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	Lead-free solid-state organicâ€“inorganic halide perovskite solar cells. Nature Photonics, 2014, 8, 489-494.	31.4	2,410
2	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
3	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
4	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
5	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
6	Mechanical and thermal transport properties of graphene with defects. Applied Physics Letters, 2011, 99, .	3.3	321
7	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
8	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
9	Progress of the key materials for organic solar cells. Science China Chemistry, 2020, 63, 758-765.	8.2	158
10	A chlorinated copolymer donor demonstrates a 18.13% power conversion efficiency. Journal of Semiconductors, 2021, 42, 010501.	3.7	158
11	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
12	Lewis acid/base approach for efficacious defect passivation in perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 12201-12225.	10.3	149
13	Recent advances in alternative cathode materials for iodine-free dye-sensitized solar cells. Energy and Environmental Science, 2013, 6, 2003.	30.8	135
14	Carbon Nanotube Based Inverted Flexible Perovskite Solar Cells with Allâ€Inorganic Charge Contacts. Advanced Functional Materials, 2017, 27, 1703068.	14.9	132
15	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
16	Perovskite-based tandem solar cells. Science Bulletin, 2021, 66, 621-636.	9.0	91
17	Ionic liquids engineering for high-efficiency and stable perovskite solar cells. Chemical Engineering Journal, 2020, 398, 125594.	12.7	85
18	High Electrocatalytic Activity of Vertically Aligned Single-Walled Carbon Nanotubes towards Sulfide Redox Shuttles. Scientific Reports, 2012, 2, 368.	3.3	83

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19	Discrete Iron(III) Oxide Nanoislands for Efficient and Photostable Perovskite Solar Cells. Advanced Functional Materials, 2017, 27, 1702090.	14.9	79
20	Diffusion-induced stresses of electrode nanomaterials in lithium-ion battery: The effects of surface stress. Journal of Applied Physics, 2012, 112, .	2.5	72
21	Ionic liquid reducing energy loss and stabilizing CsPbI2Br solar cells. Nano Energy, 2021, 81, 105631.	16.0	71
22	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
23	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
24	Over 16% efficiency from thick-film organic solar cells. Science Bulletin, 2020, 65, 1979-1982.	9.0	62
25	Carbonâ€based perovskite solar cells: From singleâ€junction to modules. , 2019, 1, 109-123.		61
26	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
27	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
28	Improving energy level alignment by adenine for efficient and stable perovskite solar cells. Nano Energy, 2020, 74, 104846.	16.0	54
29	Ion Migration in Organicâ€“Inorganic Hybrid Perovskite Solar Cells: Current Understanding and Perspectives. Small, 2022, 18, e2105783.	10.0	53
30	Coordination modulated crystallization and defect passivation in high quality perovskite film for efficient solar cells. Coordination Chemistry Reviews, 2020, 420, 213408.	18.8	51
31	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
32	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
33	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
34	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
35	Hot-Casting Large-Grain Perovskite Film for Efficient Solar Cells: Film Formation and Device Performance. Nano-Micro Letters, 2020, 12, 156.	27.0	47
36	Solution-Processed Air-Stable Mesoscopic Selenium Solar Cells. ACS Energy Letters, 2016, 1, 469-473.	17.4	44

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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	Low temperature reduction of free-standing graphene oxide papers with metal iodides for ultrahigh bulk conductivity. Scientific Reports, 2014, 4, 3965.	3.3	43
39	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
40	The Voltage Loss in Tin Halide Perovskite Solar Cells: Origins and Perspectives. Advanced Functional Materials, 2022, 32, 2108832.	14.9	43
41	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
42	Recent Advances and Perspectives of Photostability for Halide Perovskite Solar Cells. Advanced Optical Materials, 2022, 10, 2101822.	7.3	41
43	Chlorine-doped SnO₂ hydrophobic surfaces for large grain perovskite solar cells. Journal of Materials Chemistry C, 2020, 8, 11638-11646.	5.5	40
44	Bioinspired Electrocatalyst for Electrochemical Reduction of N₂ to NH₃ in Ambient Conditions. ACS Applied Materials & Interfaces, 2020, 12, 2445-2451.	8.0	39
45	Suppressing the formation of tin vacancy yields efficient lead-free perovskite solar cells. Nano Energy, 2022, 99, 107416.	16.0	37
46	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
47	Allâ€Solutionâ€Processed Cu₂ZnSnS₄ Solar Cells with Selfâ€Depleted Na₂S Back Contact Modification Layer. Advanced Functional Materials, 2018, 28, 1703369.	14.9	36
48	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
49	Insights into Ultrafast Carrier Dynamics in Perovskite Thin Films and Solar Cells. ACS Photonics, 2020, 7, 1893-1907.	6.6	34
50	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
51	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
52	A critical review on the moisture stability of halide perovskite films and solar cells. Chemical Engineering Journal, 2022, 430, 132701.	12.7	31
53	Reducing the interfacial voltage loss in tin halides perovskite solar cells. Chemical Engineering Journal, 2022, 445, 136769.	12.7	30
54	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

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55	Facile lattice tensile strain compensation in mixed-cation halide perovskite solar cells. Journal of Energy Chemistry, 2022, 66, 422-428.	12.9	29
56	Greenâ€“Solventâ€“Processable Perovskite Solar Cells. Advanced Energy and Sustainability Research, 2021, 2, 2000047.	5.8	28
57	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
58	Tailoring diffusion-induced stresses of core-shell nanotube electrodes in lithium-ion batteries. Journal of Applied Physics, 2013, 113, .	2.5	27
59	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
60	Electronic structure modulation of bifunctional oxygen catalysts for rechargeable Znâ€“air batteries. Journal of Materials Chemistry A, 2020, 8, 1229-1237.	10.3	26
61	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
62	Bifunctional single-crystalline rutile nanorod decorated heterostructural photoanodes for efficient dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2011, 13, 15918.	2.8	25
63	Role of alkyl chain length in diaminoalkane linked 2D Ruddlesdenâ€“Popper halide perovskites. CrystEngComm, 2018, 20, 6704-6712.	2.6	25
64	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
65	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
66	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
67	Eco-friendly antisolvent enabled inverted MAPbI₃ perovskite solar cells with fill factors over 84%. Green Chemistry, 2021, 23, 3633-3641.	9.0	22
68	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
69	Fused-ring phenazine building blocks for efficient copolymer donors. Materials Chemistry Frontiers, 2020, 4, 1454-1458.	5.9	21
70	Toward stable and efficient Sn-containing perovskite solar cells. Science Bulletin, 2020, 65, 786-790.	9.0	21
71	Thermal transport in crystalline Si/Ge nano-composites: Atomistic simulations and microscopic models. Applied Physics Letters, 2012, 100, .	3.3	20
72	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

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73	Recent molecular engineering of room temperature ionic liquid electrolytes for mesoscopic dye-sensitized solar cells. RSC Advances, 2013, 3, 23521.	3.6	18
74	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
75	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
76	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
77	An efficient medium-bandgap nonfullerene acceptor for organic solar cells. Journal of Materials Chemistry A, 2020, 8, 8857-8861.	10.3	17
78	Inhibiting octahedral tilting for stable <scp>CsPbI₂Br</scp> solar cells. InformaÄnÃ- MateriÃ¡ly, 2022, 4, .	17.3	17
79	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
80	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
81	Tunable Crystallization and Nucleation of Planar CH₃NH₃PbI₃ through Solvent-Modified Interdiffusion. ACS Applied Materials & Interfaces, 2018, 10, 14673-14683.	8.0	14
82	Tetrazole modulated perovskite films for efficient solar cells with improved moisture stability. Chemical Engineering Journal, 2021, 420, 127579.	12.7	14
83	Modeling of magnetoelectric effects in flexural nanobilayers: The effects of surface stress. Journal of Applied Physics, 2013, 113, 104103.	2.5	13
84	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
85	Renaissance of tin halide perovskite solar cells. Journal of Semiconductors, 2021, 42, 030201.	3.7	13
86	Advances in perovskite quantum-dot solar cells. Journal of Energy Chemistry, 2021, 52, 351-353.	12.9	13
87	Toward stable lead halide perovskite solar cells: A knob on the A/X sites components. IScience, 2022, 25, 103599.	4.1	13
88	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
89	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
90	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

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91	Efficient defect passivation with niacin for high-performance and stable perovskite solar cells. Journal of Materials Chemistry C, 0, , .	5.5	10
92	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
93	An alternative alkylpyridinium iodide with high electroactivity for efficient dye-sensitized solar cells. Electrochemistry Communications, 2011, 13, 550-553.	4.7	7
94	Membrane-based electrolyte sheets for facile fabrication of flexible dye-sensitized solar cells. Electrochimica Acta, 2011, 56, 6026-6032.	5.2	7
95	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
96	Size Effect of Elastic and Electromechanical Properties of BaTiO₃ Films from First-Principles Method. Integrated Ferroelectrics, 2011, 124, 79-86.	0.7	3
97	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
98	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
99	Acetone complexes for high-performance perovskite photovoltaics with reduced nonradiative recombination. Materials Advances, 2022, 3, 2047-2055.	5.4	2
100	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
101	Electrolyte-dependent photovoltaic responses in dye-sensitized solar cells. Frontiers of Optoelectronics in China, 2011, 4, 45-52.	0.2	1
102	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
103	One-dimensional and (001) Facetted Nanostructured TiO₂ Photoanodes for Dye-sensitized Solar Cells. Chimia, 2013, 67, 136-141.	0.6	1
104	Magnesium doped spinel NiCo2O4 for improved hole extraction in efficient inverted perovskite solar cells. Materials Today Communications, 2022, 31, 103750.	1.9	1
105	Photovoltaic Performance Optimization of Natural Trollius Sensitized Solar Cells. Key Engineering Materials, 0, 512-515, 1614-1618.	0.4	0
106	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