Hong Zhang

List of Publications by Year
in descending order

55 papers	5,234 citations	81839 39 h-index	155592 55 g-index
55 all docs	55 docs citations	55 times ranked	6709 citing authors

#	Article	IF	Citations
1	Pinhole-Free and Surface-Nanostructured NiO_{<i>x</i>} Film by Room-Temperature Solution Process for High-Performance Flexible Perovskite Solar Cells with Good Stability and Reproducibility. ACS Nano, 2016, 10, 1503-1511.	7.3	477
2	Selective Câ€“C Coupling in Carbon Dioxide Electroreduction via Efficient Spillover of Intermediates As Supported by Operando Raman Spectroscopy. Journal of the American Chemical Society, 2019, 141, 18704-18714.	6.6	270
3	Hole-Conductor-Free, Metal-Electrode-Free TiO₂/CH₃NH₃PbI₃ Heterojunction Solar Cells Based on a Low-Temperature Carbon Electrode. Journal of Physical Chemistry Letters, 2014, 5, 3241-3246.	2.1	258
4	A Smooth CH₃NH₃PbI₃ Film via a New Approach for Forming the PbI₂ Nanostructure Together with Strategically High CH₃NH₃I Concentration for High Efficient Planarâ€Heterojunction Solar Cells. Advanced Energy Materials, 2015, 5, 1501354.	10.2	228
5	Insight into Perovskite Solar Cells Based on SnO₂ Compact Electron-Selective Layer. Journal of Physical Chemistry C, 2015, 119, 10212-10217.	1.5	209
6	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
7	Efficient and stable inverted perovskite solar cells with very high fill factors via incorporation of star-shaped polymer. Science Advances, 2021, 7, .	4.7	195
8	Perovskite Photovoltaics: The Significant Role of Ligands in Film Formation, Passivation, and Stability. Advanced Materials, 2019, 31, e1805702.	11.1	192
9	Improving the stability and performance of perovskite solar cells <i>via</i> off-the-shelf post-device ligand treatment. Energy and Environmental Science, 2018, 11, 2253-2262.	15.6	181
10	Toward All Roomâ€Temperature, Solutionâ€Processed, Highâ€Performance Planar Perovskite Solar Cells: A New Scheme of Pyridineâ€Promoted Perovskite Formation. Advanced Materials, 2017, 29, 1604695.	11.1	178
11	Metal Oxide/Carbide/Carbon Nanocomposites: In Situ Synthesis, Characterization, Calculation, and their Application as an Efficient Counter Electrode Catalyst for Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2013, 3, 1407-1412.	10.2	157
12	Crown Ether Modulation Enables over 23% Efficient Formamidinium-Based Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 19980-19991.	6.6	145
13	A Universal Interface Layer Based on an Amineâ€Functionalized Fullerene Derivative with Dual Functionality for Efficient Solution Processed Organic and Perovskite Solar Cells. Advanced Energy Materials, 2015, 5, 1401692.	10.2	144
14	Tailoring Tripleâ€Anion Perovskite Material for Indoor Light Harvesting with Restrained Halide Segregation and Record High Efficiency Beyond 36%. Advanced Energy Materials, 2019, 9, 1901980.	10.2	122
15	Strategic Synthesis of Ultrasmall NiCo₂O₄ NPs as Hole Transport Layer for Highly Efficient Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1702722.	10.2	112
16	A dual functional additive for the HTM layer in perovskite solar cells. Chemical Communications, 2014, 50, 5020.	2.2	110
17	Efficient stable graphene-based perovskite solar cells with high flexibility in device assembling <i>via</i> modular architecture design. Energy and Environmental Science, 2019, 12, 3585-3594.	15.6	102
18	Novel Direct Nanopatterning Approach to Fabricate Periodically Nanostructured Perovskite for Optoelectronic Applications. Advanced Functional Materials, 2017, 27, 1606525.	7.8	101

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19	All-Perovskite Emission Architecture for White Light-Emitting Diodes. ACS Nano, 2018, 12, 10486-10492.	7.3	92
20	Effects of 4-tert-butylpyridine on perovskite formation and performance of solution-processed perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 22191-22198.	5.2	85
21	Controllable Crystallization of CH₃NH₃Sn_{0.25}Pb_{0.75}I₃ Perovskites for Hysteresisâ€Free Solar Cells with Efficiency Reaching 15.2%. Advanced Functional Materials, 2017, 27, 1605469.	7.8	84
22	Room-temperature solution-processed and metal oxide-free nano-composite for the flexible transparent bottom electrode of perovskite solar cells. Nanoscale, 2016, 8, 5946-5953.	2.8	83
23	Quantifying Efficiency Loss of Perovskite Solar Cells by a Modified Detailed Balance Model. Advanced Energy Materials, 2018, 8, 1701586.	10.2	82
24	Inverted, Environmentally Stable Perovskite Solar Cell with a Novel Lowâ€Cost and Waterâ€Free PEDOT Holeâ€Extraction Layer. Advanced Energy Materials, 2015, 5, 1500543.	10.2	81
25	A universal co-solvent dilution strategy enables facile and cost-effective fabrication of perovskite photovoltaics. Nature Communications, 2022, 13, 89.	5.8	77
26	Notable catalytic activity of oxygen-vacancy-rich WO2.72 nanorod bundles as counter electrodes for dye-sensitized solar cells. Chemical Communications, 2013, 49, 7626.	2.2	76
27	Printable electrolytes for highly efficient quasi-solid-state dye-sensitized solar cells. Electrochimica Acta, 2013, 91, 302-306.	2.6	73
28	Solidâ€State Synthesis of ZnO Nanostructures for Quasiâ€Solid Dyeâ€Sensitized Solar Cells with High Efficiencies up to 6.46%. Advanced Materials, 2013, 25, 4413-4419.	11.1	72
29	Composite catalyst of rosin carbon/Fe3O4: highly efficient counter electrode for dye-sensitized solar cells. Chemical Communications, 2014, 50, 1701.	2.2	72
30	Multimodal hostâ€"guest complexation for efficient and stable perovskite photovoltaics. Nature Communications, 2021, 12, 3383.	5.8	72
31	Exploring the Limiting Openâ€Circuit Voltage and the Voltage Loss Mechanism in Planar CH₃NH₃PbBr₃ Perovskite Solar Cells. Advanced Energy Materials, 2016, 6, 1600132.	10.2	71
32	Thick TiO₂-Based Top Electron Transport Layer on Perovskite for Highly Efficient and Stable Solar Cells. ACS Energy Letters, 2018, 3, 2891-2898.	8.8	71
33	Multifunctional Synthesis Approach of In:CuCrO₂ Nanoparticles for Hole Transport Layer in Highâ€Performance Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1902600.	7.8	70
34	Nanoscale interfacial engineering enables highly stable and efficient perovskite photovoltaics. Energy and Environmental Science, 2021, 14, 5552-5562.	15.6	69
35	Economical hafnium oxygen nitride binary/ternary nanocomposite counter electrode catalysts for high-efficiency dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 1341-1348.	5.2	65
36	Copolymerâ€Templated Nickel Oxide for Highâ€Efficiency Mesoscopic Perovskite Solar Cells in Inverted Architecture. Advanced Functional Materials, 2021, 31, 2102237.	7.8	51

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37	Room temperature formation of organicâ€"inorganic lead halide perovskites: design of nanostructured and highly reactive intermediates. Journal of Materials Chemistry A, 2017, 5, 3599-3608.	5.2	48
38	Iron oxide nanostructures as highly efficient heterogeneous catalysts for mesoscopic photovoltaics. Journal of Materials Chemistry A, 2014, 2, 15279-15283.	5.2	45
39	Orientationâ€Engineered Smallâ€Molecule Semiconductors as Dopantâ€Free Hole Transporting Materials for Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2011270.	7.8	41
40	Achieving High-Quality Snâ€"Pb Perovskite Films on Complementary Metal-Oxide-Semiconductor-Compatible Metal/Silicon Substrates for Efficient Imaging Array. ACS Nano, 2019, 13, 11800-11808.	7.3	40
41	Highly Stable Gel-State Dye-Sensitized Solar Cells Based on High Soluble Polyvinyl Acetate. ACS Sustainable Chemistry and Engineering, 2013, 1, 205-208.	3.2	39
42	Selfâ€Assembled Quasiâ€3D Nanocomposite: A Novel pâ€Type Hole Transport Layer for High Performance Inverted Organic Solar Cells. Advanced Functional Materials, 2018, 28, 1706403.	7.8	39
43	An Air Knifeâ€"Assisted Recrystallization Method for Ambientâ€Process Planar Perovskite Solar Cells and Its Dimâ€Light Harvesting. Small, 2019, 15, e1804465.	5.2	38
44	Highly efficient planar perovskite solar cells achieved by simultaneous defect engineering and formation kinetic control. Journal of Materials Chemistry A, 2018, 6, 23865-23874.	5.2	37
45	A low temperature gradual annealing scheme for achieving high performance perovskite solar cells with no hysteresis. Journal of Materials Chemistry A, 2015, 3, 14424-14430.	5.2	34
46	Selenium as a photoabsorber for inorganicâ€"organic hybrid solar cells. Physical Chemistry Chemical Physics, 2014, 16, 23316-23319.	1.3	30
47	Benzylammoniumâ€Mediated Formamidinium Lead Iodide Perovskite Phase Stabilization for Photovoltaics. Advanced Functional Materials, 2021, 31, 2101163.	7.8	28
48	From marine plants to photovoltaic devices. Energy and Environmental Science, 2014, 7, 343-346.	15.6	21
49	Smooth CH₃NH₃PbI₃from controlled solidâ€"gas reaction for photovoltaic applications. RSC Advances, 2015, 5, 73760-73766.	1.7	17
50	Solar Water Splitting Using Earthâ€Abundant Electrocatalysts Driven by Highâ€Efficiency Perovskite Solar Cells. ChemSusChem, 2022, 15, .	3.6	12
51	First application of bis(oxalate)borate ionic liquids (ILBOBs) in high-performance dye-sensitized solar cells. RSC Advances, 2013, 3, 12975.	1.7	11
52	Carrier Transport Layerâ€Free Perovskite Solar Cells. ChemSusChem, 2021, 14, 4776-4782.	3.6	8
53	High electrocatalytic activity of W₁₈O₄₉ nanowires for cobalt complex and ferrocenium redox mediators. RSC Advances, 2014, 4, 42190-42196.	1.7	7
54	Synthesis of CH₃NH₃Sr_{x}Pb<sub>(1-<em>x&l with Less Pb Content and Its Application in All-Solid Thin Film Solar Cells. Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 2015, 31, 285-290.	2.2	7

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55	Economical, green and dual-function pyridyl iodides as electrolyte components for high efficiency dye-sensitized solar cells. Chemical Communications, 2013, 49, 9003.	2.2	4