2D perovskite stabilized phase-pure formamidinium pe

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#	Article	IF	Citations
1	Dimensionality engineering of hybrid halide perovskite light absorbers. Nature Communications, 2018, 9, 5028.	5.8	245
2	Attaining High Photovoltaic Efficiency and Stability with Multidimensional Perovskites. ChemSusChem, 2018, 11, 4193-4202.	3.6	16
3	Face-shared structures of one-dimensional organicâ€“inorganic lead iodide perovskites. Applied Physics Express, 2018, 11, 115502.	1.1	3
4	Self-Passivation of 2D Ruddlesdenâ€“Popper Perovskite by Polytypic Surface PbI2 Encapsulation. Nano Letters, 2019, 19, 6109-6117.	4.5	31
5	Lasing from Mechanically Exfoliated 2D Homologous Ruddlesdenâ€“Popper Perovskite Engineered by Inorganic Layer Thickness. Advanced Materials, 2019, 31, e1903030.	11.1	128
6	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
7	A Modulated Doubleâ€Passivation Strategy Toward Highly Efficient Perovskite Solar Cells with Efficiency Over 21%. Solar Rrl, 2019, 3, 1900291.	3.1	12
8	A New Organic Interlayer Spacer for Stable and Efficient 2D Ruddlesdenâ€“Popper Perovskite Solar Cells. Nano Letters, 2019, 19, 5237-5245.	4.5	76
9	Fully-ambient-air and antisolvent-free-processed stable perovskite solar cells with perovskite-based composites and interface engineering. Nano Energy, 2019, 64, 103964.	8.2	35
10	A Butterflyâ€Inspired Hierarchical Lightâ€Trapping Structure towards a Highâ€Performance Polarizationâ€Sensitive Perovskite Photodetector. Angewandte Chemie - International Edition, 2019, 58, 16456-16462.	7.2	67
11	Review of Stability Enhancement for Formamidiniumâ€Based Perovskites. Solar Rrl, 2019, 3, 1900215.	3.1	60
12	Incorporating mixed cations in quasi-2D perovskites for high-performance and flexible photodetectors. Nanoscale Horizons, 2019, 4, 1342-1352.	4.1	35
13	Potassium ions as a kinetic controller in ionic double layers for hysteresis-free perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 18807-18815.	5.2	54
14	Aqueous Phase Exfoliating Quasiâ€2D CsPbBr₃ Nanosheets with Ultrahigh Intrinsic Water Stability. Small, 2019, 15, e1901994.	5.2	45
15	Recent Progress in Highâ€efficiency Planarâ€structure Perovskite Solar Cells. Energy and Environmental Materials, 2019, 2, 93-106.	7.3	45
16	Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS. Joule, 2019, 3, 1734-1745.	11.7	227
17	Synthesis of Polycrystalline Ruddlesdenâ€“Popper Organic Lead Halides and Their Growth Dynamics. Chemistry of Materials, 2019, 31, 9472-9479.	3.2	18
18	Interfacial Residual Stress Relaxation in Perovskite Solar Cells with Improved Stability. Advanced Materials, 2019, 31, e1904408.	11.1	259

#	Article	IF	Citations
19	Efficient, stable solar cells by using inherent bandgap of Î±-phase formamidinium lead iodide. Science, 2019, 366, 749-753.	6.0	936
20	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
21	Templateâ€Assisted Formation of Highâ€Quality Î±â€Phase HC(NH 2) 2 PbI 3 Perovskite Solar Cells. Advanced Science, 2019, 6, 1901591.	5.6	29
22	Advanced partial nucleation for single-phase FA0.92MA0.08PbI3-based high-efficiency perovskite solar cells. Science China Materials, 2019, 62, 1846-1856.	3.5	10
23	Toward a New Energy Era: Selfâ€Driven Integrated Systems Based on Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900320.	3.1	9
24	Induced dielectric behavior in high dense AlxLa1-xTiO3 (xâ€‰=â€‰0.2â€“0.8) nanospheres. Journal of Materials Science: Materials in Electronics, 2019, 30, 20253-20264.	1.1	33
25	Defect Engineering of Grain Boundaries in Leadâ€Free Halide Double Perovskites for Better Optoelectronic Performance. Advanced Functional Materials, 2019, 29, 1805870.	7.8	30
26	Pressureâ€Induced Emission (PIE) and Phase Transition of a Twoâ€dimensional Halide Double Perovskite (BA)₄AgBiBr₈ (BA=CH₃(CH₂)₃NH₃⁺). Angewandte Chemie, 2019, 131, 15393-15397.	1.6	36
27	A Butterflyâ€Inspired Hierarchical Lightâ€Trapping Structure towards a Highâ€Performance Polarizationâ€Sensitive Perovskite Photodetector. Angewandte Chemie, 2019, 131, 16608-16614.	1.6	26
28	Pressureâ€Induced Emission (PIE) and Phase Transition of a Twoâ€dimensional Halide Double Perovskite (BA)₄AgBiBr₈ (BA=CH₃(CH₂)₃NH₃⁺). Angewandte Chemie - International Edition, 2019, 58, 15249-15253.	7.2	105
29	Enhanced yield-mobility products in hybrid halide Ruddlesdenâ€“Popper compounds with aromatic ammonium spacers. Dalton Transactions, 2019, 48, 14019-14026.	1.6	20
30	Nanoscale hybrid multidimensional perovskites with alternating cations for high performance photovoltaic. Nano Energy, 2019, 65, 104050.	8.2	44
31	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
32	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
33	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
34	Highâ€Performance Perovskite Solar Cells with Enhanced Environmental Stability Based on a (<i>p</i>â€FC₆H₄C₂H₄NH₃)₂[PbI₄] Capping Layer. Advanced Energy Materials, 2019, 9, 1802595.	10.2	213
35	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
36	Improved Environmental Stability and Solar Cell Efficiency of (MA,FA)PbI₃ Perovskite Using a Wide-Band-Gap 1D Thiazolium Lead Iodide Capping Layer Strategy. ACS Energy Letters, 2019, 4, 1763-1769.	8.8	118

#	Article	IF	Citations
37	Ultrahydrophobic 3D/2D fluoroarene bilayer-based water-resistant perovskite solar cells with efficiencies exceeding 22%. Science Advances, 2019, 5, eaaw2543.	4.7	524
38	Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. ACS Energy Letters, 2019, 4, 1521-1527.	8.8	130
39	Recent advances in controlling the crystallization of two-dimensional perovskites for optoelectronic device. Frontiers of Physics, 2019, 14, 1.	2.4	42
40	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
41	Highly Efficient and Stable Solar Cells Based on Crystalline Oriented 2D/3D Hybrid Perovskite. Advanced Materials, 2019, 31, e1901242.	11.1	210
42	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
43	Perovskite films with a sacrificial cation for solar cells with enhanced stability based on carbon electrodes. Journal of Alloys and Compounds, 2019, 797, 811-819.	2.8	21
44	Unique characteristics of 2D Ruddlesdenâ€"Popper (2DRP) perovskite for future photovoltaic application. Journal of Materials Chemistry A, 2019, 7, 13860-13872.	5.2	84
45	An overview of the decompositions in organo-metal halide perovskites and shielding with 2-dimensional perovskites. Renewable and Sustainable Energy Reviews, 2019, 109, 160-186.	8.2	42
46	Reduced-Dimensional Perovskite Enabled by Organic Diamine for Efficient Photovoltaics. Journal of Physical Chemistry Letters, 2019, 10, 2349-2356.	2.1	104
47	Catalystâ€Free and Morphologyâ€Controlled Growth of 2D Perovskite Nanowires for Polarized Light Detection. Advanced Optical Materials, 2019, 7, 1900039.	3.6	35
48	Fusing Nanowires into Thin Films: Fabrication of Gradedâ€Heterojunction Perovskite Solar Cells with Enhanced Performance. Advanced Energy Materials, 2019, 9, 1900243.	10.2	45
49	Band engineering of two-dimensional Ruddlesdenâ€"Popper perovskites for solar utilization: the relationship between chemical components and electronic properties. Journal of Materials Chemistry A, 2019, 7, 11530-11536.	5.2	17
50	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
51	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
52	Caffeine Improves the Performance and Thermal Stability of Perovskite Solar Cells. Joule, 2019, 3, 1464-1477.	11.7	448
53	Ionic dipolar switching hinders charge collection in perovskite solar cells with normal and inverted hysteresis. Solar Energy Materials and Solar Cells, 2019, 195, 291-298.	3.0	29
54	Interfacial charge behavior modulation in 2D/3D perovskite heterostructure for potential high-performance solar cells. Nano Energy, 2019, 59, 715-720.	8.2	108

#	Article	IF	Citations
55	(C6H5C2H4NH3)2FAn-1PbnI3n+1: A quasi two-dimensional perovskite with high performance produced via two-step solution method. Journal of Alloys and Compounds, 2019, 788, 954-960.	2.8	11
56	Highly efficient and thermal stable guanidinium-based two-dimensional perovskite solar cells via partial substitution with hydrophobic ammonium. Science China Chemistry, 2019, 62, 859-865.	4.2	32
57	Stable and Reproducible 2D/3D Formamidiniumâ€"Leadâ€"Iodide Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 2486-2493.	2.5	64
58	Dionâ€"Jacobson Two-Dimensional Perovskite Solar Cells Based on Benzene Dimethanammonium Cation. Nano Letters, 2019, 19, 2588-2597.	4.5	155
59	Vapor Exchange Deposition of an Air-Stable Lead Iodide Adduct on 19% Efficient 1.8 cm² Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 2506-2514.	2.5	19
60	Solutionâ€Processable Perovskite Solar Cells toward Commercialization: Progress and Challenges. Advanced Functional Materials, 2019, 29, 1807661.	7.8	149
61	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
62	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
63	Stable, Efficient Near-Infrared Light-Emitting Diodes Enabled by Î±/Î´ Phase Modulation. Journal of Physical Chemistry Letters, 2019, 10, 2101-2107.	2.1	14
64	Verification and mitigation of ion migration in perovskite solar cells. APL Materials, 2019, 7, .	2.2	179
65	Perovskite Photovoltaics: The Significant Role of Ligands in Film Formation, Passivation, and Stability. Advanced Materials, 2019, 31, e1805702.	11.1	192
66	Constructing CsPbBr₃ Cluster Passivatedâ€Triple Cation Perovskite for Highly Efficient and Operationally Stable Solar Cells. Advanced Functional Materials, 2019, 29, 1809180.	7.8	64
67	Waterâ€Soluble Triazolium Ionicâ€Liquidâ€Induced Surface Selfâ€Assembly to Enhance the Stability and Efficiency of Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1900417.	7.8	145
68	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
69	A Review of Perovskites Solar Cell Stability. Advanced Functional Materials, 2019, 29, 1808843.	7.8	835
70	<i>In situ</i> 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
71	Singleâ€Walled Carbon Nanotubes in Emerging Solar Cells: Synthesis and Electrode Applications. Advanced Energy Materials, 2019, 9, 1801312.	10.2	86
72	Control of Crystal Growth toward Scalable Fabrication of Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1807047.	7.8	111

#	Article	IF	Citations
73	Metal Halide Perovskite Materials for Solar Cells with Longâ€Term Stability. Advanced Energy Materials, 2019, 9, 1802671.	10.2	97
74	Integration of phenylammoniumiodide (PAI) as a surface coating molecule towards ambient stable MAPbI3 perovskite for solar cell application. Solar Energy Materials and Solar Cells, 2019, 191, 316-328.	3.0	17
75	Vapor-Assisted Ex-Situ Doping of Carbon Nanotube toward Efficient and Stable Perovskite Solar Cells. Nano Letters, 2019, 19, 2223-2230.	4.5	72
76	A Review on Additives for Halide Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902492.	10.2	240
77	Review on Practical Interface Engineering of Perovskite Solar Cells: From Efficiency to Stability. Solar Rrl, 2020, 4, 1900257.	3.1	119
78	Organicâ€Inorganic Halide Perovskites: From Crystallization of Polycrystalline Films to Solar Cell Applications. Solar Rrl, 2020, 4, 1900200.	3.1	43
79	Additive Engineering for Efficient and Stable Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902579.	10.2	477
80	Aâ€Site Management for Highly Crystalline Perovskites. Advanced Materials, 2020, 32, e1904702.	11.1	62
81	Steric Mixedâ€Cation 2D Perovskite as a Methylammonium Locker to Stabilize MAPbI₃. Angewandte Chemie, 2020, 132, 1485-1489.	1.6	18
82	Steric Mixedâ€Cation 2D Perovskite as a Methylammonium Locker to Stabilize MAPbI₃. Angewandte Chemie - International Edition, 2020, 59, 1469-1473.	7.2	60
83	Chemi-Structural Stabilization of Formamidinium Lead Iodide Perovskite by Using Embedded Quantum Dots. ACS Energy Letters, 2020, 5, 418-427.	8.8	87
84	Orientationally engineered 2D/3D perovskite for high efficiency solar cells. Sustainable Energy and Fuels, 2020, 4, 324-330.	2.5	35
85	The mechanism of universal green antisolvents for intermediate phase controlled high-efficiency formamidinium-based perovskite solar cells. Materials Horizons, 2020, 7, 934-942.	6.4	51
86	Surface passivation of perovskite thin films by phosphonium halides for efficient and stable solar cells. Journal of Materials Chemistry A, 2020, 8, 2039-2046.	5.2	58
87	New Strategies for Defect Passivation in Highâ€Efficiency Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903090.	10.2	237
88	Chemical Approaches for Stabilizing Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903249.	10.2	132
89	Surfaceâ€2D/Bulkâ€3D Heterophased Perovskite Nanograins for Longâ€Termâ€Stable Lightâ€Emitting Diodes. Advanced Materials, 2020, 32, e1905674.	11.1	59
90	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

#	Article	IF	Citations
91	Facile Formation of 2Dâ€"3D Heterojunctions on Perovskite Thin Film Surfaces for Efficient Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 1159-1168.	4.0	55
92	Achieving Reproducible and High-Efficiency (>21%) Perovskite Solar Cells with a Presynthesized FAPbI₃ Powder. ACS Energy Letters, 2020, 5, 360-366.	8.8	139
93	Dual-passivation of ionic defects for highly crystalline perovskite. Nano Energy, 2020, 68, 104320.	8.2	55
94	Reconfiguration of Interfacial and Bulk Energy Band Structure for Highâ€Performance Organic and Thermalâ€"Stability Enhanced Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900482.	3.1	16
95	Roadmap on halide perovskite and related devices. Nanotechnology, 2020, 31, 152001.	1.3	24
96	Degradation mechanism of flexible perovskite solar cells: Investigated by tracking of the heterojunction property. Materials Research Bulletin, 2020, 123, 110696.	2.7	8
97	Ion Migration: A â€œDoubleâ€Edged Swordâ€•for Halideâ€Perovskiteâ€Based Electronic Devices. Small Methods, 2020, 4, 1900552.	4.6	127
98	Shallow Iodine Defects Accelerate the Degradation of Î±-Phase Formamidinium Perovskite. Joule, 2020, 4, 2426-2442.	11.7	173
99	Using Monovalent- to Trivalent-Cation Hybrid Perovskites for Producing High-Efficiency Solar Cells: Electrical Response, Impedance, and Stability. ACS Applied Energy Materials, 2020, 3, 10349-10361.	2.5	20
100	A data review on certified perovskite solar cells efficiency and I-V metrics: Insights into materials selection and process scaling up. Solar Energy, 2020, 209, 21-29.	2.9	5
101	An <i>in situ</i> cross-linked 1D/3D perovskite heterostructure improves the stability of hybrid perovskite solar cells for over 3000 h operation. Energy and Environmental Science, 2020, 13, 4344-4352.	15.6	142
102	Reversible multicolor chromism in layered formamidinium metal halide perovskites. Nature Communications, 2020, 11, 5234.	5.8	48
103	Effect of Different Bromine Sources on the Dual Cation Mixed Halide Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 8285-8294.	2.5	8
104	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
105	Molecular Interaction Regulates the Performance and Longevity of Defect Passivation for Metal Halide Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 20071-20079.	6.6	145
106	Minimizing the Trade-Off between Photocurrent and Photovoltage in Triple-Cation Mixed-Halide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 10188-10195.	2.1	36
107	Stabilizing Î³â€CsPbI₃ Perovskite via Phenylethylammonium for Efficient Solar Cells with Openâ€Circuit Voltage over 1.3Â V. Small, 2020, 16, e2005246.	5.2	67
108	Sodium Dodecylbenzene Sulfonate Interface Modification of Methylammonium Lead Iodide for Surface Passivation of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 52643-52651.	4.0	25

#	Article	IF	Citations
109	Barrier Designs in Perovskite Solar Cells for Longâ€Term Stability. Advanced Energy Materials, 2020, 10, 2001610.	10.2	84
110	High-Efficiency Perovskite Solar Cells. Chemical Reviews, 2020, 120, 7867-7918.	23.0	1,480
111	Stabilizing Organicâ€"Inorganic Lead Halide Perovskite Solar Cells With Efficiency Beyond 20%. Frontiers in Chemistry, 2020, 8, 592.	1.8	30
112	PEAI-Based Interfacial Layer for High-Efficiency and Stable Solar Cells Based on a MACl-Mediated Grown FA_{0.94}MA_{0.06}PbI₃ Perovskite. ACS Applied Materials & Interfaces, 2020, 12, 37197-37207.	4.0	62
113	Eradication of non-capacitive effects with potassium incorporation in perovskite solar cells. Journal of Applied Physics, 2020, 128, 055501.	1.1	2
114	Solid-phase hetero epitaxial growth of Î±-phase formamidinium perovskite. Nature Communications, 2020, 11, 5514.	5.8	71
115	Bromine Incorporation and Suppressed Cation Rotation in Mixed-Halide Perovskites. ACS Nano, 2020, 14, 15107-15118.	7.3	23
116	Chemically Stable Black Phase CsPbI₃ Inorganic Perovskites for Highâ€Efficiency Photovoltaics. Advanced Materials, 2020, 32, e2001025.	11.1	123
117	Molecular Engineering of Organic Spacer Cations for Efficient and Stable Formamidinium Perovskite Solar Cell. Advanced Energy Materials, 2020, 10, 2001759.	10.2	48
118	Effect of halide-mixing on tolerance factor and charge-carrier dynamics in (CH3NH3PbBr3â^'xClx) perovskites powders. Journal of Materials Science: Materials in Electronics, 2020, 31, 19415-19428.	1.1	4
119	Surfactant Sodium Dodecyl Benzene Sulfonate Improves the Efficiency and Stability of Airâ€Processed Perovskite Solar Cells with Negligible Hysteresis. Solar Rrl, 2020, 4, 2000376.	3.1	30
120	Passivation of defects in perovskite solar cell: From a chemistry point of view. Nano Energy, 2020, 77, 105237.	8.2	92
121	Double-Halide Composition-Engineered SnO₂-Triple Cation Perovskite Solar Cells Demonstrating Outstanding Performance and Stability. ACS Applied Energy Materials, 2020, 3, 8595-8605.	2.5	17
122	Defect passivation strategies in perovskites for an enhanced photovoltaic performance. Energy and Environmental Science, 2020, 13, 4017-4056.	15.6	235
123	Concerted regulation on vertical orientation and film quality of two-dimensional ruddlesden-popper perovskite layer for efficient solar cells. Science China Chemistry, 2020, 63, 1675-1683.	4.2	9
124	A review: crystal growth for high-performance all-inorganic perovskite solar cells. Energy and Environmental Science, 2020, 13, 1971-1996.	15.6	156
125	Crystal Site Feature Embedding Enables Exploration of Large Chemical Spaces. Matter, 2020, 3, 433-448.	5.0	33
126	Structured Perovskite Light Absorbers for Efficient and Stable Photovoltaics. Advanced Materials, 2020, 32, e1903937.	11.1	69

#	Article	IF	Citations
127	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
128	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
129	Moisture-Driven Formation and Growth of Quasi-2-D Organolead Halide Perovskite Crystallites. ACS Applied Energy Materials, 2020, 3, 6280-6290.	2.5	11
130	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
131	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
132	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
133	Stabilization of Black Perovskite Phase in FAPbI₃ and CsPbI₃. ACS Energy Letters, 2020, 5, 1974-1985.	8.8	203
134	FAPbI₃â€Based Perovskite Solar Cells Employing Hexylâ€Based Ionic Liquid with an Efficiency Over 20% and Excellent Longâ€Term Stability. Advanced Functional Materials, 2020, 30, 2002964.	7.8	172
135	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
136	Structural Regulation for Highly Efficient and Stable Perovskite Solar Cells via Mixed-Vapor Deposition. ACS Applied Energy Materials, 2020, 3, 6544-6551.	2.5	10
137	Layered perovskite materials: key solutions for highly efficient and stable perovskite solar cells. Reports on Progress in Physics, 2020, 83, 086502.	8.1	48
138	Stabilizing High Efficiency Perovskite Solar Cells with 3D-2D Heterostructures. Joule, 2020, 4, 975-979.	11.7	37
139	Ion migration in Br-doped MAPbI3 and its inhibition mechanisms investigated via quantum dynamics simulations. Physical Chemistry Chemical Physics, 2020, 22, 7778-7786.	1.3	10
140	Recent Advances in Improving Phase Stability of Perovskite Solar Cells. Small Methods, 2020, 4, 1900877.	4.6	74
141	Selfâ€Crystallized Multifunctional 2D Perovskite for Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 1910620.	7.8	68
142	A Polymerizationâ€Assisted Grain Growth Strategy for Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2020, 32, e1907769.	11.1	161
143	Synthesis and characterization of Cs2Pb1-xBixCl2I2 (0 â‰ x â‰ 0.15) derivative perovskite. Materials Chemistry and Physics, 2020, 247, 122870.	2.0	5
144	Non-equilibrium dynamics, materials and structures for hot carrier solar cells: a detailed review. Semiconductor Science and Technology, 2020, 35, 073002.	1.0	23

#	Article	IF	Citations
145	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
146	Efficient, stable silicon tandem cells enabled by anion-engineered wide-bandgap perovskites. Science, 2020, 368, 155-160.	6.0	420
147	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
148	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
149	Degradation Mechanism of Perovskite Lightâ€Emitting Diodes: An In Situ Investigation via Electroabsorption Spectroscopy and Device Modelling. Advanced Functional Materials, 2020, 30, 1910464.	7.8	41
150	Stabilizing Formamidinium Lead Iodide Perovskite by Sulfonylâ€Functionalized Phenethylammonium Salt via Crystallization Control and Surface Passivation. Solar Rrl, 2020, 4, 2000069.	3.1	33
151	Organicâ€Saltâ€Assisted Crystal Growth and Orientation of Quasiâ€2D Ruddlesdenâ€"Popper Perovskites for Solar Cells with Efficiency over 19%. Advanced Materials, 2020, 32, e2001470.	11.1	162
152	Intrinsic and environmental stability issues of perovskite photovoltaics. Progress in Energy, 2020, 2, 022002.	4.6	33
153	Airâ€Stable Highly Crystalline Formamidinium Perovskite 1D Structures for Ultrasensitive Photodetectors. Advanced Functional Materials, 2020, 30, 1908894.	7.8	27
154	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
155	Advances in two-dimensional organicâ€"inorganic hybrid perovskites. Energy and Environmental Science, 2020, 13, 1154-1186.	15.6	420
156	Strategies for Improving the Stability of Tinâ€Based Perovskite (ASnX₃) Solar Cells. Advanced Science, 2020, 7, 1903540.	5.6	123
157	Structural changes and band gap tunability with incorporation of n-butylammonium iodide in perovskite thin film. Heliyon, 2020, 6, e03364.	1.4	11
158	Stability of Perovskite Light Sources: Status and Challenges. Advanced Optical Materials, 2020, 8, 1902012.	3.6	54
159	Size-selected and surface-passivated CsPbBr₃ perovskite nanocrystals for self-enhanced electrochemiluminescence in aqueous media. Nanoscale, 2020, 12, 7321-7329.	2.8	28
160	From Defects to Degradation: A Mechanistic Understanding of Degradation in Perovskite Solar Cell Devices and Modules. Advanced Energy Materials, 2020, 10, 1904054.	10.2	256
161	Stable and Monochromatic All-Inorganic Halide Perovskite Assisted by Hollow Carbon Nitride Nanosphere for Ratiometric Electrochemiluminescence Bioanalysis. Analytical Chemistry, 2020, 92, 4123-4130.	3.2	57
162	Interfacial and structural modifications in perovskite solar cells. Nanoscale, 2020, 12, 5719-5745.	2.8	39

#	Article	IF	Citations
163	Temperature-Dependent Dynamic Carrier Process of FAPbI₃ Nanocrystalsâ€™ Film. Journal of Physical Chemistry C, 2020, 124, 5093-5098.	1.5	14
164	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
165	Stable and Highâ€Efficiency Methylammoniumâ€Free Perovskite Solar Cells. Advanced Materials, 2020, 32, e1905502.	11.1	131
166	Engineering Multiphase Metal Halide Perovskites Thin Films for Stable and Efficient Solar Cells. Advanced Energy Materials, 2020, 10, 1903221.	10.2	16
167	Anisotropy of Excitons in Two-Dimensional Perovskite Crystals. ACS Nano, 2020, 14, 2156-2161.	7.3	52
168	Emerging Conductive Atomic Force Microscopy for Metal Halide Perovskite Materials and Solar Cells. Advanced Energy Materials, 2020, 10, 1903922.	10.2	63
169	Stability Improvement and Performance Reproducibility Enhancement of Perovskite Solar Cells Following (FA/MA/Cs)PbI_{3â€“<i>x</i>}Br_{<i>x</i>}/(CH₃)₃SPbI₃ Dimensionality Engineering. ACS Applied Energy Materials, 2020, 3, 2465-2477.	2.5	44
170	Elucidating the Doping Mechanism in Fluoreneâ€“Dithiophene-Based Hole Selective Layer Employing Ultrahydrophobic Ionic Liquid Dopant. ACS Applied Materials & Interfaces, 2020, 12, 9395-9403.	4.0	26
171	Stoichiometry Control for the Tuning of Grain Passivation and Domain Distribution in Green Quasiâ€2D Metal Halide Perovskite Films and Lightâ€Emitting Diodes. Advanced Functional Materials, 2020, 30, 2001816.	7.8	41
172	Fluoroaromatic Cationâ€Assisted Planar Junction Perovskite Solar Cells with Improved <i>V</i>_{OC} and Stability: The Role of Fluorination Position. Solar Rrl, 2020, 4, 2000107.	3.1	68
173	Controlled crystallinity and morphologies of 2D Ruddlesden-Popper perovskite films grown without anti-solvent for solar cells. Chemical Engineering Journal, 2020, 394, 124959.	6.6	33
174	Interface passivation treatment by halogenated low-dimensional perovskites for high-performance and stable perovskite photovoltaics. Nano Energy, 2020, 73, 104753.	8.2	57
175	Boosting the Conversion Efficiency Over 20% in MAPbI₃ Perovskite Planar Solar Cells by Employing a Solution-Processed Aluminum-Doped Nickel Oxide Hole Collector. ACS Applied Materials & Interfaces, 2020, 12, 22958-22970.	4.0	42
176	Recent Progress on Interface Engineering for Highâ€Performance, Stable Perovskites Solar Cells. Advanced Materials Interfaces, 2020, 7, 2000118.	1.9	34
177	Embedding of WO3 nanocrystals with rich oxygen-vacancies in solution processed perovskite film for improved photovoltaic performance. Journal of Power Sources, 2020, 461, 228175.	4.0	17
178	Hydrazinium cation mixed FAPbI3-based perovskite with 1D/3D hybrid dimension structure for efficient and stable solar cells. Chemical Engineering Journal, 2021, 403, 125724.	6.6	33
179	Evaporated potassium chloride for double-sided interfacial passivation in inverted planar perovskite solar cells. Journal of Energy Chemistry, 2021, 54, 493-500.	7.1	28
180	Stable and Efficient Methylammoniumâ€, Cesiumâ€, and Bromideâ€Free Perovskite Solar Cells by Inâ€Situ Interlayer Formation. Advanced Functional Materials, 2021, 31, 2007520.	7.8	34

#	Article	IF	Citations
181	Pseudohalide Additives Enhanced Perovskite Photodetectors. Advanced Optical Materials, 2021, 9, 2001587.	3.6	15
182	Perovskite Passivation Strategies for Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, .	3.1	23
183	Advanced Characterization Techniques for Overcoming Challenges of Perovskite Solar Cell Materials. Advanced Energy Materials, 2021, 11, 2001753.	10.2	29
184	Enhanced efficiency and stability of quasi-2D/3D perovskite solar cells by thermal assisted blade coating method. Chemical Engineering Journal, 2021, 405, 126992.	6.6	20
185	Superior photovoltaics/optoelectronics of two-dimensional halide perovskites. Journal of Energy Chemistry, 2021, 57, 69-82.	7.1	20
186	Toward Efficient and Stable Perovskite Solar Cells by 2D Interface Energy Band Alignment. Advanced Materials Interfaces, 2021, 8, .	1.9	19
187	Two-dimensional halide perovskite-based solar cells: Strategies for performance and stability enhancement. FlatChem, 2021, 25, 100213.	2.8	4
188	Poly(<i>N</i>,<i>N</i>â€²â€bisâ€4â€butylphenylâ€«<i>N</i>,<i>N</i>â€²â€bisphenyl)benzidineâ€Based Interfacial Passivation Strategy Promoting Efficiency and Operational Stability of Perovskite Solar Cells in Regular Architecture. Advanced Materials, 2021, 33, e2006087.	11.1	128
189	Compositionally Designed 2D Ruddlesdenâ€"Popper Perovskites for Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, 2000661.	3.1	8
190	Effects of A site doping on the crystallization of perovskite films. Journal of Materials Chemistry A, 2021, 9, 1372-1394.	5.2	43
191	Impact of grain size on the optoelectronic performance of 2D Ruddlesdenâ€"Popper perovskite-based photodetectors. Journal of Materials Chemistry C, 2021, 9, 110-116.	2.7	26
192	Surface Engineering of Ambient-Air-Processed Cesium Lead Triiodide Layers for Efficient Solar Cells. Joule, 2021, 5, 183-196.	11.7	308
193	Progress in recycling organicâ€"inorganic perovskite solar cells for eco-friendly fabrication. Journal of Materials Chemistry A, 2021, 9, 2612-2627.	5.2	17
194	Dynamic structural property of organic-inorganic metal halide perovskite. IScience, 2021, 24, 101959.	1.9	29
195	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
196	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
197	Formamidine disulfide oxidant as a localised electron scavenger for >20% perovskite solar cell modules. Energy and Environmental Science, 2021, 14, 4903-4914.	15.6	63
198	Top transparent electrodes for fabricating semitransparent organic and perovskite solar cells. Journal of Materials Chemistry C, 2021, 9, 9102-9123.	2.7	17

#	Article	IF	Citations
200	Passivation and process engineering approaches of halide perovskite films for high efficiency and stability perovskite solar cells. Energy and Environmental Science, 2021, 14, 2906-2953.	15.6	170
201	Novel design strategies for perovskite materials with improved stability and suitable band gaps. Physical Chemistry Chemical Physics, 2021, 23, 20288-20297.	1.3	1
202	Engineering fluorinated-cation containing inverted perovskite solar cells with an efficiency of >21% and improved stability towards humidity. Nature Communications, 2021, 12, 52.	5.8	94
203	Research progress of light irradiation stability of functional layers in perovskite solar cells. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 098402.	0.2	2
204	Perovskite solar cells. , 2021, , 249-281.		5
205	All-inorganic perovskite quantum dots as light-harvesting, interfacial, and light-converting layers toward solar cells. Journal of Materials Chemistry A, 2021, 9, 18947-18973.	5.2	19
206	Zwitterions: promising interfacial/doping materials for organic/perovskite solar cells. New Journal of Chemistry, 2021, 45, 15118-15130.	1.4	15
207	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
208	INTRODUCTION TO TWO-DIMENSIONAL MATERIALS. Surface Review and Letters, 2021, 28, 2140005.	0.5	14
209	Layered Perovskites Enhanced Perovskite Photodiodes. Journal of Physical Chemistry Letters, 2021, 12, 1726-1733.	2.1	29
210	A review of experimental and computational attempts to remedy stability issues of perovskite solar cells. Heliyon, 2021, 7, e06211.	1.4	15
211	Advances to Highâ€Performance Blackâ€Phase FAPbI₃ Perovskite for Efficient and Stable Photovoltaics. Small Structures, 2021, 2, 2000130.	6.9	81
212	High-Valent Iodoplumbate-Rich Perovskite Precursor Solution <i>via</i> Solar Illumination for Reproducible Power Conversion Efficiency. Journal of Physical Chemistry Letters, 2021, 12, 1676-1682.	2.1	12
213	Reconfiguring the band-edge states of photovoltaic perovskites by conjugated organic cations. Science, 2021, 371, 636-640.	6.0	184
214	Surface structure of quasi-2D perovskite PEA_{2m}MA_{nâˆ’2m}Pb_nI_{3n}(n â‰« m). Applied Physics Express, 2021, 14, 031006.	1.1	0
215	Recent Progress in Perovskite Solar Cells Modified by Sulfur Compounds. Solar Rrl, 2021, 5, 2000713.	3.1	17
216	Discovery of a New Intermediate Enables Oneâ€Step Deposition of Highâ€Quality Perovskite Films via Solvent Engineering. Solar Rrl, 2021, 5, 2000712.	3.1	24
217	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

#	Article	IF	Citations
218	2D Nanomaterials for Effective Energy Scavenging. Nano-Micro Letters, 2021, 13, 82.	14.4	36
219	Bulk Passivation and Interfacial Passivation for Perovskite Solar Cells: Which One is More Effective?. Advanced Materials Interfaces, 2021, 8, 2002078.	1.9	34
220	Suppressing the Î´-Phase and Photoinstability through a Hypophosphorous Acid Additive in Carbon-Based Mixed-Cation Perovskite Solar Cells. Journal of Physical Chemistry C, 2021, 125, 6585-6592.	1.5	9
221	A Universal Approach for Controllable Synthesis of <i>n</i>â€Specific Layered 2D Perovskite Nanoplates. Angewandte Chemie - International Edition, 2021, 60, 7866-7872.	7.2	24
222	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
223	A Universal Approach for Controllable Synthesis of n â€Specific Layered 2D Perovskite Nanoplates. Angewandte Chemie, 2021, 133, 7945-7951.	1.6	6
224	Formation of Highâ€Performance Multiâ€Cation Halide Perovskites Photovoltaics by Î´â€CsPbI₃/Î´â€RbPbI₃ Seedâ€Assisted Heterogeneous Nucleation. Advanced Energy Materials, 2021, 11, 2003785.	10.2	32
225	Chemically tailored molecular surface modifiers for efficient and stable perovskite photovoltaics. SmartMat, 2021, 2, 33-37.	6.4	47
226	Origin, Influence, and Countermeasures of Defects in Perovskite Solar Cells. Small, 2021, 17, e2005495.	5.2	61
227	Efficient and Stable Perovskite Solar Cells with a Superhydrophobic Two-Dimensional Capping Layer. Journal of Physical Chemistry Letters, 2021, 12, 4052-4058.	2.1	16
228	Stabilization of formamidinium lead triiodide Î±-phase with isopropylammonium chloride for perovskite solar cells. Nature Energy, 2021, 6, 419-428.	19.8	157
229	Polymer strategies for high-efficiency and stable perovskite solar cells. Nano Energy, 2021, 82, 105712.	8.2	64
230	Review on persistent challenges of perovskite solar cellsâ€™ stability. Solar Energy, 2021, 218, 469-491.	2.9	80
231	Structural Stability of Formamidinium- and Cesium-Based Halide Perovskites. ACS Energy Letters, 2021, 6, 1942-1969.	8.8	76
232	Spacer Engineering Using Aromatic Formamidinium in 2D/3D Hybrid Perovskites for Highly Efficient Solar Cells. ACS Nano, 2021, 15, 7811-7820.	7.3	99
233	Efficient Perovskite Solar Cells with a Gradient Light Absorption Layer and Low VOC Loss Obtained by Interface Engineering. ACS Applied Energy Materials, 2021, 4, 3584-3592.	2.5	2
234	Multiple functional groups synergistically improve the performance of inverted planar perovskite solar cells. Nano Energy, 2021, 82, 105742.	8.2	79
235	IIâ€“VI Organicâ€“Inorganic Hybrid Nanostructures with Greatly Enhanced Optoelectronic Properties, Perfectly Ordered Structures, and Shelf Stability of Over 15 Years. ACS Nano, 2021, 15, 10565-10576.	7.3	9

#	Article	IF	Citations
236	Efficient and stable inverted perovskite solar cells incorporating 4-Fluorobenzylammonium iodide. Organic Electronics, 2021, 92, 106124.	1.4	10
237	Interfacial stabilization for inverted perovskite solar cells with long-term stability. Science Bulletin, 2021, 66, 991-1002.	4.3	45
238	Halide Perovskites: A New Era of Solutionâ€Processed Electronics. Advanced Materials, 2021, 33, e2005000.	11.1	138
239	Understanding the Effects of Fluorine Substitution in Lithium Salt on Photovoltaic Properties and Stability of Perovskite Solar Cells. ACS Energy Letters, 2021, 6, 2218-2228.	8.8	51
240	Defect compensation in formamidiniumâ€“caesium perovskites for highly efficient solar mini-modules with improved photostability. Nature Energy, 2021, 6, 633-641.	19.8	215
241	Perspectives of Open-Air Processing to Enable Perovskite Solar Cell Manufacturing. Frontiers in Energy Research, 2021, 9, .	1.2	10
242	Mechanism and Timescales of Reversible pâ€Doping of Methylammonium Lead Triiodide by Oxygen. Advanced Materials, 2021, 33, e2100211.	11.1	17
243	3D/2D passivation as a secret to success for polycrystalline thin-film solar cells. Joule, 2021, 5, 1057-1073.	11.7	48
244	Opportunities and challenges of inorganic perovskites in high-performance photodetectors. Journal Physics D: Applied Physics, 2021, 54, 293002.	1.3	35
245	Phenyl Ethylammonium Iodide introduction into inverted triple cation perovskite solar cells for improved VOC and stability. Organic Electronics, 2021, 93, 106121.	1.4	3
246	Uniform Stepped Interfacial Energy Level Structure Boosts Efficiency and Stability of CsPbI₂Br Solar Cells. Advanced Functional Materials, 2021, 31, 2103316.	7.8	18
247	Lowâ€Dimensional Inorganic Tin Perovskite Solar Cells Prepared by Templated Growth. Angewandte Chemie, 2021, 133, 16466-16472.	1.6	13
248	Layered Hybrid Formamidinium Lead Iodide Perovskites: Challenges and Opportunities. Accounts of Chemical Research, 2021, 54, 2729-2740.	7.6	48
249	Unraveling the degradation process of 2D passivated and Cs stabilized FAPbI₃ by optical pump THz probe spectroscopy. Optical Materials Express, 2021, 11, 1874.	1.6	1
250	Tailored Key Parameters of Perovskite for High-Performance Photovoltaics. Accounts of Materials Research, 2021, 2, 447-457.	5.9	5
251	Benzodithiopheneâ€Based Spacers for Layered and Quasiâ€Layered Lead Halide Perovskite Solar Cells. ChemSusChem, 2021, 14, 3001-3009.	3.6	8
252	Recent Progress on Formamidiniumâ€Dominated Perovskite Photovoltaics. Advanced Energy Materials, 2022, 12, 2100690.	10.2	45
253	A Microstructural Analysis of 2D Halide Perovskites: Stability and Functionality. Frontiers in Nanotechnology, 2021, 3, .	2.4	3

#	Article	IF	Citations
254	Lowâ€Dimensional Inorganic Tin Perovskite Solar Cells Prepared by Templated Growth. Angewandte Chemie - International Edition, 2021, 60, 16330-16336.	7.2	48
255	Dopant-free Hole-transporting Materials for CH₃NH₃PbI₃ Inverted Perovskite Solar Cells with an Approximate Efficiency of 20%. ACS Applied Energy Materials, 2021, 4, 5756-5766.	2.5	16
256	Recent progress in stabilizing perovskite solar cells through two-dimensional modification. APL Materials, 2021, 9, .	2.2	12
257	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
258	Mitigating ion migration in perovskite solar cells. Trends in Chemistry, 2021, 3, 575-588.	4.4	81
259	Cation Engineering for Effective Defect Passivation to Improve Efficiency and Stability of FA0.5MA0.5PbI3 Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 7654-7660.	2.5	3
260	Perovskite (PEA)2Pb(I1-xBrx)4 single crystal thin films for improving optoelectronic performances. Optical Materials, 2021, 117, 111074.	1.7	6
261	Improving Thermal Stability of Perovskite Solar Cells by Suppressing Ion Migration Using Copolymer Grain Encapsulation. Chemistry of Materials, 2021, 33, 6120-6135.	3.2	22
262	Stable Photodetectors Based on Formamidinium Lead Iodide Quantum Well Perovskite Nanoparticles Fabricated with Excess Organic Cations. ACS Applied Nano Materials, 2021, 4, 7788-7799.	2.4	9
263	Beyond the Limit of Goldschmidt Tolerance Factor: Crystal Surface Engineering to Boost the Î±â€Phase Stability of Formamidiniumâ€Only Hybrid Inorganicâ€“Organic Perovskites. Solar Rrl, 2021, 5, 2100188.	3.1	8
264	Surface Stabilization of a Formamidinium Perovskite Solar Cell Using Quaternary Ammonium Salt. ACS Applied Materials & Interfaces, 2021, 13, 37052-37062.	4.0	23
265	Interfacial Embedding of Laserâ€Manufactured Fluorinated Gold Clusters Enabling Stable Perovskite Solar Cells with Efficiency Over 24%. Advanced Materials, 2021, 33, e2101590.	11.1	62
266	Origin of anomalous band-gap bowing in two-dimensional tin-lead mixed perovskite alloys. Physical Review B, 2021, 104, .	1.1	9
267	Defect Passivation Effect of Chemical Groups on Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 34161-34170.	4.0	33
268	Small-Area Perovskite Photodiodes With High Detectivity and Stability. IEEE Electron Device Letters, 2021, 42, 1200-1203.	2.2	2
269	Formamidinium Lead Iodide Perovskite Films with Polyvinylpyrrolidone Additive for Active Layer in Perovskite Solar Cells, Enhanced Stability and Electrical Conductivity. Materials, 2021, 14, 4594.	1.3	4
270	Ion migration in halide perovskite solar cells: Mechanism, characterization, impact and suppression. Journal of Energy Chemistry, 2021, 63, 528-549.	7.1	76
271	Advances and Challenges in Two-Dimensional Organicâ€“Inorganic Hybrid Perovskites Toward High-Performance Light-Emitting Diodes. Nano-Micro Letters, 2021, 13, 163.	14.4	54

#	Article	IF	Citations
272	Material, Phase, and Interface Stability of Photovoltaic Perovskite: A Perspective. Journal of Physical Chemistry C, 2021, 125, 19088-19096.	1.5	7
273	Combined Bulk and Surface Passivation in Dimensionally Engineered 2Dâ€3D Perovskite Films via Chlorine Diffusion. Advanced Functional Materials, 2021, 31, 2104251.	7.8	37
274	Chlorides, other Halides, and Pseudoâ€Halides as Additives for the Fabrication of Efficient and Stable Perovskite Solar Cells. ChemSusChem, 2021, 14, 3665-3692.	3.6	14
275	Elastic Lattice and Excess Charge Carrier Manipulation in 1Dâ€"3D Perovskite Solar Cells for Exceptionally Longâ€Term Operational Stability. Advanced Materials, 2021, 33, e2105170.	11.1	78
276	Abnormal Phase Transition and Band Renormalization of Guanidinium-Based Organicâ€"Inorganic Hybrid Perovskite. ACS Applied Materials & Interfaces, 2021, 13, 44964-44971.	4.0	8
277	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
278	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
279	Polymerization stabilized black-phase FAPbI3 perovskite solar cells retain 100% of initial efficiency over 100Âdays. Chemical Engineering Journal, 2021, 419, 129482.	6.6	21
280	Halogen-halogen bonds enable improved long-term operational stability of mixed-halide perovskite photovoltaics. CheM, 2021, 7, 3131-3143.	5.8	55
281	Moisture tolerant solar cells by encapsulating 3D perovskite with long-chain alkylammonium cation-based 2D perovskite. Communications Materials, 2021, 2, .	2.9	19
282	Unraveling the influence of CsCl/MACl on the formation of nanotwins, stacking faults and cubic supercell structure in FA-based perovskite solar cells. Nano Energy, 2021, 87, 106226.	8.2	27
283	Repair Strategies for Perovskite Solar Cells. Chemical Research in Chinese Universities, 2021, 37, 1055-1066.	1.3	3
284	A critical review of materials innovation and interface stabilization for efficient and stable perovskite photovoltaics. Nano Energy, 2021, 87, 106141.	8.2	28
285	Strain analysis and engineering in halide perovskite photovoltaics. Nature Materials, 2021, 20, 1337-1346.	13.3	220
286	Emission Wavelength Tuning via Competing Lattice Expansion and Octahedral Tilting for Efficient Red Perovskite Lightâ€Emitting Diodes. Advanced Functional Materials, 2021, 31, 2106691.	7.8	23
287	Dion-Jacobson and Ruddlesden-Popper double-phase 2D perovskites for solar cells. Nano Energy, 2021, 88, 106249.	8.2	37
288	A levelized cost of energy approach to select and optimise emerging PV technologies: The relative impact of degradation, cost and initial efficiency. Applied Energy, 2021, 299, 117302.	5.1	13
289	Materials, methods and strategies for encapsulation of perovskite solar cells: From past to present. Renewable and Sustainable Energy Reviews, 2021, 151, 111608.	8.2	45

#	Article	IF	Citations
290	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
291	Methylammonium- and bromide-free perovskites enable efficient and stable photovoltaics. Journal of Energy Chemistry, 2021, 63, 12-24.	7.1	1
292	Gammaâ€“ray irradiation of lead iodide precursor for enhanced perovskite crystalline properties. Applied Surface Science, 2022, 571, 151263.	3.1	3
293	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
294	A strategic review on processing routes towards scalable fabrication of perovskite solar cells. Journal of Energy Chemistry, 2022, 64, 538-560.	7.1	33
295	Formamide iodide: a new cation additive for inhibiting Î´-phase formation of formamidinium lead iodide perovskite. Materials Advances, 2021, 2, 2272-2277.	2.6	2
296	Enhancing the efficiency and stability of two-dimensional Dionâ€“Jacobson perovskite solar cells using a fluorinated diammonium spacer. Journal of Materials Chemistry A, 2021, 9, 11778-11786.	5.2	27
297	Exploring the film growth in perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 6029-6049.	5.2	20
298	A penetrated 2D/3D hybrid heterojunction for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 23019-23027.	5.2	23
299	Multifunctional organic ammonium salt-modified SnO₂nanoparticles toward efficient and stable planar perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 3940-3951.	5.2	146
300	Recent Progress in Designing Halide-Perovskite-Based System for the Photocatalytic Applications. Frontiers in Chemistry, 2020, 8, 613174.	1.8	6
301	Efficient surface passivation of perovskite films by a post-treatment method with a minimal dose. Journal of Materials Chemistry A, 2021, 9, 3441-3450.	5.2	60
302	Graded 2D/3D Perovskite Heterostructure for Efficient and Operationally Stable MAâ€Free Perovskite Solar Cells. Advanced Materials, 2020, 32, e2000571.	11.1	166
303	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
304	Structural Tunability and Diversity of Twoâ€Dimensional Lead Halide Benzenethiolate. Chemistry - A European Journal, 2020, 26, 6599-6607.	1.7	3
305	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
306	Vapor-assisted deposition of highly efficient, stable black-phase FAPbI ₃ perovskite solar cells. Science, 2020, 370, .	6.0	530
307	2D organic-inorganic hybrid perovskite materials for nonlinear optics. Nanophotonics, 2020, 9, 1787-1810.	2.9	60

#	Article	IF	Citations
308	Lead and Iodide Fixation by Thiol Copper(II) Porphyrin for Stable and Environmental-Friendly Perovskite Solar Cells. CCS Chemistry, 0, , 25-36.	4.6	2
309	Surface recrystallized stable 2Dâ€“3D graded perovskite solar cells for efficiency beyond 21%. Journal of Materials Chemistry A, 2021, 9, 26069-26076.	5.2	36
310	Two-/Three-Dimensional Perovskite Bilayer Thin Films Post-Treated with Solvent Vapor for High-Performance Perovskite Photovoltaics. ACS Applied Materials & Interfaces, 2021, 13, 49104-49113.	4.0	12
312	Advancing 2D Perovskites for Efficient and Stable Solar Cells: Challenges and Opportunities. Advanced Materials, 2022, 34, e2105849.	11.1	104
313	Intrinsic stability of organic-inorganic hybrid perovskite. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 158804.	0.2	8
314	Structural Damage of Two-Dimensional Organicâ€“Inorganic Halide Perovskites. Inorganics, 2020, 8, 13.	1.2	5
315	Combined Precursor Engineering and Grain Anchoring Leading to MAâ€Free, Phaseâ€Pure, and Stable Î±â€Formamidinium Lead Iodide Perovskites for Efficient Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 27299-27306.	7.2	46
316	Propylammonium Chloride Additive for Efficient and Stable FAPbI₃ Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2102538.	10.2	84
317	In Situ Perovskitoid Engineering at SnO₂ Interface toward Highly Efficient and Stable Formamidinium Lead Triiodide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 10567-10573.	2.1	18
318	Synergetic Coâ€Modulation of Crystallization and Coâ€Passivation of Defects for FAPbI₃ Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, 2108567.	7.8	38
319	Combined precursor engineering and grain anchoring leading to MAâ€free, phaseâ€pure and stable Î±â€formamidinium lead iodide perovskites for efficient solar cells. Angewandte Chemie, 0, , .	1.6	11
320	Effects of polymer grain boundary passivation on organicâ€“inorganic hybrid perovskite field-effect transistors. Applied Physics Letters, 2021, 119, 183303.	1.5	4
321	Progress in Perovskite Solar Cells towards Commercializationâ€"A Review. Materials, 2021, 14, 6569.	1.3	10
322	Reconstruction of the (EMIm)<i>_x</i>MA_{1â€“<i>x</i>}Pb[(BF₄)<i>_x</i>I_{1â€“<i>x</i>}]<sub Interlayer for Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 727-733.	4.0	8
323	Development of encapsulation strategies towards the commercialization of perovskite solar cells. Energy and Environmental Science, 2022, 15, 13-55.	15.6	158
324	Ion Migration in Metal Halide Perovskites Solar Cells. , 2020, , 1-32.		2
325	Tailoring Interlayer Spacers for Efficient and Stable Formamidiniumâ€Based Lowâ€Dimensional Perovskite Solar Cells. Advanced Materials, 2022, 34, e2106380.	11.1	42
326	Formation of a Fast Charge Transfer Channel in Quasi-2D Perovskite Solar Cells through External Electric Field Modulation. Energies, 2021, 14, 7402.	1.6	1

#	Article	IF	Citations
327	Rear Interface Engineering to Suppress Migration of Iodide Ions for Efficient Perovskite Solar Cells with Minimized Hysteresis. Advanced Functional Materials, 2022, 32, 2107823.	7.8	57
328	Recent Progress in Perovskiteâ€Based Reversible Photonâ€"Electricity Conversion Devices. Advanced Functional Materials, 2022, 32, 2108926.	7.8	18
329	MXene-Based Materials for Solar Cell Applications. Nanomaterials, 2021, 11, 3170.	1.9	19
330	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
331	Phase-Pure Quasi-2D Perovskite by Protonation of Neutral Amine. Journal of Physical Chemistry Letters, 2021, 12, 11323-11329.	2.1	8
332	Evolution of a Snowflake-Like Mn ²⁺ Doped Cs ₂NaBiCl ₆ Nanosheet Phosphor Driven By Cation Exchange. SSRN Electronic Journal, 0, , .	0.4	0
333	Facet orientation tailoring via 2D-seed- induced growth enables highly efficient and stable perovskite solar cells. Joule, 2022, 6, 240-257.	11.7	128
334	Tailoring Phase Purity in the 2D/3D Perovskite Heterostructures Using Lattice Mismatch. ACS Energy Letters, 2022, 7, 550-559.	8.8	23
335	Fabrication of stable perovskite solar cells with efficiency over 20% in open air using <i>in situ</i> polymerized bi-functional additives. Journal of Materials Chemistry A, 2022, 10, 3688-3697.	5.2	16
336	Nucleation Engineering in Sprayed MA₃Bi₂I₉ Films for Direct-Conversion X-ray Detectors. Journal of Physical Chemistry Letters, 2022, 13, 371-377.	2.1	15
337	Unravelling the effect of defect density, grain boundary and gradient doping in an efficient lead-free formamidinium perovskite solar cell. Optical Materials, 2022, 124, 111952.	1.7	11
338	Constructing Monolithic Perovskite/Organic Tandem Solar Cell with Efficiency of 22.0% via Reduced Openâ€Circuit Voltage Loss and Broadened Absorption Spectra. Advanced Materials, 2022, 34, e2108829.	11.1	56
339	A finely regulated quantum well structure in quasi-2D Ruddlesdenâ€"Popper perovskite solar cells with efficiency exceeding 20%. Energy and Environmental Science, 2022, 15, 296-310.	15.6	54
340	Defects and passivation in perovskite solar cells. Surface Innovations, 2022, 10, 3-20.	1.4	18
341	Tailoring the EnergyÂManifold of Quasiâ€Twoâ€Dimensional Perovskites for Efficient Carrier Extraction. Advanced Energy Materials, 2022, 12, .	10.2	15
342	Ethylamine Iodide Additive Enables Solidâ€toâ€Solid Transformed Highly Oriented Perovskite for Excellent Photodetectors. Advanced Materials, 2022, 34, e2108569.	11.1	23
343	Additiveâ€Free, Lowâ€Temperature Crystallization of Stable Î±â€FAPbI₃ Perovskite. Advanced Materials, 2022, 34, e2107850.	11.1	71
344	Interpretation of Rubidiumâ€Based Perovskite Recipes toward Electronic Passivation and Ionâ€Diffusion Mitigation. Advanced Materials, 2022, 34, e2109998.	11.1	29

#	Article	IF	Citations
345	Review on Organicâ€"Inorganic Two-Dimensional Perovskite-Based Optoelectronic Devices. ACS Applied Electronic Materials, 2022, 4, 547-567.	2.0	35
346	Silk fibroin induced homeotropic alignment of perovskite crystals toward high efficiency and stability. Nano Energy, 2022, 94, 106936.	8.2	25
347	Boost the efficiency of nickel oxide-based formamidinium-cesium perovskite solar cells to 21% by using coumarin 343 dye as defect passivator. Nano Energy, 2022, 94, 106935.	8.2	49
348	Composition-Dependent Optoelectronic Properties of Mixed 2D/3D Metal Halide Perovskite Films for Light-Emitting Diodes. ACS Applied Energy Materials, 0, , .	2.5	3
349	From Structural Design to Functional Construction: Amine Molecules in Highâ€Performance Formamidiniumâ€Based Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	17
350	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
351	Roles of Longâ€Chain Alkylamine Ligands in Tripleâ€Halide Perovskites for Efficient NiO_{<i>x</i>}â€Based Inverted Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	14
352	Inverted Perovskite Solar Cells: The Emergence of a Highly Stable and Efficient Architecture. Energy Technology, 2022, 10, .	1.8	11
353	Polar Ferromagnet Induced by Fluorine Positioning in Isomeric Layered Copper Halide Perovskites. Inorganic Chemistry, 2022, 61, 3230-3239.	1.9	11
354	Role of Ï€-conjugated-length-regulated perovskite intergrain interconnecting in the photovoltaic performance of perovskite solar cells. Applied Surface Science, 2022, 585, 152670.	3.1	5
355	Post-doping induced morphology evolution boosts Mn²⁺ luminescence in the Cs₂NaBiCl₆:Mn²⁺ phosphor. Physical Chemistry Chemical Physics, 2022, 24, 9866-9874.	1.3	10
356	Instability Issues and Stabilization Strategies of Lead Halide Perovskites for Photo(electro)catalytic Solar Fuel Production. Journal of Physical Chemistry Letters, 2022, 13, 1806-1824.	2.1	7
357	Rethinking the A cation in halide perovskites. Science, 2022, 375, eabj1186.	6.0	207
358	Phase-Pure Î±-FAPbI₃ for Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2022, 13, 1845-1854.	2.1	27
359	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
360	FAPbI₃ Perovskite Solar Cells: From Film Morphology Regulation to Device Optimization. Solar Rrl, 2022, 6, .	3.1	19
361	Halide perovskite dynamics at work: Large cations at 2D-on-3D interfaces are mobile. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2114740119.	3.3	19
362	Imaging the Moisture-Induced Degradation Process of 2D Organolead Halide Perovskites. ACS Omega, 2022, 7, 10365-10371.	1.6	10

#	Article	IF	Citations
363	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
364	Stable one dimensional (1D)/three dimensional (3D) perovskite solar cell with an efficiency exceeding 23%. InformaÄnÃ-MateriÃ¡ly, 2022, 4, .	8.5	23
365	Mixedâ€Dimensional Formamidinium Bismuth Iodides Featuring Inâ€Situ Formed Typeâ€I Band Structure for Convolution Neural Networks. Advanced Science, 2022, 9, e2200168.	5.6	8
366	High Efficiency Quasiâ€2D/3D Pbâ€"Ba Perovskite Solar Cells via Phenethylammonium Chloride Addition. Solar Rrl, 2022, 6, .	3.1	4
367	Spray-Pyrolyzed Tantalum-Doped TiO₂ Compact Electron Transport Layer for UV-Photostable Planar Perovskite Solar Cells Exceeding 20% Efficiency. ACS Applied Energy Materials, 2022, 5, 3454-3462.	2.5	22
368	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
369	Phaseâ€Pure Engineering for Efficient and Stable Formamidiniumâ€Based Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	16
370	Two-Dimensional Heterostructure of MoS₂/BA₂PbI₄ 2D Ruddlesdenâ€"Popper Perovskite with an S Scheme Alignment for Solar Cells: A First-Principles Study. ACS Applied Electronic Materials, 2022, 4, 1939-1948.	2.0	11
371	Narrow Bandgap Metal Halide Perovskites: Synthesis, Characterization, and Optoelectronic Applications. Advanced Optical Materials, 2022, 10, .	3.6	7
372	A Selective Targeting Anchor Strategy Affords Efficient and Stable Idealâ€Bandgap Perovskite Solar Cells. Advanced Materials, 2022, 34, e2110241.	11.1	44
373	Passivating defects via 4-cyanobenzenaminium iodide enables 22.44% efficiency perovskite solar cells. Electrochimica Acta, 2022, 413, 140172.	2.6	12
374	Facilitate hole transport with thin 2D perovskite capping layer to passivate interface defects of 3D perovskite solar cells using PEABr. Materials Research Bulletin, 2022, 150, 111793.	2.7	17
375	Recent progress of perovskite devices fabricated using thermal evaporation method: Perspective and outlook. Materials Today Advances, 2022, 14, 100232.	2.5	28
376	Loosening effect of perovskite intermolecular exchanger with strong steric hindrance for highly sensitive photodetector. Applied Surface Science, 2022, 591, 153207.	3.1	5
377	Leadâ€Free Chiral 2D Double Perovskite Microwire Arrays for Circularly Polarized Light Detection. Advanced Optical Materials, 2022, 10, .	3.6	21
378	Wideâ€Gap Perovskite via Synergetic Surface Passivation and Its Application toward Efficient Stacked Tandem Photovoltaics. Small, 2022, 18, e2103887.	5.2	3
379	Fabrication Strategies and Optoelectronic Applications of Perovskite Heterostructures. Advanced Optical Materials, 2022, 10, .	3.6	15
380	Partial replacement of B-site cation to stabilize the optically active cubic phase of FAPbI3 for optoelectronic applications. Materials Today: Proceedings, 2022, , .	0.9	4

#	Article	IF	Citations
381	Recent Advances on the Strategies to Stabilize the Î±-Phase of Formamidinium Based Perovskite Materials. Crystals, 2022, 12, 573.	1.0	2
382	Hyperbranched phthalocyanine enabling black-phase formamidinium perovskite solar cells processing and operating in humidity open air. Journal of Energy Chemistry, 2022, 71, 141-149.	7.1	10
383	CsPbBr3 perovskite based tandem device for CO2 photoreduction. Chemical Engineering Journal, 2022, 443, 136447.	6.6	8
384	Efficient and stable pure Î±-phase FAPbI3 perovskite solar cells with a dual engineering strategy: Additive and dimensional engineering approaches. Chemical Engineering Journal, 2022, 443, 136469.	6.6	42
386	Hetero-perovskite engineering for stable and efficient perovskite solar cells. Sustainable Energy and Fuels, 2022, 6, 3304-3323.	2.5	3
387	Photovoltaic properties and microstructures of polysilane-added perovskite solar cells. , 0, , .		2
388	Efficient and Stable FAâ€Rich Perovskite Photovoltaics: From Material Properties to Device Optimization. Advanced Energy Materials, 2022, 12, .	10.2	16
389	Effect of Stability of Two-Dimensional (2D) Aminoethyl Methacrylate Perovskite Using Lead-Based Materials for Ammonia Gas Sensor Application. Polymers, 2022, 14, 1853.	2.0	5
390	Organic Ion Templateâ€Guided Solution Growth of Ultrathin Bismuth Oxyselenide with Tunable Electronic Properties for Optoelectronic Applications. Advanced Functional Materials, 2022, 32, .	7.8	18
391	Carbon Electrode Endows Highâ€Efficiency Perovskite Photovoltaics Affordable, Fully Printable, and Durable. Solar Rrl, 2022, 6, .	3.1	18
392	Spacer Cation Engineering of Two-Dimensional Hybrid Perovskites with Tunable Band Alignment and Optoelectronic Properties. Journal of Physical Chemistry C, 2022, 126, 8408-8416.	1.5	10
393	Disulfide bond containing self-healing fullerene derivatized polyurethane as additive for achieving efficient and stable perovskite solar cells. Carbon, 2022, 196, 213-219.	5.4	17
394	Enhancing performance of tin-based perovskite solar cells by polyvinyl pyrrolidone doping strategy. Optical Materials, 2022, 129, 112511.	1.7	3
395	A first-principles study on environmental stability and optoelectronic properties of bismuth oxychloride/cesium lead chloride van der Waals heterojunctions. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.2	0
396	Defects Passivation Strategy for Efficient and Stable Perovskite Solar Cells. Advanced Materials Interfaces, 2022, 9, .	1.9	13
398	Interface modification by Fmoc-Met-OH molecule for high-efficient perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2022, 33, 15359-15368.	1.1	2
400	Methylammonium and Bromideâ€Free Tinâ€Based Low Bandgap Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	18
402	Cs-content-dependent organic cation exchange in FA1-Cs PbI3 perovskite. Journal of Energy Chemistry, 2022, 72, 539-544.	7.1	12

#	ARTICLE	IF	CITATIONS
403	Properties and Improvements of Chlorine-Doped Methylamine-Based Perovskites. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.2	0
404	Enhanced Charge Transport <i>via</i> Mixed-Dimensional Heterostructures in 2Dâ€“3D Perovskites and Their Relevance to Solar Cells. ACS Applied Energy Materials, 2022, 5, 7965-7976.	2.5	7
405	A Multifunctional Fluorinated Polymer Enabling Efficient MAPbI₃-Based Inverted Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 31285-31295.	4.0	7
406	Stability of perovskite materials and devices. Materials Today, 2022, 58, 275-296.	8.3	35
407	Thiocyanate-Mediated Dimensionality Transformation of Low-Dimensional Perovskites for Photovoltaics. Chemistry of Materials, 2022, 34, 6331-6338.	3.2	5
408	Perovskite and Polymeric Solar Cells: A Comparison of Advances and Key Challenges. Energy Technology, 2022, 10, .	1.8	1
409	Enhance Photothermal Stability of Hybrid Perovskite Materials by Inhibiting Intrinsic Ion Migration. Solar Rrl, 2022, 6, .	3.1	3
410	Recent defect passivation drifts and role of additive engineering in perovskite photovoltaics. Nano Energy, 2022, 101, 107579.	8.2	46
411	Improving inorganic perovskite photovoltaic performance via organic cation addition for efficient solar energy utilization. Energy, 2022, 257, 124640.	4.5	8
412	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
413	Additive-Induced Film Morphology Evolution for Inverted Dionâ€“Jacobson Quasi-Two-Dimensional Perovskite Solar Cells with Enhanced Performance. ACS Applied Energy Materials, 2022, 5, 9837-9845.	2.5	5
414	Efficient Idealâ€Bandgap Tinâ€“Lead Alloyed Inorganic Perovskite Solar Cells Enabled by Structural Dimension Engineering. Advanced Optical Materials, 2022, 10, .	3.6	3
415	Tailoring CsPbBr₃ Growth <i>via</i> Non-Polar Solvent Choice and Heating Methods. Langmuir, 2022, 38, 9363-9371.	1.6	2
416	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
417	Ammonia for post-healing of formamidinium-based Perovskite films. Nature Communications, 2022, 13, .	5.8	21
418	TiO₂/SnO₂ electron transport double layers with ultrathin SnO₂ for efficient planar perovskite solar cells. Chinese Physics B, 2022, 31, 118802.	0.7	2
419	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
420	Hybrid mixed-dimensional perovskite/metal-oxide heterojunction for all-in-one opto-electric artificial synapse and retinal-neuromorphic system. Nano Energy, 2022, 102, 107686.	8.2	20

#	Article	IF	Citations
421	Scalable spray coated high performance sulfurized electron transporter for efficient and stable perovskite solar modules. Journal of Energy Chemistry, 2022, 75, 391-398.	7.1	4
422	[PbX₆]^{4âˆ’}modulation and organic spacer construction for stable perovskite solar cells. Energy and Environmental Science, 2022, 15, 4470-4510.	15.6	16
423	Stabilizing black-phase FAPbI₃in humid air with secondary ammoniums. Journal of Materials Chemistry A, 2022, 10, 21422-21429.	5.2	3
424	Facet Engineering for Stable, Efficient Perovskite Solar Cells. ACS Energy Letters, 2022, 7, 3120-3128.	8.8	36
425	Thermal Annealing-Free SnO₂ for Fully Room-Temperature-Processed Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 41037-41044.	4.0	5
426	Recent Progress on Heterojunction Engineering in Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	23
427	Strain Control to Stabilize Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	2
428	Strain Control to Stabilize Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	37
429	Engineering strategies for two-dimensional perovskite solar cells. Trends in Chemistry, 2022, 4, 1005-1020.	4.4	10
430	Bottomâ€Up Templated and Oriented Crystallization for Inverted Tripleâ€Cation Perovskite Solar Cells with Stabilized Nickelâ€Oxide Interface. Small, 2022, 18, .	5.2	20
431	Inhibiting the Growth of 1D Intermediates in Quasiâ€2D Ruddlesdenâˆ’Popper Perovskites. Advanced Functional Materials, 2022, 32, .	7.8	7
432	Impeded degradation of perovskite solar cells via the dual interfacial modification of siloxane. Science China Chemistry, 2022, 65, 2299-2306.	4.2	2
433	Highâ€Performance Perovskite Lightâ€Emitting Diodes Enabled by Passivating Defect and Constructing Dual Energyâ€Transfer Pathway through Functional Perovskite Nanocrystals. Advanced Materials, 2022, 34, .	11.1	43
434	Hole-Transporting Vanadium-Containing Oxide (V₂O_{5â€“<i>x</i>}) Interlayers Enhance Stability of Î±-FAPbI₃-Based Perovskite Solar Cells (âˆ¼23%). ACS Applied Materials & Interfaces, 2022, 14, 42007-42017.	4.0	9
435	Enhancing the Stability and Performance of Two-Dimensional Perovskite Solar Cells via Double-Step Homogeneous Precursor Mixing. ACS Applied Energy Materials, 2022, 5, 12415-12426.	2.5	1
436	Self-healing and efficient flexible perovskite solar cells enabled by hostâ€“guest interaction and a 2D/3D heterostructure. Journal of Materials Chemistry A, 2022, 10, 22445-22452.	5.2	9
437	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
438	Multifunctional Histidine Cross-Linked Interface toward Efficient Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 47872-47881.	4.0	13

#	Article	IF	Citations
439	Volatile 2D Ruddlesdenâ€Popper Perovskite: A Gift for Î±â€Formamidinium Lead Triiodide Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	13
440	<i>N</i> â€(2â€aminoethyl) Acetamide Additive Enables Phaseâ€Pure and Stable Î±â€FAPbI₃ for Efficient Selfâ€Powered Photodetectors. Advanced Materials, 2022, 34, .	11.1	9
441	Spray-coated perovskite hemispherical photodetector featuring narrow-band and wide-angle imaging. Nature Communications, 2022, 13, .	5.8	31
442	Laser Manufactured Nanoâ€MXenes with Tailored Halogen Terminations Enable Interfacial Ionic Stabilization of High Performance Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	15
443	Anionic surfactant anchoring enables 23.4% efficient and stable perovskite solar cells. Science China Materials, 2022, 65, 3361-3367.	3.5	2
444	A Thiourea Competitive Crystallization Strategy for FAâ€Based Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	25
445	Nondestructive Post-Treatment Enabled by <i>In Situ</i> Generated 2D Perovskites Derived from Multi-ammonium Molecule Vapor for High-Performance 2D/3D Bilayer Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 51053-51065.	4.0	3
446	Balanced change in crystal unit cell volume and strain leads to stable halide perovskite with high guanidinium content. RSC Advances, 2022, 12, 32630-32639.	1.7	5
447	Moisture-Dependent Blinking of Individual CsPbBr₃ Nanocrystals Revealed by Single-Particle Spectroscopy. Journal of Physical Chemistry Letters, 2022, 13, 10751-10758.	2.1	6
448	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
449	Method to Inhibit Perovskite Solution Aging: Induced by Perovskite Microcrystals. ACS Applied Materials & Interfaces, 2022, 14, 52960-52970.	4.0	4
450	Improving intrinsic stability for perovskite/silicon tandem solar cells. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	2.0	7
451	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
452	Air Annealing Facilitates Crystallization Reconstruction of Quasiâ€2D Perovskite. Solar Rrl, 2023, 7, .	3.1	2
453	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
454	Over 24% Efficient Poly(vinylidene fluoride) (PVDF)â€Coordinated Perovskite Solar Cells with a Photovoltage up to 1.22ÂV. Advanced Functional Materials, 2023, 33, .	7.8	32
455	Super hydrophilic, ultra bubble repellent substrate for pinhole free Dionâ€"Jacobson perovskite solar cells. Applied Physics Letters, 2022, 121, .	1.5	5
456	Inorganic lead-based halide perovskites: From fundamental properties to photovoltaic applications. Materials Today, 2022, 61, 191-217.	8.3	25

#	Article	IF	Citations
457	Nanomaterials in 2-dimensions for flexible solar cell applications â€“ a review. Cogent Engineering, 2022, 9, .	1.1	6
458	Two-Dimensional Halide Perovskite Materials Featuring 2-(Methylthio)ethylamine Organic Spacers for Efficient Solar and Thermal Energy Harvesting. Journal of Physical Chemistry C, 2022, 126, 21518-21526.	1.5	1
459	Unraveling the Defect-Dominated Broadband Emission Mechanisms in (001)-Preferred Two-Dimensional Layered Antimony-Halide Perovskite Film. Journal of Physical Chemistry Letters, 2022, 13, 11736-11744.	2.1	4
460	Tunable lattice dynamics and dielectric functions of two-dimensional Bi₂O₂Se: striking layer and temperature dependent effects. Nanoscale, 2023, 15, 2323-2331.	2.8	4
461	Large ammonium cation-induced controlled mixed-phase of CsPbBr3 perovskites for color tunable perovskite light-emitting diodes. Journal of Alloys and Compounds, 2023, 940, 168913.	2.8	3
462	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
463	Multiple roles of negative thermal expansion material for high-performance fully-air processed perovskite solar cells. Chemical Engineering Journal, 2023, 457, 141216.	6.6	13
464	Binary Microcrystal Additives Enabled Antisolventâ€Free Perovskite Solar Cells with High Efficiency and Stability. Advanced Energy Materials, 2023, 13, .	10.2	12
465	Mixed valence Sn doped (CH₃NH₃)₃Bi₂Br₉ produced by mechanochemical synthesis. Physical Chemistry Chemical Physics, 2023, 25, 4563-4569.	1.3	0
466	Rational Design of Ferroelectric 2D Perovskite for Improving the Efficiency of Flexible Perovskite Solar Cells Over 23â€‰%. Angewandte Chemie, 2023, 135, .	1.6	0
467	Rational Design of Ferroelectric 2D Perovskite for Improving the Efficiency of Flexible Perovskite Solar Cells Over 23â€‰%. Angewandte Chemie - International Edition, 2023, 62, .	7.2	26
468	Alkyl Chain Lengthâ€Dependent Amineâ€Induced Crystallization for Efficient Interface Passivation of Perovskite Solar Cells. Advanced Materials Interfaces, 2023, 10, .	1.9	3
469	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
470	Self-crystallization mechanism of perovskite films for improving performance of perovskite solar cells. Materials Research Bulletin, 2023, 162, 112209.	2.7	0
471	Building optimistic perovskite-polymer composite solar cells: Feasible involvement of a BLP inclusion to efficiently stable perovskite films. Materials Science in Semiconductor Processing, 2023, 160, 107409.	1.9	0
472	Low-dimensional perovskite modified 3D structures for higher-performance solar cells. Journal of Energy Chemistry, 2023, 81, 389-403.	7.1	8
473	Transient Energy-Resolved Photoluminescence Study of Excitons and Free Carriers on FAPbBr₃ and FAPbBr₃/SnO₂ Interfaces. Journal of Physical Chemistry C, 2023, 127, 3085-3092.	1.5	2
474	Polyvinylammonium-immobilized FAPbI3 Perovskite Grains for Flexible Fibrous Woven RRAM Array. Journal of Electronic Materials, 2023, 52, 2794-2806.	1.0	1

#	Article	IF	Citations
475	Manipulating Crystallographic Orientation via Crossâ€Linkable Ligand for Efficient and Stable Perovskite Solar Cells. Small, 2023, 19, .	5.2	8
476	Stabilization of 3D/2D perovskite heterostructures via inhibition of ion diffusion by cross-linked polymers for solar cells with improved performance. Nature Energy, 2023, 8, 294-303.	19.8	47
477	Additive engineering for highly efficient and stable perovskite solar cells. Applied Physics Reviews, 2023, 10, .	5.5	13
478	Controlled growth of perovskite layers with volatile alkylammonium chlorides. Nature, 2023, 616, 724-730.	13.7	610
479	Orientation Engineering via 2D Seeding for Stable 24.83% Efficiency Perovskite Solar Cells. Advanced Energy Materials, 2023, 13, .	10.2	23
480	Passivation engineering via silicaâ€encapsulated quantum dots for highly sensitive photodetection. , 2023, 5, .		3
481	Combined Ultraviolet Ozone and Thermally Activated Formamidinium Iodide Solution to Fabricate Large Grain FAPbI_{2.6}Br_{0.3}Cl_{0.1} Films. ACS Omega, 2023, 8, 9298-9306.	1.6	3
482	Fully Methylammonium-Free Stable Formamidinium Lead Iodide Perovskite Solar Cells Processed under Humid Air Conditions. ACS Applied Materials & Interfaces, 2023, 15, 13353-13362.	4.0	5
483	Contact Engineering and In Situ Formation of 2D Perovskite Via Solidâ€Phase Growth for Efficient Holeâ€Transportâ€Layerâ€Free Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	2
484	High Performance Inverted RbCsFAPbI₃ Perovskite Solar Cells Based on Interface Engineering and Defects Passivation. Small, 2023, 19, .	5.2	3
485	Giant Humidity Effect of 2D Perovskite on Paper Substrate: Optoelectronic Performance and Mechanical Flexibility. Advanced Optical Materials, 2023, 11, .	3.6	1
486	CsPbBr₃ Quantum Dotsâ€Sensitized Mesoporous TiO₂ Electron Transport Layers for Highâ€Efficiency Perovskite Solar Cells. Solar Rrl, 2023, 7, .	3.1	2
487	Fiber-bridging-induced toughening of perovskite for resistance to crack propagation. Matter, 2023, 6, 1622-1638.	5.0	4
488	R4N+ and Clâˆ’ stabilized Î±-formamidinium lead triiodide and efficient bar-coated mini-modules. Joule, 2023, 7, 797-809.	11.7	6
489	Inhibition of Ion Migration for Highly Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2023, 35, .	11.1	8
490	Identification and Mitigation of Transient Phenomena That Complicate the Characterization of Halide Perovskite Photodetectors. ACS Applied Energy Materials, 2023, 6, 10233-10242.	2.5	3
494	Direct Observation of Intragrain Defect Elimination in FAPbI₃ Perovskite Solar Cells by Two-Dimensional PEA₂PbI₄. ACS Energy Letters, 2023, 8, 2620-2629.	8.8	5
500	Minimizing the Interface-Driven Losses in Inverted Perovskite Solar Cells and Modules. ACS Energy Letters, 2023, 8, 2532-2542.	8.8	14

#	Article	IF	Citations
512	Synergy of 3D and 2D Perovskites for Durable, Efficient Solar Cells and Beyond. Chemical Reviews, 2023, 123, 9565-9652.	23.0	21
513	Inverted Wide-Bandgap 2D/3D Perovskite Solar Cells with >22% Efficiency and Low Voltage Loss. Nano Letters, 2023, 23, 6705-6712.	4.5	6
520	The role of organic spacers in 2D/3D hybrid perovskite solar cells. Materials Chemistry Frontiers, 2023, 8, 82-103.	3.2	2
521	Can photoluminescence quenching be a predictor for perovskite solar cell efficiencies?. Physical Chemistry Chemical Physics, 2023, 25, 22607-22613.	1.3	3
554	Dimensional diversity (0D, 1D, 2D, and 3D) in perovskite solar cells: exploring the potential of mixed-dimensional integrations. Journal of Materials Chemistry A, 2024, 12, 4421-4440.	5.2	11
559	The impact of moisture on the stability and degradation of perovskites in solar cells. Materials Advances, 2024, 5, 2200-2217.	2.6	0