

# Jia Zhu

## List of Publications by Year in descending order

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Version: 2024-02-01

122  
papers

21,704  
citations

14644

66  
h-index

15716

125  
g-index

127  
all docs

127  
docs citations

127  
times ranked

16322  
citing authors

#	ARTICLE	IF	CITATIONS
1	3D self-assembly of aluminium nanoparticles for plasmon-enhanced solar desalination. <i>Nature Photonics</i> , 2016, 10, 393-398.	15.6	1,669
2	Solar-driven interfacial evaporation. <i>Nature Energy</i> , 2018, 3, 1031-1041.	19.8	1,347
3	Self-assembly of highly efficient, broadband plasmonic absorbers for solar steam generation. <i>Science Advances</i> , 2016, 2, e1501227.	4.7	1,025
4	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.	3.3	971
5	Mushrooms as Efficient Solar Steam Generation Devices. <i>Advanced Materials</i> , 2017, 29, 1606762.	11.1	922
6	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.	19.8	736
7	Tailoring Graphene Oxide-Based Aerogels for Efficient Solar Steam Generation under One Sun. <i>Advanced Materials</i> , 2017, 29, 1604031.	11.1	711
8	Challenges and Recent Progress in the Development of Si Anodes for Lithium-Ion Battery. <i>Advanced Energy Materials</i> , 2017, 7, 1700715.	10.2	709
9	Flexible and Salt Resistant Janus Absorbers by Electrospinning for Stable and Efficient Solar Desalination. <i>Advanced Energy Materials</i> , 2018, 8, 1702884.	10.2	635
10	Few-layer graphdiyne doped with sp-hybridized nitrogen atoms at acetylenic sites for oxygen reduction electrocatalysis. <i>Nature Chemistry</i> , 2018, 10, 924-931.	6.6	558
11	All-perovskite tandem solar cells with improved grain surface passivation. <i>Nature</i> , 2022, 603, 73-78.	13.7	544
12	Enhancement of Interfacial Solar Vapor Generation by Environmental Energy. <i>Joule</i> , 2018, 2, 1331-1338.	11.7	507
13	All-perovskite tandem solar cells with 24.2% certified efficiency and area over 1%cm <sup>2</sup> using surface-anchoring zwitterionic antioxidant. <i>Nature Energy</i> , 2020, 5, 870-880.	19.8	497
14	Poly(dimethylsiloxane) Thin Film as a Stable Interfacial Layer for High-Performance Lithium-Metal Battery Anodes. <i>Advanced Materials</i> , 2017, 29, 1603755.	11.1	454
15	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.	15.6	405
16	Three-dimensional artificial transpiration for efficient solar waste-water treatment. <i>National Science Review</i> , 2018, 5, 70-77.	4.6	363
17	A water lily-inspired hierarchical design for stable and efficient solar evaporation of high-salinity brine. <i>Science Advances</i> , 2019, 5, eaaw7013.	4.7	335
18	Simultaneous Contact and Grain-Boundary Passivation in Planar Perovskite Solar Cells Using SnO <sub>2</sub> /KCl Composite Electron Transport Layer. <i>Advanced Energy Materials</i> , 2020, 10, 1903083.	10.2	323

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19	Joint Charge Storage for High-Rate Aqueous Zinc-Manganese Dioxide Batteries. <i>Advanced Materials</i> , 2019, 31, e1900567.	11.1	299
20	Over 10 kg m <sup>-2</sup> h <sup>-1</sup> Evaporation Rate Enabled by a 3D Interconnected Porous Carbon Foam. <i>Joule</i> , 2020, 4, 928-937.	11.7	263
21	The revival of thermal utilization from the Sun: interfacial solar vapor generation. <i>National Science Review</i> , 2019, 6, 562-578.	4.6	260
22	Conductivity and lithiophilicity gradients guide lithium deposition to mitigate short circuits. <i>Nature Communications</i> , 2019, 10, 1896.	5.8	256
23	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.	7.8	249
24	Measuring Conversion Efficiency of Solar Vapor Generation. <i>Joule</i> , 2019, 3, 1798-1803.	11.7	246
25	Targeted tumour theranostics in mice via carbon quantum dots structurally mimicking large amino acids. <i>Nature Biomedical Engineering</i> , 2020, 4, 704-716.	11.6	243
26	Synthesis, Characterization, Physical Properties, and OLED Application of Single BN-Fused Perylene Diimide. <i>Journal of Organic Chemistry</i> , 2015, 80, 196-203.	1.7	227
27	PVDF/Palygorskite Nanowire Composite Electrolyte for 4 V Rechargeable Lithium Batteries with High Energy Density. <i>Nano Letters</i> , 2018, 18, 6113-6120.	4.5	227
28	Rational Design of a Ni <sub>3</sub> N <sub>0.85</sub> Electrocatalyst to Accelerate Polysulfide Conversion in Lithium-Sulfur Batteries. <i>ACS Nano</i> , 2020, 14, 6673-6682.	7.3	212
29	Interfacial Solar Steam Generation Enables Fast-Responsive, Energy-Efficient, and Low-Cost Off-Grid Sterilization. <i>Advanced Materials</i> , 2018, 30, e1805159.	11.1	208
30	Storage and Recycling of Interfacial Solar Steam Enthalpy. <i>Joule</i> , 2018, 2, 2477-2484.	11.7	205
31	Tin and Mixed Lead-Tin Halide Perovskite Solar Cells: Progress and their Application in Tandem Solar Cells. <i>Advanced Materials</i> , 2020, 32, e1907392.	11.1	203
32	Subambient daytime radiative cooling textile based on nanoprocessed silk. <i>Nature Nanotechnology</i> , 2021, 16, 1342-1348.	15.6	178
33	Dual functional asymmetric plasmonic structures for solar water purification and pollution detection. <i>Nano Energy</i> , 2018, 51, 451-456.	8.2	165
34	Direct Conversion of Perovskite Thin Films into Nanowires with Kinetic Control for Flexible Optoelectronic Devices. <i>Nano Letters</i> , 2016, 16, 871-876.	4.5	164
35	A Polymerization-Assisted Grain Growth Strategy for Efficient and Stable Perovskite Solar Cells. <i>Advanced Materials</i> , 2020, 32, e1907769.	11.1	161
36	An Interfacial Solar Heating Assisted Liquid Sorbent Atmospheric Water Generator. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 12054-12058.	7.2	152

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37	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.	11.1	148
38	An Interfacial Solar-Driven Atmospheric Water Generator Based on a Liquid Sorbent with Simultaneous Adsorption-Desorption. <i>Advanced Materials</i> , 2019, 31, e1903378.	11.1	147
39	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.	6.6	145
40	Topological insulators for thermoelectrics. <i>Npj Quantum Materials</i> , 2017, 2, .	1.8	143
41	Interlayer Lithium Plating in Au Nanoparticles Pillared Reduced Graphene Oxide for Lithium Metal Anodes. <i>Advanced Functional Materials</i> , 2018, 28, 1804133.	7.8	142
42	Towards high energy density lithium battery anodes: silicon and lithium. <i>Chemical Science</i> , 2019, 10, 7132-7148.	3.7	134
43	Efficient Ni <sub>2</sub> Co <sub>4</sub> P <sub>3</sub> Nanowires Catalysts Enhance Ultrahigh-Loading Lithium-Sulfur Conversion in a Microreactor-Like Battery. <i>Advanced Functional Materials</i> , 2020, 30, 1906661.	7.8	134
44	Transition metal-based layered double hydroxides for photo(electro)chemical water splitting: a mini review. <i>Nanoscale</i> , 2021, 13, 13593-13603.	2.8	133
45	Thermal Properties of Two Dimensional Layered Materials. <i>Advanced Functional Materials</i> , 2017, 27, 1604134.	7.8	130
46	A Nano-shield Design for Separators to Resist Dendrite Formation in Lithium-Metal Batteries. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 6561-6566.	7.2	128
47	Temperature-Gated Thermal Rectifier for Active Heat Flow Control. <i>Nano Letters</i> , 2014, 14, 4867-4872.	4.5	126
48	Stable, high-performance sodium-based plasmonic devices in the near-infrared. <i>Nature</i> , 2020, 581, 401-405.	13.7	125
49	Minimized lithium trapping by isovalent isomorphism for high initial Coulombic efficiency of silicon anodes. <i>Science Advances</i> , 2019, 5, eaax0651.	4.7	122
50	Scalable Production of Si Nanoparticles Directly from Low Grade Sources for Lithium-Ion Battery Anode. <i>Nano Letters</i> , 2015, 15, 5750-5754.	4.5	119
51	Bioinspired, Spine-Like, Flexible, Rechargeable Lithium-Ion Batteries with High Energy Density. <i>Advanced Materials</i> , 2018, 30, e1704947.	11.1	109
52	Tailoring Aerogels and Related 3D Macroporous Monoliths for Interfacial Solar Vapor Generation. <i>Advanced Functional Materials</i> , 2020, 30, 1907234.	7.8	109
53	A high-performing single-stage invert-structured solar water purifier through enhanced absorption and condensation. <i>Joule</i> , 2021, 5, 1602-1612.	11.7	107
54	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.	4.5	105

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55	Fundamentals, Materials, and Applications for Daytime Radiative Cooling. <i>Advanced Materials Technologies</i> , 2020, 5, .	3.0	103
56	N,P-coordinated fullerene-like carbon nanostructures with dual active centers toward highly-efficient multi-functional electrocatalysis for CO <sub>2</sub> RR, ORR and Zn-air battery. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15271-15277.	5.2	99
57	Graphene oxide based materials for desalination. <i>Carbon</i> , 2019, 146, 320-328.	5.4	98
58	Highly Flexible Self-Powered Organolead Trihalide Perovskite Photodetectors with Gold Nanowire Networks as Transparent Electrodes. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 23868-23875.	4.0	95
59	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.	7.8	94
60	Plasmon-enhanced solar vapor generation. <i>Nanophotonics</i> , 2019, 8, 771-786.	2.9	91
61	Synergistic Tandem Solar Electricity-Water Generators. <i>Joule</i> , 2020, 4, 347-358.	11.7	91
62	Highly-sensitive optical organic vapor sensor through polymeric swelling induced variation of fluorescent intensity. <i>Nature Communications</i> , 2018, 9, 3799.	5.8	86
63	Vapor condensation with daytime radiative cooling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	86
64	High-yield solar-driven atmospheric water harvesting of metal-organic-framework-derived nanoporous carbon with fast-diffusion water channels. <i>Nature Nanotechnology</i> , 2022, 17, 857-863.	15.6	85
65	Protecting ice from melting under sunlight via radiative cooling. <i>Science Advances</i> , 2022, 8, eabj9756.	4.7	80
66	Interfacial Solar Vapor Generation: Materials and Structural Design. <i>Accounts of Materials Research</i> , 2021, 2, 198-209.	5.9	75
67	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.	7.2	74
68	Low-dimensional metal halide perovskites and related optoelectronic applications. <i>Informa Materials</i> , 2020, 2, 341-378.	8.5	72
69	Electrodeposition Technologies for Li-Based Batteries: New Frontiers of Energy Storage. <i>Advanced Materials</i> , 2020, 32, e1903808.	11.1	70
70	Solution-Processed Monolithic All-Perovskite Triple-Junction Solar Cells with Efficiency Exceeding 20%. <i>ACS Energy Letters</i> , 2020, 5, 2819-2826.	8.8	69
71	CsSn <sub>3</sub> Solar Cells via an Evaporation-Assisted Solution Method. <i>Solar Rrl</i> , 2018, 2, 1700224.	3.1	68
72	Tin-Based Perovskite with Improved Coverage and Crystallinity through Tin-Fluoride-Assisted Heterogeneous Nucleation. <i>Advanced Optical Materials</i> , 2018, 6, 1700615.	3.6	67

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73	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.	4.3	66
74	Exploring Peltier effect in organic thermoelectric films. <i>Nature Communications</i> , 2018, 9, 3586.	5.8	65
75	Simultaneous Purification and Perforation of Low-Grade Si Sources for Lithium-Ion Battery Anode. <i>Nano Letters</i> , 2015, 15, 7742-7747.	4.5	62
76	Li <sup>+</sup> -Containing, Continuous Silica Nanofibers for High Li <sup>+</sup> Conductivity in Composite Polymer Electrolyte. <i>Small</i> , 2019, 15, e1902729.	5.2	58
77	A scalable fish-school inspired self-assembled particle system for solar-powered water-solute separation. <i>National Science Review</i> , 2021, 8, nwab065.	4.6	58
78	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, 13473-13477.	3.3	56
79	Cation Dynamics Governed Thermal Properties of Lead Halide Perovskite Nanowires. <i>Nano Letters</i> , 2018, 18, 2772-2779.	4.5	55
80	“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 &amp; Interfaces</i> , 2020, 12, 23896-23903.	4.0	53
81	Recent Progress in Daytime Radiative Cooling: Advanced Material Designs and Applications. <i>Small Methods</i> , 2022, 6, e2101379.	4.6	53
82	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.	5.2	48
83	Interfacial Solar Steam/Vapor Generation for Heating and Cooling. <i>Advanced Science</i> , 2022, 9, e2104181.	5.6	42
84	Seed-Induced Vertical Growth of 2D Bi <sub>2</sub> O <sub>2</sub> Se Nanoplates by Chemical Vapor Transport. <i>Advanced Functional Materials</i> , 2019, 29, 1906639.	7.8	39
85	Nanomaterials for the water-energy nexus. <i>MRS Bulletin</i> , 2019, 44, 59-66.	1.7	39
86	Scalable Production of the Silicon “Tin Yin-Yang Hybrid Structure with Graphene Coating for High Performance Lithium-Ion Battery Anodes. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 15388-15393.	4.0	36
87	An Interfacial Solar Heating Assisted Liquid Sorbent Atmospheric Water Generator. <i>Angewandte Chemie</i> , 2019, 131, 12182-12186.	1.6	34
88	Hybrid Solar Absorber “Emitter by Coherence-Enhanced Absorption for Improved Solar Thermophotovoltaic Conversion. <i>Advanced Optical Materials</i> , 2018, 6, 1800813.	3.6	33
89	Simultaneous Perforation and Doping of Si Nanoparticles for Lithium-Ion Battery Anode. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 44452-44457.	4.0	31
90	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.	7.1	31

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91	Free-Standing Graphene-Encapsulated Silicon Nanoparticle Aerogel as an Anode for Lithium Ion Batteries. <i>ChemNanoMat</i> , 2016, 2, 671-674.	1.5	29
92	Greener and higher conversion of esterification via interfacial photothermal catalysis. <i>Nature Sustainability</i> , 2022, 5, 348-356.	11.5	29
93	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.	3.3	28
94	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.	3.2	26
95	Highly Conducting Organic-Inorganic Hybrid Copper Sulfides $Cu_xC_6S_6$ ( $x=4$ or $5.5$ ): Ligand-Based Oxidation-Induced Chemical and Electronic Structure Modulation. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 22602-22609.	7.2	26
96	Efficient thermal conductance in organometallic perovskite $CH_3NH_3PbI_3$ films. <i>Applied Physics Letters</i> , 2016, 108, 081902.	1.5	22
97	Spectrally selective solar absorber with sharp and temperature dependent cut-off based on semiconductor nanowire arrays. <i>Applied Physics Letters</i> , 2017, 110, 201108.	1.5	20
98	Record Photocurrent Density over $26\% \text{ mA cm}^{-2}$ in Planar Perovskite Solar Cells Enabled by Antireflective Cascaded Electron Transport Layer. <i>Solar Rrl</i> , 2020, 4, 2000169.	3.1	17
99	Persistent Radical Tetrathiafulvalene-Based 2D Metal-Organic Frameworks and Their Application in Efficient Photothermal Conversion. <i>Angewandte Chemie</i> , 2021, 133, 4839-4845.	1.6	17
100	Electrical Dynamic Switching of Magnetic Plasmon Resonance Based on Selective Lithium Deposition. <i>Advanced Materials</i> , 2020, 32, e2000058.	11.1	16
101	Impact of Stoichiometry and Fluorine Atoms on the Charge Transport of Perylene- $F_4$ -TCNQ. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 3376-3380.	2.1	15
102	Ethanol Assisted Transfer for Clean Assembly of 2D Building Blocks and Suspended Structures. <i>Advanced Functional Materials</i> , 2019, 29, 1902427.	7.8	14
103	A Nano-Shield Design for Separators to Resist Dendrite Formation in Lithium-Metal Batteries. <i>Angewandte Chemie</i> , 2020, 132, 6623-6628.	1.6	14
104	Steering on Degrees of Freedom of 2D Van der Waals Heterostructures. <i>Small Science</i> , 2022, 2, 2100033.	5.8	13
105	Biases Characteristics Assessment of the Advanced Geosynchronous Radiation Imager (AGRI) Measurement on Board Fengyun-4A Geostationary Satellite. <i>Remote Sensing</i> , 2020, 12, 2871.	1.8	12
106	Molecule functionalization to facilitate electrocatalytic oxygen reduction on graphdiyne. <i>Journal of Energy Chemistry</i> , 2022, 65, 141-148.	7.1	11
107	Electrochemically driven dynamic plasmonics. <i>Advanced Photonics</i> , 2021, 3, .	6.2	10
108	Strong dependence of the vertical charge carrier mobility on the $\pi$ - $\pi$ stacking distance in molecule/graphene heterojunctions. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 13802-13807.	1.3	10

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109	Anomalous thermal anisotropy of two-dimensional nanoplates of vertically grown MoS <sub>2</sub> . Applied Physics Letters, 2017, 111, .	1.5	8
110	Tunable thermal conductivity in mesoporous silicon by slight porosity change. Applied Physics Letters, 2017, 111, .	1.5	8
111	Lithium-plasmon-based low-powered dynamic color display. National Science Review, 2023, 10, .	4.6	8
112	Reply to 'The merits of plasmonic desalination'. Nature Photonics, 2017, 11, 70-71.	15.6	7
113	The Antioxidant Activity and Catalytic Mechanism of Schiff Base Diphenylamines at Elevated Temperatures. Industrial & Engineering Chemistry Research, 2020, 59, 1031-1037.	1.8	7
114	Tuning the Ambipolar Character of Copolymers with Substituents: A Density Functional Theory Study. Journal of Physical Chemistry Letters, 2020, 11, 3928-3933.	2.1	6
115	Chemical structure modulation in conductive MOFs by adjusting the oxidation state of the ligand and introducing alkali metal ions. Chemical Communications, 2022, 58, 2702-2705.	2.2	6
116	Solar thermal energy conversion and utilization—New research horizon. EcoMat, 2022, 4, .	6.8	5
117	Sorption Energy Harvesting from Air for Smart Battery Thermal Management. ACS Central Science, 2020, 6, 1479-1481.	5.3	4
118	Highly Conducting Organic-Inorganic Hybrid Copper Sulfides Cu <sub>x</sub> C <sub>6</sub> S <sub>6</sub> (x=4 or 5.5): Ligand-Based Oxidation-Induced Chemical and Electronic Structure Modulation. Angewandte Chemie, 2020, 132, 22791-22798.	1.6	2
119	Materials Research at Nanjing University. Advanced Materials, 2020, 32, 1907498.	11.1	2
120	Thermoelectric properties of organic charge transfer salts from first-principles investigations: role of molecular packing and triiodide anions. Journal of Materials Chemistry A, 2022, 10, 4288-4299.	5.2	1
121	Two cations make the right layer. Nature Energy, 2022, 7, 570-571.	19.8	1
122	Self-inhibition effect of metal incorporation in nanoscaled semiconductors. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	0