Shengzhong Frank Liu

List of Publications by Year
in descending order

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475 papers	36,360 citations	2311 98 h-index	4978 167 g-index
481 all docs	481 docs citations	481 times ranked	22190 citing authors

#	Article	IF	Citations
1	High efficiency planar-type perovskite solar cells with negligible hysteresis using EDTA-complexed SnO2. Nature Communications, 2018, 9, 3239.	5.8	1,017
2	Twoâ€Inchâ€Sized Perovskite CH₃NH₃PbX₃ (X = Cl, Br, I) Crystals: Growth and Characterization. Advanced Materials, 2015, 27, 5176-5183.	11.1	914
3	Surface optimization to eliminate hysteresis for record efficiency planar perovskite solar cells. Energy and Environmental Science, 2016, 9, 3071-3078.	15.6	870
4	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. Nature Energy, 2020, 5, 35-49.	19.8	797
5	Stable Highâ€Performance Perovskite Solar Cells via Grain Boundary Passivation. Advanced Materials, 2018, 30, e1706576.	11.1	665
6	Stable high efficiency two-dimensional perovskite solar cells via cesium doping. Energy and Environmental Science, 2017, 10, 2095-2102.	15.6	588
7	High efficiency flexible perovskite solar cells using superior low temperature TiO₂. Energy and Environmental Science, 2015, 8, 3208-3214.	15.6	519
8	Allâ€Inorganic CsPbX₃ Perovskite Solar Cells: Progress and Prospects. Angewandte Chemie - International Edition, 2019, 58, 15596-15618.	7.2	425
9	Hysteresisâ€Suppressed Highâ€Efficiency Flexible Perovskite Solar Cells Using Solidâ€State Ionicâ€Liquids for Effective Electron Transport. Advanced Materials, 2016, 28, 5206-5213.	11.1	387
10	All-inorganic cesium lead iodide perovskite solar cells with stabilized efficiency beyond 15%. Nature Communications, 2018, 9, 4544.	5.8	379
11	Record Efficiency Stable Flexible Perovskite Solar Cell Using Effective Additive Assistant Strategy. Advanced Materials, 2018, 30, e1801418.	11.1	377
12	Single atom tungsten doped ultrathin Î±-Ni(OH)2 for enhanced electrocatalytic water oxidation. Nature Communications, 2019, 10, 2149.	5.8	363
13	Interstitial Mn²⁺-Driven High-Aspect-Ratio Grain Growth for Low-Trap-Density Microcrystalline Films for Record Efficiency CsPbI₂Br Solar Cells. ACS Energy Letters, 2018, 3, 970-978.	8.8	356
14	Fabrication of TiO2/C3N4 heterostructure for enhanced photocatalytic Z-scheme overall water splitting. Applied Catalysis B: Environmental, 2016, 191, 130-137.	10.8	344
15	Reducing Detrimental Defects for Highâ€Performance Metal Halide Perovskite Solar Cells. Angewandte Chemie - International Edition, 2020, 59, 6676-6698.	7.2	334
16	One-step hydrothermal synthesis of monolayer MoS₂ quantum dots for highly efficient electrocatalytic hydrogen evolution. Journal of Materials Chemistry A, 2015, 3, 10693-10697.	5.2	320
17	20â€mmâ€Large Singleâ€Crystalline Formamidiniumâ€Perovskite Wafer for Mass Production of Integrated Photodetectors. Advanced Optical Materials, 2016, 4, 1829-1837.	3.6	316
18	Solution-Processed Nb:SnO₂ Electron Transport Layer for Efficient Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 2421-2429.	4.0	315

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19	Graded Bandgap CsPbI2+Br1â^' Perovskite Solar Cells with a Stabilized Efficiency of 14.4%. Joule, 2018, 2, 1500-1510.	11.7	307
20	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
21	Thinnessâ€•and Shapeâ€Controlled Growth for Ultrathin Singleâ€Crystalline Perovskite Wafers for Mass Production of Superior Photoelectronic Devices. Advanced Materials, 2016, 28, 9204-9209.	11.1	296
22	Polymer Doping for Highâ€Efficiency Perovskite Solar Cells with Improved Moisture Stability. Advanced Energy Materials, 2018, 8, 1701757.	10.2	293
23	Recent Advances in Flexible Perovskite Solar Cells: Fabrication and Applications. Angewandte Chemie - International Edition, 2019, 58, 4466-4483.	7.2	290
24	Nucleation-controlled growth of superior lead-free perovskite Cs3Bi2I9 single-crystals for high-performance X-ray detection. Nature Communications, 2020, 11, 2304.	5.8	286
25	Controlled nâ€Doping in Airâ€Stable CsPbI₂Br Perovskite Solar Cells with a Record Efficiency of 16.79%. Advanced Functional Materials, 2020, 30, 1909972.	7.8	282
26	Highâ€Performance Planar Perovskite Solar Cells Using Low Temperature, Solutionâ€"Combustionâ€Based Nickel Oxide Hole Transporting Layer with Efficiency Exceeding 20%. Advanced Energy Materials, 2018, 8, 1703432.	10.2	279
27	Multifunctional Enhancement for Highly Stable and Efficient Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2005776.	7.8	273
28	Precursor Engineering for Allâ€Inorganic CsPbI₂Br Perovskite Solar Cells with 14.78% Efficiency. Advanced Functional Materials, 2018, 28, 1803269.	7.8	264
29	gâ€C₃N₄ Loading Black Phosphorus Quantum Dot for Efficient and Stable Photocatalytic H₂ Generation under Visible Light. Advanced Functional Materials, 2018, 28, 1800668.	7.8	257
30	A 1300 mm² Ultrahighâ€Performance Digital Imaging Assembly using Highâ€Quality Perovskite Single Crystals. Advanced Materials, 2018, 30, e1707314.	11.1	246
31	Phase Transition Control for High Performance Ruddlesdenâ€"Popper Perovskite Solar Cells. Advanced Materials, 2018, 30, e1707166.	11.1	244
32	Alkali Metal Doping for Improved CH₃NH₃PbI₃ Perovskite Solar Cells. Advanced Science, 2018, 5, 1700131.	5.6	227
33	Recent Progress in Singleâ€Crystalline Perovskite Research Including Crystal Preparation, Property Evaluation, and Applications. Advanced Science, 2018, 5, 1700471.	5.6	223
34	Energy-Down-Shift CsPbCl₃:Mn Quantum Dots for Boosting the Efficiency and Stability of Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1479-1486.	8.8	221
35	Highâ€Efficiency Perovskite Solar Cells with Imidazoliumâ€Based Ionic Liquid for Surface Passivation and Charge Transport. Angewandte Chemie - International Edition, 2021, 60, 4238-4244.	7.2	221
36	E-beam evaporated Nb2O5 as an effective electron transport layer for large flexible perovskite solar cells. Nano Energy, 2017, 36, 1-8.	8.2	215

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37	Multi-inch single-crystalline perovskite membrane for high-detectivity flexible photosensors. Nature Communications, 2018, 9, 5302.	5.8	212
38	Low-temperature-gradient crystallization for multi-inch high-quality perovskite single crystals for record performance photodetectors. Materials Today, 2019, 22, 67-75.	8.3	204
39	Surface-Tension-Controlled Crystallization for High-Quality 2D Perovskite Single Crystals for Ultrahigh Photodetection. Matter, 2019, 1, 465-480.	5.0	202
40	Inch-Size 0D-Structured Lead-Free Perovskite Single Crystals for Highly Sensitive Stable X-Ray Imaging. Matter, 2020, 3, 180-196.	5.0	202
41	Âµâ€Graphene Crosslinked CsPbI₃ Quantum Dots for High Efficiency Solar Cells with Much Improved Stability. Advanced Energy Materials, 2018, 8, 1800007.	10.2	198
42	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
43	A review on the stability of inorganic metal halide perovskites: challenges and opportunities for stable solar cells. Energy and Environmental Science, 2021, 14, 2090-2113.	15.6	193
44	Interfaceâ€Modificationâ€Induced Gradient Energy Band for Highly Efficient CsPbIBr₂ Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803785.	10.2	191
45	Dynamical Transformation of Two-Dimensional Perovskites with Alternating Cations in the Interlayer Space for High-Performance Photovoltaics. Journal of the American Chemical Society, 2019, 141, 2684-2694.	6.6	189
46	Rational Surfaceâ€Defect Control via Designed Passivation for Highâ€Efficiency Inorganic Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 23164-23170.	7.2	189
47	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
48	Recordâ€Efficiency Flexible Perovskite Solar Cells Enabled by Multifunctional Organic Ions Interface Passivation. Advanced Materials, 2022, 34, e2201681.	11.1	186
49	Enhancing Efficiency and Stability of Perovskite Solar Cells through Nb-Doping of TiO₂ at Low Temperature. ACS Applied Materials & Interfaces, 2017, 9, 10752-10758.	4.0	181
50	Progress toward Stable Lead Halide Perovskite Solar Cells. Joule, 2018, 2, 1961-1990.	11.7	181
51	Stable Efficiency Exceeding 20.6% for Inverted Perovskite Solar Cells through Polymer-Optimized PCBM Electron-Transport Layers. Nano Letters, 2019, 19, 3313-3320.	4.5	181
52	Phase Transition Control for High-Performance Blade-Coated Perovskite Solar Cells. Joule, 2018, 2, 1313-1330.	11.7	180
53	Modulating crystal grain size and optoelectronic properties of perovskite films for solar cells by reaction temperature. Nanoscale, 2016, 8, 3816-3822.	2.8	179
54	Design of an Inorganic Mesoporous Holeâ€Transporting Layer for Highly Efficient and Stable Inverted Perovskite Solar Cells. Advanced Materials, 2018, 30, e1805660.	11.1	179

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55	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
56	All-Ambient Processed Binary CsPbBr₃â€“CsPb₂Br₅ Perovskites with Synergistic Enhancement for High-Efficiency Csâ€“Pbâ€“Br-Based Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 7145-7154.	4.0	171
57	Compositional Control in 2D Perovskites with Alternating Cations in the Interlayer Space for Photovoltaics with Efficiency over 18%. Advanced Materials, 2019, 31, e1903848.	11.1	171
58	Chlorine doping for black Î³-CsPbI3 solar cells with stabilized efficiency beyond 16%. Nano Energy, 2019, 58, 175-182.	8.2	170
59	Telluriumâ€Assisted Epitaxial Growth of Largeâ€Area, Highly Crystalline ReS₂ Atomic Layers on Mica Substrate. Advanced Materials, 2016, 28, 5019-5024.	11.1	169
60	Superior stability for perovskite solar cells with 20% efficiency using vacuum co-evaporation. Nanoscale, 2017, 9, 12316-12323.	2.8	169
61	A Se-doped MoS₂ nanosheet for improved hydrogen evolution reaction. Chemical Communications, 2015, 51, 15997-16000.	2.2	167
62	A Novel Anion Doping for Stable CsPbI₂Br Perovskite Solar Cells with an Efficiency of 15.56% and an Open Circuit Voltage of 1.30 V. Advanced Energy Materials, 2019, 9, 1902279.	10.2	166
63	Interfacial Engineering at the 2D/3D Heterojunction for High-Performance Perovskite Solar Cells. Nano Letters, 2019, 19, 7181-7190.	4.5	163
64	Tripleâ€Cation and Mixedâ€Halide Perovskite Single Crystal for Highâ€Performance Xâ€ray Imaging. Advanced Materials, 2021, 33, e2006010.	11.1	163
65	Scalable Fabrication of Metal Halide Perovskite Solar Cells and Modules. ACS Energy Letters, 2019, 4, 2147-2167.	8.8	161
66	Printable CsPbI₃ Perovskite Solar Cells with PCE of 19% via an Additive Strategy. Advanced Materials, 2020, 32, e2001243.	11.1	157
67	2D-MoO₃nanosheets for superior gas sensors. Nanoscale, 2016, 8, 8696-8703.	2.8	156
68	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
69	Alternating precursor layer deposition for highly stable perovskite films towards efficient solar cells using vacuum deposition. Journal of Materials Chemistry A, 2015, 3, 9401-9405.	5.2	146
70	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
71	Highâ€Pressure Nitrogenâ€Extraction and Effective Passivation to Attain Highest Largeâ€Area Perovskite Solar Module Efficiency. Advanced Materials, 2020, 32, e2004979.	11.1	145
72	Efficient planar CsPbBr3 perovskite solar cells by dual-source vacuum evaporation. Solar Energy Materials and Solar Cells, 2018, 187, 1-8.	3.0	139

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73	Two-dimensional (PEA)₂PbBr₄ perovskite single crystals for a high performance UV-detector. Journal of Materials Chemistry C, 2019, 7, 1584-1591.	2.7	138
74	Fe(<scp>iii</scp>) doped NiS₂ nanosheet: a highly efficient and low-cost hydrogen evolution catalyst. Journal of Materials Chemistry A, 2017, 5, 10173-10181.	5.2	137
75	Highly Efficient Ruddlesdenâ€“Popper Halide Perovskite PA₂MA₄Pb₅I₁₆ Solar Cells. ACS Energy Letters, 2018, 3, 1975-1982.	8.8	135
76	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
77	Graphdiyne-WS2 2D-Nanohybrid electrocatalysts for high-performance hydrogen evolution reaction. Carbon, 2018, 129, 228-235.	5.4	124
78	Scalable Ambient Fabrication of High-Performance CsPbI2Br Solar Cells. Joule, 2019, 3, 2485-2502.	11.7	124
79	Centimeterâ€Sized Single Crystal of Twoâ€Dimensional Halide Perovskites Incorporating Straightâ€Chain Symmetric Diammonium Ion for Xâ€Ray Detection. Angewandte Chemie - International Edition, 2020, 59, 14896-14902.	7.2	124
80	Molecular Engineering for Two-Dimensional Perovskites with Photovoltaic Efficiency Exceeding 18%. Matter, 2021, 4, 582-599.	5.0	123
81	Polymeric room-temperature molten salt as a multifunctional additive toward highly efficient and stable inverted planar perovskite solar cells. Energy and Environmental Science, 2020, 13, 5068-5079.	15.6	121
82	High-throughput large-area vacuum deposition for high-performance formamidine-based perovskite solar cells. Energy and Environmental Science, 2021, 14, 3035-3043.	15.6	121
83	Perovskite CH₃NH₃Pb(Br_xI_{1â^'x})₃ single crystals with controlled composition for fine-tuned bandgap towards optimized optoelectronic applications. Journal of Materials Chemistry C, 2016, 4, 9172-9178.	2.7	120
84	Room-Temperature Processed Nb₂O₅ as the Electron-Transporting Layer for Efficient Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 23181-23188.	4.0	120
85	Flexible perovskite solar cells with simultaneously improved efficiency, operational stability, and mechanical reliability. Joule, 2021, 5, 1587-1601.	11.7	120
86	Agx@WO3 core-shell nanostructure for LSP enhanced chemical sensors. Scientific Reports, 2014, 4, 6745.	1.6	116
87	CsPb(I Br1â^')3 solar cells. Science Bulletin, 2019, 64, 1532-1539.	4.3	114
88	Photoelectrochemical CO₂ reduction to adjustable syngas on grain-boundary-mediated a-Si/TiO₂/Au photocathodes with low onset potentials. Energy and Environmental Science, 2019, 12, 923-928.	15.6	114
89	Nitrogen-doped graphene quantum dots for 80% photoluminescence quantum yield for inorganic Î³-CsPbI₃ perovskite solar cells with efficiency beyond 16%. Journal of Materials Chemistry A, 2019, 7, 5740-5747.	5.2	113
90	Ruddlesdenâ€“Popper 2D Component to Stabilize Î³â€CsPbI₃ Perovskite Phase for Stable and Efficient Photovoltaics. Advanced Energy Materials, 2019, 9, 1902529.	10.2	111

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91	40.1% Record Lowâ€Light Solarâ€Cell Efficiency by Holistic Trapâ€Passivation using Micrometerâ€Thick Perovskite Film. Advanced Materials, 2021, 33, e2100770.	11.1	110
92	Gas-solid reaction based over one-micrometer thick stable perovskite films for efficient solar cells and modules. Nature Communications, 2018, 9, 3880.	5.8	109
93	Synthesis of Largeâ€Size 1Tâ€² ReS₂_xSe_{2(1â^’}_x₎ Alloy Monolayer with Tunable Bandgap and Carrier Type. Advanced Materials, 2017, 29, 1705015.	11.1	107
94	120 mm single-crystalline perovskite and wafers: towards viable applications. Science China Chemistry, 2017, 60, 1367-1376.	4.2	107
95	Color-Tuned Perovskite Films Prepared for Efficient Solar Cell Applications. Journal of Physical Chemistry C, 2016, 120, 42-47.	1.5	106
96	Precursor Engineering for Ambientâ€Compatible Antisolventâ€Free Fabrication of Highâ€Efficiency CsPbI₂Br Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000691.	10.2	106
97	2D Cs₂PbI₂Cl₂ Nanosheets for Holistic Passivation of Inorganic CsPbI₂Br Perovskite Solar Cells for Improved Efficiency and Stability. Advanced Energy Materials, 2020, 10, 2002882.	10.2	105
98	ITIC surface modification to achieve synergistic electron transport layer enhancement for planar-type perovskite solar cells with efficiency exceeding 20%. Journal of Materials Chemistry A, 2017, 5, 9514-9522.	5.2	103
99	One-pot hydrothermal fabrication of layered Î²-Ni(OH) 2 /g-C 3 N 4 nanohybrids for enhanced photocatalytic water splitting. Applied Catalysis B: Environmental, 2016, 194, 74-83.	10.8	102
100	High Density and Unit Activity Integrated in Amorphous Catalysts for Electrochemical Water Splitting. Small Structures, 2021, 2, 2000096.	6.9	102
101	Pt monolayer coating on complex network substrate with high catalytic activity for the hydrogen evolution reaction. Science Advances, 2015, 1, e1400268.	4.7	97
102	Improve the oxide/perovskite heterojunction contact for low temperature high efficiency and stable all-inorganic CsPbI2Br perovskite solar cells. Nano Energy, 2020, 67, 104241.	8.2	97
103	Unveiling the Effects of Hydrolysisâ€Derived DMAI/DMAPbI_x Intermediate Compound on the Performance of CsPbI₃ Solar Cells. Advanced Science, 2020, 7, 1902868.	5.6	97
104	Ionic Liquid Treatment for Highestâ€Efficiency Ambient Printed Stable Allâ€Inorganic CsPbI₃ Perovskite Solar Cells. Advanced Materials, 2022, 34, e2106750.	11.1	97
105	Low Temperature Fabrication for High Performance Flexible CsPbI₂Br Perovskite Solar Cells. Advanced Science, 2018, 5, 1801117.	5.6	96
106	Polar rotor scattering as atomic-level origin of low mobility and thermal conductivity of perovskite CH3NH3PbI3. Nature Communications, 2017, 8, 16086.	5.8	95
107	Europium and Acetate Coâ€doping Strategy for Developing Stable and Efficient CsPbI₂Br Perovskite Solar Cells. Small, 2019, 15, e1904387.	5.2	95
108	Hydrazide Derivatives for Defect Passivation in Pure CsPbI₃ Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	95

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109	Large and Dense Organicâ€“Inorganic Hybrid Perovskite CH₃NH₃PbI₃ Wafer Fabricated by One-Step Reactive Direct Wafer Production with High X-ray Sensitivity. ACS Applied Materials & Interfaces, 2020, 12, 16592-16600.	4.0	94
110	Stable ultra-fast broad-bandwidth photodetectors based on Î±-CsPbI₃ perovskite and NaYF₄:Yb,Er quantum dots. Nanoscale, 2017, 9, 6278-6285.	2.8	93
111	Additive Engineering to Grow Micronâ€Sized Grains for Stable High Efficiency Perovskite Solar Cells. Advanced Science, 2019, 6, 1901241.	5.6	93
112	Goldschmidt-rule-deviated perovskite CsPbIBr2by barium substitution for efficient solar cells. Nano Energy, 2019, 61, 165-172.	8.2	93
113	28.3%-efficiency perovskite/silicon tandem solar cell by optimal transparent electrode for high efficient semitransparent top cell. Nano Energy, 2021, 84, 105934.	8.2	93
114	High-Performance, Self-Powered Photodetectors Based on Perovskite and Graphene. ACS Applied Materials & Interfaces, 2017, 9, 42779-42787.	4.0	91
115	27%â€Efficiency Fourâ€Terminal Perovskite/Silicon Tandem Solar Cells by Sandwiched Gold Nanomesh. Advanced Functional Materials, 2020, 30, 1908298.	7.8	91
116	Ag Nanoparticle-Sensitized WO₃ Hollow Nanosphere for Localized Surface Plasmon Enhanced Gas Sensors. ACS Applied Materials & Interfaces, 2016, 8, 18165-18172.	4.0	90
117	High-performance transparent ultraviolet photodetectors based on inorganic perovskite CsPbCl₃ nanocrystals. RSC Advances, 2017, 7, 36722-36727.	1.7	90
118	Iodineâ€Optimized Interface for Inorganic CsPbI₂Br Perovskite Solar Cell to Attain High Stabilized Efficiency Exceeding 14%. Advanced Science, 2018, 5, 1801123.	5.6	90
119	Thermally stable methylammonium-free inverted perovskite solar cells with Zn2+ doped CuGaO2 as efficient mesoporous hole-transporting layer. Nano Energy, 2019, 61, 148-157.	8.2	90
120	In Situ Synthesis of Fewâ€Layered gâ€C₃N₄ with Vertically Aligned MoS₂ Loading for Boosting Solarâ€toâ€Hydrogen Generation. Small, 2018, 14, 1703003.	5.2	90
121	P Doped MoO_{3â^'}_x Nanosheets as Efficient and Stable Electrocatalysts for Hydrogen Evolution. Small, 2017, 13, 1700441.	5.2	88
122	Graphene-oxide doped PEDOT:PSS as a superior hole transport material for high-efficiency perovskite solar cell. Organic Electronics, 2017, 48, 165-171.	1.4	87
123	Vapor-fumigation for record efficiency two-dimensional perovskite solar cells with superior stability. Energy and Environmental Science, 2018, 11, 3349-3357.	15.6	87
124	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
125	A Special Additive Enables All Cations and Anions Passivation for Stable Perovskite Solar Cells with Efficiency over 23%. Nano-Micro Letters, 2021, 13, 169.	14.4	86
126	Novel inorganic electron transport layers for planar perovskite solar cells: Progress and prospective. Nano Energy, 2020, 68, 104289.	8.2	83

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127	WO 3 -SnO 2 nanosheet composites: Hydrothermal synthesis and gas sensing mechanism. Journal of Alloys and Compounds, 2018, 736, 322-331.	2.8	82
128	Bifunctional Hydroxylamine Hydrochloride Incorporated Perovskite Films for Efficient and Stable Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 900-909.	2.5	81
129	Inch-sized high-quality perovskite single crystals by suppressing phase segregation for light-powered integrated circuits. Science Advances, 2021, 7, .	4.7	81
130	Moltenâ€Saltâ€Assisted CsPbI₃ Perovskite Crystallization for Nearly 20%â€Efficiency Solar Cells. Advanced Materials, 2021, 33, e2103770.	11.1	81
131	Perovskiteâ€”a Perfect Top Cell for Tandem Devices to Break the Sâ€“Q Limit. Advanced Science, 2019, 6, 1801704.	5.6	80
132	Recent progress of twoâ€dimensional lead halide perovskite single crystals: Crystal growth, physical properties, and device applications. EcoMat, 2020, 2, e12036.	6.8	80
133	Ionicâ€Liquidâ€Perovskite Capping Layer for Stable 24.33%â€Efficient Solar Cell. Advanced Energy Materials, 2022, 12, .	10.2	80
134	An up-scalable approach to CH3NH3PbI3 compact films for high-performance perovskite solar cells. Nano Energy, 2015, 15, 670-678.	8.2	79
135	Defect Engineering in Earthâ€Abundant Cu₂ZnSn(S,Se)₄ Photovoltaic Materials via Ga³⁺â€Doping for over 12% Efficient Solar Cells. Advanced Functional Materials, 2021, 31, 2010325.	7.8	79
136	Low-temperature and facile solution-processed two-dimensional TiS₂ as an effective electron transport layer for UV-stable planar perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 9132-9138.	5.2	78
137	Stability of the CsPbI₃perovskite: from fundamentals to improvements. Journal of Materials Chemistry A, 2021, 9, 11124-11144.	5.2	78
138	Recent Advances in Photoelectrochemical Applications of Silicon Materials for Solarâ€toâ€Chemicals Conversion. ChemSusChem, 2017, 10, 4324-4341.	3.6	77
139	Graphdiyne Quantum Dots for Much Improved Stability and Efficiency of Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1701117.	1.9	76
140	High-quality perovskite MAPbI3 single crystals for broad-spectrum and rapid response integrate photodetector. Journal of Energy Chemistry, 2018, 27, 722-727.	7.1	76
141	Cesium Lead Mixed-Halide Perovskites for Low-Energy Loss Solar Cells with Efficiency Beyond 17%. Chemistry of Materials, 2019, 31, 6231-6238.	3.2	76
142	Highâ€Efficiency Perovskite Solar Cells Enabled by Anatase TiO₂ Nanopyramid Arrays with an Oriented Electric Field. Angewandte Chemie - International Edition, 2020, 59, 11969-11976.	7.2	76
143	Zn-doping for reduced hysteresis and improved performance of methylammonium lead iodide perovskite hybrid solar cells. Materials Today Energy, 2017, 5, 205-213.	2.5	75
144	Ultrastable Perovskiteâ€“Zeolite Composite Enabled by Encapsulation and Inâ€…Situ Passivation. Angewandte Chemie - International Edition, 2020, 59, 23100-23106.	7.2	75

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145	Simultaneous Cesium and Acetate Coalloying Improves Efficiency and Stability of FA_{0.85}MA_{0.15}PbI₃ Perovskite Solar Cell with an Efficiency of 21.95%. Solar Rrl, 2019, 3, 1900220.	3.1	74
146	Dual Passivation of Perovskite and SnO₂ for Highâ€Efficiency MAPbI₃ Perovskite Solar Cells. Advanced Science, 2021, 8, 2001466.	5.6	72
147	Synthesis and formation mechanism of flowerlike architectures assembled from ultrathin NiO nanoflakes and their adsorption to malachite green and acid red in water. Chemical Engineering Journal, 2014, 239, 141-148.	6.6	71
148	Metal Cations in Efficient Perovskite Solar Cells: Progress and Perspective. Advanced Materials, 2019, 31, e1902037.	11.1	71
149	m-Phenylenediammonium as a New Spacer for Dionâ€“Jacobson Two-Dimensional Perovskites. Journal of the American Chemical Society, 2021, 143, 12063-12073.	6.6	71
150	Stable High-Performance Flexible Photodetector Based on Upconversion Nanoparticles/Perovskite Microarrays Composite. ACS Applied Materials & Interfaces, 2017, 9, 19176-19183.	4.0	70
151	Recent advances in resistive random access memory based on lead halide perovskite. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 293-315.	8.5	70
152	Epitaxial growth of large-area and highly crystalline anisotropic ReSe2 atomic layer. Nano Research, 2017, 10, 2732-2742.	5.8	69
153	Interfaces and Interfacial Layers in Inorganic Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 26440-26453.	7.2	69
154	Preparation of ZnO hollow spheres with different surface roughness and their enhanced gas sensing property. Sensors and Actuators B: Chemical, 2014, 197, 58-65.	4.0	68
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