

# Hong Zhang

## List of Publications by Citations

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54  
papers

3,746  
citations

34  
h-index

55  
g-index

55  
ext. papers

4,494  
ext. citations

15.1  
avg, IF

5.55  
L-index

#	Paper	IF	Citations
54	Pinhole-Free and Surface-Nanostructured NiOx Film by Room-Temperature Solution Process for High-Performance Flexible Perovskite Solar Cells with Good Stability and Reproducibility. <i>ACS Nano</i> , <b>2016</b> , 10, 1503-11	16.7	390
53	Hole-Conductor-Free, Metal-Electrode-Free TiO <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Heterojunction Solar Cells Based on a Low-Temperature Carbon Electrode. <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 3241-6	6.4	227
52	A Smooth CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Film via a New Approach for Forming the PbI <sub>2</sub> Nanostructure Together with Strategically High CH <sub>3</sub> NH <sub>3</sub> I Concentration for High Efficient Planar-Heterojunction Solar Cells. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1501354	21.8	193
51	Insight into Perovskite Solar Cells Based on SnO <sub>2</sub> Compact Electron-Selective Layer. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 10212-10217	3.8	179
50	Perovskite Photovoltaics: The Significant Role of Ligands in Film Formation, Passivation, and Stability. <i>Advanced Materials</i> , <b>2019</b> , 31, e1805702	24	143
49	Toward All Room-Temperature, Solution-Processed, High-Performance Planar Perovskite Solar Cells: A New Scheme of Pyridine-Promoted Perovskite Formation. <i>Advanced Materials</i> , <b>2017</b> , 29, 1604695 <sup>24</sup>	24	142
48	A Universal Interface Layer Based on an Amine-Functionalized Fullerene Derivative with Dual Functionality for Efficient Solution Processed Organic and Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1401692	21.8	141
47	Improving the stability and performance of perovskite solar cells via off-the-shelf post-device ligand treatment. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 2253-2262	35.4	137
46	Metal Oxide/Carbide/Carbon Nanocomposites: In Situ Synthesis, Characterization, Calculation, and their Application as an Efficient Counter Electrode Catalyst for Dye-Sensitized Solar Cells. <i>Advanced Energy Materials</i> , <b>2013</b> , 3, 1407-1412	21.8	135
45	Stabilization of Highly Efficient and Stable Phase-Pure FAPbI Perovskite Solar Cells by Molecularly Tailored 2D-Overlayers. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 15688-15694	16.4	115
44	Selective C-C Coupling in Carbon Dioxide Electroreduction via Efficient Spillover of Intermediates As Supported by Operando Raman Spectroscopy. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 18704-18714	16.4	113
43	A dual functional additive for the HTM layer in perovskite solar cells. <i>Chemical Communications</i> , <b>2014</b> , 50, 5020-2	5.8	93
42	Strategic Synthesis of Ultrasmall NiCo <sub>2</sub> O <sub>4</sub> NPs as Hole Transport Layer for Highly Efficient Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1702722	21.8	82
41	Novel Direct Nanopatterning Approach to Fabricate Periodically Nanostructured Perovskite for Optoelectronic Applications. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1606525	15.6	75
40	Effects of 4-tert-butylpyridine on perovskite formation and performance of solution-processed perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 22191-22198	13	75
39	Crown Ether Modulation Enables over 23% Efficient Formamidinium-Based Perovskite Solar Cells. <i>Journal of the American Chemical Society</i> , <b>2020</b> , 142, 19980-19991	16.4	72
38	Inverted, Environmentally Stable Perovskite Solar Cell with a Novel Low-Cost and Water-Free PEDOT Hole-Extraction Layer. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1500543	21.8	72

37	Tailoring Triple-Anion Perovskite Material for Indoor Light Harvesting with Restrained Halide Segregation and Record High Efficiency Beyond 36%. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1901980	21.8	71
36	Room-temperature solution-processed and metal oxide-free nano-composite for the flexible transparent bottom electrode of perovskite solar cells. <i>Nanoscale</i> , <b>2016</b> , 8, 5946-53	7.7	71
35	Solid-state synthesis of ZnO nanostructures for quasi-solid dye-sensitized solar cells with high efficiencies up to 6.46%. <i>Advanced Materials</i> , <b>2013</b> , 25, 4413-9	24	69
34	Controllable Crystallization of CH <sub>3</sub> NH <sub>3</sub> Sn <sub>0.25</sub> Pb <sub>0.75</sub> I <sub>3</sub> Perovskites for Hysteresis-Free Solar Cells with Efficiency Reaching 15.2%. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1605469	15.6	68
33	Notable catalytic activity of oxygen-vacancy-rich WO <sub>2.72</sub> nanorod bundles as counter electrodes for dye-sensitized solar cells. <i>Chemical Communications</i> , <b>2013</b> , 49, 7626-8	5.8	68
32	Printable electrolytes for highly efficient quasi-solid-state dye-sensitized solar cells. <i>Electrochimica Acta</i> , <b>2013</b> , 91, 302-306	6.7	65
31	Efficient stable graphene-based perovskite solar cells with high flexibility in device assembling via modular architecture design. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 3585-3594	35.4	65
30	Quantifying Efficiency Loss of Perovskite Solar Cells by a Modified Detailed Balance Model. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1701586	21.8	64
29	Composite catalyst of rosin carbon/Fe <sub>3</sub> O <sub>4</sub> : highly efficient counter electrode for dye-sensitized solar cells. <i>Chemical Communications</i> , <b>2014</b> , 50, 1701-3	5.8	61
28	All-Perovskite Emission Architecture for White Light-Emitting Diodes. <i>ACS Nano</i> , <b>2018</b> , 12, 10486-10492	16.7	61
27	Economical hafnium oxygen nitride binary/ternary nanocomposite counter electrode catalysts for high-efficiency dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 1341-1348	13	59
26	Exploring the Limiting Open-Circuit Voltage and the Voltage Loss Mechanism in Planar CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1600132	21.8	59
25	Thick TiO <sub>2</sub> -Based Top Electron Transport Layer on Perovskite for Highly Efficient and Stable Solar Cells. <i>ACS Energy Letters</i> , <b>2018</b> , 3, 2891-2898	20.1	55
24	Efficient and stable inverted perovskite solar cells with very high fill factors via incorporation of star-shaped polymer. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	54
23	Multifunctional Synthesis Approach of In:CuCrO <sub>2</sub> Nanoparticles for Hole Transport Layer in High-Performance Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1902600	15.6	48
22	Iron oxide nanostructures as highly efficient heterogeneous catalysts for mesoscopic photovoltaics. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 15279-15283	13	43
21	Room temperature formation of organic/inorganic lead halide perovskites: design of nanostructured and highly reactive intermediates. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 3599-3608	13	36
20	A low temperature gradual annealing scheme for achieving high performance perovskite solar cells with no hysteresis. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 14424-14430	13	32

19	Highly Stable Gel-State Dye-Sensitized Solar Cells Based on High Soluble Polyvinyl Acetate. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2013</b> , 1, 205-208	8.3	32
18	Self-Assembled Quasi-3D Nanocomposite: A Novel p-Type Hole Transport Layer for High Performance Inverted Organic Solar Cells. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1706403	15.6	31
17	Highly efficient planar perovskite solar cells achieved by simultaneous defect engineering and formation kinetic control. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 23865-23874	13	28
16	An Air Knife-Assisted Recrystallization Method for Ambient-Process Planar Perovskite Solar Cells and Its Dim-Light Harvesting. <i>Small</i> , <b>2019</b> , 15, e1804465	11	27
15	Selenium as a photoabsorber for inorganic-organic hybrid solar cells. <i>Physical Chemistry Chemical Physics</i> , <b>2014</b> , 16, 23316-9	3.6	24
14	Achieving High-Quality Sn-Pb Perovskite Films on Complementary Metal-Oxide-Semiconductor-Compatible Metal/Silicon Substrates for Efficient Imaging Array. <i>ACS Nano</i> , <b>2019</b> , 13, 11800-11808	16.7	22
13	From marine plants to photovoltaic devices. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 343-346	35.4	20
12	Nanoscale interfacial engineering enables highly stable and efficient perovskite photovoltaics. <i>Energy and Environmental Science</i> , <b>2021</b> , 14, 5552-5562	35.4	20
11	Multimodal host-guest complexation for efficient and stable perovskite photovoltaics. <i>Nature Communications</i> , <b>2021</b> , 12, 3383	17.4	17
10	Smooth CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> from controlled solid-gas reaction for photovoltaic applications. <i>RSC Advances</i> , <b>2015</b> , 5, 73760-73766	3.7	16
9	A universal co-solvent dilution strategy enables facile and cost-effective fabrication of perovskite photovoltaics. <i>Nature Communications</i> , <b>2022</b> , 13, 89	17.4	14
8	Orientation-Engineered Small-Molecule Semiconductors as Dopant-Free Hole Transporting Materials for Efficient and Stable Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2101270	15.6	14
7	Copolymer-Templated Nickel Oxide for High-Efficiency Mesoscopic Perovskite Solar Cells in Inverted Architecture. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2102237	15.6	12
6	Benzylammonium-Mediated Formamidinium Lead Iodide Perovskite Phase Stabilization for Photovoltaics. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2101163	15.6	10
5	First application of bis(oxalate)borate ionic liquids (ILBOBs) in high-performance dye-sensitized solar cells. <i>RSC Advances</i> , <b>2013</b> , 3, 12975	3.7	9
4	Synthesis of CH <sub>3</sub> NH <sub>3</sub> Sr <sub>x</sub> Pb(1-x)I <sub>3</sub> with Less Pb Content and Its Application in All-Solid Thin Film Solar Cells. <i>Wuli Huaxue Xuebao/Acta Physico-Chimica Sinica</i> , <b>2015</b> , 31, 285-290	3.8	6
3	High electrocatalytic activity of W18O49 nanowires for cobalt complex and ferrocenium redox mediators. <i>RSC Advances</i> , <b>2014</b> , 4, 42190-42196	3.7	5
2	Economical, green and dual-function pyridyl iodides as electrolyte components for high efficiency dye-sensitized solar cells. <i>Chemical Communications</i> , <b>2013</b> , 49, 9003-5	5.8	4

1 Carrier Transport Layer-Free Perovskite Solar Cells. *ChemSusChem*, **2021**, 14, 4776-4782

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