.	5.2	23
437	Structure engineering of hierarchical layered perovskite interface for efficient and stable wide bandgap photovoltaics. Nano Energy, 2020, 75, 104917.	8.2	44
438	Unravelling the Mechanism of Ionic Fullerene Passivation for Efficient and Stable Methylammonium-Free Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2015-2022.	8.8	38
439	Gas chromatographyâ€“mass spectrometry analyses of encapsulated stable perovskite solar cells. Science, 2020, 368, .	6.0	306
440	Blading Phaseâ€Pure Formamidiniumâ€Alloyed Perovskites for Highâ€Efficiency Solar Cells with Low Photovoltage Deficit and Improved Stability. Advanced Materials, 2020, 32, e2000995.	11.1	125
441	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
442	Strategies for high performance perovskite/c-Si tandem solar cells: Effects of bandgap engineering, solar concentration and device temperature. Optical Materials, 2020, 106, 109935.	1.7	18
443	Two-dimensional halide perovskites featuring semiconducting organic building blocks. Materials Chemistry Frontiers, 2020, 4, 3400-3418.	3.2	50
444	Direct assessment of structural order and evidence for stacking faults in layered hybrid perovskite films from X-ray scattering measurements. Journal of Materials Chemistry A, 2020, 8, 12790-12798.	5.2	13
445	The Molybdenum Oxide Interface Limits the High-Temperature Operational Stability of Unencapsulated Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 2349-2360.	8.8	49
446	Doping and ion substitution in colloidal metal halide perovskite nanocrystals. Chemical Society Reviews, 2020, 49, 4953-5007.	18.7	269
447	Two-Dimensional Perovskite Capping Layer Simultaneously Improves the Charge Carriersâ€™ Lifetime and Stability of MAPbI₃ Perovskite: A Time-Domain Ab Initio Study. Journal of Physical Chemistry Letters, 2020, 11, 5100-5107.	2.1	9
448	Synthesis and Applications of Wide Bandgap 2D Layered Semiconductors Reaching the Green and Blue Wavelengths. ACS Applied Electronic Materials, 2020, 2, 1777-1814.	2.0	50
449	Multiply Charged Conjugated Polyelectrolytes as a Multifunctional Interlayer for Efficient and Scalable Perovskite Solar Cells. Advanced Materials, 2020, 32, e2002333.	11.1	48
450	Interface Engineering Driven Stabilization of Halide Perovskites against Moisture, Heat, and Light for Optoelectronic Applications. Advanced Energy Materials, 2020, 10, 2000768.	10.2	62

#	Article	IF	Citations
451	Layered perovskite materials: key solutions for highly efficient and stable perovskite solar cells. Reports on Progress in Physics, 2020, 83, 086502.	8.1	48
452	Dimensional Mixing Increases the Efficiency of 2D/3D Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 5115-5119.	2.1	34
453	Revealing photoinduced bulk polarization and spin-orbit coupling effects in high-efficiency 2D/3D Pbâ€“Sn alloyed perovskite solar cells. Nano Energy, 2020, 76, 104999.	8.2	20
454	Diammonium Porphyrin-Induced CsPbBr3 Nanocrystals to Stabilize Perovskite Films for Efficient and Stable Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 16236-16242.	4.0	31
455	Grain Growth of MAPbI₃ via Diethylammonium Bromide Induced Grain Mergence. ACS Applied Materials & Interfaces, 2020, 12, 16707-16714.	4.0	10
456	Structureâ€“Electronic Property Relationships of 2D Ruddlesdenâ€“Popper Tin- and Lead-based Iodide Perovskites. ACS Applied Materials & Interfaces, 2020, 12, 15328-15337.	4.0	56
457	Improved Performance of CH₃NH₃PbI_{3â€“x}Cl_x Resistive Switching Memory by Assembling 2D/3D Perovskite Heterostructures. ACS Applied Materials & Interfaces, 2020, 12, 15439-15445.	4.0	43
458	Selfâ€Crystallized Multifunctional 2D Perovskite for Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 1910620.	7.8	68
459	Charge Carrier Recombination Dynamics of Two-Dimensional Lead Halide Perovskites. Journal of Physical Chemistry Letters, 2020, 11, 2570-2576.	2.1	61
460	A novel 2D perovskite as surface â€œpatchesâ€•for efficient flexible perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 7808-7818.	5.2	48
461	Highly Reproducible and Efficient FASnI₃ Perovskite Solar Cells Fabricated with Volatilizable Reducing Solvent. Journal of Physical Chemistry Letters, 2020, 11, 2965-2971.	2.1	115
462	Multi-component engineering to enable long-term operational stability of perovskite solar cells. JPhys Energy, 2020, 2, 024008.	2.3	13
463	Efficient, stable silicon tandem cells enabled by anion-engineered wide-bandgap perovskites. Science, 2020, 368, 155-160.	6.0	420
464	Reviewing and understanding the stability mechanism of halide perovskite solar cells. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 1034-1056.	8.5	55
465	Thermal conductivity and diffusivity of triple-cation perovskite halide materials for solar cells. Journal of Applied Physics, 2020, 127, .	1.1	3
466	Vertically Aligned 2D/3D Pbâ€“Sn Perovskites with Enhanced Charge Extraction and Suppressed Phase Segregation for Efficient Printable Solar Cells. ACS Energy Letters, 2020, 5, 1386-1395.	8.8	111
467	Phase Distribution and Carrier Dynamics in Multiple-Ring Aromatic Spacer-Based Two-Dimensional Ruddlesdenâ€“Popper Perovskite Solar Cells. ACS Nano, 2020, 14, 4871-4881.	7.3	126
468	Enhanced stability of Î±-phase FAPbI₃perovskite solar cells by insertion of 2D (PEA)₂PbI₄nanosheets. Journal of Materials Chemistry A, 2020, 8, 8058-8064.	5.2	45

#	Article	IF	Citations
469	Spontaneously Selfâ€Assembly of a 2D/3D Heterostructure Enhances the Efficiency and Stability in Printed Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000173.	10.2	126
470	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
471	Stabilizing Formamidinium Lead Iodide Perovskite by Sulfonylâ€Functionalized Phenethylammonium Salt via Crystallization Control and Surface Passivation. Solar Rrl, 2020, 4, 2000069.	3.1	33
472	Regulated Crystallization of Efficient and Stable Tin-Based Perovskite Solar Cells via a Self-Sealing Polymer. ACS Applied Materials & Interfaces, 2020, 12, 14049-14056.	4.0	95
473	Understanding of perovskite crystal growth and film formation in scalable deposition processes. Chemical Society Reviews, 2020, 49, 1653-1687.	18.7	364
474	Influence of a UV-ozone treatment on amorphous SnO2 electron selective layers for highly efficient planar MAPbI3 perovskite solar cells. Journal of Materials Science and Technology, 2020, 59, 195-202.	5.6	28
475	Tailoring the Surface Morphology and Phase Distribution for Efficient Perovskite Electroluminescence. Journal of Physical Chemistry Letters, 2020, 11, 5877-5882.	2.1	17
476	A piperidinium salt stabilizes efficient metal-halide perovskite solar cells. Science, 2020, 369, 96-102.	6.0	461
477	Perovskite solar cells stability enhancement via analytical fabrication conditions. Synthetic Metals, 2020, 267, 116443.	2.1	5
478	Lowâ€Temperature Crystallization of CsPbIBr₂ Perovskite for High Performance Solar Cells. Solar Rrl, 2020, 4, 2000254.	3.1	31
479	Easy Strategy to Enhance Thermal Stability of Planar PSCs by Perovskite Defect Passivation and Low-Temperature Carbon-Based Electrode. ACS Applied Materials & Interfaces, 2020, 12, 32536-32547.	4.0	28
480	Perovskite nanogels: synthesis, properties, and applications. Journal of Materials Chemistry C, 2020, 8, 12355-12379.	2.7	7
481	Comprehensive insights into defect passivation and charge dynamics for FA0.8MA0.15Cs0.05PbI2.8Br0.2 perovskite solar cells. Applied Physics Letters, 2020, 117, .	1.5	7
482	Solutionâ€Grown Largeâ€Sized Singleâ€Crystalline 2D/3D Perovskite Heterostructure for Selfâ€Powered Photodetection. Advanced Optical Materials, 2020, 8, 2000311.	3.6	35
483	Recent progress of twoâ€dimensional lead halide perovskite single crystals: Crystal growth, physical properties, and device applications. EcoMat, 2020, 2, e12036.	6.8	80
484	Molecular aspects of organic cations affecting the humidity stability of perovskites. Energy and Environmental Science, 2020, 13, 805-820.	15.6	104
485	Interlayerâ€Sensitized Linear and Nonlinear Photoluminescence of Quasiâ€2D Hybrid Perovskites Using Aggregationâ€Induced Enhanced Emission Active Organic Cation Layers. Advanced Functional Materials, 2020, 30, 1909375.	7.8	21
486	Quasi-2D halide perovskites for resistive switching devices with ON/OFF ratios above 109. NPG Asia Materials, 2020, 12, .	3.8	71

#	Article	IF	Citations
487	Intrinsic and environmental stability issues of perovskite photovoltaics. Progress in Energy, 2020, 2, 022002.	4.6	33
488	Perspectives on intrinsic toughening strategies and passivation of perovskite films with organic additives. Solar Energy Materials and Solar Cells, 2020, 209, 110433.	3.0	25
489	Highly stable inverted methylammonium lead tri-iodide perovskite solar cells achieved by surface re-crystallization. Energy and Environmental Science, 2020, 13, 840-847.	15.6	44
490	Advances in two-dimensional organicâ€“inorganic hybrid perovskites. Energy and Environmental Science, 2020, 13, 1154-1186.	15.6	420
491	Vacuum-Induced Degradation of 2D Perovskites. Frontiers in Chemistry, 2020, 8, 66.	1.8	19
492	Selfâ€Additive Lowâ€Dimensional Ruddlesdenâ€“Popper Perovskite by the Incorporation of Glycine Hydrochloride for Highâ€Performance and Stable Solar Cells. Advanced Functional Materials, 2020, 30, 2000034.	7.8	61
493	Stability of Perovskite Light Sources: Status and Challenges. Advanced Optical Materials, 2020, 8, 1902012.	3.6	54
494	TiO₂-Assisted Halide Ion Segregation in Mixed Halide Perovskite Films. Journal of the American Chemical Society, 2020, 142, 5362-5370.	6.6	72
495	Controlling the film structure by regulating 2D Ruddlesdenâ€“Popper perovskite formation enthalpy for efficient and stable tri-cation perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 5874-5881.	5.2	23
496	Is Formamidinium Always More Stable than Methylammonium?. Chemistry of Materials, 2020, 32, 2501-2507.	3.2	34
497	Enhancing Device Performance in Quasi-2D Perovskite ((BA)₂(MA)₃Pb₄I₁₃) Solar Cells Using PbCl₂ Additives. ACS Applied Materials & Interfaces, 2020, 12, 11190-11196.	4.0	35
498	Observation of Vortex Domains in a Two-Dimensional Lead Iodide Perovskite Ferroelectric. Journal of the American Chemical Society, 2020, 142, 4925-4931.	6.6	153
499	Interfacial and structural modifications in perovskite solar cells. Nanoscale, 2020, 12, 5719-5745.	2.8	39
500	Defect Passivation via the Incorporation of Tetrapropylammonium Cation Leading to Stability Enhancement in Lead Halide Perovskite. Advanced Functional Materials, 2020, 30, 1909737.	7.8	50
501	Temperature-Dependent Dynamic Carrier Process of FAPbI₃ Nanocrystalsâ€™ Film. Journal of Physical Chemistry C, 2020, 124, 5093-5098.	1.5	14
502	Unveiling the Importance of Precursor Preparation for Highly Efficient and Stable Phenethylammoniumâ€Based Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900463.	3.1	2
503	How far are we from attaining 10-year lifetime for metal halide perovskite solar cells?. Materials Science and Engineering Reports, 2020, 140, 100545.	14.8	67
504	Structural and spectral dynamics of single-crystalline Ruddlesden-Popper phase halide perovskite blue light-emitting diodes. Science Advances, 2020, 6, eaay4045.	4.7	88

#	Article	IF	Citations
505	The Rise of 2D Photothermal Materials beyond Graphene for Clean Water Production. Advanced Science, 2020, 7, 1902236.	5.6	206
506	Long-lived charge separation in two-dimensional ligand-perovskite heterostructures. Journal of Chemical Physics, 2020, 152, 044711.	1.2	28
507	Unusual Pressureâ€Driven Phase Transformation and Band Renormalization in 2D vdW Hybrid Lead Halide Perovskites. Advanced Materials, 2020, 32, e1907364.	11.1	23
508	Engineering Multiphase Metal Halide Perovskites Thin Films for Stable and Efficient Solar Cells. Advanced Energy Materials, 2020, 10, 1903221.	10.2	16
509	Recycled Utilization of a Nanoporous Au Electrode for Reduced Fabrication Cost of Perovskite Solar Cells. Advanced Science, 2020, 7, 1902474.	5.6	26
510	Long-range exciton transport and slow annihilation in two-dimensional hybrid perovskites. Nature Communications, 2020, 11, 664.	5.8	167
511	Alkali Cation Doping for Improving the Structural Stability of 2D Perovskite in 3D/2D PSCs. Nano Letters, 2020, 20, 1240-1251.	4.5	68
512	High crystallinity and photovoltaic performance of CsPbI3 film enabled by secondary dimension. Journal of Energy Chemistry, 2020, 48, 181-186.	7.1	13
513	Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. Nature Energy, 2020, 5, 131-140.	19.8	894
514	Structurally Stable and Highly Enhanced Luminescent Perovskite Based on Quasi-Two-Dimensional Structures upon Addition of Guanidinium Cations. Journal of Physical Chemistry C, 2020, 124, 4414-4420.	1.5	12
515	Lowâ€dimensional metal halide perovskites and related optoelectronic applications. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 341-378.	8.5	72
516	Dopantâ€Free, Amorphousâ€“Crystalline Heterophase SnO₂Electron Transport Bilayer Enables >20% Efficiency in Tripleâ€Cation Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2001559.	7.8	72
517	A Crossâ€Linked PCBM Interlayer for Efficient and UVâ€Stable Methylammoniumâ€Free Perovskite Solar Cells. Energy Technology, 2020, 8, 2000224.	1.8	9
518	Two-dimensional halide perovskite lateral epitaxial heterostructures. Nature, 2020, 580, 614-620.	13.7	284
519	Highly Luminescent and Stable Green Quasiâ€2D Perovskiteâ€Embedded Polymer Sheets by Inkjet Printing. Advanced Functional Materials, 2020, 30, 1910817.	7.8	58
520	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
521	Promoting Thermodynamic and Kinetic Stabilities of FA-based Perovskite by an in Situ Bilayer Structure. Nano Letters, 2020, 20, 3864-3871.	4.5	49
522	Effects of Alkylammonium Choice on Stability and Performance of Quasi-2D Organolead Halide Perovskites. Journal of Physical Chemistry C, 2020, 124, 10887-10897.	1.5	7

#	Article	IF	Citations
523	Role of PCBM in the Suppression of Hysteresis in Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 1908920.	7.8	110
524	Phenylhydrazinium Iodide for Surface Passivation and Defects Suppression in Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2000778.	7.8	103
525	A Thermally Induced Perovskite Crystal Control Strategy for Efficient and Photostable Wideâ€Bandgap Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000033.	3.1	22
526	Interface passivation treatment by halogenated low-dimensional perovskites for high-performance and stable perovskite photovoltaics. Nano Energy, 2020, 73, 104753.	8.2	57
527	Secondary Grain Growth in Organicâ€“Inorganic Perovskite Films with Ethylamine Hydrochloride Additives for Highly Efficient Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 20026-20034.	4.0	25
528	Reduced-dimensional perovskite photovoltaics with homogeneous energy landscape. Nature Communications, 2020, 11, 1672.	5.8	191
529	A general approach for hysteresis-free, operationally stable metal halide perovskite field-effect transistors. Science Advances, 2020, 6, eaaz4948.	4.7	129
530	Recent Progress on Interface Engineering for Highâ€Performance, Stable Perovskites Solar Cells. Advanced Materials Interfaces, 2020, 7, 2000118.	1.9	34
531	Relaxing the Goldschmidt Tolerance Factor: Sizable Incorporation of the Guanidinium Cation into a Two-Dimensional Ruddlesdenâ€“Popper Perovskite. Chemistry of Materials, 2020, 32, 4024-4037.	3.2	28
532	Recent progress in encapsulation strategies to enhance the stability of organometal halide perovskite solar cells. JPhys Energy, 2020, 2, 031002.	2.3	76
533	Efficient Seâ€Rich Sb₂Se₃/CdS Planar Heterojunction Solar Cells by Sequential Processing: Control and Influence of Se Content. Solar Rrl, 2020, 4, 2000141.	3.1	23
534	Suppressed Halide Ion Migration in 2D Lead Halide Perovskites. , 2020, 2, 565-570.		99
535	Self-driven all-inorganic perovskite microplatelet vertical Schottky junction photodetectors with a tunable spectral response. Journal of Materials Chemistry C, 2020, 8, 6804-6812.	2.7	29
536	Perovskite Passivation Strategies for Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, .	3.1	23
537	A universal method for hysteresis-free and stable perovskite solar cells using water pre-treatment. Chemical Engineering Journal, 2021, 403, 126435.	6.6	12
538	Advanced Strategies of Passivating Perovskite Defects for Highâ€Performance Solar Cells. Energy and Environmental Materials, 2021, 4, 293-301.	7.3	15
539	Highly Thermostable and Efficient Formamidiniumâ€Based Lowâ€Dimensional Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 856-864.	7.2	75
540	Efficient and stable perovskite solar cells via surface passivation of an ultrathin hydrophobic organic molecular layer. Chemical Engineering Journal, 2021, 405, 126712.	6.6	42

#	Article	IF	Citations
541	Superior photovoltaics/optoelectronics of two-dimensional halide perovskites. Journal of Energy Chemistry, 2021, 57, 69-82.	7.1	20
542	Highly Thermostable and Efficient Formamidiniumâ€Based Lowâ€Dimensional Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 869-877.	1.6	12
543	Recent progress in low dimensional (quasi-2D) and mixed dimensional (2D/3D) tin-based perovskite solar cells. Sustainable Energy and Fuels, 2021, 5, 34-51.	2.5	24
544	Two-dimensional halide perovskite-based solar cells: Strategies for performance and stability enhancement. FlatChem, 2021, 25, 100213.	2.8	4
545	Grain size control for high-performance formamidinium-based perovskite solar cells via suppressing heterogenous nucleation. Journal of Materials Chemistry C, 2021, 9, 208-213.	2.7	26
546	Recent advances in resistive random access memory based on lead halide perovskite. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 293-315.	8.5	70
547	Roles of MACl in Sequentially Deposited Bromineâ€Free Perovskite Absorbers for Efficient Solar Cells. Advanced Materials, 2021, 33, e2007126.	11.1	112
548	Mechanisms and Suppression of Photoinduced Degradation in Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2002326.	10.2	118
549	Progress of all-perovskite tandem solar cells: the role of narrow-bandgap absorbers. Science China Chemistry, 2021, 64, 218-227.	4.2	37
550	Spin-Dependent Photovoltaic and Photogalvanic Responses of Optoelectronic Devices Based on Chiral Two-Dimensional Hybrid Organicâ€“Inorganic Perovskites. ACS Nano, 2021, 15, 588-595.	7.3	85
551	In Quest of Environmentally Stable Perovskite Solar Cells: A Perspective. Helvetica Chimica Acta, 2021, 104, .	1.0	15
552	Epitaxial halide perovskite-based materials for photoelectric energy conversion. Energy and Environmental Science, 2021, 14, 127-157.	15.6	37
553	Dual Defectâ€Passivation Using Phthalocyanine for Enhanced Efficiency and Stability of Perovskite Solar Cells. Small, 2021, 17, e2005216.	5.2	40
554	Dimensionality and Defect Engineering Using Fluoroaromatic Cations for Efficiency and Stability Enhancement in 3D/2D Perovskite Photovoltaics. Solar Rrl, 2021, 5, 2000589.	3.1	21
555	Optoelectronic and <scp>photoâ€charging</scp> properties of <scp> CH ₃ NH ₃ PbI ₃ </scp> / <scp> LiFePO ₄ </scp> system. International Journal of Energy Research, 2021, 45, 6426-6435.	2.2	4
556	Progress in recycling organicâ€“inorganic perovskite solar cells for eco-friendly fabrication. Journal of Materials Chemistry A, 2021, 9, 2612-2627.	5.2	17
557	Efficient perovskite solar cells enabled by large dimensional structured hole transporting materials. Journal of Materials Chemistry A, 2021, 9, 1663-1668.	5.2	14
558	Strain Engineering of Metalâ€“Halide Perovskites toward Efficient Photovoltaics: Advances and Perspectives. Solar Rrl, 2021, 5, 2000672.	3.1	33

#	Article	IF	Citations
559	Review and perspective of materials for flexible solar cells. Materials Reports Energy, 2021, 1, 100001.	1.7	54
560	Lowâ€Dimensional Metal Halide Perovskite Photodetectors. Advanced Materials, 2021, 33, e2003309.	11.1	319
561	Wide-Bandgap Metal Halide Perovskites for Tandem Solar Cells. ACS Energy Letters, 2021, 6, 232-248.	8.8	89
562	Reduced graphene oxide in perovskite solar cells: the influence on film formation, photophysics, performance, and stability. Journal of Materials Chemistry C, 2021, 9, 14648-14658.	2.7	9
563	Modeling and Simulation of Lead-Free Perovskite Solar Cell Using SCAPS-1D. East European Journal of Physics, 2021, , .	0.1	4
564	Numerical Modeling and Analysis of HTM-Free Heterojunction Solar Cell Using SCAPS-1D. East European Journal of Physics, 2021, , .	0.1	2
565	Recent progress in meniscus coating for large-area perovskite solar cells and solar modules. Sustainable Energy and Fuels, 2021, 5, 1926-1951.	2.5	11
566	4-Chlorobenzylamine-based 2D/3D Perovskite Solar Cell. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2021, , 199.	0.6	1
567	Recent progress of metal-halide perovskite-based tandem solar cells. Materials Chemistry Frontiers, 2021, 5, 4538-4564.	3.2	15
568	Role of the spacer cation in the growth and crystal orientation of two-dimensional perovskites. Sustainable Energy and Fuels, 2021, 5, 1255-1279.	2.5	14
569	Two birds with one stone: dual grain-boundary and interface passivation enables >22% efficient inverted methylammonium-free perovskite solar cells. Energy and Environmental Science, 2021, 14, 5875-5893.	15.6	180
570	Enhanced photovoltage and stability of perovskite photovoltaics enabled by a cyclohexylmethylammonium iodide-based 2D perovskite passivation layer. Nanoscale, 2021, 13, 14915-14924.	2.8	16
571	The 2D Halide Perovskite Rulebook: How the Spacer Influences Everything from the Structure to Optoelectronic Device Efficiency. Chemical Reviews, 2021, 121, 2230-2291.	23.0	506
572	High-performance photovoltaic application of the 2D all-inorganic Ruddlesdenâ€“Popper perovskite heterostructure Cs₂PbI₂Cl₂/MAPbI₃. Physical Chemistry Chemical Physics, 2021, 23, 23703-23710.	1.3	6
573	Revealing defective nanostructured surfaces and their impact on the intrinsic stability of hybrid perovskites. Energy and Environmental Science, 2021, 14, 1563-1572.	15.6	55
574	Printing Highâ€Efficiency Perovskite Solar Cells in Highâ€Humidity Ambient Environmentâ€”An In Situ Guided Investigation. Advanced Science, 2021, 8, 2003359.	5.6	40
575	Methods of transferring two-dimensional materials. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 028201.	0.2	4
576	Intact 2D/3D halide junction perovskite solar cells via solid-phase in-plane growth. Nature Energy, 2021, 6, 63-71.	19.8	365

#	Article	IF	Citations
577	Effect of interface modification on performances of organic-inorganic hybrid perovskite solar cells. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 028402.	0.2	1
578	Detection of Halomethanes Using Cesium Lead Halide Perovskite Nanocrystals. ACS Nano, 2021, 15, 1454-1464.	7.3	32
579	Lowâ€Dimensionalâ€Networked Perovskites with Aâ€Siteâ€Cation Engineering for Optoelectronic Devices. Small Methods, 2021, 5, e2001147.	4.6	27
580	Research progress on two-dimensional (2D) halide organicâ€“inorganic hybrid perovskites. Sustainable Energy and Fuels, 2021, 5, 3950-3978.	2.5	12
581	Highâ€Quality Ruddlesdenâ€“Popper Perovskite Film Formation for Highâ€Performance Perovskite Solar Cells. Advanced Materials, 2021, 33, e2002582.	11.1	182
582	A Lab-to-Fab Study toward Roll-to-Roll Fabrication of Reproducible Perovskite Solar Cells under Ambient Room Conditions. Cell Reports Physical Science, 2021, 2, 100293.	2.8	39
583	Research progress of light irradiation stability of functional layers in perovskite solar cells. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 098402.	0.2	2
584	Layer number dependent exciton dissociation and carrier recombination in 2D Ruddlesdenâ€“Popper halide perovskites. Journal of Materials Chemistry C, 2021, 9, 8966-8974.	2.7	18
585	Conjugated molecule based 2D perovskites for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 21910-21917.	5.2	8
586	Perovskite solar cells. , 2021, , 249-281.		5
588	The effect of dimensionality on the charge carrier mobility of halide perovskites. Journal of Materials Chemistry A, 2021, 9, 21551-21575.	5.2	49
589	Highly stable and efficient perovskite solar cells passivated by a functional amorphous layer. Journal of Materials Chemistry A, 2021, 9, 21708-21715.	5.2	13
590	Phenylalkylammonium passivation enables perovskite light emitting diodes with record high-radiance operational lifetime: the chain length matters. Nature Communications, 2021, 12, 644.	5.8	109
591	Performance and stability improvements in metal halide perovskite with intralayer incorporation of organic additives. Journal of Materials Chemistry A, 2021, 9, 16281-16338.	5.2	28
592	Stabilizing Fullerene for Burnâ€in–Free and Stable Perovskite Solar Cells under Ultraviolet Preconditioning and Light Soaking. Advanced Materials, 2021, 33, e2006910.	11.1	52
593	Modifying Surface Termination of CsPbI₃ Grain Boundaries by 2D Perovskite Layer for Efficient and Stable Photovoltaics. Advanced Functional Materials, 2021, 31, 2009515.	7.8	62
594	Improving the stability of perovskite by covering graphene on <scp> FAPbI ₃ </scp> surface. International Journal of Energy Research, 2021, 45, 10808-10820.	2.2	7
595	Europium ions doped WOx nanorods for dual interfacial modification facilitating high efficiency and stability of perovskite solar cells. Nano Energy, 2021, 80, 105564.	8.2	26

#	Article	IF	Citations
596	Layer number dependent ferroelasticity in 2D Ruddlesdenâ€“Popper organic-inorganic hybrid perovskites. Nature Communications, 2021, 12, 1332.	5.8	28
597	Layered Perovskites Enhanced Perovskite Photodiodes. Journal of Physical Chemistry Letters, 2021, 12, 1726-1733.	2.1	29
598	Controlled Crystallization of CsRbâ€Based Multiâ€Cation Perovskite Using a Blended Sequential Process for Highâ€Performance Solar Cells. Solar Rrl, 2021, 5, 2100050.	3.1	10
599	Advances and Prospective in Metal Halide Ruddlesenâ€“Popper Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2003907.	10.2	13
600	Effects of Cl and F Substitution in Phenylethylammonium Spacer Cations on Stability, Structure, and Optical Properties of 2Dâ€“3D Ruddlesdenâ€“Popper Perovskite Layers. ACS Applied Energy Materials, 2021, 4, 1860-1867.	2.5	11
601	Multidimensional perovskites enhance solar cell performance. Journal of Semiconductors, 2021, 42, 020201.	2.0	4
602	Electronic States Modulation by Coherent Optical Phonons in 2D Halide Perovskites. Advanced Materials, 2021, 33, e2006233.	11.1	41
603	Two-Dimensional (C₆H₅C₂H₄NH₃)₂PbI₄ Perovskite Single Crystal Resistive Switching Memory Devices. IEEE Electron Device Letters, 2021, 42, 327-330.	2.2	12
604	Distinct Carrier Transport Properties Across Horizontally vs Vertically Oriented Heterostructures of 2D/3D Perovskites. Journal of the American Chemical Society, 2021, 143, 4969-4978.	6.6	52
605	Emerging Lowâ€Dimensional Crystal Structure of Metal Halide Perovskite Optoelectronic Materials and Devices. Small Structures, 2021, 2, 2000133.	6.9	33
606	An Electron Acceptor Analogue for Lowering Trap Density in Organic Solar Cells. Advanced Materials, 2021, 33, e2008134.	11.1	91
607	Organic Ammonium Halide Modulators as Effective Strategy for Enhanced Perovskite Photovoltaic Performance. Advanced Science, 2021, 8, 2004593.	5.6	57
608	Multifunctional potassium hexafluorophosphate passivate interface defects for high efficiency perovskite solar cells. Journal of Power Sources, 2021, 488, 229451.	4.0	39
609	2D Phase Purity Determines Charge-Transfer Yield at 3D/2D Lead Halide Perovskite Heterojunctions. Journal of Physical Chemistry Letters, 2021, 12, 3312-3320.	2.1	13
610	Bulk Passivation and Interfacial Passivation for Perovskite Solar Cells: Which One is More Effective?. Advanced Materials Interfaces, 2021, 8, 2002078.	1.9	34
611	Reversible Emission Tunability from 2Dâ€Layered Perovskites with Conjugated Organic Cations. Advanced Photonics Research, 2021, 2, 2100005.	1.7	10
612	Compositional and Interfacial Engineering Yield High-Performance and Stable p-i-n Perovskite Solar Cells and Mini-Modules. ACS Applied Materials & Interfaces, 2021, 13, 13022-13033.	4.0	69
613	Origin of Efficiency and Stability Enhancement in Highâ€Performing Mixed Dimensional 2Dâ€3D Perovskite Solar Cells: A Review. Advanced Functional Materials, 2022, 32, 2009164.	7.8	96

#	Article	IF	Citations
614	Universal Passivation Strategy for the Hole Transport Layer/Perovskite Interface via an Alkali Treatment for Highâ€Efficiency Perovskite Solar Cells. Solar Rrl, 2021, 5, 2000793.	3.1	14
615	Optical and electrical analysis for high power conversion efficiency hybrid perovskite solar cells. , 2021, , .		0
616	Bulky Cations Improve Band Alignment and Efficiency in Snâ€“Pb Halide Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 2616-2628.	2.5	11
617	Ligand-engineered bandgap stability in mixed-halide perovskite LEDs. Nature, 2021, 591, 72-77.	13.7	471
618	Chemically tailored molecular surface modifiers for efficient and stable perovskite photovoltaics. SmartMat, 2021, 2, 33-37.	6.4	47
619	Perovskite Lightâ€Emitting Diodes with External Quantum Efficiency Exceeding 22% via Smallâ€Molecule Passivation. Advanced Materials, 2021, 33, e2007169.	11.1	211
620	Azahomofullerenes as New n-Type Acceptor Materials for Efficient and Stable Inverted Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 20296-20304.	4.0	13
621	Lycopeneâ€Based Bionic Membrane for Stable Perovskite Photovoltaics. Advanced Functional Materials, 2021, 31, 2011242.	7.8	59
622	Highly Efficient 1D/3D Ferroelectric Perovskite Solar Cell. Advanced Functional Materials, 2021, 31, 2100205.	7.8	24
623	Structural Stability of Formamidinium- and Cesium-Based Halide Perovskites. ACS Energy Letters, 2021, 6, 1942-1969.	8.8	76
624	Two-dimensional nanomaterials with engineered bandgap: Synthesis, properties, applications. Nano Today, 2021, 37, 101059.	6.2	82
625	Versatile Bidentate Chemical Passivation on a Cesium Lead Inorganic Perovskite for Efficient and Stable Photovoltaics. ACS Applied Energy Materials, 2021, 4, 4021-4028.	2.5	16
626	Stability Assessment of p-i-n Perovskite Photovoltaic Mini-Modules Utilizing Different Top Metal Electrodes. Micromachines, 2021, 12, 423.	1.4	3
627	Spacer Engineering Using Aromatic Formamidinium in 2D/3D Hybrid Perovskites for Highly Efficient Solar Cells. ACS Nano, 2021, 15, 7811-7820.	7.3	99
628	Gradient 1D/3D Perovskite Bilayer using 4â€tertâ€Butylpyridinium Cation for Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2021, 5, 2000791.	3.1	10
629	The More, the Betterâ€“Recent Advances in Construction of 2D Multiâ€Heterostructures. Advanced Functional Materials, 2021, 31, 2102049.	7.8	27
630	Boosting V_{OC} of antimony chalcogenide solar cells: A review on interfaces and defects. Nano Select, 2021, 2, 1818-1848.	1.9	66
631	Adsorption and diffusion of lithium ions on <scp>leadâ€free twoâ€dimensional</scp> halide perovskite surface toward energy storage applications. International Journal of Energy Research, 2021, 45, 16524-16537.	2.2	6

#	Article	IF	Citations
632	Hole-Transporting Low-Dimensional Perovskite for Enhancing Photovoltaic Performance. Research, 2021, 2021, 9797053.	2.8	9
633	Benzylammoniumâ€Mediated Formamidinium Lead Iodide Perovskite Phase Stabilization for Photovoltaics. Advanced Functional Materials, 2021, 31, 2101163.	7.8	28
634	A Review of Integrated Systems Based on Perovskite Solar Cells and Energy Storage Units: Fundamental, Progresses, Challenges, and Perspectives. Advanced Science, 2021, 8, 2100552.	5.6	19
635	Defect Passivation in Leadâ€Halide Perovskite Nanocrystals and Thin Films: Toward Efficient LEDs and Solar Cells. Angewandte Chemie, 2021, 133, 21804-21828.	1.6	76
636	Bromine-Substitution-Induced High-T_c Two-Dimensional Bilayered Perovskite Photoferroelectric. Journal of the American Chemical Society, 2021, 143, 7593-7598.	6.6	40
637	Remote growth of oxide heteroepitaxy through MoS2. APL Materials, 2021, 9, .	2.2	11
638	Improving Photovoltaic Performance of Pbâ€Less Halide Perovskite Solar Cells by Incorporating Bulky Phenylethylammonium Cations. Energy Technology, 2021, 9, 2100176.	1.8	1
639	Exploiting a Multiphase Pure Formamidinium Lead Perovskite for Efficient Green-Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2021, 13, 23067-23073.	4.0	11
640	The Role of Dimensionality on the Optoelectronic Properties of Oxide and Halide Perovskites, and their Halide Derivatives. Advanced Energy Materials, 2022, 12, 2100499.	10.2	66
641	Polarons and Charge Localization in Metalâ€Halide Semiconductors for Photovoltaic and Lightâ€Emitting Devices. Advanced Materials, 2021, 33, e2007057.	11.1	53
642	Organoammonium-Ion-based Perovskites Can Degrade to Pb⁰ via Amineâ€“Pb(II) Coordination. ACS Energy Letters, 2021, 6, 2262-2267.	8.8	25
643	Naphthylmethylamine post-treatment of MAPbI3 perovskite solar cells with simultaneous defect passivation and stability improvement. Solar Energy, 2021, 220, 18-23.	2.9	10
644	3D/2D passivation as a secret to success for polycrystalline thin-film solar cells. Joule, 2021, 5, 1057-1073.	11.7	48
645	The benefits of ionic liquids for the fabrication of efficient and stable perovskite photovoltaics. Chemical Engineering Journal, 2021, 411, 128461.	6.6	70
646	Layered Perovskites in Solar Cells: Structure, Optoelectronic Properties, and Device Design. Advanced Energy Materials, 2021, 11, 2003877.	10.2	49
647	Defect Passivation in Leadâ€Halide Perovskite Nanocrystals and Thin Films: Toward Efficient LEDs and Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 21636-21660.	7.2	183
648	Phenyl Ethylammonium Iodide introduction into inverted triple cation perovskite solar cells for improved VOC and stability. Organic Electronics, 2021, 93, 106121.	1.4	3
649	Spinâ€“Orbit Coupling Is the Key to Promote Asynchronous Photoinduced Charge Transfer of Two-Dimensional Perovskites. Jacs Au, 2021, 1, 1178-1186.	3.6	10

#	Article	IF	Citations
650	Piezo-electric and -phototronic effects of perovskite 2D|3D heterostructures. Nano Energy, 2021, 84, 105899.	8.2	13
651	Electron Delocalization and Structure Coupling Promoted Ï€-Conjugated Charge Transport in a Novel [Ga-Tpy₂]PbI₅ Perovskite-like Single Crystal. Journal of Physical Chemistry Letters, 2021, 12, 5571-5579.	2.1	7
652	Lowâ€dimensional perovskite materials and theirâ€‰optoelectronics. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 1039-1069.	8.5	39
653	Concurrent cationic and anionic perovskite defect passivation enables 27.4% perovskite/silicon tandems with suppression of halide segregation. Joule, 2021, 5, 1566-1586.	11.7	119
654	Two-dimensional perovskites for photovoltaics. Materials Today Nano, 2021, 14, 100117.	2.3	27
655	Memory Seeds Enable High Structural Phase Purity in 2D Perovskite Films for Highâ€Efficiency Devices. Advanced Materials, 2021, 33, e2007176.	11.1	50
656	Layered Hybrid Formamidinium Lead Iodide Perovskites: Challenges and Opportunities. Accounts of Chemical Research, 2021, 54, 2729-2740.	7.6	48
657	Guanidinium cation doped (Gua)<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e565" altimg="si46.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>(MA)<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e573" altimg="si47.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>−</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>PbI3	0.7	5
658	High-performance quasi-2D perovskite solar cells with power conversion efficiency over 20% fabricated in humidity-controlled ambient air. Chemical Engineering Journal, 2022, 427, 130949.	6.6	28
659	Multifunctional passivation strategy based on tetraoctylammonium bromide for efficient inverted perovskite solar cells. Nano Energy, 2021, 84, 105882.	8.2	46
660	Recent Progress on Formamidiniumâ€Dominated Perovskite Photovoltaics. Advanced Energy Materials, 2022, 12, 2100690.	10.2	45
661	Synergistic Interface Layer Optimization and Surface Passivation with Fluorocarbon Molecules toward Efficient and Stable Inverted Planar Perovskite Solar Cells. Research, 2021, 2021, 9836752.	2.8	27
662	Current Development toward Commercialization of Metalâ€Halide Perovskite Photovoltaics. Advanced Optical Materials, 2021, 9, 2100390.	3.6	15
663	Recent Progress on Perovskite Surfaces and Interfaces in Optoelectronic Devices. Advanced Materials, 2021, 33, e2006004.	11.1	86
664	Recent progress in stabilizing perovskite solar cells through two-dimensional modification. APL Materials, 2021, 9, .	2.2	12
665	Unveiling Crystal Orientation in Quasiâ€2D Perovskite Films by In Situ GIWAXS for Highâ€Performance Photovoltaics. Small, 2021, 17, e2100972.	5.2	23
666	Graded interface engineering of 3D/2D halide perovskite solar cells through ultrathin (PEA)2PbI4 nanosheets. Chinese Chemical Letters, 2021, 32, 2259-2262.	4.8	23
667	Mesoporous Au@Cu_{2â”’x}S Coreâ€“Shell Nanoparticles with Double Localized Surface Plasmon Resonance and Ligand Modulation for Holeâ€Selective Passivation in Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100358.	3.1	13

#	Article	IF	Citations
668	Oriented Halide Perovskite Nanostructures and Thin Films for Optoelectronics. Chemical Reviews, 2021, 121, 12112-12180.	23.0	70
669	Stable and low-photovoltage-loss perovskite solar cells by multifunctional passivation. Nature Photonics, 2021, 15, 681-689.	15.6	255
670	Defect Passivation of Perovskite Films for Highly Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, 2100295.	3.1	58
671	S-Methylthiouronium Improves the Photostability of Methylammonium Lead Iodide Perovskites. ACS Applied Energy Materials, 2021, 4, 6466-6473.	2.5	2
672	Hybrid Organicâ€“Inorganic Halide Postâ€Perovskite 3â€Cyanopyridinium Lead Tribromide for Optoelectronic Applications. Advanced Functional Materials, 2021, 31, 2102338.	7.8	18
673	Layered metal halide perovskite solar cells: A review from structureâ€properties perspective towards maximization of their performance and stability. EcoMat, 2021, 3, e12124.	6.8	27
674	1,10-Phenanthroline as an Efficient Bifunctional Passivating Agent for MAPbI₃ Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 32894-32905.	4.0	13
675	Stability Improvement of Tinâ€Based Halide Perovskite by Precursorâ€Solution Regulation with Dualâ€Functional Reagents. Advanced Functional Materials, 2021, 31, 2104344.	7.8	47
676	Multidimensional perovskite solar cells. Fundamental Research, 2022, 2, 237-253.	1.6	11
677	Surface Stabilization of a Formamidinium Perovskite Solar Cell Using Quaternary Ammonium Salt. ACS Applied Materials & Interfaces, 2021, 13, 37052-37062.	4.0	23
678	A Review on Emerging Barrier Materials and Encapsulation Strategies for Flexible Perovskite and Organic Photovoltaics. Advanced Energy Materials, 2021, 11, 2101383.	10.2	57
679	Stability of Perovskite Solar Cells: Degradation Mechanisms and Remedies. Frontiers in Electronics, 2021, 2, .	2.0	75
680	Defect Passivation Effect of Chemical Groups on Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 34161-34170.	4.0	33
681	Passivation of the Buried Interface via Preferential Crystallization of 2D Perovskite on Metal Oxide Transport Layers. Advanced Materials, 2021, 33, e2103394.	11.1	99
682	Progress in ambient air-processed perovskite solar cells: Insights into processing techniques and stability assessment. Solar Energy, 2021, 224, 1369-1395.	2.9	43
683	Lewis Base Passivation Mediates Charge Transfer at Perovskite Heterojunctions. Journal of the American Chemical Society, 2021, 143, 12230-12243.	6.6	36
684	Selfâ€Organized Co₃O₄â€SrCO₃ Percolative Composites Enabling Nanosized Hole Transport Pathways for Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2106121.	7.8	18
685	Pressure-Tuned Quantum Well Configuration in Two-Dimensional PA₈Pb₅I₁₈ Perovskites for Highly Efficient Yellow Fluorescence. ACS Applied Energy Materials, 2021, 4, 10003-10011.	2.5	7

#	Article	IF	Citations
686	Control Perovskite Crystals Vertical Growth for Obtaining Highâ€Performance Monolithic Perovskite/Silicon Heterojunction Tandem Solar Cells with V_{OC} of 1.93â€‰V. Solar Rrl, 2021, 5, 2100357.	3.1	15
687	Structural and Optoelectronic Properties of Two-Dimensional Ruddlesdenâ€“Popper Hybrid Perovskite CsSnBr3. Nanomaterials, 2021, 11, 2119.	1.9	7
688	Naphthalenediimide/Formamidinium-Based Low-Dimensional Perovskites. Chemistry of Materials, 2021, 33, 6412-6420.	3.2	16
689	Sandwiched electrode buffer for efficient and stable perovskite solar cells with dual back surface fields. Joule, 2021, 5, 2148-2163.	11.7	63
690	2D/3D Halide Perovskites for Optoelectronic Devices. Frontiers in Chemistry, 2021, 9, 715157.	1.8	8
691	Combined Bulk and Surface Passivation in Dimensionally Engineered 2Dâ€3D Perovskite Films via Chlorine Diffusion. Advanced Functional Materials, 2021, 31, 2104251.	7.8	37
692	Polyaniline polymer-modified ZnO electron transport material for high-performance planar perovskite solar cells. Ceramics International, 2021, 47, 33390-33397.	2.3	36
693	Bulky organic cations engineered lead-halide perovskites: a review on dimensionality and optoelectronic applications. Materials Today Energy, 2021, 21, 100759.	2.5	24
694	Efficient perovskite solar mini-modules fabricated via bar-coating using 2-methoxyethanol-based formamidinium lead tri-iodide precursor solution. Joule, 2021, 5, 2420-2436.	11.7	85
695	Efficient and Stable FAPbBr₃ Perovskite Solar Cells via Interface Modification by a Low-Dimensional Perovskite Layer. ACS Applied Energy Materials, 2021, 4, 9276-9282.	2.5	19
696	Improvement Performance of Planar Perovskite Solar Cells by Bulk and Surface Defect Passivation. ACS Sustainable Chemistry and Engineering, 2021, 9, 13001-13009.	3.2	14
697	A Perspective on the Commercial Viability of Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100401.	3.1	33
698	Cyclohexylammoniumâ€Based 2D/3D Perovskite Heterojunction with Funnelâ€Like Energy Band Alignment for Efficient Solar Cells (23.91%). Advanced Energy Materials, 2021, 11, 2102236.	10.2	77
699	Deciphering the Orientation of the Aromatic Spacer Cation in Bilayer Perovskite Solar Cells through Spectroscopic Techniques. ACS Applied Materials & Interfaces, 2021, 13, 48219-48227.	4.0	6
700	Boosting interfacial charge transfer by constructing rare earthâ€“doped WOx nanorods/SnO2 hybrid electron transport layer for efficient perovskite solar cells. Materials Today Energy, 2021, 21, 100724.	2.5	8
701	Enhancement in charge extraction and moisture stability of perovskite solar cell via infiltration of charge transport material in grain boundaries. Journal of Power Sources, 2021, 506, 230212.	4.0	6
702	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
703	A review on two-dimensional (2D) and 2D-3D multidimensional perovskite solar cells: Perovskites structures, stability, and photovoltaic performances. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2021, 48, 100405.	5.6	77

#	Article	IF	Citations
704	Correlating the Active Layer Structure and Composition with the Device Performance and Lifetime of Amino-Acid-Modified Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 43505-43515.	4.0	17
705	Triple-decker layered perovskite materials. Nature, 2021, 597, 333-334.	13.7	2
706	New Carbon Nitride C₃N₃ Additive for Improving Cationic Defects of Perovskite Solar Cells. Energy and Environmental Materials, 2023, 6, .	7.3	12
707	Atomic-scale understanding on the physics and control of intrinsic point defects in lead halide perovskites. Applied Physics Reviews, 2021, 8, .	5.5	36
708	Halogen-halogen bonds enable improved long-term operational stability of mixed-halide perovskite photovoltaics. CheM, 2021, 7, 3131-3143.	5.8	55
709	Mini-Review on Efficiency and Stability of Perovskite Solar Cells with Spiro-OMeTAD Hole Transport Layer: Recent Progress and Perspectives. Energy & Fuels, 2021, 35, 18915-18927.	2.5	45
710	Sulfonated Dopantâ€Free Holeâ€Transport Material Promotes Interfacial Charge Transfer Dynamics for Highly Stable Perovskite Solar Cells. Advanced Sustainable Systems, 2021, 5, 2100244.	2.7	27
711	Thermal- and Light-Induced Evolution of the 2D/3D Interface in Lead-Halide Perovskite Films. ACS Applied Materials & Interfaces, 2022, 14, 34180-34188.	4.0	19
712	Mixed 2D-3D Halide Perovskite Solar Cells. , 0, , .		0
713	Surface-Orientation Elimination of Vapor-Deposited PbI₂ Flakes for Efficient Perovskite Synthesis on Curved Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 45496-45504.	4.0	9
714	2D Hybrid Halide Perovskites: Structure, Properties, and Applications in Solar Cells. Small, 2021, 17, e2103514.	5.2	59
715	Understanding degradation mechanisms of perovskite solar cells due to electrochemical metallization effect. Solar Energy Materials and Solar Cells, 2021, 230, 111278.	3.0	20
716	A critical review of materials innovation and interface stabilization for efficient and stable perovskite photovoltaics. Nano Energy, 2021, 87, 106141.	8.2	28
717	The Fabrication of Leadâ€Free Cs₂SnI₆ Perovskite Films Using Iodineâ€Rich Strategy for Optoelectronic Applications. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100271.	0.8	5
718	Advances in surface passivation of perovskites using organic halide salts for efficient and stable solar cells. Surfaces and Interfaces, 2021, 26, 101420.	1.5	10
719	Stability of mixed-halide wide bandgap perovskite solar cells: Strategies and progress. Journal of Energy Chemistry, 2021, 61, 395-415.	7.1	34
720	Limitations and solutions for achieving high-performance perovskite tandem photovoltaics. Nano Energy, 2021, 88, 106219.	8.2	20
721	Optoelectronic simulation and optimization of tandem and multi-junction perovskite solar cells using concentrating photovoltaic systems. Energy Reports, 2021, 7, 5895-5908.	2.5	4

#	Article	IF	Citations
722	Visualizing band alignment across 2D/3D perovskite heterointerfaces of solar cells with light-modulated scanning tunneling microscopy. Nano Energy, 2021, 89, 106362.	8.2	13
723	Upgraded antisolvent engineering enables 2D@3D quasi core-shell perovskite for achieving stable and 21.6% efficiency solar cells. Journal of Materials Science and Technology, 2021, 92, 21-30.	5.6	4
724	Methylammonium- and bromide-free perovskites enable efficient and stable photovoltaics. Journal of Energy Chemistry, 2021, 63, 12-24.	7.1	1
725	Interface regulation enables hysteresis free wide-bandgap perovskite solar cells with low VOC deficit and high stability. Nano Energy, 2021, 90, 106537.	8.2	12
726	A guide to use fluorinated aromatic bulky cations for stable and high-performance 2D/3D perovskite solar cells: The more fluorination the better?. Journal of Energy Chemistry, 2022, 64, 179-189.	7.1	28
727	Unraveling the compositional heterogeneity and carrier dynamics of alkali cation doped 3D/2D perovskites with improved stability. Materials Advances, 2021, 2, 1253-1262.	2.6	23
728	Leadâ€Less Halide Perovskite Solar Cells. Solar Rrl, 2021, 5, 2000616.	3.1	25
729	Direct Surface Passivation of Perovskite Film by 4-Fluorophenethylammonium Iodide toward Stable and Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 2558-2565.	4.0	71
730	Future perspectives of perovskite solar cells: Metal oxide-based inorganic hole-transporting materials. , 2021, , 181-219.		5
731	Two-dimensional or passivation treatment: the effect of hexylammonium post deposition treatment on 3D halide perovskite-based solar cells. Materials Advances, 2021, 2, 2617-2625.	2.6	14
732	Mixed dimensional 0D/3D perovskite heterostructure for efficient green light-emitting diodes. Journal of Materials Chemistry C, 2021, 9, 14318-14326.	2.7	8
733	Graded 2D/3D Perovskite Heterostructure for Efficient and Operationally Stable MAâ€Free Perovskite Solar Cells. Advanced Materials, 2020, 32, e2000571.	11.1	166
734	Perovskite Quantum Wells Formation Mechanism for Stable Efficient Perovskite Photovoltaicsâ€”A Realâ€Time Phaseâ€Transition Study. Advanced Materials, 2021, 33, e2006238.	11.1	30
735	Electronâ€Beamâ€Evaporated Nickel Oxide Hole Transport Layers for Perovskiteâ€Based Photovoltaics. Advanced Energy Materials, 2019, 9, 1802995.	10.2	122
736	High Efficiency Perovskiteâ€Silicon Tandem Solar Cells: Effect of Surface Coating versus Bulk Incorporation of 2D Perovskite. Advanced Energy Materials, 2020, 10, 1903553.	10.2	110
737	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
738	Cesium-Trifluoroacetate Doped MA/FA-Based Perovskite Solar Cells with Inverted Planar Structure. Journal of Electronic Materials, 2020, 49, 7144-7152.	1.0	3
739	2D-Quasi-2D-3D Hierarchy Structure for Tin Perovskite Solar Cells with Enhanced Efficiency and Stability. Joule, 2018, 2, 2732-2743.	11.7	343

#	Article	IF	Citations
740	Quantum confinement and strain effects on the low-dimensional all-inorganic halide Cs2XI2Cl2 (X=) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 E: Low-Dimensional Systems and Nanostructures, 2020, 124, 114226.	1.3	12
741	Spontaneous Formation of 2D/3D Heterostructures on the Edges of 2D Ruddlesdenâ€“Popper Hybrid Perovskite Crystals. Chemistry of Materials, 2020, 32, 5009-5015.	3.2	45
742	Composite Encapsulation Enabled Superior Comprehensive Stability of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 27277-27285.	4.0	54
743	CHAPTER 4. Solution-processed Solar Cells: Perovskite Solar Cells. Inorganic Materials Series, 2019, , 153-192.	0.5	6
744	Roadmap on organicâ€“inorganic hybrid perovskite semiconductors and devices. APL Materials, 2021, 9, .	2.2	102
745	Defects in halide perovskite semiconductors: impact on photo-physics and solar cell performance. Journal Physics D: Applied Physics, 2020, 53, 503003.	1.3	26
746	Investigation of air-stable Cs₂SnI₆ films prepared by the modified two-step process for lead-free perovskite solar cells. Semiconductor Science and Technology, 2020, 35, 125027.	1.0	10
747	A system for the deterministic transfer of 2D materials under inert environmental conditions. 2D Materials, 2020, 7, 025034.	2.0	21
748	Impact of strain relaxation on performance of Î±-formamidinium lead iodide perovskite solar cells. Science, 2020, 370, 108-112.	6.0	932
749	Layer-by-layer spray coating of a stacked perovskite absorber for perovskite solar cells with better performance and stability under a humid environment. Optical Materials Express, 2020, 10, 1497.	1.6	23
750	The Path to Perovskite on Silicon PV. , 2018, 1, 1-8.		16
751	Back-Contact Perovskite Solar Cells. , 2019, 1, 1-10.		4
752	Crystallization control via a molecular needle knitting strategy for the enhanced emission efficiency and stability of CsPbBr₃ films. Journal of Materials Chemistry C, 2021, 9, 15967-15976.	2.7	6
753	Designs from single junctions, heterojunctions to multijunctions for high-performance perovskite solar cells. Chemical Society Reviews, 2021, 50, 13090-13128.	18.7	91
754	Photoinduced Halide Segregation in Ruddlesdenâ€“Popper 2D Mixed Halide Perovskite Films. Advanced Materials, 2021, 33, e2105585.	11.1	49
755	Effect of illumination and applied potential on the electrochemical impedance spectra in triple cation (FA/MA/Cs) 3D and 2D/3D perovskite solar cells. Journal of Electroanalytical Chemistry, 2021, 902, 115800.	1.9	9
756	Upscaling Solutionâ€Processed Perovskite Photovoltaics. Advanced Energy Materials, 2021, 11, 2101973.	10.2	46
757	The Future of Hybrid and Inorganic Perovskite Materials: Technology Forecasting. Energy Technology, 2021, 9, 2100376.	1.8	2

#	Article	IF	Citations
758	Improved Operational Stability of Perovskite Solar Cells via Au Barrier Layer Incorporation. ACS Applied Energy Materials, 2021, 4, 11062-11068.	2.5	9
759	Improved Efficiency and Stability of Perovskite Solar Cells Using a Difluorobenzothiadiazole-Based Interfacial Material. ACS Applied Energy Materials, 2021, 4, 10646-10655.	2.5	9
760	Contact passivation for defect mitigation in multi-dimensional perovskite interfaces. Applied Physics Letters, 2021, 119, 141602.	1.5	1
761	A-site phase segregation in mixed cation perovskite. Materials Reports Energy, 2021, 1, 100064.	1.7	19
762	An Embedding 2D/3D Heterostructure Enables Highâ€Performance FAâ€Alloyed Flexible Perovskite Solar Cells with Efficiency over 20%. Advanced Science, 2021, 8, e2101856.	5.6	57
763	Optical-Frequency Magnetic Polarizability in a Layered Semiconductor. Physical Review Letters, 2021, 127, 173604.	2.9	2
765	Advancing 2D Perovskites for Efficient and Stable Solar Cells: Challenges and Opportunities. Advanced Materials, 2022, 34, e2105849.	11.1	104
766	Defect passivation of perovskites in high efficiency solar cells. JPhys Energy, 2021, 3, 042003.	2.3	13
767	Oligomeric Silica-Wrapped Perovskites Enable Synchronous Defect Passivation and Grain Stabilization for Efficient and Stable Perovskite Photovoltaics. SSRN Electronic Journal, 0, , .	0.4	1
768	Recent progress of ion migration in organometal halide perovskite. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 158801.	0.2	11
769	Ultrafast photophysics of metal halide perovskite multiple quantum wells: device implications and reconciling band alignment. , 2019, , .		0
770	Perovskite Materials in Photovoltaics. Materials Horizons, 2020, , 175-207.	0.3	1
771	Interactions Between 2D Halide Perovskite Materials and Methylamine Vapor. , 2020, , .		0
772	Propylammonium Chloride Additive for Efficient and Stable FAPbI₃ Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2102538.	10.2	84
774	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
776	Synergetic Coâ€Modulation of Crystallization and Coâ€Passivation of Defects for FAPbI₃ Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, 2108567.	7.8	38
777	Optimization of Hole Transport Layer Materials for a Leadâ€Free Perovskite Solar Cell Based on Formamidinium Tin Iodide. Energy Technology, 2021, 9, 2100859.	1.8	7
778	Development of encapsulation strategies towards the commercialization of perovskite solar cells. Energy and Environmental Science, 2022, 15, 13-55.	15.6	158

#	Article	IF	Citations
779	Low-temperature processing of polyvinylpyrrolidone modified CsPbI2Br perovskite films for high-performance solar cells. Journal of Solid State Chemistry, 2022, 305, 122656.	1.4	6
780	Construction of a gradient-type 2D/3D perovskite structure for subsurface passivation and energy-level alignment of an MAPbI₃ film. Journal of Materials Chemistry A, 2021, 9, 26086-26094.	5.2	12
781	Research progress of wide bandgap perovskite materials and solar cells. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 207401.	0.2	2
782	Perovskite Quantum Dots for Photovoltaic Applications. Springer Series in Materials Science, 2020, , 243-254.	0.4	1
785	Interface and Grain Boundary Passivation by PEA-SCN Double Ions via One-Step Crystal Engineering for All Air-Processed, Stable Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 12290-12297.	2.5	6
786	Optimization of a SnO₂-Based Electron Transport Layer Using Zirconium Acetylacetonate for Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 54579-54588.	4.0	11
787	Tunable bandgap and luminescence characters in single-phase two-dimensional perovskite AVA2PbCl Br4- alloys. Journal of Materials Research and Technology, 2021, 15, 5353-5359.	2.6	3
788	Ultrafast and High-Yield Polaronic Exciton Dissociation in Two-Dimensional Perovskites. Journal of the American Chemical Society, 2021, 143, 19128-19136.	6.6	43
789	Surface Reconstruction and In Situ Formation of 2D Layer for Efficient and Stable 2D/3D Perovskite Solar Cells. Small Methods, 2021, 5, e2101000.	4.6	33
792	Quasiâ€2D Perovskite Thick Film for Xâ€Ray Detection with Low Detection Limit. Advanced Functional Materials, 2022, 32, 2109458.	7.8	48
793	Highâ€Efficiency and Stable Perovskite Solar Cells Enabled by Lowâ€Dimensional Perovskite Surface Modifiers. Solar Rrl, 2022, 6, .	3.1	15
794	Growth of 1D Nanorod Perovskite for Surface Passivation in FAPbI₃ Perovskite Solar Cells. Small, 2022, 18, e2104100.	5.2	23
795	Passivating contacts for high-efficiency silicon-based solar cells: From single-junction to tandem architecture. Nano Energy, 2022, 92, 106712.	8.2	30
796	Updated Progresses in Perovskite Solar Cells. Chinese Physics Letters, 2021, 38, 107801.	1.3	11
798	MXene-Based Materials for Solar Cell Applications. Nanomaterials, 2021, 11, 3170.	1.9	19
799	Prediction of solar cell materials via unsupervised literature learning. Journal of Physics Condensed Matter, 2022, 34, 095902.	0.7	5
800	Structural modulation and assembling of metal halide perovskites for solar cells and lightâ€emitting diodes. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 1218-1250.	8.5	7
801	Long-term stable perovskite solar cells prepared by doctor blade coating technology using bilayer structure and non-toxic solvent. Organic Electronics, 2022, 101, 106400.	1.4	5

#	Article	IF	Citations
802	In Situ Epitaxial Growth of Centimeter-Sized Lead-Free (BA)₂CsAgBiBr₇/Cs₂AgBiBr₆ Heterocrystals for Self-Driven X-ray Detection. Journal of the American Chemical Society, 2021, 143, 20802-20810.	6.6	65
803	Chemical bath deposition of AgBiS2 films for visible and X-ray detection. Applied Materials Today, 2022, 26, 101262.	2.3	12
804	<scp>Formamidinium</scp> postâ€dripping on <scp>methylammonium lead iodide</scp> to achieve stable and efficient perovskite solar cells. International Journal of Energy Research, 2022, 46, 5306-5314.	2.2	7
805	Drop-Casting Method to Screen Ruddlesdenâ€“Popper Perovskite Formulations for Use in Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 56217-56225.	4.0	17
806	High-efficiency perovskite photovoltaic modules achieved via cesium doping. Chemical Engineering Journal, 2022, 431, 133713.	6.6	19
807	Phase-Pure Quasi-2D Perovskite by Protonation of Neutral Amine. Journal of Physical Chemistry Letters, 2021, 12, 11323-11329.	2.1	8
808	Stabilization Techniques of Lead Halide Perovskite for Photovoltaic Applications. Solar Rrl, 2022, 6, .	3.1	8
809	Strategies for chemical vapor deposition of two-dimensional organic-inorganic halide perovskites. IScience, 2021, 24, 103486.	1.9	11
810	Dynamics of photoconversion processes: the energetic cost of lifetime gain in photosynthetic and photovoltaic systems. Chemical Society Reviews, 2021, 50, 13372-13409.	18.7	10
811	Defects in Solution-Processed Perovskite Semiconductors: Photophysics and Impact on Solar Cell Performance. , 2021, , 1-34.		1
812	Electronic Doping Strategy in Perovskite Solar Cells. , 2021, , 1-56.		1
813	The effect of organic cation dynamics on the optical properties in (PEA)2(MA)[Pb2I7] perovskite dimorphs. Journal of Materials Chemistry C, 2021, 9, 17050-17060.	2.7	2
814	A self-assembled hierarchical structure to keep the 3D crystal dimensionality inn-butylammonium cation-capped Pbâ€“Sn perovskites. Journal of Materials Chemistry A, 2021, 9, 27541-27550.	5.2	5
815	Facet orientation tailoring via 2D-seed- induced growth enables highly efficient and stable perovskite solar cells. Joule, 2022, 6, 240-257.	11.7	128
816	Tailoring Phase Purity in the 2D/3D Perovskite Heterostructures Using Lattice Mismatch. ACS Energy Letters, 2022, 7, 550-559.	8.8	23
817	Shedding light on the energy applications of emerging 2D hybrid organic-inorganic halide perovskites. IScience, 2022, 25, 103753.	1.9	9
818	The Influence of CsBr on Crystal Orientation and Optoelectronic Properties of MAPbI₃-Based Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 2958-2967.	4.0	18
819	A holistic sunscreen interface strategy to effectively improve the performance of perovskite solar cells and prevent lead leakage. Chemical Engineering Journal, 2022, 433, 134566.	6.6	20

#	Article	IF	Citations
820	Quasi-Two-Dimensional Perovskite Solar Cells with Efficiency Exceeding 22%. ACS Energy Letters, 2022, 7, 757-765.	8.8	114
821	Highly efficient and stable perovskite solar cells enabled by low-dimensional perovskitoids. Science Advances, 2022, 8, eabk2722.	4.7	53
822	Perovskite Nanowires for Next-Generation Optoelectronic Devices: Lab to Fab. ACS Applied Energy Materials, 2022, 5, 1342-1377.	2.5	9
823	Effect of annealing treatment of PC60BM layer on inverted perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2022, 33, 5351-5358.	1.1	1
824	On the optical anisotropy in 2D metal-halide perovskites. Nanoscale, 2022, 14, 752-765.	2.8	15
825	1,8â€Octanediamine Dihydroiodideâ€Mediated Grain Boundary and Interface Passivation in Twoâ€Stepâ€Processed Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	6
826	The Rational Control of Precursor Concentration in Perovskite Light-Emitting Diodes. Crystals, 2022, 12, 60.	1.0	0
827	A review on two-dimensional (2D) perovskite material-based solar cells to enhance the power conversion efficiency. Dalton Transactions, 2022, 51, 797-816.	1.6	20
828	Quantification of Efficiency Losses Due to Mobile Ions in Perovskite Solar Cells via Fast Hysteresis Measurements. Solar Rrl, 2022, 6, .	3.1	36
829	Film formation mechanisms in mixed-dimensional 2D/3D halide perovskite films revealed by in situ grazing-incidence wide-angle X-ray scattering. CheM, 2022, 8, 1067-1082.	5.8	16
830	4-tert-butyl pyridine additive for moisture-resistant wide bandgap perovskite solar cells. Optical Materials, 2022, 123, 111876.	1.7	12
831	Band gap, effective masses, and energy level alignment of 2D and 3D halide perovskites and heterostructures using DFT-1/2. Physical Review Materials, 2022, 6, .	0.9	13
832	Amidinium additives for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2022, 10, 3506-3512.	5.2	11
833	Investigation of Double-Layered Pb-Sn Perovskite Absorbers: Formation, Structure, Band Alignment, and Stability. Journal of Physical Chemistry C, 2022, 126, 1623-1634.	1.5	3
834	Surface Passivation Using 2D Perovskites toward Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2022, 34, e2105635.	11.1	221
835	Defects and passivation in perovskite solar cells. Surface Innovations, 2022, 10, 3-20.	1.4	18
836	Design of two-dimensional halide perovskite composites for optoelectronic applications and beyond. Materials Advances, 2022, 3, 756-778.	2.6	14
837	Emerging Lead-Halide Perovskite Semiconductor for Solid-State Detectors. , 2022, , 35-58.		1

#	Article	IF	Citations
838	Conjugated polyelectrolytes for stable perovskite solar cells based on methylammonium lead triiodide. Journal of Materials Chemistry A, 2022, 10, 3321-3329.	5.2	1
839	F-containing cations improve the performance of perovskite solar cells. Journal of Semiconductors, 2022, 43, 010202.	2.0	12
840	Suppressed Halide Segregation and Defects in Wide Bandgap Perovskite Solar Cells Enabled by Doping Organic Bromide Salt with Moderate Chain Length. Journal of Physical Chemistry C, 2022, 126, 1711-1720.	1.5	8
841	Review on Organicâ€“Inorganic Two-Dimensional Perovskite-Based Optoelectronic Devices. ACS Applied Electronic Materials, 2022, 4, 547-567.	2.0	35
842	Highâ€Performance Nonâ€Volatile Flash Photomemory via Highly Oriented Quasiâ€2D Perovskite. Advanced Functional Materials, 2022, 32, .	7.8	23
843	Enhanced efficiency and stability of tripleâ€cation perovskite solar cells with CsPbI_xBr_{3â€‰â^'â€‰x} QDs â€œsurface patchesâ€. SmartMat, 2022, 3, 513-521.	6.4	22
844	Spacer Engineering of Thiophene-Based Two-Dimensional/Three-Dimensional Hybrid Perovskites for Stable and Efficient Solar Cells. Journal of Physical Chemistry C, 2022, 126, 3351-3358.	1.5	9
845	Long carrier diffusion length in two-dimensional lead halide perovskite single crystals. CheM, 2022, 8, 1107-1120.	5.8	29
846	Multifunctional Heterocyclic-Based Spacer Cation for Efficient and Stable 2D/3D Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 9183-9191.	4.0	12
847	From Structural Design to Functional Construction: Amine Molecules in Highâ€Performance Formamidiniumâ€Based Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	17
848	From Structural Design to Functional Construction: Amine Molecules in Highâ€Performance Formamidiniumâ€Based Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	63
849	Roles of Longâ€Chain Alkylamine Ligands in Tripleâ€Halide Perovskites for Efficient NiO_xâ€Based Inverted Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	14
850	Photoluminescence Enhancement in Thin Two-Dimensional Ruddlesdenâ€“Popper Perovskites by Spiro-OMeTAD. Journal of Physical Chemistry C, 0, , .	1.5	1
851	Conformational Order of Alkyl Side Chain of Poly(3-alkylthiophene) Promotes Hole-Extraction Ability in Perovskite/Poly(3-alkylthiophene) Heterojunction. Journal of Physical Chemistry Letters, 2021, 12, 11817-11823.	2.1	8
852	A bilayer conducting polymer structure for planar perovskite solar cells with over 1,400â€‰hours operational stability at elevated temperatures. Nature Energy, 2022, 7, 144-152.	19.8	123
853	Efficient MA-free perovskite solar cells with balanced carrier transport achieved using 4-trifluorophenylammonium iodide. Journal of Materials Chemistry A, 2022, 10, 9161-9170.	5.2	8
854	Phenylethylammonium-Formamidinium-Methylammonium Quasi-2d/3d Tin Wide-Bandgap Perovskite Solar Cell with Improved Efficiency and Stability. SSRN Electronic Journal, 0, , .	0.4	0
856	Molecular optical filtering in perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2022, 33, 7728-7737.	1.1	3

#	Article	IF	Citations
857	Rethinking the A cation in halide perovskites. Science, 2022, 375, eabj1186.	6.0	207
858	Ultraviolet Photocatalytic Degradation of Perovskite Solar Cells: Progress, Challenges, and Strategies. Advanced Energy and Sustainability Research, 2022, 3, .	2.8	16
859	High Efficiency Perovskite Solar Cells Employing Quasiâ€2D Ruddlesdenâ€Popper/Dionâ€Jacobson Heterojunctions. Advanced Functional Materials, 2022, 32, .	7.8	23
860	Recent Progress on Perovskite Photodetectors for Narrowband Detection. Advanced Photonics Research, 2022, 3, .	1.7	21
861	Dimensional Engineering Enables 1.31 V Openâ€Circuit Voltage for Efficient and Stable Wideâ€Bandgap Halide Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	5
862	Effect of Steric Hindrance of Butylammonium Iodide as Interface Modification Materials on the Performance of Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	10
863	High-Performance Blue Perovskite Light-Emitting Diodes Enabled by a Sacrificial Agent Maleic Anhydride. Journal of Physical Chemistry C, 0, , .	1.5	6
864	Assessment of Leadâ€Free Tin Halide Perovskite Solar Cells Using Jâ€“V Hysteresis. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	0.8	19
865	Imaging the Moisture-Induced Degradation Process of 2D Organolead Halide Perovskites. ACS Omega, 2022, 7, 10365-10371.	1.6	10
866	Wideâ€Bandgap Organicâ€“Inorganic Lead Halide Perovskite Solar Cells. Advanced Science, 2022, 9, e2105085.	5.6	60
867	Suppressing the Formation of High n-Phase and 3D Perovskites in the Fabrication of Ruddlesdenâ€“Popper Perovskite Thin Films by Bulky Organic Cation Engineering. Chemistry of Materials, 2022, 34, 3076-3088.	3.2	13
868	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
869	Optical Properties and Photostability Improvement of CH₃NH₃PbI₃ Treated by Iodide of Long H₃N(CH₂)₁₀COOH Bifunctional Cation in â€œ2D/3Dâ€•and â€œMonolayerâ€•Passivation Modes. Chemistry of Materials, 2022, 34, 2998-3005.	3.2	2
870	Revealing the Correlation of Light Soaking Effect with Ion Migration in Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	9
871	Seedâ€Assisted Growth of Methylammoniumâ€Free Perovskite for Efficient Inverted Perovskite Solar Cells. Small Methods, 2022, 6, e2200048.	4.6	9
872	Influence of Halide Choice on Formation of Lowâ€Dimensional Perovskite Interlayer in Efficient Perovskite Solar Cells. Energy and Environmental Materials, 2022, 5, 670-682.	7.3	9
873	Stability-limiting heterointerfaces of perovskite photovoltaics. Nature, 2022, 605, 268-273.	13.7	229
875	Synergistic Passivation of Perovskite Absorber Films for Efficient Fourâ€Terminal Perovskite/Silicon Tandem Solar Cells. Advanced Energy and Sustainability Research, 2022, 3, .	2.8	10

#	Article	IF	Citations
876	Insights from scalable fabrication to operational stability and industrial opportunities for perovskite solar cells and modules. Cell Reports Physical Science, 2022, 3, 100827.	2.8	16
877	Highly Efficient and Reliable Semitransparent Perovskite Solar Cells via Top Electrode Engineering. Advanced Functional Materials, 2022, 32, .	7.8	20
878	Passivating defects via 4-cyanobenzenaminium iodide enables 22.44% efficiency perovskite solar cells. Electrochimica Acta, 2022, 413, 140172.	2.6	12
879	Recent progress of perovskite devices fabricated using thermal evaporation method: Perspective and outlook. Materials Today Advances, 2022, 14, 100232.	2.5	28
880	The emergence of concentrator photovoltaics for perovskite solar cells. Applied Physics Reviews, 2021, 8, .	5.5	8
881	Structural Disorder in Layered Hybrid Halide Perovskites: Types of Stacking Faults, Influence on Optical Properties and Their Suppression by Crystallization Engineering. Nanomaterials, 2021, 11, 3333.	1.9	5
882	Low-Temperature Deposited Highly Flexible Inâ€“Znâ€“Vâ€“O Transparent Conductive Electrode for Perovskite Solar Cells. ACS Applied Energy Materials, 2022, 5, 234-248.	2.5	8
883	Efficient and Stable Wideâ€Bandgap Perovskite Solar Cells Derived from a Thermodynamic Phaseâ€Pure Intermediate. Solar Rrl, 2022, 6, .	3.1	11
884	Characterize and Retard the Impact of the Biasâ€Induced Mobile Ions in CH₃NH₃PbBr₃ Perovskite Lightâ€Emitting Diodes. Advanced Optical Materials, 2022, 10, .	3.6	5
885	Fabrication Strategies and Optoelectronic Applications of Perovskite Heterostructures. Advanced Optical Materials, 2022, 10, .	3.6	15
886	Bridging Effects of Sulfur Anions at Titanium Oxide and Perovskite Interfaces on Interfacial Defect Passivation and Performance Enhancement of Perovskite Solar Cells. ACS Omega, 2021, 6, 34485-34493.	1.6	10
887	Efficient FAPbI3 perovskite solar cells using PMACl additives in two-step deposition method. , 2021, , .		0
888	Stable Formamidiniumâ€Based Centimeter Long Twoâ€Dimensional Lead Halide Perovskite Singleâ€Crystal for Longâ€Live Optoelectronic Applications. Advanced Functional Materials, 0, , 2112277.	7.8	8
889	Mixed Solvent Engineering for Morphology Optimization of the Electron Transport Layer in Perovskite Photovoltaics. ACS Applied Energy Materials, 2022, 5, 387-396.	2.5	8
890	Highly Orientational Order Perovskite Induced by In situâ€generated 1D Perovskitoid for Efficient and Stable Printable Photovoltaics. Small, 2022, 18, e2200130.	5.2	10
892	Hetero-perovskite engineering for stable and efficient perovskite solar cells. Sustainable Energy and Fuels, 2022, 6, 3304-3323.	2.5	3
893	Sustainable development of graphitic carbon nanosheets from plastic wastes with efficient photothermal energy conversion for enhanced solar evaporation. Journal of Materials Chemistry A, 2022, 10, 19612-19617.	5.2	21
894	Beyond hydrophobicity: how F4-TCNQ doping of the hole transport material improves stability of mesoporous triple-cation perovskite solar cells. Journal of Materials Chemistry A, 2022, 10, 11721-11731.	5.2	19

#	Article	IF	Citations
895	Progress of defect and defect passivation in perovskite solar cells. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 166801.	0.2	1
896	Efficient and Stable FAâ€Rich Perovskite Photovoltaics: From Material Properties to Device Optimization. Advanced Energy Materials, 2022, 12, .	10.2	16
897	Discovery of Pb-free hybrid organicâ€“inorganic 2D perovskites using a stepwise optimization strategy. Npj Computational Materials, 2022, 8, .	3.5	9
898	Could two-dimensional perovskites fundamentally solve the instability of perovskite photovoltaics. Chinese Physics B, 2022, 31, 117803.	0.7	0
899	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
900	cis/trans-Isomeric Cation Tuning Photoluminescence and Photodetection in 2D Perovskites. Journal of Physical Chemistry Letters, 2022, 13, 4119-4124.	2.1	11
901	A Novel 4,4â€™-Bipiperidine-Based Organic Salt for Efficient and Stable 2D-3D Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 22324-22331.	4.0	6
902	Dye-modified halide perovskite materials. Organic Electronics, 2022, , 106545.	1.4	2
903	Photoinduced Cross Linkable Polymerization of Flexible Perovskite Solar Cells and Modules by Incorporating Benzyl Acrylate. Advanced Functional Materials, 2022, 32, .	7.8	32
904	Ion-exchange-induced slow crystallization of 2D-3D perovskite thick junctions for X-ray detection and imaging. Matter, 2022, 5, 2251-2264.	5.0	40
905	Analysis of electrical parameters of p-i-n perovskites solar cells during passivation via N-doped graphene quantum dots. Surfaces and Interfaces, 2022, 31, 102066.	1.5	5
906	Perovskite modifiers with porphyrin/phthalocyanine complexes for efficient photovoltaics. Journal of Coordination Chemistry, 2022, 75, 1494-1519.	0.8	2
907	Bifunctional interface modification for efficient and UV-robust Î±-Fe2O3-based planar organicâ€“inorganic hybrid perovskite solar cells. Advanced Composites and Hybrid Materials, 2022, 5, 3212-3222.	9.9	23
908	X-ray diffraction of photovoltaic perovskites: Principles and applications. Applied Physics Reviews, 2022, 9, .	5.5	28
909	Origin and physical effects of edge states in two-dimensional Ruddlesden-Popper perovskites. IScience, 2022, 25, 104420.	1.9	8
910	Metal-organic framework derived magnetic phase change nanocage for fast-charging solar-thermal energy conversion. Nano Energy, 2022, 99, 107383.	8.2	26
911	Lewis base governing superfacial proton behavior of hybrid perovskite: Basicity dependent passivation strategy. Chemical Engineering Journal, 2022, 446, 137033.	6.6	26
912	Singleâ€Layer Sheets of Alkylammonium Lead Iodide Perovskites with Tunable and Stable Green Emission for White Lightâ€Emitting Devices. Advanced Optical Materials, 2022, 10, .	3.6	2

#	Article	IF	Citations
913	Enhancing Self-Trapped Exciton Emission via Energy Transfer in Two-Dimensional/Quantum Dot Perovskite Heterostructures. ACS Photonics, 2022, 9, 2008-2014.	3.2	11
914	Intrinsic and extrinsic stability of triple-cation perovskite solar cells through synergistic influence of organic additive. Cell Reports Physical Science, 2022, 3, 100906.	2.8	7
915	A facile oneâ€step solution synthesis of <scp> Cs ₂ SnI _{6â^'x} Br _x </scp> using lessâ€toxic methanol solvent for application in dyeâ€sensitized solar cells. International Journal of Energy Research, 0, , .	2.2	1
916	Phenylethylammonium-formamidinium-methylammonium quasi-2D/3D tin wide-bandgap perovskite solar cell with improved efficiency and stability. Chemical Engineering Journal, 2022, 446, 137388.	6.6	17
917	Efficient and stable Cs2AgBiBr6 double perovskite solar cells through in-situ surface modulation. Chemical Engineering Journal, 2022, 446, 137144.	6.6	45
918	2D/3D heterostructured CsPbI₂Br solar cells: a choice for a monolithic all-perovskite tandem device. Journal of Materials Chemistry A, 2022, 10, 14799-14809.	5.2	8
919	Benzimidazole Based Holeâ€Transporting Materials for Highâ€performance Inverted Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	19
922	Universal Bifacial Stamping Approach Enabling Reverseâ€Graded Ruddlesdenâ€Popper 2D Perovskite Solar Cells. Small, 2022, 18, .	5.2	6
923	Picolylamine Isomers Trigger Multidimension Coupling Strategy toward Efficient and Stable Inorganic Perovskite Solar Cells. Solar Rrl, 0, , .	3.1	2
924	Accurate Adjusting the Lattice Strain of Triple-Cation and Mixed-Halide Perovskites for High-Performance Photodetector. ACS Applied Materials & Interfaces, 2022, 14, 28154-28162.	4.0	16
925	Polymer Photoelectrodes for Solar Fuel Production: Progress and Challenges. Chemical Reviews, 2022, 122, 11778-11829.	23.0	39
927	Understanding and minimizing non-radiative recombination losses in perovskite light-emitting diodes. Journal of Materials Chemistry C, 2022, 10, 13590-13610.	2.7	29
928	Best practices in the measurement of circularly polarised photodetectors. Journal of Materials Chemistry C, 2022, 10, 10452-10463.	2.7	9
929	Enhanced Charge Transport via Mixed-Dimensional Heterostructures in 2Dâ€“3D Perovskites and Their Relevance to Solar Cells. ACS Applied Energy Materials, 2022, 5, 7965-7976.	2.5	7
930	Stabilizing wide-bandgap halide perovskites through hydrogen bonding. Science China Chemistry, 2022, 65, 1650-1660.	4.2	9
931	Excellent Longâ€Range Chargeâ€Carrier Mobility in 2D Perovskites. Advanced Functional Materials, 2022, 32, .	7.8	20
932	Highâ€Resolution Patterning of 2D Perovskite Films through Femtosecond Laser Direct Writing. Advanced Functional Materials, 2022, 32, .	7.8	24
933	Decoupling engineering of formamidiniumâ€“cesium perovskites for efficient photovoltaics. National Science Review, 2022, 9, .	4.6	22

#	Article	IF	Citations
934	Effective Passivation with Sizeâ€Matched Alkyldiammonium Iodide for Highâ€Performance Inverted Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	41
935	Stability of perovskite materials and devices. Materials Today, 2022, 58, 275-296.	8.3	35
936	Thiocyanate-Mediated Dimensionality Transformation of Low-Dimensional Perovskites for Photovoltaics. Chemistry of Materials, 2022, 34, 6331-6338.	3.2	5
937	F-Type Pseudo-Halide Anions for High-Efficiency and Stable Wide-Band-Gap Inverted Perovskite Solar Cells with Fill Factor Exceeding 84%. ACS Nano, 2022, 16, 10798-10810.	7.3	45
938	Recent defect passivation drifts and role of additive engineering in perovskite photovoltaics. Nano Energy, 2022, 101, 107579.	8.2	46
939	Whether organic spacer cations induced 2D/3D or quasi-2D/3D mixed dimensional perovskites?. Chemical Engineering Journal, 2022, 450, 137887.	6.6	8
940	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
941	Synergetic Regulation of Oriented Crystallization and Interfacial Passivation Enables 19.1% Efficient Wideâ€Bandgap Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	40
942	Slot-die coating of a formamidinium-cesium mixed-cation perovskite for roll-to-roll fabrication of perovskite solar cells under ambient laboratory conditions. Solar Energy Materials and Solar Cells, 2022, 246, 111884.	3.0	8
943	Electronic Disorder Dominates the Charge-Carrier Dynamics in Two-Dimensional/Three-Dimensional Organicâ€“Inorganic Perovskite Heterostructure. Journal of Physical Chemistry C, 2022, 126, 12689-12695.	1.5	7
944	Room-temperature epitaxial welding of 3D and 2D perovskites. Nature Materials, 2022, 21, 1042-1049.	13.3	32
945	Phenethylammonium Iodide Passivation Layers for Flexible Planar Perovskite Solar Cells. Energy Technology, 2022, 10, .	1.8	5
946	Dually-passivated planar SnO2 based perovskite solar cells with Ë ƒ2,700h ambient stability: Facile fabrication, high performance and mechanism. Ceramics International, 2022, 48, 33934-33942.	2.3	3
947	Enhanced efficiency and stability of Dionâ€“Jacobson quasi-two-dimensional perovskite solar cells by additive. Journal Physics D: Applied Physics, 2022, 55, 414002.	1.3	2
948	Two-Dimensional Hybrid Perovskitoid Micro/nanosheets: Colorful Ultralong Phosphorescence, Delayed Fluorescence, and Anisotropic Optical Waveguide. ACS Applied Materials & Interfaces, 2022, 14, 40223-40231.	4.0	11
949	Efficient and Stable 3D/2D Perovskite Solar Cells through Vertical Heterostructures with (BA)₄AgBiBr₈ Nanosheets. Advanced Materials, 2022, 34, .	11.1	22
950	Spaceâ€Resolved Photoresponse in Quasiâ€Twoâ€Dimensional Ruddlesdenâ€“Popper Perovskites. Advanced Optical Materials, 2022, 10, .	3.6	4
951	Heterojunction engineering for improving perovskite solar cell performance. Matter, 2022, 5, 2447-2449.	5.0	1

#	Article	IF	Citations
952	Recent Progress in Cesiumâ€Based Leadâ€Free Halide Double Perovskite Materials for Photovoltaic Applications. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	0.8	6
953	Interfacial Embedding for Highâ€Efficiency and Stable Methylammoniumâ€Free Perovskite Solar Cells with Fluoroarene Hydrazine. Advanced Energy Materials, 2022, 12, .	10.2	30
954	Exploring the Steric Hindrance of Alkylammonium Cations in the Structural Reconfiguration of Quasiâ€2D Perovskite Materials Using a Highâ€throughput Experimental Platform. Advanced Functional Materials, 2022, 32, .	7.8	12
955	Investigation of photocurrent efficiency of Cs2TiBr6 double perovskite solar cell. Materials Today: Proceedings, 2022, 66, 3692-3697.	0.9	2
956	Efficiency enhancement of Cs0.1(CH3NH3)0.9PbI3 perovskite solar cell by surface passivation using iso-butyl ammonium iodide. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 1963-1970.	2.4	3
957	Dynamic Nuclear Polarization Enables NMR of Surface Passivating Agents on Hybrid Perovskite Thin Films. Journal of the American Chemical Society, 2022, 144, 15175-15184.	6.6	10
958	Inverted planar heterojunction perovskite solar cells with high ultraviolet stability. Nano Energy, 2022, 103, 107849.	8.2	26
959	Inverted Planar Heterojunction Perovskite Solar Cells with High Ultraviolet Stability. SSRN Electronic Journal, 0, , .	0.4	0
960	Perovskite-transition metal dichalcogenides heterostructures: recent advances and future perspectives. , 2022, 1, 220006-220006.		17
961	Strain effects on halide perovskite solar cells. Chemical Society Reviews, 2022, 51, 7509-7530.	18.7	89
962	[PbX₆]^{4â^'}modulation and organic spacer construction for stable perovskite solar cells. Energy and Environmental Science, 2022, 15, 4470-4510.	15.6	16
963	Diammoniumâ€induced<scp>Dionâ€Jacobson 2D</scp>/<scp>3D</scp>wideâ€bandgap perovskite solar cells with enhanced efficiency and stability. EcoMat, 2023, 5, .	6.8	6
964	Recent Progress on Heterojunction Engineering in Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	23
965	Efficient and Stable Perovskite Solar Cells with a High Openâ€Circuit Voltage Over 1.2ÂV Achieved by a Dualâ€Side Passivation Layer. Advanced Materials, 2022, 34, .	11.1	20
966	Strain Control to Stabilize Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	2
967	Strain Control to Stabilize Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	37
968	Bilayer metal halide perovskite for efficient and stable solar cells and modules. Materials Futures, 2022, 1, 042102.	3.1	19
969	Engineering strategies for two-dimensional perovskite solar cells. Trends in Chemistry, 2022, 4, 1005-1020.	4.4	10

#	Article	IF	Citations
970	Strain propagation in layered two-dimensional halide perovskites. Science Advances, 2022, 8, .	4.7	8
971	Dually Modified Wide-Bandgap Perovskites by Phenylethylammonium Acetate toward Highly Efficient Solar Cells with Low Photovoltage Loss. ACS Applied Materials & Interfaces, 2022, 14, 43246-43256.	4.0	3
972	Cooperative Adsorption of Metalâ€organic Complexes on CsPbI₂Br Perovskite Surface for Photovoltaic Efficiency Exceeding 17â€‰%. ChemSusChem, 2022, 15, .	3.6	2
973	Interfaced Structures between Halide Perovskites: From Basics to Construction to Optoelectronic Applications. Advanced Energy Materials, 2023, 13, .	10.2	6
974	Solar Cell Efficiency Exceeding 25% through Rb-Based Perovskitoid Scaffold Stabilizing the Buried Perovskite Surface. ACS Energy Letters, 2022, 7, 3685-3694.	8.8	44
975	Mixed 2D-Dionâ€”Jacobson/3D Sn-Pb alloyed perovskites for efficient photovoltaic solar devices. Nano Research, 2023, 16, 3142-3148.	5.8	7
976	A Versatile Moltenâ€Salt Induction Strategy to Achieve Efficient CsPbI₃ Perovskite Solar Cells with a High Openâ€Circuit Voltage >1.2 V. Advanced Materials, 2022, 34, .	11.1	71
977	Formate as Antiâ€Oxidation Additives for Pbâ€Free FASnI₃ Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	4
978	Efficient and hysteresis-free mixed-dimensional 2D/3D perovskite solar cells using ethyl lactate as a green additive to perovskite precursor solutions. Journal of Materials Chemistry C, 2022, 10, 16480-16491.	2.7	26
979	Inorganic frameworks of low-dimensional perovskites dictate the performance and stability of mixed-dimensional perovskite solar cells. Materials Horizons, 2023, 10, 536-546.	6.4	5
980	Volatile 2D Ruddlesdenâ€Popper Perovskite: A Gift for Î±â€Formamidinium Lead Triiodide Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	13
981	Direct observation of photoinduced carrier blocking in mixed-dimensional 2D/3D perovskites and the origin. Nature Communications, 2022, 13, .	5.8	16
982	Efficient CsPbBr3 Perovskite Solar Cells with Storage Stability > 340 Days. Energies, 2022, 15, 7740.	1.6	0
983	Phase Segregation and Sequential Expulsion of Iodide and Bromide in Photoirradiated Ruddlesdenâ€“Popper 2D Perovskite Films. ACS Energy Letters, 2022, 7, 3982-3988.	8.8	10
984	Pre-annealing treatment for high-efficiency perovskite solar cells via sequential deposition. Joule, 2022, 6, 2869-2884.	11.7	41
985	Over 11% Efficient CuGaSe₂ Solar Cells Without Using KCN Treatment. Solar Rrl, 2022, 6, .	3.1	3
986	Enhancement of the photovoltaic performance of HTL-free-perovskite solar cells based on carbon electrode via the modification of electron transport layer with Copper oxide@Polyaniline nanocomposite. Energy Reports, 2022, 8, 13596-13609.	2.5	3
987	Research Progress of Buffer Layer and Encapsulation Layer Prepared by Atomic Layer Deposition to Improve the Stability of Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	5

#	Article	IF	Citations
988	Alcohol assistant surface passivated perovskites for efficient perovskite solar cells. Organic Electronics, 2022, 111, 106653.	1.4	3
989	Self-healing 2D/3D perovskite for efficient and stable p-i-n perovskite solar cells. Chemosphere, 2023, 311, 136893.	4.2	2
990	Strategy for the fabrication of perovskite-based green micro LED for ultra high-resolution displays by micro-molding process and surface passivation. Chemical Engineering Journal, 2023, 453, 139927.	6.6	10
991	Spatially Resolved Local Electronic Properties of 2D Lead Halide Perovskite Single Crystals Studied by Xâ€Ray Photoemission Electron Microscopy. Solar Rrl, 2023, 7, .	3.1	2
992	Molecular engineering of contact interfaces for high-performance perovskite solar cells. Nature Reviews Materials, 2023, 8, 89-108.	23.3	125
993	Spontaneous Formation of Heterostructured Perovskite Films for Photovoltaic Application. Chemistry - A European Journal, 0, , .	1.7	0
994	Molecular Configuration Engineering in Holeâ€Transporting Materials toward Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2023, 33, .	7.8	10
995	Spontaneous Formation of a Ligand-Based 2D Capping Layer on the Surface of Quasi-2D Perovskite Films. ACS Applied Materials & Interfaces, 2022, 14, 51910-51920.	4.0	2
996	The Electronic Properties of a 2D Ruddlesdenâ€Popper Perovskite and its Energy Level Alignment with a 3D Perovskite Enable Interfacial Energy Transfer. Advanced Functional Materials, 2023, 33, .	7.8	14
997	Defect engineering of metal halide perovskite optoelectronic devices. Progress in Quantum Electronics, 2022, 86, 100438.	3.5	4
998	Recent review of interfacial engineering for perovskite solar cells: effect of functional groups on the stability and efficiency. Materials Today Chemistry, 2022, 26, 101224.	1.7	8
1000	Initializing film homogeneity to retard phase segregation for stable perovskite solar cells. Science, 2022, 378, 747-754.	6.0	81
1001	Environment-friendly copper-based chalcogenide thin film solar cells: status and perspectives. Materials Horizons, 2023, 10, 313-339.	6.4	11
1002	Recent Progress of Surface Passivation Molecules for Perovskite Solar Cell Applications. Journal of Renewable Materials, 2023, 11, 1533-1554.	1.1	2
1003	Additive-associated antisolvent engineering of perovskite films for highly stable and efficient pâ€“iâ€“n perovskite solar cells. Journal of Materials Chemistry C, 2022, 10, 18303-18311.	2.7	5
1004	Bifacial all-perovskite tandem solar cells. Science Advances, 2022, 8, .	4.7	26
1005	Grain Regrowth and Bifacial Passivation for Highâ€Efficiency Wideâ€Bandgap Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	36
1006	Thienothiopheneâ€Assisted Property Optimization for Dopantâ€Free Ïâ€Conjugation Polymeric Hole Transport Material Achieving Over 23% Efficiency in Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	18

#	Article	IF	Citations
1007	Boosting Charge Transport in a 2D/3D Perovskite Heterostructure by Selecting an Ordered 2D Perovskite as the Passivator. Angewandte Chemie, 2023, 135, .	1.6	5
1008	Boosting Charge Transport in a 2D/3D Perovskite Heterostructure by Selecting an Ordered 2D Perovskite as the Passivator. Angewandte Chemie - International Edition, 2023, 62, .	7.2	6
1009	Tailoring the Cs/Br Ratio for Efficient and Stable Wideâ€Bandgap Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	0
1010	A Review of Perovskite-Based Photodetectors and Their Applications. Nanomaterials, 2022, 12, 4390.	1.9	19
1011	In-situ organic-inorganic ferroelectric layer growth for efficient perovskite solar cells with high photovoltage. Nano Energy, 2023, 107, 108114.	8.2	10
1012	Effect of Organic Chloride Additives on the Photovoltaic Performance of MAâ€Free Cs_{0.1}FA_{0.9}PbI₃ Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	0
1013	Two/Quasi-two-dimensional perovskite-based heterostructures: construction, properties and applications. International Journal of Extreme Manufacturing, 2023, 5, 012004.	6.3	8
1014	Thermodynamic Origin of the Photostability of the Two-Dimensional Perovskite PEA₂Pb(I_{1â€“x}Br_x)₄. ACS Energy Letters, 2023, 8, 943-949.	8.8	9
1015	Highly efficient perovskite solar cells by building 2D/3D perovskite heterojuction in situ for interfacial passivation and energy level adjustment. Science China Chemistry, 2023, 66, 449-458.	4.2	9
1016	High-member low-dimensional Sn-based perovskite solar cells. Science China Chemistry, 2023, 66, 459-465.	4.2	22
1017	Bulk Incorporation with 4â€Methylphenethylammonium Chloride for Efficient and Stable Methylammoniumâ€Free Perovskite and Perovskiteâ€Silicon Tandem Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	14
1018	Critical Influence of Organic Aâ€²â€Site Ligand Structure on 2D Perovskite Crystallization. Small, 2023, 19, .	5.2	9
1019	Localization control of 2D/3D perovskite heterostructures at grain boundaries by amine-vapor-induced dimensionality reduction. Journal of Alloys and Compounds, 2023, 939, 168680.	2.8	3
1020	Dimensional Tuning in Leadâ€Free Tin Halide Perovskite for Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	21
1021	Tuning Surface Oxidation States of Nickel Oxide for Efficient Inverted Perovskite Solar Cells. ACS Applied Energy Materials, 2023, 6, 1332-1339.	2.5	3
1022	Challenges and future prospects. , 2023, , 447-484.		1
1023	Additiveâ€Enhanced Crystallization of Inorganic Perovskite Single Crystals for Highâ€Sensitivity Xâ€Ray Detection. Small, 2023, 19, .	5.2	3
1024	Highly efficient p-i-n perovskite solar cells that endure temperature variations. Science, 2023, 379, 399-403.	6.0	145

#	Article	IF	Citations
1025	Fundamentals and classification of halide perovskites. , 2023, , 19-55.		0
1027	Tuning Octahedral Tilting by Doping to Prevent Detrimental Phase Transition and Extend Carrier Lifetime in Organometallic Perovskites. Journal of the American Chemical Society, 2023, 145, 5393-5399.	6.6	10
1028	Ambient-aging process enables enhanced efficiency for wide-bandgap perovskite solar cells. Nano Energy, 2023, 109, 108288.	8.2	4
1029	Two-dimensional materials for boosting the performance of perovskite solar cells: Fundamentals, materials and devices. Materials Science and Engineering Reports, 2023, 153, 100727.	14.8	5
1030	Controllable conduction band-edge reconfiguration in quasi-2D perovskites enabled by dimensional engineering for encouraging electron-hole separation. Chemical Engineering Journal, 2023, 465, 142866.	6.6	3
1031	A comparative study of cubic methylammonium lead iodide (CH3NH3PbI3) perovskite by using density functional theory. Materials Today Communications, 2023, 35, 105814.	0.9	1
1032	Recent Development of Halide Perovskite Materials and Devices for Ionizing Radiation Detection. Chemical Reviews, 2023, 123, 1207-1261.	23.0	41
1033	3D/2D Core/Shell Perovskite Nanocrystals for Highâ€Performance Solar Cells. Small, 2023, 19, .	5.2	5
1034	Intermediate phase assisted sequential deposition of reverseâ€graded quasiâ€<scp>2D</scp> alternating cation perovskites for <scp>MAâ€free</scp> perovskite solar cells. InformaÄ•Ã-MateriÃ¡ly, 2023, 5, .	8.5	5
1035	A Polymer Strategy toward Highâ€Performance Multifunctional Perovskite Optoelectronics: From Polymer Matrix to Device Applications. Advanced Optical Materials, 2023, 11, .	3.6	4
1036	2D/3D Perovskite: A Step toward Commercialization of Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	11
1037	Composition and structure regulation of Ruddlesdenâ€“Popper perovskite for light-emitting diodes applications. Journal of Materials Chemistry C, 2023, 11, 3448-3458.	2.7	0
1038	Tuning charge carrier dynamics through spacer cation functionalization in layered halide perovskites: an ab initio quantum dynamics study. Journal of Materials Chemistry C, 2023, 11, 3521-3532.	2.7	0
1039	Additive engineering for highly efficient and stable perovskite solar cells. Applied Physics Reviews, 2023, 10, .	5.5	13
1040	Challenges and Perspectives toward Future Wideâ€Bandgap Mixedâ€Halide Perovskite Photovoltaics. Advanced Energy Materials, 2023, 13, .	10.2	29
1041	Improving morphology and optoelectronic properties of ultra-wide bandgap perovskite via Cs tuning for clear solar cell and UV detection applications. Scientific Reports, 2023, 13, .	1.6	2
1042	Issues of phase segregation in wide-bandgap perovskites. Materials Chemistry Frontiers, 2023, 7, 1896-1911.	3.2	4
1043	2D-3D perovskite memristor with low energy consumption and high stability for neural morphology calculation. Science China Materials, 2023, 66, 2013-2022.	3.5	4

#	Article	IF	Citations
1044	Rapid Interlayer Charge Separation and Extended Carrier Lifetimes due to Spontaneous Symmetry Breaking in Organic and Mixed Organicâ€“Inorganic Dionâ€“Jacobson Perovskites. Journal of the American Chemical Society, 2023, 145, 5297-5309.	6.6	24
1045	Metalâ€Halide Perovskite Lasers: Cavity Formation and Emission Characteristics. Advanced Materials, 0, , .	11.1	12
1046	Concurrent Top and Buried Surface Optimization for Flexible Perovskite Solar Cells with High Efficiency and Stability. Advanced Functional Materials, 2023, 33, .	7.8	11
1047	2D multilayered perovskites and 2D/3D bilayers for stable solar cells. , 2023, , .		0
1048	3,5-dichlorobenzylamine lead high-performance and stable 2D/3D perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2023, 34, .	1.1	1
1049	Precrystallizedâ€Heterojunction Strategy on Precursor Solution Enables Highâ€Performance Semitransparent Perovskite Solar Cells. Advanced Optical Materials, 0, , .	3.6	2
1050	Molecular Dipole Engineering of Carbonyl Additives for Efficient and Stable Perovskite Solar Cells. Angewandte Chemie, 2023, 135, .	1.6	0
1051	Molecular Dipole Engineering of Carbonyl Additives for Efficient and Stable Perovskite Solar Cells. Angewandte Chemie - International Edition, 2023, 62, .	7.2	19
1052	Surface Passivation by Sulfur-Based 2D (TEA)₂PbI₄ for Stable and Efficient Perovskite Solar Cells. ACS Omega, 2023, 8, 12842-12852.	1.6	7
1061	Perovskite-based LEDs and lasers. , 2023, , 519-548.		0
1079	Synergy of 3D and 2D Perovskites for Durable, Efficient Solar Cells and Beyond. Chemical Reviews, 2023, 123, 9565-9652.	23.0	21
1081	Inverted Wide-Bandgap 2D/3D Perovskite Solar Cells with >22% Efficiency and Low Voltage Loss. Nano Letters, 2023, 23, 6705-6712.	4.5	6
1093	The role of organic spacers in 2D/3D hybrid perovskite solar cells. Materials Chemistry Frontiers, 2023, 8, 82-103.	3.2	2
1115	Methylammonium-free wide-bandgap metal halide perovskites for tandem photovoltaics. Nature Reviews Materials, 2023, 8, 822-838.	23.3	2
1116	Advanced Perovskite Solar Cells. Advances in Material Research and Technology, 2024, , 113-135.	0.3	0
1134	Modulating Efficiency and Stability of Methylammonium/Br-Free Perovskite Solar Cells Using Fluoroarene Hydrazine. , 2023, , .		0
1156	The impact of moisture on the stability and degradation of perovskites in solar cells. Materials Advances, 2024, 5, 2200-2217.	2.6	0