Kai Zhu

List of Publications by Year
in descending order

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207 papers	35,284 citations	2543 96 h-index	3260 185 g-index
210 all docs	210 docs citations	210 times ranked	22711 citing authors

#	Article	IF	Citations
1	The Promise of Perovskite Solar Cells. , 2022, , 388-404.		3
2	Construction of reduced graphene oxide coupled with CoSe2-MoSe2 heterostructure for enhanced electrocatalytic hydrogen production. Journal of Colloid and Interface Science, 2022, 608, 922-930.	5.0	26
3	Metastable Dion-Jacobson 2D structure enables efficient and stable perovskite solar cells. Science, 2022, 375, 71-76.	6.0	216
4	Atomically Resolved Electrically Active Intragrain Interfaces in Perovskite Semiconductors. Journal of the American Chemical Society, 2022, 144, 1910-1920.	6.6	37
5	Incorporation of 2D Perovskite Systems into 3D Perovskite Solar Cells. , 2022, , 81-114.		0
6	Nanoscale Photoexcited Carrier Dynamics in Perovskites. Journal of Physical Chemistry Letters, 2022, 13, 2388-2395.	2.1	3
7	Advances in SnO₂ for Efficient and Stable nâ€“iâ€“p Perovskite Solar Cells. Advanced Materials, 2022, 34, e2110438.	11.1	186
8	Mixing Matters: Nanoscale Heterogeneity and Stability in Metal Halide Perovskite Solar Cells. ACS Energy Letters, 2022, 7, 471-480.	8.8	23
9	Energy Spotlight. ACS Energy Letters, 2022, 7, 1862-1863.	8.8	0
10	Understanding the Effect of Lead Iodide Excess on the Performance of Methylammonium Lead Iodide Perovskite Solar Cells. ACS Energy Letters, 2022, 7, 1912-1919.	8.8	14
11	Carrier control in Snâ€“Pb perovskites via 2D cation engineering for all-perovskite tandem solar cells with improved efficiency and stability. Nature Energy, 2022, 7, 642-651.	19.8	121
12	Surface engineering with oxidized Ti3C2Tx MXene enables efficient and stable p-i-n-structured CsPbI3 perovskite solar cells. Joule, 2022, 6, 1672-1688.	11.7	45
13	Polymer Hole Transport Material Functional Group Tuning for Improved Perovskite Solar Cell Performance. ACS Applied Energy Materials, 2022, 5, 8601-8610.	2.5	3
14	Breakthrough: Phase-Pure 2D Perovskite Films. Joule, 2021, 5, 14-15.	11.7	8
15	Efficient and Stable Graded CsPbI3â^'xBrx Perovskite Solar Cells and Submodules by Orthogonal Processable Spray Coating. Joule, 2021, 5, 481-494.	11.7	81
16	Wide-Bandgap Metal Halide Perovskites for Tandem Solar Cells. ACS Energy Letters, 2021, 6, 232-248.	8.8	89
17	SMART Perovskite Growth: Enabling a Larger Range of Process Conditions. ACS Energy Letters, 2021, 6, 650-658.	8.8	14
18	In situ Al₂O₃ incorporation enhances the efficiency of CuIn(S,Se)₂ solar cells prepared from molecular-ink solutions. Journal of Materials Chemistry A, 2021, 9, 10419-10426.	5.2	6

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19	Ultrafast Fenton-like reaction route to FeOOH/NiFe-LDH heterojunction electrode for efficient oxygen evolution reaction. Journal of Materials Chemistry A, 2021, 9, 21785-21791.	5.2	55
20	Performance and limits of 2.0 eV bandgap CuInGaS₂ solar absorber integrated with CdS buffer on F:SnO₂ substrate for multijunction photovoltaic and photoelectrochemical water splitting devices. Materials Advances, 2021, 2, 5752-5763.	2.6	4
21	Investigating the iodide and bromide ion exchange in metal halide perovskite single crystals and thin films. Chemical Communications, 2021, 57, 6125-6128.	2.2	7
22	Reconfiguring the band-edge states of photovoltaic perovskites by conjugated organic cations. Science, 2021, 371, 636-640.	6.0	184
23	Surface lattice engineering through three-dimensional lead iodide perovskitoid for high-performance perovskite solar cells. CheM, 2021, 7, 774-785.	5.8	37
24	High-performance methylammonium-free ideal-band-gap perovskite solar cells. Matter, 2021, 4, 1365-1376.	5.0	51
25	3D/2D passivation as a secret to success for polycrystalline thin-film solar cells. Joule, 2021, 5, 1057-1073.	11.7	48
26	Prospects for metal halide perovskite-based tandem solar cells. Nature Photonics, 2021, 15, 411-425.	15.6	195
27	Substrate-Controlled Electronic Properties of Perovskite Layer in Lateral Heterojunction Configuration. , 2021, , .		0
28	Linking Transient Voltage to Spatially-Resolved Luminescence Imaging to Understand Reliability of Perovskite Photovoltaics. , 2021, , .		2
29	Unraveling the surface state of photovoltaic perovskite thin film. Matter, 2021, 4, 2417-2428.	5.0	22
30	Superior photo-carrier diffusion dynamics in organic-inorganic hybrid perovskites revealed by spatiotemporal conductivity imaging. Nature Communications, 2021, 12, 5009.	5.8	10
31	Super Flexible Transparent Conducting Oxideâ€Free Organicâ€“Inorganic Hybrid Perovskite Solar Cells with 19.01% Efficiency (Active Areaâ€‰=â€‰1â€‰cm²). Solar Rrl, 2021, 5, 2100733.	3.1	10
32	On-device lead-absorbing tapes for sustainable perovskite solar cells. Nature Sustainability, 2021, 4, 1038-1041.	11.5	53
33	Polymer Hole Transport Materials for Perovskite Solar Cells via Buchwaldâ€“Hartwig Amination. ACS Applied Polymer Materials, 2021, 3, 5578-5587.	2.0	14
34	Reliable Go Game Images Recognition Under Strong Light Attack. IEEE Access, 2021, 9, 160064-160071.	2.6	3
35	Metastable Dion-Jacobson 2D structure enables efficient and stable perovskite solar cells. Science, 2021, , eabj2637.	6.0	2
36	Additive Engineering for Efficient and Stable Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902579.	10.2	477

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37	Sub-1.4eV bandgap inorganic perovskite solar cells with long-term stability. Nature Communications, 2020, 11, 151.	5.8	92
38	Individual Electron and Hole Mobilities in Lead-Halide Perovskites Revealed by Noncontact Methods. ACS Energy Letters, 2020, 5, 47-55.	8.8	37
39	Inhomogeneous Doping of Perovskite Materials by Dopants from Hole-Transport Layer. Matter, 2020, 2, 261-272.	5.0	38
40	Sustainable lead management in halide perovskite solar cells. Nature Sustainability, 2020, 3, 1044-1051.	11.5	87
41	Reduced Self-Doping of Perovskites Induced by Short Annealing for Efficient Solar Modules. Joule, 2020, 4, 1949-1960.	11.7	72
42	Energy Spotlight. ACS Energy Letters, 2020, 5, 2739-2741.	8.8	1
43	Learning from existing photovoltaic technologies to identify alternative perovskite module designs. Energy and Environmental Science, 2020, 13, 3393-3403.	15.6	43
44	Choose Your Own Adventure: Fabrication of Monolithic Allâ€Perovskite Tandem Photovoltaics. Advanced Materials, 2020, 32, e2003312.	11.1	39
45	The 2020 photovoltaic technologies roadmap. Journal Physics D: Applied Physics, 2020, 53, 493001.	1.3	274
46	Enhancing Charge Transport of 2D Perovskite Passivation Agent for Wideâ€Bandgap Perovskite Solar Cells Beyond 21%. Solar Rrl, 2020, 4, 2070065.	3.1	2
47	Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. Science, 2020, 367, 1135-1140.	6.0	525
48	Enhancing Charge Transport of 2D Perovskite Passivation Agent for Wideâ€Bandgap Perovskite Solar Cells Beyond 21%. Solar Rrl, 2020, 4, 2000082.	3.1	79
49	Efficient, stable silicon tandem cells enabled by anion-engineered wide-bandgap perovskites. Science, 2020, 368, 155-160.	6.0	420
50	An analysis of carrier dynamics in methylammonium lead triiodide perovskite solar cells using cross correlation noise spectroscopy. Applied Physics Letters, 2020, 116, .	1.5	5
51	Advances in two-dimensional organicâ€“inorganic hybrid perovskites. Energy and Environmental Science, 2020, 13, 1154-1186.	15.6	420
52	Investigating the Effects of Chemical Gradients on Performance and Reliability within Perovskite Solar Cells with TOFâ€SIMS. Advanced Energy Materials, 2020, 10, 1903674.	10.2	52
53	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
54	26.7% Efficient 4-Terminal Perovskiteâ€“Silicon Tandem Solar Cell Composed of a High-Performance Semitransparent Perovskite Cell and a Doped Poly-Si/SiOx Passivating Contact Silicon Cell. IEEE Journal of Photovoltaics, 2020, 10, 417-422.	1.5	40

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55	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. Nature Energy, 2020, 5, 35-49.	19.8	797
56	Carbazole-Based Hole-Transport Materials for High-Efficiency and Stable Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 4492-4498.	2.5	47
57	Surface-Activated Corrosion in Tinâ€"Lead Halide Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 3344-3351.	8.8	55
58	Scalable fabrication and coating methods for perovskite solar cells and solar modules. Nature Reviews Materials, 2020, 5, 333-350.	23.3	568
59	On-device lead sequestration for perovskite solar cells. Nature, 2020, 578, 555-558.	13.7	284
60	Structural Stability of Tin-Lead Halide Perovskite Solar Cells. , 2020, , .		0
61	Mitigating Measurement Artifacts in TOF-SIMS Analysis of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 30911-30918.	4.0	44
62	Bimolecular Additives Improve Wide-Band-Gap Perovskites for Efficient Tandem Solar Cells with CIGS. Joule, 2019, 3, 1734-1745.	11.7	227
63	Electrochemical Deposition of Conformal Semiconductor Layers in Nanoporous Oxides for Sensitized Photoelectrodes. ACS Omega, 2019, 4, 19772-19776.	1.6	3
64	Thermally Stable Perovskite Solar Cells by Systematic Molecular Design of the Hole-Transport Layer. ACS Energy Letters, 2019, 4, 473-482.	8.8	66
65	Lewis acid activated CO₂ reduction over a Ni modified Niâ€"Ge hydroxide driven by visible-infrared light. Dalton Transactions, 2019, 48, 1672-1679.	1.6	12
66	Enhanced Charge Transport by Incorporating Formamidinium and Cesium Cations into Twoâ€Dimensional Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 11737-11741.	7.2	67
67	Enhanced Charge Transport by Incorporating Formamidinium and Cesium Cations into Twoâ€Dimensional Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 11863-11867.	1.6	22
68	Carrier lifetimes of >1 Î¼s in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. Science, 2019, 364, 475-479.	6.0	781
69	Achieving a high open-circuit voltage in inverted wide-bandgap perovskite solar cells with a graded perovskite homojunction. Nano Energy, 2019, 61, 141-147.	8.2	152
70	Self-Seeding Growth for Perovskite Solar Cells with Enhanced Stability. Joule, 2019, 3, 1452-1463.	11.7	120
71	Highly selective electrochemical CO₂ reduction to CO using a redox-active couple on low-crystallinity mesoporous ZnGa₂O₄ catalyst. Journal of Materials Chemistry A, 2019, 7, 9316-9323.	5.2	30
72	Enhanced Charge Transport in 2D Perovskites via Fluorination of Organic Cation. Journal of the American Chemical Society, 2019, 141, 5972-5979.	6.6	274

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73	Insights into operational stability and processing of halide perovskite active layers. Energy and Environmental Science, 2019, 12, 1341-1348.	15.6	125
74	Improving Charge Transport via Intermediateâ€Controlled Crystal Growth in 2D Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1901652.	7.8	103
75	Understanding Measurement Artifacts Causing Inherent Cation Gradients in Depth Profiles of Perovskite Photovoltaics with TOF-SIMS. , 2019, , .		2
76	Monolithic Two-Terminal All-Perovskite Tandem Solar Cells with Power Conversion Efficiency Exceeding 21%. , 2019, , .		3
77	Spin-dependent charge transport through 2D chiral hybrid lead-iodide perovskites. Science Advances, 2019, 5, eaay0571.	4.7	275
78	Tuning Hole Transport Layer Using Urea for Highâ€Performance Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1806740.	7.8	101
79	Reducing Saturationâ€Current Density to Realize Highâ€Efficiency Lowâ€Bandgap Mixed Tinâ€“Lead Halide Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803135.	10.2	255
80	Highly Efficient Perovskite Solar Modules by Scalable Fabrication and Interconnection Optimization. ACS Energy Letters, 2018, 3, 322-328.	8.8	143
81	Four-Terminal All-Perovskite Tandem Solar Cells Achieving Power Conversion Efficiencies Exceeding 23%. ACS Energy Letters, 2018, 3, 305-306.	8.8	219
82	Scalable Deposition of High-Efficiency Perovskite Solar Cells by Spray-Coating. ACS Applied Energy Materials, 2018, 1, 1853-1857.	2.5	78
83	Scalable fabrication of perovskite solar cells. Nature Reviews Materials, 2018, 3, .	23.3	764
84	Effect of non-stoichiometric solution chemistry on improving the performance of wide-bandgap perovskite solar cells. Materials Today Energy, 2018, 7, 232-238.	2.5	31
85	100â€Fold Enhancement of Charge Transport in Uniaxially Oriented Mesoporous Anatase TiO₂ Films. Chemistry - A European Journal, 2018, 24, 89-92.	1.7	9
86	Suppressing defects through the synergistic effect of a Lewis base and a Lewis acid for highly efficient and stable perovskite solar cells. Energy and Environmental Science, 2018, 11, 3480-3490.	15.6	274
87	Efficient two-terminal all-perovskite tandem solar cells enabled by high-quality low-bandgap absorber layers. Nature Energy, 2018, 3, 1093-1100.	19.8	422
88	Scalable Deposition of Polycrystalline Perovskite Thin Films towards High-Efficiency and Large-Area Perovskite Photovoltaics. , 2018, , .		0
89	One-Step High-Throughput Blade Coating of Perovskite Solar Cells. , 2018, , .		1
90	Highâ€Performance and Stable Silicon Photoanode Modified by Crystalline Ni@ Amorphous Co Coreâ€Shell Nanoparticles. ChemCatChem, 2018, 10, 5025-5031.	1.8	14

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91	Roll-to-Roll Printing of Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 2558-2565.	8.8	199
92	3D/2D multidimensional perovskites: Balance of high performance and stability for perovskite solar cells. Current Opinion in Electrochemistry, 2018, 11, 105-113.	2.5	59
93	Stability at Scale: Challenges of Module Interconnects for Perovskite Photovoltaics. ACS Energy Letters, 2018, 3, 2502-2503.	8.8	31
94	Ultrafast Imaging of Carrier Transport across Grain Boundaries in Hybrid Perovskite Thin Films. ACS Energy Letters, 2018, 3, 1402-1408.	8.8	55
95	Stable Formamidiniumâ€Based Perovskite Solar Cells via In Situ Grain Encapsulation. Advanced Energy Materials, 2018, 8, 1800232.	10.2	78
96	Low-Cost, Efficient, and Durable H₂ Production by Photoelectrochemical Water Splitting with CuGa₃Se₅ Photocathodes. ACS Applied Materials & Interfaces, 2018, 10, 19573-19579.	4.0	33
97	Perovskite Solar Cells: Stable Formamidinium-Based Perovskite Solar Cells via In Situ Grain Encapsulation (Adv. Energy Mater. 22/2018). Advanced Energy Materials, 2018, 8, 1870101.	10.2	1
98	Scalable slot-die coating of high performance perovskite solar cells. Sustainable Energy and Fuels, 2018, 2, 2442-2449.	2.5	155
99	Divalent Anionic Doping in Perovskite Solar Cells for Enhanced Chemical Stability. Advanced Materials, 2018, 30, e1800973.	11.1	50
100	Probing Perovskite Inhomogeneity beyond the Surface: TOF-SIMS Analysis of Halide Perovskite Photovoltaic Devices. ACS Applied Materials & Interfaces, 2018, 10, 28541-28552.	4.0	72
101	Impact of Layer Thickness on the Charge Carrier and Spin Coherence Lifetime in Two-Dimensional Layered Perovskite Single Crystals. ACS Energy Letters, 2018, 3, 2273-2279.	8.8	126
102	Outlook and Challenges of Perovskite Solar Cells toward Terawatt-Scale Photovoltaic Module Technology. Joule, 2018, 2, 1437-1451.	11.7	162
103	Recent Advances in Perovskite Tandem Devices. Materials and Energy, 2018, , 141-197.	2.5	0
104	Top and bottom surfaces limit carrier lifetime in lead iodide perovskite films. Nature Energy, 2017, 2, .	19.8	376
105	Electronic and Morphological Inhomogeneities in Pristine and Deteriorated Perovskite Photovoltaic Films. Nano Letters, 2017, 17, 1796-1801.	4.5	25
106	Do grain boundaries dominate non-radiative recombination in CH₃NH₃PbI₃ perovskite thin films?. Physical Chemistry Chemical Physics, 2017, 19, 5043-5050.	1.3	161
107	Low-bandgap mixed tinâ€“lead iodide perovskite absorbers with long carrier lifetimes for all-perovskite tandem solar cells. Nature Energy, 2017, 2, .	19.8	634
108	Electrochemical impedance analysis of perovskiteâ€“electrolyte interfaces. Chemical Communications, 2017, 53, 2467-2470.	2.2	46

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109	Extrinsic ion migration in perovskite solar cells. Energy and Environmental Science, 2017, 10, 1234-1242.	15.6	458
110	300% Enhancement of Carrier Mobility in Uniaxialâ€Oriented Perovskite Films Formed by Topotacticâ€Oriented Attachment. Advanced Materials, 2017, 29, 1606831.	11.1	120
111	Highly Efficient and Uniform 1â€…cm‹sup›2‹/sup› Perovskite Solar Cells with an Electrochemically Deposited NiO‹sub›‹i›x‹/i›‹/sub› Holeâ€Extraction Layer. ChemSusChem, 2017, 10, 2660-2667.	3.6	84
112	Synergistic Effects of Lead Thiocyanate Additive and Solvent Annealing on the Performance of Wide-Bandgap Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1177-1182.	8.8	190
113	Hybrid Perovskite Phase Transition and Its Ionic, Electrical and Optical Properties. MRS Advances, 2017, 2, 3077-3082.	0.5	3
114	Long-range hot-carrier transport in hybrid perovskites visualized by ultrafast microscopy. Science, 2017, 356, 59-62.	6.0	434
115	High-Performance Formamidinium-Based Perovskite Solar Cells via Microstructure-Mediated Î´-to-Î± Phase Transformation. Chemistry of Materials, 2017, 29, 3246-3250.	3.2	99
116	Perovskite ink with wide processing window for scalable high-efficiency solar cells. Nature Energy, 2017, 2, .	19.8	499
117	Quantitative analysis of time-resolved microwave conductivity data. Journal Physics D: Applied Physics, 2017, 50, 493002.	1.3	74
118	Perovskite Photovoltaics: The Path to a Printable Terawatt-Scale Technology. ACS Energy Letters, 2017, 2, 2540-2544.	8.8	64
119	Additive-Assisted Controllable Growth of Perovskites. Series on Chemistry, Energy and the Environment, 2017, , 1-26.	0.3	4
120	Determination of the True Lateral Grain Size in Organicâ€“Inorganic Halide Perovskite Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 33565-33570.	4.0	17
121	In situ investigation of halide incorporation into perovskite solar cells. MRS Communications, 2017, 7, 575-582.	0.8	7
122	Effect of Rubidium Incorporation on the Structural, Electrical, and Photovoltaic Properties of Methylammonium Lead Iodide-Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 41898-41905.	4.0	51
123	Perovskite Solar Cellsâ€"Towards Commercialization. ACS Energy Letters, 2017, 2, 1749-1751.	8.8	107
124	Acid Additives Enhancing the Conductivity of Spiroâ€OMeTAD Toward Highâ€Efficiency and Hysteresisâ€Less Planar Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1601451.	10.2	123
125	Impact of grain boundaries on efficiency and stability of organic-inorganic trihalide perovskites. Nature Communications, 2017, 8, 2230.	5.8	220
126	Defect Tolerance in Methylammonium Lead Triiodide Perovskite. ACS Energy Letters, 2016, 1, 360-366.	8.8	500

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127	Intrinsic Raman signatures of pristine hybrid perovskite CH₃NH₃PbI₃ and its multiple stages of structure transformation. , 2016, , .		0
128	Electron and hole drift mobility measurements on methylammonium lead iodide perovskite solar cells. Applied Physics Letters, 2016, 108, .	1.5	60
129	Polarization and Dielectric Study of Methylammonium Lead Iodide Thin Film to Reveal its Nonferroelectric Nature under Solar Cell Operating Conditions. ACS Energy Letters, 2016, 1, 142-149.	8.8	103
130	In situ investigation of the formation and metastability of formamidinium lead tri-iodide perovskite solar cells. Energy and Environmental Science, 2016, 9, 2372-2382.	15.6	79
131	Influence of Electrode Interfaces on the Stability of Perovskite Solar Cells: Reduced Degradation Using MoO_x/Al for Hole Collection. ACS Energy Letters, 2016, 1, 38-45.	8.8	237
132	Exceptional Morphology-Preserving Evolution of Formamidinium Lead Triiodide Perovskite Thin Films via Organic-Cation Displacement. Journal of the American Chemical Society, 2016, 138, 5535-5538.	6.6	178
133	Structural and chemical evolution of methylammonium lead halide perovskites during thermal processing from solution. Energy and Environmental Science, 2016, 9, 2072-2082.	15.6	188
134	Perovskite Solar Cells Shine in the â€œValley of the Sunâ€• ACS Energy Letters, 2016, 1, 64-67.	8.8	101
135	Effect of Water Vapor, Temperature, and Rapid Annealing on Formamidinium Lead Triiodide Perovskite Crystallization. ACS Energy Letters, 2016, 1, 155-161.	8.8	27
136	Third-order nonlinear optical properties of methylammonium lead halide perovskite films. Journal of Materials Chemistry C, 2016, 4, 4847-4852.	2.7	45
137	Multiple-Stage Structure Transformation of Organic-Inorganic Hybrid Perovskite<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>CH</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></ Physical Review X, 2016, 6, .	2.8	13
138	Methylammonium lead iodide grain boundaries exhibit depth-dependent electrical properties. Energy and Environmental Science, 2016, 9, 3642-3649.	15.6	47
139	Leadâ€Free Inverted Planar Formamidinium Tin Triiodide Perovskite Solar Cells Achieving Power Conversion Efficiencies up to 6.22%. Advanced Materials, 2016, 28, 9333-9340.	11.1	636
140	Ionic and Optical Properties of Methylammonium Lead Iodide Perovskite across the Tetragonalâ€“Cubic Structural Phase Transition. ChemSusChem, 2016, 9, 2692-2698.	3.6	61
141	Grain-Size-Limited Mobility in Methylammonium Lead Iodide Perovskite Thin Films. ACS Energy Letters, 2016, 1, 561-565.	8.8	160
142	Cooperative tin oxide fullerene electron selective layers for high-performance planar perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 14276-14283.	5.2	204
143	Large polarization-dependent exciton optical Stark effect in lead iodide perovskites. Nature Communications, 2016, 7, 12613.	5.8	98
144	Thermally evaporated methylammonium tin triiodide thin films for lead-free perovskite solar cell fabrication. RSC Advances, 2016, 6, 90248-90254.	1.7	114

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145	Fabrication of Efficient Low-Bandgap Perovskite Solar Cells by Combining Formamidinium Tin Iodide with Methylammonium Lead Iodide. Journal of the American Chemical Society, 2016, 138, 12360-12363.	6.6	362
146	Effects of alloying on the optical properties of organicâ€“inorganic lead halide perovskite thin films. Journal of Materials Chemistry C, 2016, 4, 7775-7782.	2.7	100
147	The Controlling Mechanism for Potential Loss in CH₃NH₃PbBr₃ Hybrid Solar Cells. ACS Energy Letters, 2016, 1, 424-430.	8.8	77
148	Simultaneous band-gap narrowing and carrier-lifetime prolongation of organicâ€“inorganic trihalide perovskites. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8910-8915.	3.3	269
149	Electronâ€“Rotor Interaction in Organicâ€“Inorganic Lead Iodide Perovskites Discovered by Isotope Effects. Journal of Physical Chemistry Letters, 2016, 7, 2879-2887.	2.1	79
150	The layer boundary effect on multi-layer mesoporous TiO₂ film based dye sensitized solar cells. RSC Advances, 2016, 6, 98167-98170.	1.7	3
151	Towards stable and commercially available perovskite solar cells. Nature Energy, 2016, 1, .	19.8	941
152	Improved Phase Stability of Formamidinium Lead Triiodide Perovskite by Strain Relaxation. ACS Energy Letters, 2016, 1, 1014-1020.	8.8	367
153	Facile fabrication of large-grain CH3NH3PbI3âˆ’xBrx films for high-efficiency solar cells via CH3NH3Br-selective Ostwald ripening. Nature Communications, 2016, 7, 12305.	5.8	444
154	Selective dissolution of halide perovskites as a step towards recycling solar cells. Nature Communications, 2016, 7, 11735.	5.8	129
155	Employing Lead Thiocyanate Additive to Reduce the Hysteresis and Boost the Fill Factor of Planar Perovskite Solar Cells. Advanced Materials, 2016, 28, 5214-5221.	11.1	487
156	Proton Reduction Using a Hydrogenase-Modified Nanoporous Black Silicon Photoelectrode. ACS Applied Materials & Interfaces, 2016, 8, 14481-14487.	4.0	44
157	Charge Transfer Dynamics between Carbon Nanotubes and Hybrid Organic Metal Halide Perovskite Films. Journal of Physical Chemistry Letters, 2016, 7, 418-425.	2.1	83
158	Understanding and removing surface states limiting charge transport in TiO₂ nanowire arrays for enhanced optoelectronic device performance. Chemical Science, 2016, 7, 1910-1913.	3.7	29
159	Organicâ€“inorganic hybrid lead halide perovskites for optoelectronic and electronic applications. Chemical Society Reviews, 2016, 45, 655-689.	18.7	1,285
160	Origin of Jâ€“V Hysteresis in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 905-917.	2.1	631
161	Planar versus mesoscopic perovskite microstructures: The influence of CH3NH3PbI3 morphology on charge transport and recombination dynamics. Nano Energy, 2016, 22, 439-452.	8.2	76
162	Efficient charge extraction and slow recombination in organicâ€“inorganic perovskites capped with semiconducting single-walled carbon nanotubes. Energy and Environmental Science, 2016, 9, 1439-1449.	15.6	126

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163	Transformative Evolution of Organolead Triiodide Perovskite Thin Films from Strong Room-Temperature Solidâ€"Gas Interaction between HPbI₃-CH₃NH₂ Precursor Pair. Journal of the American Chemical Society, 2016, 138, 750-753.	6.6	156
164	Stabilizing Perovskite Structures by Tuning Tolerance Factor: Formation of Formamidinium and Cesium Lead Iodide Solid-State Alloys. Chemistry of Materials, 2016, 28, 284-292.	3.2	1,606
165	Manipulating Crystallization of Organolead Mixed-Halide Thin Films in Antisolvent Baths for Wide-Bandgap Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 2232-2237.	4.0	91
166	Annealing-free efficient vacuum-deposited planar perovskite solar cells with evaporated fullerenes as electron-selective layers. Nano Energy, 2016, 19, 88-97.	8.2	125
167	Intercalation crystallization of phase-pure Î±-HC(NH₂)₂PbI₃upon microstructurally engineered PbI₂thin films for planar perovskite solar cells. Nanoscale, 2016, 8, 6265-6270.	2.8	41
168	Observation of a hot-phonon bottleneck in lead-iodide perovskites. Nature Photonics, 2016, 10, 53-59.	15.6	760
169	Squareâ€Centimeter Solutionâ€Processed Planar CH₃NH₃PbI₃ Perovskite Solar Cells with Efficiency Exceeding 15%. Advanced Materials, 2015, 27, 6363-6370.	11.1	311
170	Controllable Sequential Deposition of Planar CH₃NH₃PbI₃ Perovskite Films via Adjustable Volume Expansion. Nano Letters, 2015, 15, 3959-3963.	4.5	245
171	Crystal Morphologies of Organolead Trihalide in Mesoscopic/Planar Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2015, 6, 2292-2297.	2.1	93
172	Controlled Humidity Study on the Formation of Higher Efficiency Formamidinium Lead Triiodide-Based Solar Cells. Chemistry of Materials, 2015, 27, 4814-4820.	3.2	133
173	Impact of Capacitive Effect and Ion Migration on the Hysteretic Behavior of Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2015, 6, 4693-4700.	2.1	335
174	Comparison of Recombination Dynamics in CH₃NH₃PbBr₃ and CH₃NH₃PbI₃ Perovskite Films: Influence of Exciton Binding Energy. Journal of Physical Chemistry Letters, 2015, 6, 4688-4692.	2.1	350
175	Growth control of compact CH₃NH₃PbI₃ thin films via enhanced solid-state precursor reaction for efficient planar perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 9249-9256.	5.2	128
176	Room-temperature crystallization of hybrid-perovskite thin films via solventâ€"solvent extraction for high-performance solar cells. Journal of Materials Chemistry A, 2015, 3, 8178-8184.	5.2	385
177	Trend of Perovskite Solar Cells: Dig Deeper to Build Higher. Journal of Physical Chemistry Letters, 2015, 6, 2315-2317.	2.1	27
178	Ferroelectric solar cells based on inorganicâ€"organic hybrid perovskites. Journal of Materials Chemistry A, 2015, 3, 7699-7705.	5.2	103
179	Carrier separation and transport in perovskite solar cells studied by nanometre-scale profiling of electrical potential. Nature Communications, 2015, 6, 8397.	5.8	205
180	Mesoporous scaffolds based on TiO₂ nanorods and nanoparticles for efficient hybrid perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 24315-24321.	5.2	29

#	Article	IF	Citations
181	Low surface recombination velocity in solution-grown CH3NH3PbBr3 perovskite single crystal. Nature Communications, 2015, 6, 7961.	5.8	406
182	Electronic Structure and Optical Properties of Î±-CH₃NH₃PbBr₃ Perovskite Single Crystal. Journal of Physical Chemistry Letters, 2015, 6, 4304-4308.	2.1	136
183	Stability of inverted organic solar cells with ZnO contact layers deposited from precursor solutions. Energy and Environmental Science, 2015, 8, 592-601.	15.6	103
184	Three-step sequential solution deposition of PbI₂-free CH₃NH₃PbI₃perovskite. Journal of Materials Chemistry A, 2015, 3, 9086-9091.	5.2	100
185	CH₃NH₃Cl-Assisted One-Step Solution Growth of CH₃NH₃PbI₃: Structure, Charge-Carrier Dynamics, and Photovoltaic Properties of Perovskite Solar Cells. Journal of Physical Chemistry C, 2014, 118, 9412-9418.	1.5	516
186	Solid-State Mesostructured Perovskite CH₃NH₃PbI₃ Solar Cells: Charge Transport, Recombination, and Diffusion Length. Journal of Physical Chemistry Letters, 2014, 5, 490-494.	2.1	275
187	8-Hydroxylquinoline-conjugated porphyrins as broadband light absorbers for dye-sensitized solar cells. New Journal of Chemistry, 2014, 38, 1565.	1.4	23
188	Fast Supercapacitors Based on Grapheneâ€Bridged V₂O₃/VO_x Coreâ€“Shell Nanostructure Electrodes with a Power Density of 1 MW kg^{â^'1}. Advanced Materials Interfaces, 2014, 1, 1400398.	1.9	101
189	Solution Chemistry Engineering toward High-Efficiency Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2014, 5, 4175-4186.	2.1	227
190	Fluorene functionalized porphyrins as broadband absorbers for TiO₂nanocrystalline solar cells. Journal of Materials Chemistry A, 2014, 2, 13667.	5.2	20
191	Substrate-controlled band positions in CH₃NH₃PbI₃perovskite films. Physical Chemistry Chemical Physics, 2014, 16, 22122-22130.	1.3	177
192	Transparent TiO2 nanotube array photoelectrodes prepared via two-step anodization. Nano Convergence, 2014, 1, 9.	6.3	11
193	Electrocatalytic properties of a vertically oriented graphene film and its application as a catalytic counter electrode for dye-sensitized solar cells. Journal of Materials Chemistry A, 2014, 2, 12746-12753.	5.2	39
194	Charge Transport and Recombination in Perovskite (CH₃NH₃)PbI₃ Sensitized TiO₂ Solar Cells. Journal of Physical Chemistry Letters, 2013, 4, 2880-2884.	2.1	284
195	The effect of a metallic Ni core on charge dynamics in CdS-sensitized p-type NiO nanowire mesh photocathodes. RSC Advances, 2013, 3, 13342.	1.7	1
196	Effects of TiCl₄ Treatment of Nanoporous TiO₂ Films on Morphology, Light Harvesting, and Charge-Carrier Dynamics in Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2012, 116, 21285-21290.	1.5	131
197	Pseudocapacitive Lithium-Ion Storage in Oriented Anatase TiO₂ Nanotube Arrays. Journal of Physical Chemistry C, 2012, 116, 11895-11899.	1.5	138
198	Controlled synthesis of aligned Ni-NiO core-shell nanowire arrays on glass substrates as a new supercapacitor electrode. RSC Advances, 2012, 2, 8281.	1.7	62

#	Article	IF	Citations
199	Effects of water intrusion on the charge-carrier dynamics, performance, and stability of dye-sensitized solar cells. Energy and Environmental Science, 2012, 5, 9492.	15.6	36
200	Rapid Charge Transport in Dyeâ€Sensitized Solar Cells Made from Vertically Aligned Singleâ€Crystal Rutile TiO₂ Nanowires. Angewandte Chemie - International Edition, 2012, 51, 2727-2730.	7.2	244
201	Converting light to electrons in oriented nanotube arrays used in sensitized solar cells. MRS Bulletin, 2011, 36, 446-452.	1.7	14
202	Effects of Annealing Temperature on the Charge-Collection and Light-Harvesting Properties of TiO₂ Nanotube-Based Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2010, 114, 13433-13441.	1.5	114
203	Constructing Ordered Sensitized Heterojunctions: Bottom-Up Electrochemical Synthesis of p-Type Semiconductors in Oriented n-TiO₂ Nanotube Arrays. Nano Letters, 2009, 9, 806-813.	4.5	80
204	Removing Structural Disorder from Oriented TiO₂ Nanotube Arrays:â€‰ Reducing the Dimensionality of Transport and Recombination in Dye-Sensitized Solar Cells. Nano Letters, 2007, 7, 3739-3746.	4.5	449
205	Enhanced Charge-Collection Efficiencies and Light Scattering in Dye-Sensitized Solar Cells Using Oriented TiO2Nanotubes Arrays. Nano Letters, 2007, 7, 69-74.	4.5	2,001
206	Influence of Surface Area on Charge Transport and Recombination in Dye-Sensitized TiO2Solar Cellsâ€. Journal of Physical Chemistry B, 2006, 110, 25174-25180.	1.2	184
207	Determining the locus for photocarrier recombination in dye-sensitized solar cells. Applied Physics Letters, 2002, 80, 685-687.	1.5	86