Feng Hao

List of Publications by Year
in descending order

106 papers	9,697 citations	81900 39 h-index	36028 97 g-index
112 all docs	112 docs citations	112 times ranked	10904 citing authors

#	Article	IF	Citations
1	A critical review on the moisture stability of halide perovskite films and solar cells. Chemical Engineering Journal, 2022, 430, 132701.	12.7	31
2	Benzotriazole derivative inhibits nonradiative recombination and improves the UV-stability of inverted MAPbI3 perovskite solar cells. Journal of Energy Chemistry, 2022, 65, 592-599.	12.9	18
3	Facile lattice tensile strain compensation in mixed-cation halide perovskite solar cells. Journal of Energy Chemistry, 2022, 66, 422-428.	12.9	29
4	The Voltage Loss in Tin Halide Perovskite Solar Cells: Origins and Perspectives. Advanced Functional Materials, 2022, 32, 2108832.	14.9	43
5	Inhibiting octahedral tilting for stable <scp>CsPbI₂Br</scp> solar cells. InformaÄnÃ- MateriÃ¡ly, 2022, 4, .	17.3	17
6	Recent Advances and Perspectives of Photostability for Halide Perovskite Solar Cells. Advanced Optical Materials, 2022, 10, 2101822.	7.3	41
7	Acetone complexes for high-performance perovskite photovoltaics with reduced nonradiative recombination. Materials Advances, 2022, 3, 2047-2055.	5.4	2
8	Ion Migration in Organicâ€“Inorganic Hybrid Perovskite Solar Cells: Current Understanding and Perspectives. Small, 2022, 18, e2105783.	10.0	53
9	Toward stable lead halide perovskite solar cells: A knob on the A/X sites components. IScience, 2022, 25, 103599.	4.1	13
10	Simultaneous Passivation of Bulk and Interface Defects with Gradient 2D/3D Heterojunction Engineering for Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 21079-21088.	8.0	26
11	Reducing the interfacial voltage loss in tin halides perovskite solar cells. Chemical Engineering Journal, 2022, 445, 136769.	12.7	30
12	Suppressing the formation of tin vacancy yields efficient lead-free perovskite solar cells. Nano Energy, 2022, 99, 107416.	16.0	37
13	Magnesium doped spinel NiCo2O4 for improved hole extraction in efficient inverted perovskite solar cells. Materials Today Communications, 2022, 31, 103750.	1.9	1
14	Tetrazole modulated perovskite films for efficient solar cells with improved moisture stability. Chemical Engineering Journal, 2021, 420, 127579.	12.7	14
15	Ionic liquid reducing energy loss and stabilizing CsPbI2Br solar cells. Nano Energy, 2021, 81, 105631.	16.0	71
16	Perovskite-based tandem solar cells. Science Bulletin, 2021, 66, 621-636.	9.0	91
17	Greenâ€“Solventâ€“Processable Perovskite Solar Cells. Advanced Energy and Sustainability Research, 2021, 2, 2000047.	5.8	28
18	Eco-friendly antisolvent enabled inverted MAPbI₃ perovskite solar cells with fill factors over 84%. Green Chemistry, 2021, 23, 3633-3641.	9.0	22

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19	Renaissance of tin halide perovskite solar cells. Journal of Semiconductors, 2021, 42, 030201.	3.7	13
20	Fluorinated Oligomer Wrapped Perovskite Crystals for Inverted MAPbI₃ Solar Cells with 21% Efficiency and Enhanced Stability. ACS Applied Materials & Interfaces, 2021, 13, 26093-26101.	8.0	18
21	Improving the hole extraction by hexadecylbenzene modification for efficient perovskite solar cells. IOP Conference Series: Earth and Environmental Science, 2021, 781, 042042.	0.3	0
22	Lattice Strain Relaxation and Grain Homogenization for Efficient Inverted MAPbI₃ Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 4569-4575.	4.6	19
23	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.	4.6	6
24	Advances in perovskite quantum-dot solar cells. Journal of Energy Chemistry, 2021, 52, 351-353.	12.9	13
25	A chlorinated copolymer donor demonstrates a 18.13% power conversion efficiency. Journal of Semiconductors, 2021, 42, 010501.	3.7	158
26	Electronic structure modulation of bifunctional oxygen catalysts for rechargeable Znâ€“air batteries. Journal of Materials Chemistry A, 2020, 8, 1229-1237.	10.3	26
27	Bioinspired Electrocatalyst for Electrochemical Reduction of N₂ to NH₃ in Ambient Conditions. ACS Applied Materials & Interfaces, 2020, 12, 2445-2451.	8.0	39
28	Over 16% efficiency from thick-film organic solar cells. Science Bulletin, 2020, 65, 1979-1982.	9.0	62
29	Hot-Casting Large-Grain Perovskite Film for Efficient Solar Cells: Film Formation and Device Performance. Nano-Micro Letters, 2020, 12, 156.	27.0	47
30	Metal oxide alternatives for efficient electron transport in perovskite solar cells: beyond TiO₂ and SnO₂. Journal of Materials Chemistry A, 2020, 8, 19768-19787.	10.3	60
31	Lewis acid/base approach for efficacious defect passivation in perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 12201-12225.	10.3	149
32	Lanthanum-Doped Strontium Stannate for Efficient Electron-Transport Layers in Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 6889-6896.	5.1	11
33	Dynamically controlled growth of Cuâ€“Moâ€“O nanosheets for efficient electrocatalytic hydrogen evolution. Journal of Materials Chemistry C, 2020, 8, 9337-9344.	5.5	3
34	Coordination modulated crystallization and defect passivation in high quality perovskite film for efficient solar cells. Coordination Chemistry Reviews, 2020, 420, 213408.	18.8	51
35	Fused-ring phenazine building blocks for efficient copolymer donors. Materials Chemistry Frontiers, 2020, 4, 1454-1458.	5.9	21
36	Progress of the key materials for organic solar cells. Science China Chemistry, 2020, 63, 758-765.	8.2	158

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37	Vacancy defect modulation in hot-casted NiO film for efficient inverted planar perovskite solar cells. Journal of Energy Chemistry, 2020, 48, 426-434.	12.9	44
38	Insights into Ultrafast Carrier Dynamics in Perovskite Thin Films and Solar Cells. ACS Photonics, 2020, 7, 1893-1907.	6.6	34
39	Chlorine-doped SnO₂ hydrophobic surfaces for large grain perovskite solar cells. Journal of Materials Chemistry C, 2020, 8, 11638-11646.	5.5	40
40	Aqueous solvent-regulated crystallization and interfacial modification in perovskite solar cells with enhanced stability and performance. Journal of Power Sources, 2020, 471, 228447.	7.8	13
41	Toward stable and efficient Sn-containing perovskite solar cells. Science Bulletin, 2020, 65, 786-790.	9.0	21
42	Precise control of PbI2 excess into grain boundary for efficacious charge extraction in off-stoichiometric perovskite solar cells. Electrochimica Acta, 2020, 338, 135697.	5.2	25
43	Secondary lateral growth of MAPbI₃ grains for the fabrication of efficient perovskite solar cells. Journal of Materials Chemistry C, 2020, 8, 3217-3225.	5.5	24
44	Improving energy level alignment by adenine for efficient and stable perovskite solar cells. Nano Energy, 2020, 74, 104846.	16.0	54
45	An efficient medium-bandgap nonfullerene acceptor for organic solar cells. Journal of Materials Chemistry A, 2020, 8, 8857-8861.	10.3	17
46	Ionic liquids engineering for high-efficiency and stable perovskite solar cells. Chemical Engineering Journal, 2020, 398, 125594.	12.7	85
47	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.	5.5	49
48	Low-cost coenzyme Q10 as an efficient electron transport layer for inverted perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 18626-18633.	10.3	33
49	Carbonâ€based perovskite solar cells: From singleâ€junction to modules. , 2019, 1, 109-123.		61
50	Cr₃C₂ Nanoparticle-Embedded Carbon Nanofiber for Artificial Synthesis of NH₃ through N₂ Fixation under Ambient Conditions. ACS Applied Materials & Interfaces, 2019, 11, 35764-35769.	8.0	43
51	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.	8.0	50
52	In situ growth of Î±-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.	5.5	31
53	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.	10.3	116
54	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.	8.0	66

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55	Perovskite solar cells: must lead be replaced â€“ and can it be done?. Science and Technology of Advanced Materials, 2018, 19, 425-442.	6.1	151
56	Tunable Crystallization and Nucleation of Planar CH₃NH₃PbI₃ through Solvent-Modified Interdiffusion. ACS Applied Materials & Interfaces, 2018, 10, 14673-14683.	8.0	14
57	Allâ€Solutionâ€Processed Cu₂ZnSnS₄ Solar Cells with Selfâ€Depleted Na₂S Back Contact Modification Layer. Advanced Functional Materials, 2018, 28, 1703369.	14.9	36
58	Bifacial Modified Charge Transport Materials for Highly Efficient and Stable Inverted Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 17861-17870.	8.0	29
59	Thiazole-Induced Surface Passivation and Recrystallization of CH₃NH₃PbI₃ Films for Perovskite Solar Cells with Ultrahigh Fill Factors. ACS Applied Materials & Interfaces, 2018, 10, 42436-42443.	8.0	49
60	Laser-Induced Flash-Evaporation Printing CH₃NH₃PbI₃ Thin Films for High-Performance Planar Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 26206-26212.	8.0	10
61	Role of alkyl chain length in diaminoalkane linked 2D Ruddlesdenâ€“Popper halide perovskites. CrystEngComm, 2018, 20, 6704-6712.	2.6	25
62	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.	8.0	68
63	Rational Design of Solution-Processed Tiâ€“Feâ€“O Ternary Oxides for Efficient Planar CH₃NH₃PbI₃ Perovskite Solar Cells with Suppressed Hysteresis. ACS Applied Materials & Interfaces, 2017, 9, 34833-34843.	8.0	21
64	Carbon Nanotube Based Inverted Flexible Perovskite Solar Cells with Allâ€Inorganic Charge Contacts. Advanced Functional Materials, 2017, 27, 1703068.	14.9	132
65	Discrete Iron(III) Oxide Nanoislands for Efficient and Photostable Perovskite Solar Cells. Advanced Functional Materials, 2017, 27, 1702090.	14.9	79
66	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.	6.7	228
67	Solution-Processed Air-Stable Mesoscopic Selenium Solar Cells. ACS Energy Letters, 2016, 1, 469-473.	17.4	44
68	Carrier Diffusion Lengths of over 500 nm in Lead-Free Perovskite CH₃NH₃SnI₃ Films. Journal of the American Chemical Society, 2016, 138, 14750-14755.	13.7	252
69	Solvent-Mediated Crystallization of CH₃NH₃SnI₃ Films for Heterojunction Depleted Perovskite Solar Cells. Journal of the American Chemical Society, 2015, 137, 11445-11452.	13.7	598
70	Lead-free solid-state organicâ€“inorganic halide perovskite solar cells. Nature Photonics, 2014, 8, 489-494.	31.4	2,410
71	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, 8094-8099.	13.7	1,234
72	Controllable Perovskite Crystallization at a Gasâ€“Solid Interface for Hole Conductor-Free Solar Cells with Steady Power Conversion Efficiency over 10%. Journal of the American Chemical Society, 2014, 136, 16411-16419.	13.7	383

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73	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.	10.3	47
74	Air-Stable Molecular Semiconducting Iodosalts for Solar Cell Applications: Cs₂SnI₆ as a Hole Conductor. Journal of the American Chemical Society, 2014, 136, 15379-15385.	13.7	560
75	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.	3.1	55
76	Low temperature reduction of free-standing graphene oxide papers with metal iodides for ultrahigh bulk conductivity. Scientific Reports, 2014, 4, 3965.	3.3	43
77	The effects of interface misfit strain and surface tension on magnetoelectric effects in layered magnetostrictive-piezoelectric composites. Journal of Applied Physics, 2013, 114, .	2.5	10
78	Recent molecular engineering of room temperature ionic liquid electrolytes for mesoscopic dye-sensitized solar cells. RSC Advances, 2013, 3, 23521.	3.6	18
79	Solvent dipole modulation of conduction band edge shift and charge recombination in robust dye-sensitized solar cells. Nanoscale, 2013, 5, 726-733.	5.6	17
80	Modeling of magnetoelectric effects in flexural nanobilayers: The effects of surface stress. Journal of Applied Physics, 2013, 113, 104103.	2.5	13
81	Recent advances in alternative cathode materials for iodine-free dye-sensitized solar cells. Energy and Environmental Science, 2013, 6, 2003.	30.8	135
82	One-dimensional and (001) Facetted Nanostructured TiO₂ Photoanodes for Dye-sensitized Solar Cells. Chimia, 2013, 67, 136-141.	0.6	1
83	Tailoring diffusion-induced stresses of core-shell nanotube electrodes in lithium-ion batteries. Journal of Applied Physics, 2013, 113, .	2.5	27
84	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.	2.2	42
85	Facile solvothermal synthesis of single-crystalline anatase nanorods for efficient dye-sensitized solar cells. Pure and Applied Chemistry, 2012, 85, 417-425.	1.9	3
86	Diffusion-induced stresses of electrode nanomaterials in lithium-ion battery: The effects of surface stress. Journal of Applied Physics, 2012, 112, .	2.5	72
87	High Electrocatalytic Activity of Vertically Aligned Single-Walled Carbon Nanotubes towards Sulfide Redox Shuttles. Scientific Reports, 2012, 2, 368.	3.3	83
88	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	1
89	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.	3.1	36
90	Highly catalytic cross-stacked superaligned carbon nanotube sheets for iodine-free dye-sensitized solar cells. Journal of Materials Chemistry, 2012, 22, 22756.	6.7	26

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91	Thermal transport in crystalline Si/Ge nano-composites: Atomistic simulations and microscopic models. Applied Physics Letters, 2012, 100, .	3.3	20
92	Anionic structure-dependent photoelectrochemical responses of dye-sensitized solar cells based on a binary ionic liquid electrolyte. Physical Chemistry Chemical Physics, 2011, 13, 6416.	2.8	27
93	Bifunctional single-crystalline rutile nanorod decorated heterostructural photoanodes for efficient dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2011, 13, 15918.	2.8	25
94	Facile Construction of High-Electrocatalytic Bilayer Counter Electrode for Efficient Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2011, 3, 3916-3920.	8.0	14
95	Mechanical and thermal transport properties of graphene with defects. Applied Physics Letters, 2011, 99, .	3.3	321
96	Electrolyte-dependent photovoltaic responses in dye-sensitized solar cells. Frontiers of Optoelectronics in China, 2011, 4, 45-52.	0.2	1
97	An alternative alkylpyridinium iodide with high electroactivity for efficient dye-sensitized solar cells. Electrochemistry Communications, 2011, 13, 550-553.	4.7	7
98	Membrane-based electrolyte sheets for facile fabrication of flexible dye-sensitized solar cells. Electrochimica Acta, 2011, 56, 6026-6032.	5.2	7
99	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.	5.2	14
100	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.	7.8	24
101	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
102	Size Effect of Elastic and Electromechanical Properties of BaTiO₃ Films from First-Principles Method. Integrated Ferroelectrics, 2011, 124, 79-86.	0.7	3
103	Enhancement of Photocurrent of Dye-Sensitized Solar Cell by Composite Liquid Electrolyte Including NiO Nanosheets. Journal of Nanoscience and Nanotechnology, 2010, 10, 7390-7393.	0.9	1
104	Influence of iodine concentration on the photoelectrochemical performance of dye-sensitized solar cells containing non-volatile electrolyte. Electrochimica Acta, 2010, 55, 7225-7229.	5.2	35
105	Photovoltaic Performance Optimization of Natural Trollius Sensitized Solar Cells. Key Engineering Materials, 0, 512-515, 1614-1618.	0.4	0
106	Efficient defect passivation with niacin for high-performance and stable perovskite solar cells. Journal of Materials Chemistry C, 0, , .	5.5	10