Haining Chen

List of Publications by Year
in descending order

80 papers	7,702 citations	50244 46 h-index	58549 82 g-index
83 all docs	83 docs citations	83 times ranked	8648 citing authors

#	Article	IF	Citations
1	Hybrid Halide Perovskite Solar Cell Precursors: Colloidal Chemistry and Coordination Engineering behind Device Processing for High Efficiency. Journal of the American Chemical Society, 2015, 137, 4460-4468.	6.6	586
2	Inkjet Printing and Instant Chemical Transformation of a CH₃NH₃PbI₃/Nanocarbon Electrode and Interface for Planar Perovskite Solar Cells. Angewandte Chemie - International Edition, 2014, 53, 13239-13243.	7.2	370
3	Solvent Engineering Boosts the Efficiency of Paintable Carbonâ€Based Perovskite Solar Cells to Beyond 14%. Advanced Energy Materials, 2016, 6, 1502087.	10.2	306
4	Effects of a Molecular Monolayer Modification of NiO Nanocrystal Layer Surfaces on Perovskite Crystallization and Interface Contact toward Faster Hole Extraction and Higher Photovoltaic Performance. Advanced Functional Materials, 2016, 26, 2950-2958.	7.8	305
5	Cost-efficient clamping solar cells using candle soot for hole extraction from ambipolar perovskites. Energy and Environmental Science, 2014, 7, 3326-3333.	15.6	272
6	Carbonâ€Based Perovskite Solar Cells without Hole Transport Materials: The Front Runner to the Market?. Advanced Materials, 2017, 29, 1603994.	11.1	261
7	Interfacial Residual Stress Relaxation in Perovskite Solar Cells with Improved Stability. Advanced Materials, 2019, 31, e1904408.	11.1	259
8	Carbon-Based CsPbBr₃ Perovskite Solar Cells: All-Ambient Processes and High Thermal Stability. ACS Applied Materials & Interfaces, 2016, 8, 33649-33655.	4.0	256
9	Highly Air-Stable Carbon-Based Î±-CsPbI₃ Perovskite Solar Cells with a Broadened Optical Spectrum. ACS Energy Letters, 2018, 3, 1824-1831.	8.8	235
10	Highâ€Performance Grapheneâ€Based Hole Conductorâ€Free Perovskite Solar Cells: Schottky Junction Enhanced Hole Extraction and Electron Blocking. Small, 2015, 11, 2269-2274.	5.2	233
11	Hysteresis-free multi-walled carbon nanotube-based perovskite solar cells with a high fill factor. Journal of Materials Chemistry A, 2015, 3, 24226-24231.	5.2	217
12	A scalable electrodeposition route to the low-cost, versatile and controllable fabrication of perovskite solar cells. Nano Energy, 2015, 15, 216-226.	8.2	207
13	Inorganic Perovskite Solar Cells: A Rapidly Growing Field. Solar Rrl, 2018, 2, 1700188.	3.1	193
14	Boron Doping of Multiwalled Carbon Nanotubes Significantly Enhances Hole Extraction in Carbon-Based Perovskite Solar Cells. Nano Letters, 2017, 17, 2496-2505.	4.5	184
15	Understanding the relationship between ion migration and the anomalous hysteresis in high-efficiency perovskite solar cells: A fresh perspective from halide substitution. Nano Energy, 2016, 26, 620-630.	8.2	167
16	Profiling the organic cation-dependent degradation of organolead halide perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 1103-1111.	5.2	155
17	A pure and stable intermediate phase is key to growing aligned and vertically monolithic perovskite crystals for efficient PIN planar perovskite solar cells with high processibility and stability. Nano Energy, 2017, 34, 58-68.	8.2	151
18	The synergistic effect of non-stoichiometry and Sb-doping on air-stable Î±-CsPbI₃ for efficient carbon-based perovskite solar cells. Nanoscale, 2018, 10, 9996-10004.	2.8	142

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19	Electrophoretic deposition of graphene oxide as a corrosion inhibitor for sintered NdFeB. Applied Surface Science, 2013, 279, 416-423.	3.1	120
20	Twoâ€Step Sequential Deposition of Organometal Halide Perovskite for Photovoltaic Application. Advanced Functional Materials, 2017, 27, 1605654.	7.8	120
21	ITO Porous Film-Supported Metal Sulfide Counter Electrodes for High-Performance Quantum-Dot-Sensitized Solar Cells. Journal of Physical Chemistry C, 2013, 117, 3739-3746.	1.5	115
22	Simple spray deposition of a water-based superhydrophobic coating with high stability for flexible applications. Journal of Materials Chemistry A, 2017, 5, 9882-9890.	5.2	112
23	Unveiling a Key Intermediate in Solvent Vapor Postannealing to Enlarge Crystalline Domains of Organometal Halide Perovskite Films. Advanced Functional Materials, 2017, 27, 1604944.	7.8	107
24	Constructing Fluorine-Free and Cost-Effective Superhydrophobic Surface with Normal-Alcohol-Modified Hydrophobic SiO₂ Nanoparticles. ACS Applied Materials & Interfaces, 2017, 9, 858-867.	4.0	106
25	A three-dimensional hexagonal fluorine-doped tin oxide nanocone array: a superior light harvesting electrode for high performance photoelectrochemical water splitting. Energy and Environmental Science, 2014, 7, 3651-3658.	15.6	103
26	1000 h Operational Lifetime Perovskite Solar Cells by Ambient Melting Encapsulation. Advanced Energy Materials, 2020, 10, 1902472.	10.2	98
27	Designing nanobowl arrays of mesoporous TiO₂as an alternative electron transporting layer for carbon cathode-based perovskite solar cells. Nanoscale, 2016, 8, 6393-6402.	2.8	89
28	Methods and strategies for achieving high-performance carbon-based perovskite solar cells without hole transport materials. Journal of Materials Chemistry A, 2019, 7, 15476-15490.	5.2	85
29	Ultrasound-spray deposition of multi-walled carbon nanotubes on NiO nanoparticles-embedded perovskite layers for high-performance carbon-based perovskite solar cells. Nano Energy, 2017, 42, 322-333.	8.2	82
30	Natrium Doping Pushes the Efficiency of Carbon-Based CsPbI3 Perovskite Solar Cells to 10.7%. IScience, 2019, 15, 156-164.	1.9	81
31	Crystallization Kinetics Modulation of FASnI₃ Films with Preâ€nucleation Clusters for Efficient Leadâ€Free Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 3693-3698.	7.2	80
32	A multifunctional C + epoxy/Ag-paint cathode enables efficient and stable operation of perovskite solar cells in watery environments. Journal of Materials Chemistry A, 2015, 3, 16430-16434.	5.2	77
33	An amorphous precursor route to the conformable oriented crystallization of CH₃NH₃PbBr₃in mesoporous scaffolds: toward efficient and thermally stable carbon-based perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 12897-12912.	5.2	77
34	Hierarchical nanostructures of metal oxides for enhancing charge separation and transport in photoelectrochemical solar energy conversion systems. Nanoscale Horizons, 2016, 1, 96-108.	4.1	73
35	Roles of Organic Molecules in Inorganic CsPbX₃ Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, .	10.2	63
36	Epitaxial Growth of ZnO Nanodisks with Large Exposed Polar Facets on Nanowire Arrays for Promoting Photoelectrochemical Water Splitting. Small, 2014, 10, 4760-4769.	5.2	61

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37	Growing high-quality CsPbBr₃ by using porous CsPb₂Br₅ as an intermediate: a promising light absorber in carbon-based perovskite solar cells. Sustainable Energy and Fuels, 2019, 3, 184-194.	2.5	60
38	Unveiling Two Electron-Transport Modes in Oxygen-Deficient TiO₂ Nanowires and Their Influence on Photoelectrochemical Operation. Journal of Physical Chemistry Letters, 2014, 5, 2890-2896.	2.1	55
39	Liquid phase deposition of TiO₂nanolayer affords CH₃NH₃PbI₃/nanocarbon solar cells with high open-circuit voltage. Faraday Discussions, 2014, 176, 271-286.	1.6	54
40	Colloidal Precursor-Induced Growth of Ultra-Even CH3NH3PbI3 for High-Performance Paintable Carbon-Based Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 30184-30192.	4.0	53
41	Composition manipulation boosts the efficiency of carbon-based CsPbI3 perovskite solar cells to beyond 14%. Nano Energy, 2021, 84, 105881.	8.2	51
42	Growth of ZnO nanowires on fibers for one-dimensional flexible quantum dot-sensitized solar cells. Nanotechnology, 2012, 23, 075402.	1.3	48
43	Inorganic perovskite solar cells based on carbon electrodes. Nano Energy, 2020, 77, 105160.	8.2	48
44	Polyethyleneimine-functionalized carbon nanotubes as an interlayer to bridge perovskite/carbon for all inorganic carbon-based perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 22005-22011.	5.2	47
45	Controlling the Crystallization Kinetics of Leadâ€Free Tin Halide Perovskites for High Performance Green Photovoltaics. Advanced Energy Materials, 2021, 11, 2102131.	10.2	47
46	High-performance, stable and low-cost mesoscopic perovskite (CH3NH3PbI3) solar cells based on poly(3-hexylthiophene)-modified carbon nanotube cathodes. Frontiers of Optoelectronics, 2016, 9, 71-80.	1.9	42
47	Hierarchical Dualâ€Scaffolds Enhance Charge Separation and Collection for High Efficiency Semitransparent Perovskite Solar Cells. Advanced Materials Interfaces, 2016, 3, 1600484.	1.9	40
48	Tuning the A-site cation composition of FA perovskites for efficient and stable NiO-based pâ€"iâ€"n perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 21858-21865.	5.2	39
49	Size mismatch induces cation segregation in CsPbI3: Forming energy level gradient and 3D/2D heterojunction promotes the efficiency of carbon-based perovskite solar cells to over 15%. Nano Energy, 2021, 89, 106411.	8.2	39
50	Cs-Doped TiO₂ Nanorod Array Enhances Electron Injection and Transport in Carbon-Based CsPbI₃ Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 2019, 7, 16927-16932.	3.2	35
51	Amorphous/amorphous Niâ€"P/Ni(OH)₂ heterostructure nanotubes for an efficient alkaline hydrogen evolution reaction. Journal of Materials Chemistry A, 2021, 9, 10169-10179.	5.2	35
52	Extracting ammonium halides by solvent from the hybrid perovskites with various dimensions to promote the crystallization of CsPbI3 perovskite. Nano Energy, 2022, 94, 106925.	8.2	35
53	Skillfully deflecting the question: a small amount of piperazine-1,4-diium iodide radically enhances the thermal stability of CsPbI₃ perovskite. Journal of Materials Chemistry C, 2019, 7, 11757-11763.	2.7	32
54	ZnOHF nanostructure-based quantum dots-sensitized solar cells. Journal of Materials Chemistry, 2012, 22, 23344.	6.7	30

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55	Stabilizing and scaling up carbon-based perovskite solar cells. Journal of Materials Research, 2017, 32, 3011-3020.	1.2	30
56	Additive Engineering Toward Highâ€Performance CsPbI₃Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000380.	3.1	29
57	Highâ€Temperature Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100370.	3.1	27
58	In-situ fabrication of dual porous titanium dioxide films as anode for carbon cathode based perovskite solar cell. Journal of Energy Chemistry, 2015, 24, 736-743.	7.1	23
59	Magnetic-field-assisted aerosol pyrolysis synthesis of iron pyrite sponge-like nanochain networks as cost-efficient counter electrodes in dye-sensitized solar cells. Journal of Materials Chemistry A, 2014, 2, 5508-5515.	5.2	22
60	Avoiding Structural Collapse to Reduce Lead Leakage in Perovskite Photovoltaics. Angewandte Chemie - International Edition, 2022, 61, .	7.2	21
61	Wire-shaped quantum dots-sensitized solar cells based on nanosheets and nanowires. Nanotechnology, 2011, 22, 475402.	1.3	20
62	Crystallization Kinetics Modulation of FASnI₃ Films with Preâ€nucleation Clusters for Efficient Leadâ€Free Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 3737-3742.	1.6	20
63	Carbon nanotubes in perovskite-based optoelectronic devices. Matter, 2022, 5, 448-481.	5.0	19
64	High-quality perovskite in thick scaffold: a core issue for hole transport material-free perovskite solar cells. Science Bulletin, 2016, 61, 1680-1688.	4.3	17
65	Environmentally benign development of superhydrophilic and underwater superoleophobic mesh for effective oil/water separation. Surface and Coatings Technology, 2019, 377, 124892.	2.2	17
66	Precursor effects on methylamine gas-induced CH3NH3PbI3 films for stable carbon-based perovskite solar cells. Solar Energy, 2018, 174, 139-148.	2.9	16
67	Experimental Determination of Complex Optical Constants of Airâ€Stable Inorganic CsPbI₃ Perovskite Thin Films. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000070.	1.2	15
68	Precise Nucleation Regulation and Defect Passivation for Highly Efficient and Stable Carbon-Based CsPbI₂Br Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 3508-3517.	2.5	12
69	Hollow TiO₂ Porous Nanosheets: Transformation from ZnO Porous Nanosheets and Application in Photoelectrochemical Cells. ChemSusChem, 2013, 6, 983-988.	3.6	11
70	Creating gradient wetting surfaces via electroless displacement of zinc-coated carbon steel by nickel ions. Applied Surface Science, 2018, 434, 940-949.	3.1	11
71	Ultrathin, highly anticorrosive and hydrophobic film for metal protection based on a composite organosilicon structure. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 558, 359-366.	2.3	11
72	Crystallization Kinetics Engineering toward High-Performance and Stable CsPbBr₃-Based Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 10610-10617.	2.5	10

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73	High Performance Perovskite Solar Cells through Surface Modification, Mixed Solvent Engineering and Nanobowl-Assisted Light Harvesting. MRS Advances, 2016, 1, 3175-3184.	0.5	9
74	Synthesis of graphene <i>via</i> electrochemical exfoliation in different electrolytes for direct electrodeposition of a Cu/graphene composite coating. RSC Advances, 2019, 9, 35524-35531.	1.7	9
75	Effect of Monomers on the Holographic Properties of Poly(vinyl alcohol)-Based Photopolymers. ACS Applied Polymer Materials, 2020, 2, 5208-5218.	2.0	4
76	Cation substitution enables the complete conversion of 1D perovskites to 3D perovskites for photovoltaic application. Nanoscale, 2019, 11, 14465-14471.	2.8	2
77	Synergistic protective effect between phenyltriethoxysilane-functionalized silica and BTA and its synergy applications for electrical contact protection on brass. Colloids and Interface Science Communications, 2020, 36, 100260.	2.0	2
78	Facile fabrication of a Janus mesh for water fluid unidirectional transportation. RSC Advances, 2021, 11, 1001-1011.	1.7	2
79	Effect of Glycerol on an N-Vinylpyrrolidone-Based Photopolymer for Transmission Holography. Polymers, 2021, 13, 1754.	2.0	1
80	Ascorbic acid peptized alumina sol films with enhanced corrosion resistance performance. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 600, 124955.	2.3	0