

Jia Zhu

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

113
papers

12,990
citations

55
h-index

113
g-index

127
ext. papers

17,140
ext. citations

16.4
avg, IF

6.99
L-index

#	Paper	IF	Citations
113	All-perovskite tandem solar cells with improved grain surface passivation.. <i>Nature</i> , 2022 ,	50.4	112
112	Interfacial Solar Steam/Vapor Generation for Heating and Cooling.. <i>Advanced Science</i> , 2022 , e2104181	13.6	7
111	Protecting ice from melting under sunlight via radiative cooling.. <i>Science Advances</i> , 2022 , 8, eabj9756	14.3	9
110	Molecule functionalization to facilitate electrocatalytic oxygen reduction on graphdiyne. <i>Journal of Energy Chemistry</i> , 2022 , 65, 141-148	12	6
109	Recent Progress in Daytime Radiative Cooling: Advanced Material Designs and Applications.. <i>Small Methods</i> , 2022 , e2101379	12.8	5
108	Subambient daytime radiative cooling textile based on nanoprocessed silk. <i>Nature Nanotechnology</i> , 2021 ,	28.7	28
107	Interfacial Solar Vapor Generation: Materials and Structural Design. <i>Accounts of Materials Research</i> , 2021 , 2, 198-209	7.5	15
106	A scalable fish-school inspired self-assembled particle system for solar-powered water-solute separation. <i>National Science Review</i> , 2021 , 8, nwab065	10.8	10
105	Hierarchically Designed Salt-Resistant Solar Evaporator Based on Donnan Effect for Stable and High-Performance Brine Treatment. <i>Advanced Functional Materials</i> , 2021 , 31, 2100025	15.6	13
104	A high-performing single-stage invert-structured solar water purifier through enhanced absorption and condensation. <i>Joule</i> , 2021 , 5, 1602-1612	27.8	20
103	Electrochemically driven dynamic plasmonics. <i>Advanced Photonics</i> , 2021 , 3,	8.1	4
102	Simultaneously enhanced moisture tolerance and defect passivation of perovskite solar cells with cross-linked grain encapsulation. <i>Journal of Energy Chemistry</i> , 2021 , 56, 455-462	12	18
101	Scalable and hierarchically designed polymer film as a selective thermal emitter for high-performance all-day radiative cooling. <i>Nature Nanotechnology</i> , 2021 , 16, 153-158	28.7	132
100	Persistent Radical Tetrathiafulvalene-Based 2D Metal-Organic Frameworks and Their Application in Efficient Photothermal Conversion. <i>Angewandte Chemie</i> , 2021 , 133, 4839-4845	3.6	4
99	Persistent Radical Tetrathiafulvalene-Based 2D Metal-Organic Frameworks and Their Application in Efficient Photothermal Conversion. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 4789-4795	16.4	25
98	Transition metal-based layered double hydroxides for photo(electro)chemical water splitting: a mini review. <i>Nanoscale</i> , 2021 , 13, 13593-13603	7.7	26
97	Vapor condensation with daytime radiative cooling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	19

96	Biases Characteristics Assessment of the Advanced Geosynchronous Radiation Imager (AGRI) Measurement on Board Fengyun-3A Geostationary Satellite. <i>Remote Sensing</i> , 2020 , 12, 2871	5	7
95	"Lewis Base-Hungry" Amorphous-Crystalline Nickel Borate-Nickel Sulfide Heterostructures by In Situ Structural Engineering as Effective Bifunctional Electrocatalysts toward Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 23896-23903	9.5	23
94	Stable, high-performance sodium-based plasmonic devices in the near-Infrared. <i>Nature</i> , 2020 , 581, 401-405	49.4	53
93	Rational Design of a NiN Electrocatalyst to Accelerate Polysulfide Conversion in Lithium-Sulfur Batteries. <i>ACS Nano</i> , 2020 , 14, 6673-6682	16.7	103
92	A Polymerization-Assisted Grain Growth Strategy for Efficient and Stable Perovskite Solar Cells. <i>Advanced Materials</i> , 2020 , 32, e1907769	24	87
91	Targeted tumour theranostics in mice via carbon quantum dots structurally mimicking large amino acids. <i>Nature Biomedical Engineering</i> , 2020 , 4, 704-716	19	111
90	Combining Efficiency and Stability in Mixed Tin-Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. <i>Advanced Materials</i> , 2020 , 32, e1907058	24	92
89	A Nano-shield Design for Separators to Resist Dendrite Formation in Lithium-Metal Batteries. <i>Angewandte Chemie</i> , 2020 , 132, 6623-6628	3.6	6
88	Fundamentals, Materials, and Applications for Daytime Radiative Cooling. <i>Advanced Materials Technologies</i> , 2020 , 5, 1901007	6.8	38
87	Tin and Mixed Lead-Tin Halide Perovskite Solar Cells: Progress and their Application in Tandem Solar Cells. <i>Advanced Materials</i> , 2020 , 32, e1907392	24	97
86	A Nano-shield Design for Separators to Resist Dendrite Formation in Lithium-Metal Batteries. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 6561-6566	16.4	63
85	Low-dimensional metal halide perovskites and related optoelectronic applications. <i>Information Materials</i> , 2020 , 2, 341-378	23.1	36
84	Over 10 kg m ⁻² h ⁻¹ Evaporation Rate Enabled by a 3D Interconnected Porous Carbon Foam. <i>Joule</i> , 2020 , 4, 928-937	27.8	131
83	Tuning the Ambipolar Character of Copolymers with Substituents: A Density Functional Theory Study. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 3928-3933	6.4	4
82	Electrodeposition Technologies for Li-Based Batteries: New Frontiers of Energy Storage. <i>Advanced Materials</i> , 2020 , 32, e1903808	24	28
81	Strong dependence of the vertical charge carrier mobility on the π -stacking distance in molecule/graphene heterojunctions. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 13802-13807	3.6	3
80	Tailoring Aerogels and Related 3D Macroporous Monoliths for Interfacial Solar Vapor Generation. <i>Advanced Functional Materials</i> , 2020 , 30, 1907234	15.6	58
79	Efficient Ni ₂ Co ₄ P ₃ Nanowires Catalysts Enhance Ultrahigh-Loading Lithium-Sulfur Conversion in a Microreactor-Like Battery. <i>Advanced Functional Materials</i> , 2020 , 30, 1906661	15.6	77

78	Synergistic Tandem Solar Electricity-Water Generators. <i>Joule</i> , 2020 , 4, 347-358	27.8	40
77	The Antioxidant Activity and Catalytic Mechanism of Schiff Base Diphenylamines at Elevated Temperatures. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 1031-1037	3.9	1
76	Simultaneous Contact and Grain-Boundary Passivation in Planar Perovskite Solar Cells Using SnO ₂ -KCl Composite Electron Transport Layer. <i>Advanced Energy Materials</i> , 2020 , 10, 1903083	21.8	178
75	Highly Conducting Organic-Inorganic Hybrid Copper Sulfides Cu _x C ₆ S ₆ (x=4 or 5.5): Ligand-Based Oxidation-Induced Chemical and Electronic Structure Modulation. <i>Angewandte Chemie</i> , 2020 , 132, 22791-22798	22.6	22798
74	All-perovskite tandem solar cells with 24.2% certified efficiency and area over 1 cm ² using surface-anchoring zwitterionic antioxidant. <i>Nature Energy</i> , 2020 , 5, 870-880	62.3	233
73	Molecular Interaction Regulates the Performance and Longevity of Defect Passivation for Metal Halide Perovskite Solar Cells. <i>Journal of the American Chemical Society</i> , 2020 , 142, 20071-20079	16.4	72
72	Solution-Processed Monolithic All-Perovskite Triple-Junction Solar Cells with Efficiency Exceeding 20%. <i>ACS Energy Letters</i> , 2020 , 5, 2819-2826	20.1	30
71	Electrical Dynamic Switching of Magnetic Plasmon Resonance Based on Selective Lithium Deposition. <i>Advanced Materials</i> , 2020 , 32, e2000058	24	7
70	Highly Conducting Organic-Inorganic Hybrid Copper Sulfides Cu _x C ₆ S ₆ (x=4 or 5.5): Ligand-Based Oxidation-Induced Chemical and Electronic Structure Modulation. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 22602-22609	16.4	9
69	Record Photocurrent Density over 26 mA cm ⁻² in Planar Perovskite Solar Cells Enabled by Antireflective Cascaded Electron Transport Layer. <i>Solar Rrl</i> , 2020 , 4, 2000169	7.1	11
68	Seed-Induced Vertical Growth of 2D Bi ₂ O ₂ Se Nanoplates by Chemical Vapor Transport. <i>Advanced Functional Materials</i> , 2019 , 29, 1906639	15.6	20
67	3D hollow reduced graphene oxide foam as a stable host for high-capacity lithium metal anodes. <i>Materials Chemistry Frontiers</i> , 2019 , 3, 339-343	7.8	18
66	An Interfacial Solar Heating Assisted Liquid Sorbent Atmospheric Water Generator. <i>Angewandte Chemie</i> , 2019 , 131, 12182-12186	3.6	14
65	Towards high energy density lithium battery anodes: silicon and lithium. <i>Chemical Science</i> , 2019 , 10, 7132-7148	7.6	76
64	Impact of Stoichiometry and Fluorine Atoms on the Charge Transport of Perylene-FTCNQ. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 3376-3380	6.4	8
63	N,P-coordinated fullerene-like carbon nanostructures with dual active centers toward highly-efficient multi-functional electrocatalysis for CO ₂ RR, ORR and Zn-air battery. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 15271-15277	13	60
62	Joint Charge Storage for High-Rate Aqueous Zinc-Manganese Dioxide Batteries. <i>Advanced Materials</i> , 2019 , 31, e1900567	24	163
61	An Interfacial Solar Heating Assisted Liquid Sorbent Atmospheric Water Generator. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 12054-12058	16.4	77

60	Plasmon-enhanced solar vapor generation. <i>Nanophotonics</i> , 2019 , 8, 771-786	6.3	42
59	Conductivity and lithiophilicity gradients guide lithium deposition to mitigate short circuits. <i>Nature Communications</i> , 2019 , 10, 1896	17.4	150
58	Ethanol Assisted Transfer for Clean Assembly of 2D Building Blocks and Suspended Structures. <i>Advanced Functional Materials</i> , 2019 , 29, 1902427	15.6	8
57	The revival of thermal utilization from the Sun: interfacial solar vapor generation. <i>National Science Review</i> , 2019 , 6, 562-578	10.8	134
56	Graphene oxide based materials for desalination. <i>Carbon</i> , 2019 , 146, 320-328	10.4	68
55	Low-temperature processed inorganic hole transport layer for efficient and stable mixed Pb-Sn low-bandgap perovskite solar cells. <i>Science Bulletin</i> , 2019 , 64, 1399-1401	10.6	42
54	Measuring Conversion Efficiency of Solar Vapor Generation. <i>Joule</i> , 2019 , 3, 1798-1803	27.8	130
53	A water lily-inspired hierarchical design for stable and efficient solar evaporation of high-salinity brine. <i>Science Advances</i> , 2019 , 5, eaaw7013	14.3	182
52	Development and Evolution of the System Structure for Highly Efficient Solar Steam Generation from Zero to Three Dimensions. <i>Advanced Functional Materials</i> , 2019 , 29, 1903255	15.6	137
51	Li -Containing, Continuous Silica Nanofibers for High Li Conductivity in Composite Polymer Electrolyte. <i>Small</i> , 2019 , 15, e1902729	11	29
50	An Interfacial Solar-Driven Atmospheric Water Generator Based on a Liquid Sorbent with Simultaneous Adsorption-Desorption. <i>Advanced Materials</i> , 2019 , 31, e1903378	24	80
49	Minimized lithium trapping by isovalent isomorphism for high initial Coulombic efficiency of silicon anodes. <i>Science Advances</i> , 2019 , 5, eaax0651	14.3	64
48	Monolithic all-perovskite tandem solar cells with 24.8% efficiency exploiting comproportionation to suppress Sn(ii) oxidation in precursor ink. <i>Nature Energy</i> , 2019 , 4, 864-873	62.3	463
47	Nanomaterials for the water-energy nexus. <i>MRS Bulletin</i> , 2019 , 44, 59-66	3.2	22
46	Cation Dynamics Governed Thermal Properties of Lead Halide Perovskite Nanowires. <i>Nano Letters</i> , 2018 , 18, 2772-2779	11.5	33
45	CsSnI ₃ Solar Cells via an Evaporation-Assisted Solution Method. <i>Solar Rrl</i> , 2018 , 2, 1700224	7.1	50
44	Bioinspired, Spine-Like, Flexible, Rechargeable Lithium-Ion Batteries with High Energy Density. <i>Advanced Materials</i> , 2018 , 30, e1704947	24	71
43	Flexible and Salt Resistant Janus Absorbers by Electrospinning for Stable and Efficient Solar Desalination. <i>Advanced Energy Materials</i> , 2018 , 8, 1702884	21.8	423

42	Enhancement of Interfacial Solar Vapor Generation by Environmental Energy. <i>Joule</i> , 2018 , 2, 1331-1338	27.8	301
41	Three-dimensional artificial transpiration for efficient solar waste-water treatment. <i>National Science Review</i> , 2018 , 5, 70-77	10.8	275
40	Few-layer graphdiyne doped with sp-hybridized nitrogen atoms at acetylenic sites for oxygen reduction electrocatalysis. <i>Nature Chemistry</i> , 2018 , 10, 924-931	17.6	379
39	Interlayer Lithium Plating in Au Nanoparticles Pillared Reduced Graphene Oxide for Lithium Metal Anodes. <i>Advanced Functional Materials</i> , 2018 , 28, 1804133	15.6	105
38	Tin-Based Perovskite with Improved Coverage and Crystallinity through Tin-Fluoride-Assisted Heterogeneous Nucleation. <i>Advanced Optical Materials</i> , 2018 , 6, 1700615	8.1	44
37	Omnidirectional and effective salt-rejecting absorber with rationally designed nanoarchitecture for efficient and durable solar vapour generation. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 22976-22986	13	35
36	Storage and Recycling of Interfacial Solar Steam Enthalpy. <i>Joule</i> , 2018 , 2, 2477-2484	27.8	129
35	Interfacial Solar Steam Generation Enables Fast-Responsive, Energy-Efficient, and Low-Cost Off-Grid Sterilization. <i>Advanced Materials</i> , 2018 , 30, e1805159	24	146
34	Solar-driven interfacial evaporation. <i>Nature Energy</i> , 2018 , 3, 1031-1041	62.3	715
33	Hybrid Solar Absorber/Emitter by Coherence-Enhanced Absorption for Improved Solar Thermophotovoltaic Conversion. <i>Advanced Optical Materials</i> , 2018 , 6, 1800813	8.1	22
32	In operando plasmonic monitoring of electrochemical evolution of lithium metal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 11168-11173	11.5	16
31	Highly-sensitive optical organic vapor sensor through polymeric swelling induced variation of fluorescent intensity. <i>Nature Communications</i> , 2018 , 9, 3799	17.4	58
30	Exploring Peltier effect in organic thermoelectric films. <i>Nature Communications</i> , 2018 , 9, 3586	17.4	42
29	PVDF/Palygorskite Nanowire Composite Electrolyte for 4 V Rechargeable Lithium Batteries with High Energy Density. <i>Nano Letters</i> , 2018 , 18, 6113-6120	11.5	138
28	Dual functional asymmetric plasmonic structures for solar water purification and pollution detection. <i>Nano Energy</i> , 2018 , 51, 451-456	17.1	108
27	Thermal Properties of Two Dimensional Layered Materials. <i>Advanced Functional Materials</i> , 2017 , 27, 1604134	13.6	96
26	Reply to QThe merits of plasmonic desalinationQ. <i>Nature Photonics</i> , 2017 , 11, 70-71	33.9	4
25	Scalable Production of the Silicon-Tin Yin-Yang Hybrid Structure with Graphene Coating for High Performance Lithium-Ion Battery Anodes. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 15388-15393	9.5	33

24	Mushrooms as Efficient Solar Steam-Generation Devices. <i>Advanced Materials</i> , 2017 , 29, 1606762	24	654
23	Spectrally selective solar absorber with sharp and temperature dependent cut-off based on semiconductor nanowire arrays. <i>Applied Physics Letters</i> , 2017 , 110, 201108	3-4	16
22	Anomalous thermal anisotropy of two-dimensional nanoplates of vertically grown MoS ₂ . <i>Applied Physics Letters</i> , 2017 , 111, 163102	3-4	7
21	Topological insulators for thermoelectrics. <i>Npj Quantum Materials</i> , 2017 , 2,	5	90
20	Challenges and Recent Progress in the Development of Si Anodes for Lithium-Ion Battery. <i>Advanced Energy Materials</i> , 2017 , 7, 1700715	21.8	459
19	Tunable thermal conductivity in mesoporous silicon by slight porosity change. <i>Applied Physics Letters</i> , 2017 , 111, 063104	3-4	5
18	Simultaneous Perforation and Doping of Si Nanoparticles for Lithium-Ion Battery Anode. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 44452-44457	9-5	25
17	Poly(dimethylsiloxane) Thin Film as a Stable Interfacial Layer for High-Performance Lithium-Metal Battery Anodes. <i>Advanced Materials</i> , 2017 , 29, 1603755	24	354
16	Tailoring Graphene Oxide-Based Aerogels for Efficient Solar Steam Generation under One Sun. <i>Advanced Materials</i> , 2017 , 29, 1604031	24	537
15	Highly Flexible Self-Powered Organolead Trihalide Perovskite Photodetectors with Gold Nanowire Networks as Transparent Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 23868-75	9-5	77
14	Graphene oxide-based efficient and scalable solar desalination under one sun with a confined 2D water path. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 13953-13958	11.5	724
13	Self-assembly of highly efficient, broadband plasmonic absorbers for solar steam generation. <i>Science Advances</i> , 2016 , 2, e1501227	14-3	742
12	Direct Conversion of Perovskite Thin Films into Nanowires with Kinetic Control for Flexible Optoelectronic Devices. <i>Nano Letters</i> , 2016 , 16, 871-6	11.5	147
11	Free-Standing Graphene-Encapsulated Silicon Nanoparticle Aerogel as an Anode for Lithium Ion Batteries. <i>ChemNanoMat</i> , 2016 , 2, 671-674	3-5	22
10	Efficient thermal conductance in organometallic perovskite CH ₃ NH ₃ PbI ₃ films. <i>Applied Physics Letters</i> , 2016 , 108, 081902	3-4	21
9	3D self-assembly of aluminium nanoparticles for plasmon-enhanced solar desalination. <i>Nature Photonics</i> , 2016 , 10, 393-398	33-9	1238
8	Precise Perforation and Scalable Production of Si Particles from Low-Grade Sources for High-Performance Lithium Ion Battery Anodes. <i>Nano Letters</i> , 2016 , 16, 7210-7215	11.5	89
7	Simultaneous Purification and Perforation of Low-Grade Si Sources for Lithium-Ion Battery Anode. <i>Nano Letters</i> , 2015 , 15, 7742-7	11.5	55

6	Nanopurification of silicon from 84% to 99.999% purity with a simple and scalable process. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 13473-7	11.5	46
5	Scalable Production of Si Nanoparticles Directly from Low Grade Sources for Lithium-Ion Battery Anode. <i>Nano Letters</i> , 2015 , 15, 5750-4	11.5	98
4	Synthesis, Characterization, Physical Properties, and OLED Application of Single BN-Fused Perylene Diimide. <i>Journal of Organic Chemistry</i> , 2015 , 80, 196-203	4.2	193
3	Temperature-gated thermal rectifier for active heat flow control. <i>Nano Letters</i> , 2014 , 14, 4867-72	11.5	104
2	Greener and higher conversion of esterification via interfacial photothermal catalysis. <i>Nature Sustainability</i> ,	22.1	3
1	Steering on Degrees of Freedom of 2D Van der Waals Heterostructures. <i>Small Science</i> , 2100033		4