Feng Hao

List of Publications by Year in Descending Order

106 papers	7,226 citations	31 h-index	84 g-index
112 ext. papers	8,435 ext. citations	9.2 avg, IF	6.31 L-index

#	Paper	IF	Citations
106	Ion Migration in Organic-Inorganic Hybrid Perovskite Solar Cells: Current Understanding and Perspectives.. *Small*, **2022**, e2105783	11	12
105	Toward stable lead halide perovskite solar cells: A knob on the A/X sites components.. *IScience*, **2022**, 25, 103599	6.1	3
104	Benzotriazole derivative inhibits nonradiative recombination and improves the UV-stability of inverted MAPbI3 perovskite solar cells. *Journal of Energy Chemistry*, **2022**, 65, 592-599	12	4
103	Facile lattice tensile strain compensation in mixed-cation halide perovskite solar cells. *Journal of Energy Chemistry*, **2022**, 66, 422-428	12	8
102	Reducing the interfacial voltage loss in tin halides perovskite solar cells. *Chemical Engineering Journal*, **2022**, 445, 136769	14.7	5
101	Suppressing the Formation of Tin Vacancy Yields Efficient Lead-Free Perovskite Solar Cells. *Nano Energy*, **2022**, 107416	17.1	6
100	Magnesium doped spinel NiCo2O4 for improved hole extraction in efficient inverted perovskite solar cells. *Materials Today Communications*, **2022**, 31, 103750	2.5	
99	Renaissance of tin halide perovskite solar cells. *Journal of Semiconductors*, **2021**, 42, 030201	2.3	4
98	Fluorinated Oligomer Wrapped Perovskite Crystals for Inverted MAPbI Solar Cells with 21% Efficiency and Enhanced Stability. *ACS Applied Materials & Interfaces*, **2021**, 13, 26093-26101	9.5	3
97	Improving the hole extraction by hexadecylbenzene modification for efficient perovskite solar cells. *IOP Conference Series: Earth and Environmental Science*, **2021**, 781, 042042	0.3	
96	Lattice Strain Relaxation and Grain Homogenization for Efficient Inverted MAPbI Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2021**, 12, 4569-4575	6.4	14
95	Tetrazole modulated perovskite films for efficient solar cells with improved moisture stability. *Chemical Engineering Journal*, **2021**, 420, 127579	14.7	3
94	Ionic liquid reducing energy loss and stabilizing CsPbI2Br solar cells. *Nano Energy*, **2021**, 81, 105631	17.1	28
93	Perovskite-based tandem solar cells. *Science Bulletin*, **2021**, 66, 621-636	10.6	23
92	Green Solvent Processable Perovskite Solar Cells. *Advanced Energy and Sustainability Research*, **2021**, 2, 2000047	1.6	12
91	Eco-friendly antisolvent enabled inverted MAPbI3 perovskite solar cells with fill factors over 84%. *Green Chemistry*, **2021**, 23, 3633-3641	10	8
90	A Green Lead Recycling Strategy from Used Lead Acid Batteries for Efficient Inverted Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2021**, 12, 9595-9601	6.4	1

89	A critical review on the moisture stability of halide perovskite films and solar cells. *Chemical Engineering Journal*, **2021**, 430, 132701	14.7	8
88	Advances in perovskite quantum-dot solar cells. *Journal of Energy Chemistry*, **2021**, 52, 351-353	12	10
87	A chlorinated copolymer donor demonstrates a 18.13% power conversion efficiency. *Journal of Semiconductors*, **2021**, 42, 010501	2.3	81
86	Lewis acid/base approach for efficacious defect passivation in perovskite solar cells. *Journal of Materials Chemistry A*, **2020**, 8, 12201-12225	13	79
85	Lanthanum-Doped Strontium Stannate for Efficient Electron-Transport Layers in Planar Perovskite Solar Cells. *ACS Applied Energy Materials*, **2020**, 3, 6889-6896	6.1	7
84	Dynamically controlled growth of Cu□Mo□ nanosheets for efficient electrocatalytic hydrogen evolution. *Journal of Materials Chemistry C*, **2020**, 8, 9337-9344	7.1	1
83	Coordination modulated crystallization and defect passivation in high quality perovskite film for efficient solar cells. *Coordination Chemistry Reviews*, **2020**, 420, 213408	23.2	26
82	Fused-ring phenazine building blocks for efficient copolymer donors. *Materials Chemistry Frontiers*, **2020**, 4, 1454-1458	7.8	11
81	Progress of the key materials for organic solar cells. *Science China Chemistry*, **2020**, 63, 758-765	7.9	101
80	Vacancy defect modulation in hot-casted NiO film for efficient inverted planar perovskite solar cells. *Journal of Energy Chemistry*, **2020**, 48, 426-434	12	29
79	Insights into Ultrafast Carrier Dynamics in Perovskite Thin Films and Solar Cells. *ACS Photonics*, **2020**, 7, 1893-1907	6.3	16
78	Chlorine-doped SnO2 hydrophobic surfaces for large grain perovskite solar cells. *Journal of Materials Chemistry C*, **2020**, 8, 11638-11646	7.1	22
77	Aqueous solvent-regulated crystallization and interfacial modification in perovskite solar cells with enhanced stability and performance. *Journal of Power Sources*, **2020**, 471, 228447	8.9	9
76	Toward stable and efficient Sn-containing perovskite solar cells. *Science Bulletin*, **2020**, 65, 786-790	10.6	14
75	Precise control of PbI2 excess into grain boundary for efficacious charge extraction in off-stoichiometric perovskite solar cells. *Electrochimica Acta*, **2020**, 338, 135697	6.7	14
74	Secondary lateral growth of MAPbI3 grains for the fabrication of efficient perovskite solar cells. *Journal of Materials Chemistry C*, **2020**, 8, 3217-3225	7.1	19
73	Improving energy level alignment by adenine for efficient and stable perovskite solar cells. *Nano Energy*, **2020**, 74, 104846	17.1	31
72	Ionic liquids engineering for high-efficiency and stable perovskite solar cells. *Chemical Engineering Journal*, **2020**, 398, 125594	14.7	41

71	Electronic structure modulation of bifunctional oxygen catalysts for rechargeable Zn□ir batteries. *Journal of Materials Chemistry A*, **2020**, 8, 1229-1237	13	11
70	Bioinspired Electrocatalyst for Electrochemical Reduction of N to NH in Ambient Conditions. *ACS Applied Materials & Interfaces*, **2020**, 12, 2445-2451	9.5	28
69	Over 16% efficiency from thick-film organic solar cells. *Science Bulletin*, **2020**, 65, 1979-1982	10.6	41
68	Hot-Casting Large-Grain Perovskite Film for Efficient Solar Cells: Film Formation and Device Performance. *Nano-Micro Letters*, **2020**, 12, 156	19.5	26
67	Metal oxide alternatives for efficient electron transport in perovskite solar cells: beyond TiO2 and SnO2. *Journal of Materials Chemistry A*, **2020**, 8, 19768-19787	13	30
66	An efficient medium-bandgap nonfullerene acceptor for organic solar cells. *Journal of Materials Chemistry A*, **2020**, 8, 8857-8861	13	11
65	CrC Nanoparticle-Embedded Carbon Nanofiber for Artificial Synthesis of NH through N Fixation under Ambient Conditions. *ACS Applied Materials & Interfaces*, **2019**, 11, 35764-35769	9.5	30
64	Off-Stoichiometric Methylammonium Iodide Passivated Large-Grain Perovskite Film in Ambient Air for Efficient Inverted Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 39882-39889	9.5	39
63	In situ growth of □CsPbI3 perovskite nanocrystals on the surface of reduced graphene oxide with enhanced stability and carrier transport quality. *Journal of Materials Chemistry C*, **2019**, 7, 6795-6804	7.1	25
62	Methylamine-induced defect-healing and cationic substitution: a new method for low-defect perovskite thin films and solar cells. *Journal of Materials Chemistry C*, **2019**, 7, 10724-10742	7.1	42
61	Low-cost coenzyme Q10 as an efficient electron transport layer for inverted perovskite solar cells. *Journal of Materials Chemistry A*, **2019**, 7, 18626-18633	13	24
60	Carbon-based perovskite solar cells: From single-junction to modules **2019**, 1, 109-123		33
59	Emerging alkali metal ion (Li+, Na+, K+ and Rb+) doped perovskite films for efficient solar cells: recent advances and prospects. *Journal of Materials Chemistry A*, **2019**, 7, 24150-24163	13	71
58	Graphene-Modified Tin Dioxide for Efficient Planar Perovskite Solar Cells with Enhanced Electron Extraction and Reduced Hysteresis. *ACS Applied Materials & Interfaces*, **2019**, 11, 666-673	9.5	46
57	Perovskite solar cells: must lead be replaced - and can it be done?. *Science and Technology of Advanced Materials*, **2018**, 19, 425-442	7.1	99
56	Tunable Crystallization and Nucleation of Planar CHNHPbI through Solvent-Modified Interdiffusion. *ACS Applied Materials & Interfaces*, **2018**, 10, 14673-14683	9.5	13
55	All-Solution-Processed Cu2ZnSnS4 Solar Cells with Self-Depleted Na2S Back Contact Modification Layer. *Advanced Functional Materials*, **2018**, 28, 1703369	15.6	28
54	Bifacial Modified Charge Transport Materials for Highly Efficient and Stable Inverted Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 17861-17870	9.5	21

53	Laser-Induced Flash-Evaporation Printing CHNHPbI Thin Films for High-Performance Planar Solar Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 26206-26212	9.5	7
52	Role of alkyl chain length in diaminoalkane linked 2D Ruddlesden Popper halide perovskites. *CrystEngComm*, **2018**, 20, 6704-6712	3.3	17
51	Efficiently Improving the Stability of Inverted Perovskite Solar Cells by Employing Polyethylenimine-Modified Carbon Nanotubes as Electrodes. *ACS Applied Materials & Interfaces*, **2018**, 10, 31384-31393	9.5	54
50	Thiazole-Induced Surface Passivation and Recrystallization of CHNHPbI Films for Perovskite Solar Cells with Ultrahigh Fill Factors. *ACS Applied Materials & Interfaces*, **2018**, 10, 42436-42443	9.5	36
49	Electrocatalysts for T-Mediated Dye-Sensitized Solar Cells **2018**, 367-393		
48	Rational Design of Solution-Processed Ti-Fe-O Ternary Oxides for Efficient Planar CHNHPbI Perovskite Solar Cells with Suppressed Hysteresis. *ACS Applied Materials & Interfaces*, **2017**, 9, 34833-34843	9.5	30
47	Carbon Nanotube Based Inverted Flexible Perovskite Solar Cells with All-Inorganic Charge Contacts. *Advanced Functional Materials*, **2017**, 27, 1703068	15.6	108
46	Discrete Iron(III) Oxide Nanoislands for Efficient and Photostable Perovskite Solar Cells. *Advanced Functional Materials*, **2017**, 27, 1702090	15.6	71
45	Carrier Diffusion Lengths of over 500 nm in Lead-Free Perovskite CHNHSnI Films. *Journal of the American Chemical Society*, **2016**, 138, 14750-14755	16.4	174
44	Role of Organic Counterion in Lead- and Tin-Based Two-Dimensional Semiconducting Iodide Perovskites and Application in Planar Solar Cells. *Chemistry of Materials*, **2016**, 28, 7781-7792	9.6	189
43	Solution-Processed Air-Stable Mesoscopic Selenium Solar Cells. *ACS Energy Letters*, **2016**, 1, 469-473	20.1	29
42	Solvent-Mediated Crystallization of CH3NH3SnI3 Films for Heterojunction Depleted Perovskite Solar Cells. *Journal of the American Chemical Society*, **2015**, 137, 11445-52	16.4	455
41	Low temperature reduction of free-standing graphene oxide papers with metal iodides for ultrahigh bulk conductivity. *Scientific Reports*, **2014**, 4, 3965	4.9	39
40	Lead-free solid-state organic inorganic halide perovskite solar cells. *Nature Photonics*, **2014**, 8, 489-494	33.9	1966
39	Anomalous band gap behavior in mixed Sn and Pb perovskites enables broadening of absorption spectrum in solar cells. *Journal of the American Chemical Society*, **2014**, 136, 8094-9	16.4	1010
38	Controllable perovskite crystallization at a gas-solid interface for hole conductor-free solar cells with steady power conversion efficiency over 10%. *Journal of the American Chemical Society*, **2014**, 136, 16411-9	16.4	340
37	Vertically Aligned Carbon Nanotubes/Graphene Hybrid Electrode as a TCO- and Pt-Free Flexible Cathode for Application in Solar Cells. *Journal of Materials Chemistry A*, **2014**, 2, 20902-20907	13	41
36	Air-stable molecular semiconducting iodosalts for solar cell applications: Cs2SnI6 as a hole conductor. *Journal of the American Chemical Society*, **2014**, 136, 15379-85	16.4	427

35	Highly Efficient Metal-Free Sulfur-Doped and Nitrogen and Sulfur Dual-Doped Reduced Graphene Oxide Counter Electrodes for Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2014**, 118, 17010-17018	3.8	53
34	Research on Preparation and Properties of Inorganic Gelling Materials for Sand Fixation **2014**, 619-625		
33	The effects of interface misfit strain and surface tension on magnetoelectric effects in layered magnetostrictive-piezoelectric composites. *Journal of Applied Physics*, **2013**, 114, 044109	2.5	10
32	Recent molecular engineering of room temperature ionic liquid electrolytes for mesoscopic dye-sensitized solar cells. *RSC Advances*, **2013**, 3, 23521	3.7	15
31	Solvent dipole modulation of conduction band edge shift and charge recombination in robust dye-sensitized solar cells. *Nanoscale*, **2013**, 5, 726-33	7.7	15
30	Modeling of magnetoelectric effects in flexural nanobilayers: The effects of surface stress. *Journal of Applied Physics*, **2013**, 113, 104103	2.5	13
29	Recent advances in alternative cathode materials for iodine-free dye-sensitized solar cells. *Energy and Environmental Science*, **2013**, 6, 2003	35.4	124
28	One-dimensional and (001) facetted nanostructured TiO2 photoanodes for dye-sensitized solar cells. *Chimia*, **2013**, 67, 136-41	1.3	1
27	Tailoring diffusion-induced stresses of core-shell nanotube electrodes in lithium-ion batteries. *Journal of Applied Physics*, **2013**, 113, 013507	2.5	25
26	THE EFFECTS OF ELASTIC STIFFENING ON THE EVOLUTION OF THE STRESS FIELD WITHIN A SPHERICAL ELECTRODE PARTICLE OF LITHIUM-ION BATTERIES. *International Journal of Applied Mechanics*, **2013**, 05, 1350040	2.4	25
25	Efficient Light Harvesting and Charge Collection of Dye-Sensitized Solar Cells with (001) Faceted Single Crystalline Anatase Nanoparticles. *Journal of Physical Chemistry C*, **2012**, 116, 19164-19172	3.8	34
24	Highly catalytic cross-stacked superaligned carbon nanotube sheets for iodine-free dye-sensitized solar cells. *Journal of Materials Chemistry*, **2012**, 22, 22756		26
23	Thermal transport in crystalline Si/Ge nano-composites: Atomistic simulations and microscopic models. *Applied Physics Letters*, **2012**, 100, 091903	3.4	20
22	Facile solvothermal synthesis of single-crystalline anatase nanorods for efficient dye-sensitized solar cells. *Pure and Applied Chemistry*, **2012**, 85, 417-425	2.1	3
21	Photovoltaic Performance Optimization of Natural Trollius Sensitized Solar Cells. *Key Engineering Materials*, **2012**, 512-515, 1614-1618	0.4	
20	Diffusion-induced stresses of electrode nanomaterials in lithium-ion battery: The effects of surface stress. *Journal of Applied Physics*, **2012**, 112, 103507	2.5	63
19	High Electrocatalytic Activity of Vertically Aligned Single-Walled Carbon Nanotubes towards Sulfide Redox Shuttles. *Scientific Reports*, **2012**, 2, 368	4.9	81
18	Application of Electrochemical Impedance Spectroscopy in Organic Solar Cells with Vertically Aligned TiO2 Nanorod Arrays as Buffer Layer. *Key Engineering Materials*, **2012**, 512-515, 1598-1603	0.4	

17	Mechanical and thermal transport properties of graphene with defects. *Applied Physics Letters*, **2011**, 99, 041901	3.4	288
16	Electrolyte-dependent photovoltaic responses in dye-sensitized solar cells. *Frontiers of Optoelectronics in China*, **2011**, 4, 45-52		1
15	Anionic structure-dependent photoelectrochemical responses of dye-sensitized solar cells based on a binary ionic liquid electrolyte. *Physical Chemistry Chemical Physics*, **2011**, 13, 6416-22	3.6	25
14	Bifunctional single-crystalline rutile nanorod decorated heterostructural photoanodes for efficient dye-sensitized solar cells. *Physical Chemistry Chemical Physics*, **2011**, 13, 15918-24	3.6	21
13	Facile construction of high-electrocatalytic bilayer counter electrode for efficient dye-sensitized solar cells. *ACS Applied Materials & Interfaces*, **2011**, 3, 3916-20	9.5	12
12	An alternative alkylpyridinium iodide with high electroactivity for efficient dye-sensitized solar cells. *Electrochemistry Communications*, **2011**, 13, 550-553	5.1	5
11	Membrane-based electrolyte sheets for facile fabrication of flexible dye-sensitized solar cells. *Electrochimica Acta*, **2011**, 56, 6026-6032	6.7	7
10	Evidence for enhancing charge collection efficiency with an alternative cost-effective binary ionic liquids electrolyte based dye-sensitized solar cells. *Electrochimica Acta*, **2011**, 56, 5605-5610	6.7	13
9	Balance between the physical diffusion and the exchange reaction on binary ionic liquid electrolyte for dye-sensitized solar cells. *Journal of Power Sources*, **2011**, 196, 1645-1650	8.9	23
8	HIGHLY CATALYTIC ACTIVE NANOSTRUCTURED Pt ELECTRODES FOR DYE-SENSITIZED SOLAR CELLS PREPARED BY LOW TEMPERATURE ELECTRODEPOSITION. *Functional Materials Letters*, **2011**, 04, 7-11	1.2	8
7	Size Effect of Elastic and Electromechanical Properties of BaTiO3 Films from First-Principles Method. *Integrated Ferroelectrics*, **2011**, 124, 79-86	0.8	3
6	Enhancement of photocurrent of dye-sensitized solar cell by composite liquid electrolyte including NiO nanosheets. *Journal of Nanoscience and Nanotechnology*, **2010**, 10, 7390-3	1.3	1
5	Influence of iodine concentration on the photoelectrochemical performance of dye-sensitized solar cells containing non-volatile electrolyte. *Electrochimica Acta*, **2010**, 55, 7225-7229	6.7	34
4	The Voltage Loss in Tin Halide Perovskite Solar Cells: Origins and Perspectives. *Advanced Functional Materials*,2108832	15.6	6
3	Inhibiting octahedral tilting for stable CsPbI2Br solar cells. *Informa Materi*,	23.1	2
2	Recent Advances and Perspectives of Photostability for Halide Perovskite Solar Cells. *Advanced Optical Materials*,2101822	8.1	5
1	Efficient defect passivation with niacin for high-performance and stable perovskite solar cells. *Journal of Materials Chemistry C*,	7.1	5