Minchao Qin

List of Publications by Year
in descending order

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83	6,898	53751 45	60583 81
papers	citations	h-index	g-index

84	84	84	6323
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Regulating Surface Termination for Efficient Inverted Perovskite Solar Cells with Greater Than 23% Efficiency. Journal of the American Chemical Society, 2020, 142, 20134-20142.	6.6	414
2	Efficient hole-blocking layer-free planar halide perovskite thin-film solar cells. Nature Communications, 2015, 6, 6700.	5.8	358
3	Orientation Regulation of Phenylethylammonium Cation Based 2D Perovskite Solar Cell with Efficiency Higher Than 11%. Advanced Energy Materials, 2018, 8, 1702498.	10.2	313
4	Modulation of Defects and Interfaces through Alkylammonium Interlayer for Efficient Inverted Perovskite Solar Cells. Joule, 2020, 4, 1248-1262.	11.7	260
5	Stable and low-photovoltage-loss perovskite solar cells by multifunctional passivation. Nature Photonics, 2021, 15, 681-689.	15.6	255
6	Fullerene derivative anchored SnO₂ for high-performance perovskite solar cells. Energy and Environmental Science, 2018, 11, 3463-3471.	15.6	205
7	Reducing Hysteresis and Enhancing Performance of Perovskite Solar Cells Using Lowâ€Temperature Processed Yâ€Doped SnO₂ Nanosheets as Electron Selective Layers. Small, 2017, 13, 1601769.	5.2	183
8	Unveiling the additive-assisted oriented growth of perovskite crystallite for high performance light-emitting diodes. Nature Communications, 2021, 12, 5081.	5.8	178
9	Performance enhancement of perovskite solar cells with Mg-doped TiO2 compact film as the hole-blocking layer. Applied Physics Letters, 2015, 106, .	1.5	175
10	MgO Nanoparticle Modified Anode for Highly Efficient SnO₂â€Based Planar Perovskite Solar Cells. Advanced Science, 2017, 4, 1700031.	5.6	175
11	Performance enhancement of high temperature SnO₂-based planar perovskite solar cells: electrical characterization and understanding of the mechanism. Journal of Materials Chemistry A, 2016, 4, 8374-8383.	5.2	156
12	Enhanced Stability of Perovskite Solar Cells with Lowâ€Temperature Hydrothermally Grown SnO₂ Electron Transport Layers. Advanced Functional Materials, 2016, 26, 6069-6075.	7.8	154
13	Thiazole Imideâ€Based Allâ€Acceptor Homopolymer: Achieving Highâ€Performance Unipolar Electron Transport in Organic Thinâ€Film Transistors. Advanced Materials, 2018, 30, 1705745.	11.1	150
14	Fully Highâ€Temperatureâ€Processed SnO₂ as Blocking Layer and Scaffold for Efficient, Stable, and Hysteresisâ€Free Mesoporous Perovskite Solar Cells. Advanced Functional Materials, 2018, 28, 1706276.	7.8	143
15	Zwitterionic-Surfactant-Assisted Room-Temperature Coating of Efficient Perovskite Solar Cells. Joule, 2020, 4, 2404-2425.	11.7	137
16	Perovskite Solar Cells Based on Low-Temperature Processed Indium Oxide Electron Selective Layers. ACS Applied Materials & Interfaces, 2016, 8, 8460-8466.	4.0	128
17	Manipulating the Mixedâ€Perovskite Crystallization Pathway Unveiled by In Situ GIWAXS. Advanced Materials, 2019, 31, e1901284.	11.1	127
18	Stable and Efficient 3D-2D Perovskite-Perovskite Planar Heterojunction Solar Cell without Organic Hole Transport Layer. Joule, 2018, 2, 2706-2721.	11.7	124

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19	Highly Efficient Sn/Pb Binary Perovskite Solar Cell via Precursor Engineering: A Twoâ€Step Fabrication Process. Advanced Functional Materials, 2019, 29, 1807024.	7.8	122
20	Precise Control of Perovskite Crystallization Kinetics via Sequential Aâ€Site Doping. Advanced Materials, 2020, 32, e2004630.	11.1	122
21	Compositionâ€Tuned Wide Bandgap Perovskites: From Grain Engineering to Stability and Performance Improvement. Advanced Functional Materials, 2018, 28, 1803130.	7.8	121
22	The Second Spacer Cation Assisted Growth of a 2D Perovskite Film with Oriented Large Grain for Highly Efficient and Stable Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 9409-9413.	7.2	118
23	Tailoring vertical phase distribution of quasi-two-dimensional perovskite films via surface modification of hole-transporting layer. Nature Communications, 2019, 10, 878.	5.8	115
24	Low-temperature solution-processed NiO_xfilms for air-stable perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 11071-11077.	5.2	113
25	Fusedâ€Ring Electron Acceptor ITICâ€Th: A Novel Stabilizer for Halide Perovskite Precursor Solution. Advanced Energy Materials, 2018, 8, 1703399.	10.2	112
26	Effects of Alkyl Chain Length on Crystal Growth and Oxidation Process of Two-Dimensional Tin Halide Perovskites. ACS Energy Letters, 2020, 5, 1422-1429.	8.8	112
27	Multifunctional Crosslinkingâ€Enabled Strainâ€Regulating Crystallization for Stable, Efficient Î±â€FAPbI₃â€Based Perovskite Solar Cells. Advanced Materials, 2021, 33, e2008487.	11.1	106
28	A Systematic Review of Metal Halide Perovskite Crystallization and Film Formation Mechanism Unveiled by In Situ GIWAXS. Advanced Materials, 2021, 33, e2105290.	11.1	104
29	Efficient and bright warm-white electroluminescence from lead-free metal halides. Nature Communications, 2021, 12, 1421.	5.8	99
30	Ag-Doped Halide Perovskite Nanocrystals for Tunable Band Structure and Efficient Charge Transport. ACS Energy Letters, 2019, 4, 534-541.	8.8	96
31	Vertical Orientated Dionâ€“Jacobson Quasiâ€2D Perovskite Film with Improved Photovoltaic Performance and Stability. Small Methods, 2020, 4, 1900831.	4.6	96
32	Imide-Functionalized Thiazole-Based Polymer Semiconductors: Synthesis, Structureâ€“Property Correlations, Charge Carrier Polarity, and Thin-Film Transistor Performance. Chemistry of Materials, 2018, 30, 7988-8001.	3.2	92
33	All-Perovskite Emission Architecture for White Light-Emitting Diodes. ACS Nano, 2018, 12, 10486-10492.	7.3	92
34	Roomâ€Temperature Meniscus Coating of >20% Perovskite Solar Cells: A Film Formation Mechanism Investigation. Advanced Functional Materials, 2019, 29, 1900092.	7.8	92
35	General Nondestructive Passivation by 4â€Fluoroaniline for Perovskite Solar Cells with Improved Performance and Stability. Small, 2018, 14, e1803350.	5.2	82
36	Crystallinity Preservation and Ion Migration Suppression through Dual Ion Exchange Strategy for Stable Mixed Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700118.	10.2	74

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37	High-Performance Fused Ring Electron Acceptorâ€“Perovskite Hybrid. Journal of the American Chemical Society, 2018, 140, 14938-14944.	6.6	71
38	Intralayer A-Site Compositional Engineering of Ruddlesdenâ€“Popper Perovskites for Thermostable and Efficient Solar Cells. ACS Energy Letters, 2019, 4, 1216-1224.	8.8	65
39	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
40	Manipulating Crystallization Kinetics in Highâ€Performance Bladeâ€Coated Perovskite Solar Cells via Cosolventâ€Assisted Phase Transition. Advanced Materials, 2022, 34, e2200276.	11.1	64
41	Modifying Surface Termination of CsPbI₃ Grain Boundaries by 2D Perovskite Layer for Efficient and Stable Photovoltaics. Advanced Functional Materials, 2021, 31, 2009515.	7.8	62
42	Highly Efficient Guanidiniumâ€Based Quasi 2D Perovskite Solar Cells via a Twoâ€Step Postâ€Treatment Process. Small Methods, 2019, 3, 1900375.	4.6	59
43	Guanidinium doping enabled low-temperature fabrication of high-efficiency all-inorganic CsPbI₂Br perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 27640-27647.	5.2	56
44	Crystallization kinetics modulation and defect suppression of all-inorganic CsPbX₃ perovskite films. Energy and Environmental Science, 2022, 15, 413-438.	15.6	53
45	Constructing highly efficient all-inorganic perovskite solar cells with efficiency exceeding 17% by using dopant-free polymeric electron-donor materials. Nano Energy, 2020, 75, 104933.	8.2	50
46	Understanding of Imine Substitution in Wide-Bandgap Polymer Donor-Induced Efficiency Enhancement in All-Polymer Solar Cells. Chemistry of Materials, 2019, 31, 8533-8542.	3.2	49
47	Additiveâ€Assisted Hotâ€Casting Free Fabrication of Dionâ€“Jacobson 2D Perovskite Solar Cell with Efficiency Beyond 16%. Solar Rrl, 2020, 4, 2000087.	3.1	49
48	Unraveling the Impact of Halide Mixing on Crystallization and Phase Evolution in CsPbX3 Perovskite Solar Cells. Matter, 2021, 4, 313-327.	5.0	49
49	Bottomâ€Up Quasiâ€Epitaxial Growth of Hybrid Perovskite from Solution Processâ€”Achieving Highâ€Efficiency Solar Cells via Templateâ€‹â€Guided Crystallization. Advanced Materials, 2021, 33, e2100009.	11.1	44
50	Two-dimensional inverted planar perovskite solar cells with efficiency over 15% via solvent and interface engineering. Journal of Materials Chemistry A, 2019, 7, 18980-18986.	5.2	41
51	Highly oriented MAPbI3 crystals for efficient hole-conductor-free printable mesoscopic perovskite solar cells. Fundamental Research, 2022, 2, 276-283.	1.6	40
52	Room-temperature multiple ligands-tailored SnO2 quantum dots endow in situ dual-interface binding for upscaling efficient perovskite photovoltaics with high VOC. Light: Science and Applications, 2021, 10, 239.	7.7	40
53	Interfacial engineering enables high efficiency with a high open-circuit voltage above 1.23ÂV in 2D perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 18010-18017.	5.2	39
54	Perovskite Quantum Wells Formation Mechanism for Stable Efficient Perovskite Photovoltaicsâ€”A Realâ€Time Phaseâ€Transition Study. Advanced Materials, 2021, 33, e2006238.	11.1	30

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55	Solvation effect in precursor solution enables over 16% efficiency in thick 2D perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 19423-19429.	5.2	29
56	Passivating Charged Defects with 1,6-Hexamethylenediamine To Realize Efficient and Stable Tin-Based Perovskite Solar Cells. Journal of Physical Chemistry C, 2020, 124, 16289-16299.	1.5	29
57	A Nonfullerene Acceptor with Alkylthioâ€•and Dimethoxyâ€Thiopheneâ€Groups Yielding Highâ€Performance Ternary Organic Solar Cells. Solar Rrl, 2020, 4, 1900353.	3.1	26
58	Oriented Perovskite Crystal towards Efficient Charge Transport in FASnI₃ Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000153.	3.1	26
59	Control over Light Soaking Effect in Allâ€inorganic Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2101287.	7.8	25
60	Single-phase alkylammonium cesium lead iodide quasi-2D perovskites for color-tunable and spectrum-stable red LEDs. Nanoscale, 2019, 11, 16907-16918.	2.8	24
61	Green perovskite light-emitting diodes with simultaneous high luminance and quantum efficiency through charge injection engineering. Science Bulletin, 2020, 65, 1832-1839.	4.3	24
62	The Second Spacer Cation Assisted Growth of a 2D Perovskite Film with Oriented Large Grain for Highly Efficient and Stable Solar Cells. Angewandte Chemie, 2019, 131, 9509-9513.	1.6	23
63	Charge carrier transport and nanomorphology control for efficient non-fullerene organic solar cells. Materials Today Energy, 2019, 12, 398-407.	2.5	23
64	Uncovering the out-of-plane nanomorphology of organic photovoltaic bulk heterojunction by GTSAXS. Nature Communications, 2021, 12, 6226.	5.8	23
65	ZnO electron transporting layer engineering realized over 20% efficiency and over 1.28 V openâ€circuit voltage in allâ€inorganic perovskite solar cells. EcoMat, 2022, 4, .	6.8	23
66	Enhanced Electrochemical Stability by Alkyldiammonium in Dionâ€“Jacobson Perovskite toward Ultrastable Lightâ€Emitting Diodes. Advanced Optical Materials, 2021, 9, 2100243.	3.6	21
67	Thiazolothienyl imide-based wide bandgap copolymers for efficient polymer solar cells. Journal of Materials Chemistry C, 2019, 7, 11142-11151.	2.7	18
68	Cascade Typeâ€II 2D/3D Perovskite Heterojunctions for Enhanced Stability and Photovoltaic Efficiency. Solar Rrl, 2020, 4, 2000282.	3.1	18
69	Improved Crystallization and Stability of Mixed-Cation Tin Iodide for Lead-Free Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 5415-5426.	2.5	18
70	Size Modulation and Heterovalent Doping Facilitated Hybrid Organic and Perovskite Quantum Dot Bulk Heterojunction Solar Cells. ACS Applied Energy Materials, 2020, 3, 11359-11367.	2.5	14
71	High-Quality MAPbBr₃ Cuboid Film with Promising Optoelectronic Properties Prepared by a Hot Methylamine Precursor Approach. ACS Applied Materials & Interfaces, 2020, 12, 24498-24504.	4.0	14
72	The compatibility of methylammonium and formamidinium in mixed cation perovskite: the optoelectronic and stability properties. Nanotechnology, 2021, 32, 075406.	1.3	14

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73	Bulk Heterojunction Quasi-Two-Dimensional Perovskite Solar Cell with 1.18 V High Photovoltage. ACS Applied Materials & Interfaces, 2019, 11, 2935-2943.	4.0	13
74	Bifunctional Effects of Trichloro(octyl)silane Modification on the Performance and Stability of a Perovskite Solar Cell via Microscopic Characterization Techniques. ACS Applied Energy Materials, 2020, 3, 3302-3309.	2.5	11
75	Additiveâ€Assisted Hotâ€Casting Free Fabrication of Dionâ€“Jacobson 2D Perovskite Solar Cell with Efficiency Beyond 16%. Solar Rrl, 2020, 4, 2070074.	3.1	11
76	Trifluoromethylphenylacetic Acid as In Situ Accelerant of Ostwald Ripening for Stable and Efficient Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100040.	3.1	11
77	Unidirectionally aligned bright quantum rods films, using T-shape ligands, for LCD application. Nano Research, 2022, 15, 5392-5401.	5.8	8
78	Spectroscopic Study of Charge Transport at Organic Solidâ€“Water Interface. Chemistry of Materials, 2018, 30, 5422-5428.	3.2	7
79	Experimental Observation of Ultrahigh Mobility Anisotropy of Organic Semiconductors in the Two-Dimensional Limit. ACS Applied Electronic Materials, 2020, 2, 2888-2894.	2.0	6
80	Suppressed Phase Segregation in Highâ€Humidityâ€Processed Dionâ€“Jacobson Perovskite Solar Cells Toward High Efficiency and Stability. Solar Rrl, 2021, 5, 2100555.	3.1	6
81	Organic Thinâ€Film Transistors: Thiazole Imideâ€Based Allâ€Acceptor Homopolymer: Achieving Highâ€Performance Unipolar Electron Transport in Organic Thinâ€Film Transistors (Adv. Mater. 10/2018). Advanced Materials, 2018, 30, 1870071.	11.1	3
82	Doping and orientation regulation of p-type Cu:CdS1â^'Se /Pt thin film photocathodes for enhanced photoelectrochemical water splitting. Applied Surface Science, 2021, 566, 150723.	3.1	2
83	Additive assisted hot-casting free fabrication of Dion-Jacobson 2D perovskite solar cell with efficiency beyond 16%. , 2020, , .		0