

Feng Hao

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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	Lead-free solid-state organichorganic halide perovskite solar cells. <i>Nature Photonics</i> , 2014 , 8, 489-494	33.9	1966
105	Anomalous band gap behavior in mixed Sn and Pb perovskites enables broadening of absorption spectrum in solar cells. <i>Journal of the American Chemical Society</i> , 2014 , 136, 8094-9	16.4	1010
104	Solvent-Mediated Crystallization of CH ₃ NH ₃ SnI ₃ Films for Heterojunction Depleted Perovskite Solar Cells. <i>Journal of the American Chemical Society</i> , 2015 , 137, 11445-52	16.4	455
103	Air-stable molecular semiconducting iodosalts for solar cell applications: Cs ₂ SnI ₆ as a hole conductor. <i>Journal of the American Chemical Society</i> , 2014 , 136, 15379-85	16.4	427
102	Controllable perovskite crystallization at a gas-solid interface for hole conductor-free solar cells with steady power conversion efficiency over 10%. <i>Journal of the American Chemical Society</i> , 2014 , 136, 16411-9	16.4	340
101	Mechanical and thermal transport properties of graphene with defects. <i>Applied Physics Letters</i> , 2011 , 99, 041901	3.4	288
100	Role of Organic Counterion in Lead- and Tin-Based Two-Dimensional Semiconducting Iodide Perovskites and Application in Planar Solar Cells. <i>Chemistry of Materials</i> , 2016 , 28, 7781-7792	9.6	189
99	Carrier Diffusion Lengths of over 500 nm in Lead-Free Perovskite CH ₃ NH ₃ SnI ₃ Films. <i>Journal of the American Chemical Society</i> , 2016 , 138, 14750-14755	16.4	174
98	Recent advances in alternative cathode materials for iodine-free dye-sensitized solar cells. <i>Energy and Environmental Science</i> , 2013 , 6, 2003	35.4	124
97	Carbon Nanotube Based Inverted Flexible Perovskite Solar Cells with All-Inorganic Charge Contacts. <i>Advanced Functional Materials</i> , 2017 , 27, 1703068	15.6	108
96	Progress of the key materials for organic solar cells. <i>Science China Chemistry</i> , 2020 , 63, 758-765	7.9	101
95	Perovskite solar cells: must lead be replaced - and can it be done?. <i>Science and Technology of Advanced Materials</i> , 2018 , 19, 425-442	7.1	99
94	High Electrocatalytic Activity of Vertically Aligned Single-Walled Carbon Nanotubes towards Sulfide Redox Shuttles. <i>Scientific Reports</i> , 2012 , 2, 368	4.9	81
93	A chlorinated copolymer donor demonstrates a 18.13% power conversion efficiency. <i>Journal of Semiconductors</i> , 2021 , 42, 010501	2.3	81
92	Lewis acid/base approach for efficacious defect passivation in perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 12201-12225	13	79
91	Discrete Iron(III) Oxide Nanoislands for Efficient and Photostable Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2017 , 27, 1702090	15.6	71
90	Emerging alkali metal ion (Li ⁺ , Na ⁺ , K ⁺ and Rb ⁺) doped perovskite films for efficient solar cells: recent advances and prospects. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 24150-24163	13	71

89	Diffusion-induced stresses of electrode nanomaterials in lithium-ion battery: The effects of surface stress. <i>Journal of Applied Physics</i> , 2012 , 112, 103507	2.5	63
88	Efficiently Improving the Stability of Inverted Perovskite Solar Cells by Employing Polyethylenimine-Modified Carbon Nanotubes as Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 31384-31393	9.5	54
87	Highly Efficient Metal-Free Sulfur-Doped and Nitrogen and Sulfur Dual-Doped Reduced Graphene Oxide Counter Electrodes for Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 17010-17018	3.8	53
86	Graphene-Modified Tin Dioxide for Efficient Planar Perovskite Solar Cells with Enhanced Electron Extraction and Reduced Hysteresis. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 666-673	9.5	46
85	Methylamine-induced defect-healing and cationic substitution: a new method for low-defect perovskite thin films and solar cells. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 10724-10742	7.1	42
84	Vertically Aligned Carbon Nanotubes/Graphene Hybrid Electrode as a TCO- and Pt-Free Flexible Cathode for Application in Solar Cells. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 20902-20907	13	41
83	Ionic liquids engineering for high-efficiency and stable perovskite solar cells. <i>Chemical Engineering Journal</i> , 2020 , 398, 125594	14.7	41
82	Over 16% efficiency from thick-film organic solar cells. <i>Science Bulletin</i> , 2020 , 65, 1979-1982	10.6	41
81	Off-Stoichiometric Methylammonium Iodide Passivated Large-Grain Perovskite Film in Ambient Air for Efficient Inverted Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 39882-39889	9.5	39
80	Low temperature reduction of free-standing graphene oxide papers with metal iodides for ultrahigh bulk conductivity. <i>Scientific Reports</i> , 2014 , 4, 3965	4.9	39
79	Thiazole-Induced Surface Passivation and Recrystallization of CH ₃ NH ₃ PbI ₃ Films for Perovskite Solar Cells with Ultrahigh Fill Factors. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 42436-42443	9.5	36
78	Efficient Light Harvesting and Charge Collection of Dye-Sensitized Solar Cells with (001) Faceted Single Crystalline Anatase Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 19164-19172	3.8	34
77	Influence of iodine concentration on the photoelectrochemical performance of dye-sensitized solar cells containing non-volatile electrolyte. <i>Electrochimica Acta</i> , 2010 , 55, 7225-7229	6.7	34
76	Carbon-based perovskite solar cells: From single-junction to modules 2019 , 1, 109-123		33
75	Improving energy level alignment by adenine for efficient and stable perovskite solar cells. <i>Nano Energy</i> , 2020 , 74, 104846	17.1	31
74	CrC Nanoparticle-Embedded Carbon Nanofiber for Artificial Synthesis of NH ₃ through N Fixation under Ambient Conditions. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 35764-35769	9.5	30
73	Metal oxide alternatives for efficient electron transport in perovskite solar cells: beyond TiO ₂ and SnO ₂ . <i>Journal of Materials Chemistry A</i> , 2020 , 8, 19768-19787	13	30
72	Vacancy defect modulation in hot-casted NiO film for efficient inverted planar perovskite solar cells. <i>Journal of Energy Chemistry</i> , 2020 , 48, 426-434	12	29

71	Solution-Processed Air-Stable Mesoscopic Selenium Solar Cells. <i>ACS Energy Letters</i> , 2016 , 1, 469-473	20.1	29
70	All-Solution-Processed Cu ₂ ZnSnS ₄ Solar Cells with Self-Depleted Na ₂ S Back Contact Modification Layer. <i>Advanced Functional Materials</i> , 2018 , 28, 1703369	15.6	28
69	Bioinspired Electrocatalyst for Electrochemical Reduction of N to NH in Ambient Conditions. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 2445-2451	9.5	28
68	Ionic liquid reducing energy loss and stabilizing CsPbI ₂ Br solar cells. <i>Nano Energy</i> , 2021 , 81, 105631	17.1	28
67	Coordination modulated crystallization and defect passivation in high quality perovskite film for efficient solar cells. <i>Coordination Chemistry Reviews</i> , 2020 , 420, 213408	23.2	26
66	Highly catalytic cross-stacked superaligned carbon nanotube sheets for iodine-free dye-sensitized solar cells. <i>Journal of Materials Chemistry</i> , 2012 , 22, 22756		26
65	Hot-Casting Large-Grain Perovskite Film for Efficient Solar Cells: Film Formation and Device Performance. <i>Nano-Micro Letters</i> , 2020 , 12, 156	19.5	26
64	In situ growth of CsPbI ₃ perovskite nanocrystals on the surface of reduced graphene oxide with enhanced stability and carrier transport quality. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 6795-6804	7.1	25
63	Tailoring diffusion-induced stresses of core-shell nanotube electrodes in lithium-ion batteries. <i>Journal of Applied Physics</i> , 2013 , 113, 013507	2.5	25
62	THE EFFECTS OF ELASTIC STIFFENING ON THE EVOLUTION OF THE STRESS FIELD WITHIN A SPHERICAL ELECTRODE PARTICLE OF LITHIUM-ION BATTERIES. <i>International Journal of Applied Mechanics</i> , 2013 , 05, 1350040	2.4	25
61	Anionic structure-dependent photoelectrochemical responses of dye-sensitized solar cells based on a binary ionic liquid electrolyte. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 6416-22	3.6	25
60	Low-cost coenzyme Q10 as an efficient electron transport layer for inverted perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 18626-18633	13	24
59	Balance between the physical diffusion and the exchange reaction on binary ionic liquid electrolyte for dye-sensitized solar cells. <i>Journal of Power Sources</i> , 2011 , 196, 1645-1650	8.9	23
58	Perovskite-based tandem solar cells. <i>Science Bulletin</i> , 2021 , 66, 621-636	10.6	23
57	Chlorine-doped SnO ₂ hydrophobic surfaces for large grain perovskite solar cells. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 11638-11646	7.1	22
56	Bifacial Modified Charge Transport Materials for Highly Efficient and Stable Inverted Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 17861-17870	9.5	21
55	Bifunctional single-crystalline rutile nanorod decorated heterostructural photoanodes for efficient dye-sensitized solar cells. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 15918-24	3.6	21
54	Rational Design of Solution-Processed Ti-Fe-O Ternary Oxides for Efficient Planar CH ₃ NH ₃ PbI ₃ Perovskite Solar Cells with Suppressed Hysteresis. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 34833-34843	9.5	20

53	Thermal transport in crystalline Si/Ge nano-composites: Atomistic simulations and microscopic models. <i>Applied Physics Letters</i> , 2012 , 100, 091903	3.4	20
52	Secondary lateral growth of MAPbI ₃ grains for the fabrication of efficient perovskite solar cells. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 3217-3225	7.1	19
51	Role of alkyl chain length in diaminoalkane linked 2D Ruddlesden-Popper halide perovskites. <i>CrystEngComm</i> , 2018 , 20, 6704-6712	3.3	17
50	Insights into Ultrafast Carrier Dynamics in Perovskite Thin Films and Solar Cells. <i>ACS Photonics</i> , 2020 , 7, 1893-1907	6.3	16
49	Recent molecular engineering of room temperature ionic liquid electrolytes for mesoscopic dye-sensitized solar cells. <i>RSC Advances</i> , 2013 , 3, 23521	3.7	15
48	Solvent dipole modulation of conduction band edge shift and charge recombination in robust dye-sensitized solar cells. <i>Nanoscale</i> , 2013 , 5, 726-33	7.7	15
47	Toward stable and efficient Sn-containing perovskite solar cells. <i>Science Bulletin</i> , 2020 , 65, 786-790	10.6	14
46	Precise control of PbI ₂ excess into grain boundary for efficacious charge extraction in off-stoichiometric perovskite solar cells. <i>Electrochimica Acta</i> , 2020 , 338, 135697	6.7	14
45	Lattice Strain Relaxation and Grain Homogenization for Efficient Inverted MAPbI Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 4569-4575	6.4	14
44	Tunable Crystallization and Nucleation of Planar CH ₃ NH ₃ PbI through Solvent-Modified Interdiffusion. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 14673-14683	9.5	13
43	Modeling of magnetoelectric effects in flexural nanobilayers: The effects of surface stress. <i>Journal of Applied Physics</i> , 2013 , 113, 104103	2.5	13
42	Evidence for enhancing charge collection efficiency with an alternative cost-effective binary ionic liquids electrolyte based dye-sensitized solar cells. <i>Electrochimica Acta</i> , 2011 , 56, 5605-5610	6.7	13
41	Facile construction of high-electrocatalytic bilayer counter electrode for efficient dye-sensitized solar cells. <i>ACS Applied Materials & Interfaces</i> , 2011 , 3, 3916-20	9.5	12
40	Ion Migration in Organic-Inorganic Hybrid Perovskite Solar Cells: Current Understanding and Perspectives.. <i>Small</i> , 2022 , e2105783	11	12
39	GreenSolventProcessable Perovskite Solar Cells. <i>Advanced Energy and Sustainability Research</i> , 2021 , 2, 2000047	1.6	12
38	Fused-ring phenazine building blocks for efficient copolymer donors. <i>Materials Chemistry Frontiers</i> , 2020 , 4, 1454-1458	7.8	11
37	Electronic structure modulation of bifunctional oxygen catalysts for rechargeable Zn air batteries. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 1229-1237	13	11
36	An efficient medium-bandgap nonfullerene acceptor for organic solar cells. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 8857-8861	13	11

35	The effects of interface misfit strain and surface tension on magnetoelectric effects in layered magnetostrictive-piezoelectric composites. <i>Journal of Applied Physics</i> , 2013 , 114, 044109	2.5	10
34	Advances in perovskite quantum-dot solar cells. <i>Journal of Energy Chemistry</i> , 2021 , 52, 351-353	12	10
33	Aqueous solvent-regulated crystallization and interfacial modification in perovskite solar cells with enhanced stability and performance. <i>Journal of Power Sources</i> , 2020 , 471, 228447	8.9	9
32	HIGHLY CATALYTIC ACTIVE NANOSTRUCTURED Pt ELECTRODES FOR DYE-SENSITIZED SOLAR CELLS PREPARED BY LOW TEMPERATURE ELECTRODEPOSITION. <i>Functional Materials Letters</i> , 2011 , 04, 7-11	1.2	8
31	Eco-friendly antisolvent enabled inverted MAPbI ₃ perovskite solar cells with fill factors over 84%. <i>Green Chemistry</i> , 2021 , 23, 3633-3641	10	8
30	A critical review on the moisture stability of halide perovskite films and solar cells. <i>Chemical Engineering Journal</i> , 2021 , 430, 132701	14.7	8
29	Facile lattice tensile strain compensation in mixed-cation halide perovskite solar cells. <i>Journal of Energy Chemistry</i> , 2022 , 66, 422-428	12	8
28	Lanthanum-Doped Strontium Stannate for Efficient Electron-Transport Layers in Planar Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , 2020 , 3, 6889-6896	6.1	7
27	Laser-Induced Flash-Evaporation Printing CH ₃ NH ₃ PbI ₃ Thin Films for High-Performance Planar Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 26206-26212	9.5	7
26	Membrane-based electrolyte sheets for facile fabrication of flexible dye-sensitized solar cells. <i>Electrochimica Acta</i> , 2011 , 56, 6026-6032	6.7	7
25	The Voltage Loss in Tin Halide Perovskite Solar Cells: Origins and Perspectives. <i>Advanced Functional Materials</i> , 2108832	15.6	6
24	Suppressing the Formation of Tin Vacancy Yields Efficient Lead-Free Perovskite Solar Cells. <i>Nano Energy</i> , 2022 , 107416	17.1	6
23	An alternative alkylpyridinium iodide with high electroactivity for efficient dye-sensitized solar cells. <i>Electrochemistry Communications</i> , 2011 , 13, 550-553	5.1	5
22	Recent Advances and Perspectives of Photostability for Halide Perovskite Solar Cells. <i>Advanced Optical Materials</i> , 2101822	8.1	5
21	Efficient defect passivation with niacin for high-performance and stable perovskite solar cells. <i>Journal of Materials Chemistry C</i> ,	7.1	5
20	Reducing the interfacial voltage loss in tin halides perovskite solar cells. <i>Chemical Engineering Journal</i> , 2022 , 445, 136769	14.7	5
19	Renaissance of tin halide perovskite solar cells. <i>Journal of Semiconductors</i> , 2021 , 42, 030201	2.3	4
18	Benzotriazole derivative inhibits nonradiative recombination and improves the UV-stability of inverted MAPbI ₃ perovskite solar cells. <i>Journal of Energy Chemistry</i> , 2022 , 65, 592-599	12	4

17	Size Effect of Elastic and Electromechanical Properties of BaTiO ₃ Films from First-Principles Method. <i>Integrated Ferroelectrics</i> , 2011 , 124, 79-86	0.8	3
16	Facile solvothermal synthesis of single-crystalline anatase nanorods for efficient dye-sensitized solar cells. <i>Pure and Applied Chemistry</i> , 2012 , 85, 417-425	2.1	3
15	Toward stable lead halide perovskite solar cells: A knob on the A/X sites components.. <i>Science</i> , 2022 , 25, 103599	6.1	3
14	Fluorinated Oligomer Wrapped Perovskite Crystals for Inverted MAPbI ₃ Solar Cells with 21% Efficiency and Enhanced Stability. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 26093-26101	9.5	3
13	Tetrazole modulated perovskite films for efficient solar cells with improved moisture stability. <i>Chemical Engineering Journal</i> , 2021 , 420, 127579	14.7	3
12	Inhibiting octahedral tilting for stable CsPbI ₂ Br solar cells. <i>Information Materials</i> ,	23.1	2
11	Dynamically controlled growth of CuMoD nanosheets for efficient electrocatalytic hydrogen evolution. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 9337-9344	7.1	1
10	One-dimensional and (001) faceted nanostructured TiO ₂ photoanodes for dye-sensitized solar cells. <i>Chimia</i> , 2013 , 67, 136-41	1.3	1
9	Electrolyte-dependent photovoltaic responses in dye-sensitized solar cells. <i>Frontiers of Optoelectronics in China</i> , 2011 , 4, 45-52		1
8	Enhancement of photocurrent of dye-sensitized solar cell by composite liquid electrolyte including NiO nanosheets. <i>Journal of Nanoscience and Nanotechnology</i> , 2010 , 10, 7390-3	1.3	1
7	A Green Lead Recycling Strategy from Used Lead Acid Batteries for Efficient Inverted Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 9595-9601	6.4	1
6	Research on Preparation and Properties of Inorganic Gelling Materials for Sand Fixation 2014 , 619-625		
5	Photovoltaic Performance Optimization of Natural Trollius Sensitized Solar Cells. <i>Key Engineering Materials</i> , 2012 , 512-515, 1614-1618	0.4	
4	Application of Electrochemical Impedance Spectroscopy in Organic Solar Cells with Vertically Aligned TiO ₂ Nanorod Arrays as Buffer Layer. <i>Key Engineering Materials</i> , 2012 , 512-515, 1598-1603	0.4	
3	Improving the hole extraction by hexadecylbenzene modification for efficient perovskite solar cells. <i>IOP Conference Series: Earth and Environmental Science</i> , 2021 , 781, 042042	0.3	
2	Electrocatalysts for T-Mediated Dye-Sensitized Solar Cells 2018 , 367-393		
1	Magnesium doped spinel NiCo ₂ O ₄ for improved hole extraction in efficient inverted perovskite solar cells. <i>Materials Today Communications</i> , 2022 , 31, 103750	2.5	