Wei Zhang

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Atomic Level Insights into Metal Halide Perovskite Materials by Scanning Tunneling Microscopy and Spectroscopy. Angewandte Chemie - International Edition, 2022, 61, .	7.2	3
2	Atomic level insights intoÂmetal halide perovskiteÂmaterials by scanning tunneling microscopy and spectroscopy. Angewandte Chemie, 2022, 134, e202112352.	1.6	0
3	Pinning Bromide Ion with Ionic Liquid in Leadâ€Free Cs₂AgBiBr₆ Double Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	37
4	Influence of Halide Choice on Formation of Lowâ€Dimensional Perovskite Interlayer in Efficient Perovskite Solar Cells. Energy and Environmental Materials, 2022, 5, 670-682.	7.3	9
5	Energy level matching between transparent conducting electrodes and the electronic transport layer to enhance performance of all-inorganic CsPbBr3 solar cells. Vacuum, 2022, 200, 111028.	1.6	4
6	Electron transport interface engineering with pyridine functionalized perylene diimide-based material for inverted perovskite solar cell. Chemical Engineering Journal, 2022, 438, 135410.	6.6	21
7	A Multifaceted Ferrocene Interlayer for Highly Stable and Efficient Lithium Doped Spiroâ€OMeTADâ€based Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	32
8	Surface modified NiOx as an efficient hole transport layer in inverted perovskite solar cells. Journal of Materials Science: Materials in Electronics, 2022, 33, 18522-18532.	1.1	2
9	A Highly integrated flexible photo-rechargeable system based on stable ultrahigh-rate quasi-solid-state zinc-ion micro-batteries and perovskite solar cells. Energy Storage Materials, 2022, 51, 239-248.	9.5	29
10	Buried Interfaces in Halide Perovskite Photovoltaics. Advanced Materials, 2021, 33, e2006435.	11.1	214
11	Dielectric screening in perovskite photovoltaics. Nature Communications, 2021, 12, 2479.	5.8	88
12	Solvent Engineering as a Vehicle for High Quality Thin Films of Perovskites and Their Device Fabrication. Small, 2021, 17, e2008145.	5.2	53
13	Device Architecture Engineering: Progress toward Next Generation Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2103121.	7.8	41
14	Highâ€Performance ITOâ€Free Perovskite Solar Cells Enabled by Singleâ€Walled Carbon Nanotube Films. Advanced Functional Materials, 2021, 31, 2104396.	7.8	30
15	Significant performance enhancement of allâ€inorganic CsPbBr₃ perovskite solar cells enabled by Nbâ€doped SnO₂ as effective electron transport layer. Energy and Environmental Materials, 2021, 4, 671-680.	7.3	14
16	Emerging light-emitting diodes for next-generation data communications. Nature Electronics, 2021, 4, 559-572.	13.1	102
17	Strain analysis and engineering in halide perovskite photovoltaics. Nature Materials, 2021, 20, 1337-1346.	13.3	220
18	Nanocarbons for emerging photovoltaic applications. , 2021, , 49-80.		0

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19	A synergistic Cs₂CO₃ETL treatment to incorporate Cs cation into perovskite solar cells<i>via</i>two-step scalable fabrication. Journal of Materials Chemistry C, 2021, 9, 4367-4377.	2.7	17
20	Imaging Excited-State Dynamics in Two-Dimensional Semiconductors with Emerging Ultrafast Measurement Techniques. Accounts of Materials Research, 2021, 2, 75-85.	5.9	3
21	Interfacial Assembly and Applications of Functional Mesoporous Materials. Chemical Reviews, 2021, 121, 14349-14429.	23.0	151
22	Spectral Stable Blue-Light-Emitting Diodes via Asymmetric Organic Diamine Based Dionâ€"Jacobson Perovskites. Journal of the American Chemical Society, 2021, 143, 19711-19718.	6.6	29
23	Surface modification induced by perovskite quantum dots for triple-cation perovskite solar cells. Nano Energy, 2020, 67, 104189.	8.2	81
24	Approaching the Shockleyâ€"Queisser limit for fill factors in leadâ€"tin mixed perovskite photovoltaics. Journal of Materials Chemistry A, 2020, 8, 693-705.	5.2	33
25	Minimizing non-radiative recombination losses in perovskite solar cells. Nature Reviews Materials, 2020, 5, 44-60.	23.3	754
26	Improving the Stability and Optoelectronic Properties of All Inorganic Lessâ€Pb Perovskites by Bâ€Site Doping for Highâ€Performance Inorganic Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000528.	3.1	21
27	Heaterâ€Free and Substrateâ€Independent Growth of Vertically Standing Graphene Using A Highâ€Flux Plasmaâ€Enhanced Chemical Vapor Deposition. Advanced Materials Interfaces, 2020, 7, 2000854.	1.9	8
28	Sputtered Ga-Doped SnO_{<i>x</i>} Electron Transport Layer for Large-Area All-Inorganic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 54904-54915.	4.0	18
29	Integrated and Binderâ€Free Air Cathodes of Co₃Fe₇ Nanoalloy and Co_{5.47}N Encapsulated in Nitrogenâ€Doped Carbon Foam with Superior Oxygen Reduction Activity in Flexible Aluminumâ€Air Batteries. Advanced Science, 2020, 7, 2000747.	5.6	67
30	Perovskite Tandem Solar Cells: From Fundamentals to Commercial Deployment. Chemical Reviews, 2020, 120, 9835-9950.	23.0	248
31	Reduced bilateral recombination by functional molecular interface engineering for efficient inverted perovskite solar cells. Nano Energy, 2020, 78, 105249.	8.2	45
32	Direct Growth of Vertically Aligned Carbon Nanotubes onto Transparent Conductive Oxide Glass for Enhanced Charge Extraction in Perovskite Solar Cells. Advanced Materials Interfaces, 2020, 7, 2001121.	1.9	13
33	Critical review of recent progress of flexible perovskite solar cells. Materials Today, 2020, 39, 66-88.	8.3	169
34	Recent advances in the synthesis of hierarchically mesoporous TiO2 materials for energy and environmental applications. National Science Review, 2020, 7, 1702-1725.	4.6	139
35	Tailoring Perovskite Adjacent Interfaces by Conjugated Polyelectrolyte for Stable and Efficient Solar Cells. Solar Rrl, 2020, 4, 2000060.	3.1	23
36	Space-confined synthesis of CoNi nanoalloy in N-doped porous carbon frameworks as efficient oxygen reduction catalyst for neutral and alkaline aluminum-air batteries. Energy Storage Materials, 2020, 27, 96-108.	9.5	63

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37	Carbon Materials in Perovskite Solar Cells: Prospects and Future Challenges. Energy and Environmental Materials, 2019, 2, 107-118.	7.3	72
38	The Central Role of Ligand Conjugation for Properties of Coordination Complexes as Hole-Transport Materials in Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 6768-6779.	2.5	11
39	Nanomaterials in Dye-Sensitized Solar Cells. , 2019, , 69-95.		2
40	Mechanistic Insights from Functional Group Exchange Surface Passivation: A Combined Theoretical and Experimental Study. ACS Applied Energy Materials, 2019, 2, 2723-2733.	2.5	11
41	Inorganic CsPbI₂Br Perovskite Solar Cells: The Progress and Perspective. Solar Rrl, 2019, 3, 1800239.	3.1	217
42	Enhanced photovoltage for inverted planar heterojunction perovskite solar cells. Science, 2018, 360, 1442-1446.	6.0	1,221
43	Defect Engineering toward Highly Efficient and Stable Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800326.	1.9	40
44	Highly efficient solid-state dye-sensitized solar cells based on hexylimidazolium iodide ionic polymer electrolyte prepared by in situ low-temperature polymerization. Journal of Power Sources, 2017, 345, 131-136.	4.0	21
45	Low-toxic metal halide perovskites: opportunities and future challenges. Journal of Materials Chemistry A, 2017, 5, 11436-11449.	5.2	123
46	Ultra-broadband optical amplification at telecommunication wavelengths achieved by bismuth-activated lead iodide perovskites. Journal of Materials Chemistry C, 2017, 5, 2591-2596.	2.7	19
47	Tailoring Organic Cation of 2D Airâ€Stable Organometal Halide Perovskites for Highly Efficient Planar Solar Cells. Advanced Energy Materials, 2017, 7, 1700162.	10.2	312
48	In situ dynamic observations of perovskite crystallisation and microstructure evolution intermediated from [PbI6]4âˆ’ cage nanoparticles. Nature Communications, 2017, 8, 15688.	5.8	191
49	Dualâ€Source Precursor Approach for Highly Efficient Inverted Planar Heterojunction Perovskite Solar Cells. Advanced Materials, 2017, 29, 1604758.	11.1	142
50	Electron injection and scaffold effects in perovskite solar cells. Journal of Materials Chemistry C, 2017, 5, 634-644.	2.7	58
51	Reproducible Planar Heterojunction Solar Cells Based on One-Step Solution-Processed Methylammonium Lead Halide Perovskites. Chemistry of Materials, 2017, 29, 462-473.	3.2	35
52	Energetic Barriers to Interfacial Charge Transfer and Ion Movement in Perovskite Solar Cells. ChemPhysChem, 2017, 18, 3047-3055.	1.0	10
53	Monolithic Wide Band Gap Perovskite/Perovskite Tandem Solar Cells with Organic Recombination Layers. Journal of Physical Chemistry C, 2017, 121, 27256-27262.	1.5	40
54	Mechanisms of Lithium Intercalation and Conversion Processes in Organicâ€“Inorganic Halide Perovskites. ACS Energy Letters, 2017, 2, 1818-1824.	8.8	111

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55	Near-neutral-colored semitransparent perovskite films using a combination of colloidal self-assembly and plasma etching. Solar Energy Materials and Solar Cells, 2017, 160, 193-202.	3.0	47
56	Charge Carrier Balance for Highly Efficient Inverted Planar Heterojunction Perovskite Solar Cells Based on Interface Engineering. , 2016, , .		0
57	Nanoimprinted distributed feedback lasers of solution processed hybrid perovskites. Optics Express, 2016, 24, 23677.	1.7	80
58	Carrier trapping and recombination: the role of defect physics in enhancing the open circuit voltage of metal halide perovskite solar cells. Energy and Environmental Science, 2016, 9, 3472-3481.	15.6	409
59	Efficient perovskite solar cells by metal ion doping. Energy and Environmental Science, 2016, 9, 2892-2901.	15.6	372
60	Chargeâ€Carrier Balance for Highly Efficient Inverted Planar Heterojunction Perovskite Solar Cells. Advanced Materials, 2016, 28, 10718-10724.	11.1	214
61	Metal halide perovskites for energy applications. Nature Energy, 2016, 1, .	19.8	726
62	Photo-induced halide redistribution in organicâ€“inorganic perovskite films. Nature Communications, 2016, 7, 11683.	5.8	778
63	Highâ€Performance Inverted Planar Heterojunction Perovskite Solar Cells Based on Lead Acetate Precursor with Efficiency Exceeding 18%. Advanced Functional Materials, 2016, 26, 3508-3514.	7.8	176
64	POSS-Based Electrolyte for Efficient Solid-State Dye-Sensitized Solar Cells at Sub-Zero Temperatures. ACS Applied Materials & Interfaces, 2016, 8, 5343-5350.	4.0	22
65	Enhanced UV-light stability of planar heterojunction perovskite solar cells with caesium bromide interface modification. Energy and Environmental Science, 2016, 9, 490-498.	15.6	535
66	Pinhole-free perovskite films for efficient solar modules. Energy and Environmental Science, 2016, 9, 484-489.	15.6	252
67	Plasmonicâ€Induced Photon Recycling in Metal Halide Perovskite Solar Cells. Advanced Functional Materials, 2015, 25, 5038-5046.	7.8	198
68	Templated microstructural growth of perovskite thin films via colloidal monolayer lithography. Energy and Environmental Science, 2015, 8, 2041-2047.	15.6	119
69	Highly Efficient Perovskite Solar Cells with Tunable Structural Color. Nano Letters, 2015, 15, 1698-1702.	4.5	289
70	Formation of Thin Films of Organicâ€“Inorganic Perovskites for Highâ€Efficiency Solar Cells. Angewandte Chemie - International Edition, 2015, 54, 3240-3248.	7.2	245
71	Crystallization Kinetics of Organicâ€“Inorganic Trihalide Perovskites and the Role of the Lead Anion in Crystal Growth. Journal of the American Chemical Society, 2015, 137, 2350-2358.	6.6	326
72	Ultrasmooth organicâ€“inorganic perovskite thin-film formation and crystallization for efficient planar heterojunction solar cells. Nature Communications, 2015, 6, 6142.	5.8	784

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73	Improving the Long-Term Stability of Perovskite Solar Cells with a Porous Al₂O₃ Buffer Layer. Journal of Physical Chemistry Letters, 2015, 6, 432-437.	2.1	343
74	Exciton Binding Energy and the Nature of Emissive States in Organometal Halide Perovskites. Journal of Physical Chemistry Letters, 2015, 6, 2969-2975.	2.1	211
75	Charge selective contacts, mobile ions and anomalous hysteresis in organicâ€“inorganic perovskite solar cells. Materials Horizons, 2015, 2, 315-322.	6.4	366
76	Enhanced optoelectronic quality of perovskite thin films with hypophosphorous acid for planar heterojunction solar cells. Nature Communications, 2015, 6, 10030.	5.8	620
77	Optical properties and limiting photocurrent of thin-film perovskite solar cells. Energy and Environmental Science, 2015, 8, 602-609.	15.6	417
78	Optical Description of Mesostructured Organicâ€“Inorganic Halide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2015, 6, 48-53.	2.1	59
79	Influence of Thermal Processing Protocol upon the Crystallization and Photovoltaic Performance of Organicâ€“Inorganic Lead Trihalide Perovskites. Journal of Physical Chemistry C, 2014, 118, 17171-17177.	1.5	225
80	Anomalous Hysteresis in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2014, 5, 1511-1515.	2.1	2,190
81	Enhancement of Perovskite-Based Solar Cells Employing Coreâ€“Shell Metal Nanoparticles. Nano Letters, 2013, 13, 4505-4510.	4.5	505
82	Organic Sensitizers with Bridged Triphenylamine Donor Units for Efficient Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2013, 3, 200-205.	10.2	49
83	Voltage enhancement in dye-sensitized solar cell using (001)-oriented anatase TiO2 nanosheets. Journal of Solid State Electrochemistry, 2012, 16, 2993-3001.	1.2	64
84	Enhanced conversion efficiency of flexible dye-sensitized solar cells by optimization of the nanoparticle size with an electrophoretic deposition technique. RSC Advances, 2012, 2, 7074.	1.7	30
85	High Efficiency Quantum Dot Heterojunction Solar Cell Using Anatase (001) TiO₂ Nanosheets. Advanced Materials, 2012, 24, 2202-2206.	11.1	150
86	High-performance hybrid solar cells employing metal-free organic dye modified TiO2 as photoelectrode. Applied Energy, 2012, 90, 305-308.	5.1	34
87	High-Performance Solid-State Organic Dye Sensitized Solar Cells with P3HT as Hole Transporter. Journal of Physical Chemistry C, 2011, 115, 7038-7043.	1.5	109
88	Solidâ€State Dyeâ€Sensitized Solar Cells with Conjugated Polymers as Holeâ€Transporting Materials. Macromolecular Chemistry and Physics, 2011, 212, 15-23.	1.1	98
89	Application of Poly(3â€hexylthiophene) Functionalized with an Anchoring Group in Dyeâ€sensitized Solar Cells. Macromolecular Rapid Communications, 2011, 32, 1190-1194.	2.0	12
90	Low-Cost Fabrication of TiO2 Nanorod Photoelectrode for Dye-sensitized Solar Cell Application. Australian Journal of Chemistry, 2011, 64, 1282.	0.5	7

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91	An Efficient Organicâ€Dyeâ€Sensitized Solar Cell with in situ Polymerized Poly(3,4â€ethylenedioxythiophene) as a Holeâ€Transporting Material. Advanced Materials, 2010, 22, E150-5.	11.1	150
92	Anatase Mesoporous TiO₂ Nanofibers with High Surface Area for Solidâ€State Dyeâ€Sensitized Solar Cells. Small, 2010, 6, 2176-2182.	5.2	108
93	CONJUGATED POLYMER-SENSITIZED SOLAR CELLS BASED ON ELECTROSPUN TiO₂ NANOFIBER ELECTRODE. International Journal of Nanoscience, 2009, 08, 227-230.	0.4	3
94	A Triphenylamineâ€Based Conjugated Polymer with Donorâ€Ï€â€Acceptor Architecture as Organic Sensitizer for Dyeâ€Sensitized Solar Cells. Macromolecular Rapid Communications, 2009, 30, 1533-1537.	2.0	60
95	Facile construction of nanofibrous ZnO photoelectrode for dye-sensitized solar cell applications. Applied Physics Letters, 2009, 95, 043304.	1.5	79
96	Laserâ€induced recoverable fluorescence quenching of perovskite films at a microscopic grainâ€scale. Energy and Environmental Materials, 0, , .	7.3	2