

# Zhen Zhang

## List of Publications by Year in descending order

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75  
papers

5,381  
citations

76326

40  
h-index

85541

71  
g-index

76  
all docs

76  
docs citations

76  
times ranked

5099  
citing authors

#	ARTICLE	IF	CITATIONS
1	An Easily Accessible Isoindigo-Based Polymer for High-Performance Polymer Solar Cells. <i>Journal of the American Chemical Society</i> , 2011, 133, 14244-14247.	13.7	363
2	Bridging the gap between highly active oxygen reduction reaction catalysts and effective catalyst layers for proton exchange membrane fuel cells. <i>Nature Energy</i> , 2021, 6, 475-486.	39.5	252
3	Revealing the Rapid Electrocatalytic Behavior of Ultrafine Amorphous Defective Nb <sub>2</sub> O <sub>5</sub> Nanocluster toward Superior Li-S Performance. <i>ACS Nano</i> , 2020, 14, 4849-4860.	14.6	201
4	Microporous framework membranes for precise molecule/ion separations. <i>Chemical Society Reviews</i> , 2021, 50, 986-1029.	38.1	191
5	Synergistic Engineering of Defects and Architecture in Binary Metal Chalcogenide toward Fast and Reliable Lithium-Sulfur Batteries. <i>Advanced Energy Materials</i> , 2019, 9, 1900228.	19.5	177
6	Constructing multifunctional solid electrolyte interface via in-situ polymerization for dendrite-free and low N/P ratio lithium metal batteries. <i>Nature Communications</i> , 2021, 12, 186.	12.8	163
7	Three-dimensionally ordered macro-microporous metal organic frameworks with strong sulfur immobilization and catalyzation for high-performance lithium-sulfur batteries. <i>Nano Energy</i> , 2020, 72, 104685.	16.0	160
8	Boosting the oxygen evolution reaction using defect-rich ultra-thin ruthenium oxide nanosheets in acidic media. <i>Energy and Environmental Science</i> , 2020, 13, 5143-5151.	30.8	159
9	Template-guided synthesis of Co nanoparticles embedded in hollow nitrogen doped carbon tubes as a highly efficient catalyst for rechargeable Zn-air batteries. <i>Nano Energy</i> , 2020, 71, 104592.	16.0	157
10	Rational design of tailored porous carbon-based materials for CO <sub>2</sub> capture. <i>Journal of Materials Chemistry A</i> , 2019, 7, 20985-21003.	10.3	150
11	Poor Stability of Li <sub>2</sub> CO <sub>3</sub> in the Solid Electrolyte Interphase of a Lithium-Metal Anode Revealed by Cryo-Electron Microscopy. <i>Advanced Materials</i> , 2021, 33, e2100404.	21.0	147
12	Two Ships in a Bottle-Design for Zn-Ag-O Catalyst Enabling Selective and Long-Lasting CO <sub>2</sub> Electroreduction. <i>Journal of the American Chemical Society</i> , 2021, 143, 6855-6864.	13.7	139
13	An isoindigo-based low band gap polymer for efficient polymer solar cells with high photo-voltage. <i>Chemical Communications</i> , 2011, 47, 4908.	4.1	134
14	Quasi-Covalently Coupled Ni-Cu Atomic Pair for Synergistic Electroreduction of CO <sub>2</sub> . <i>Journal of the American Chemical Society</i> , 2022, 144, 9661-9671.	13.7	134
15	Multidimensional Ordered Bifunctional Air Electrode Enables Flash Reactants Shuttling for High-Energy Flexible Zn-Air Batteries. <i>Advanced Energy Materials</i> , 2019, 9, 1900911.	19.5	133
16	Ship in a Bottle-Design of Highly Efficient Bifunctional Electrocatalysts for Long-Lasting Rechargeable Zn-Air Batteries. <i>ACS Nano</i> , 2019, 13, 7062-7072.	14.6	120
17	Self-Templated Hierarchically Porous Carbon Nanorods Embedded with Atomic Fe-N <sub>4</sub> Active Sites as Efficient Oxygen Reduction Electrocatalysts in Zn-Air Batteries. <i>Advanced Functional Materials</i> , 2021, 31, 2008085.	14.9	117
18	Modulating Metal-Organic Frameworks as Advanced Oxygen Electrocatalysts. <i>Advanced Energy Materials</i> , 2021, 11, 2003291.	19.5	105

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19	Tantalum-Based Electrocatalyst for Polysulfide Catalysis and Retention for High-Performance Lithium-Sulfur Batteries. <i>Matter</i> , 2020, 3, 920-934.	10.0	104
20	Nano-crumpled induced Sn-Bi bimetallic interface pattern with moderate electron bank for highly efficient CO <sub>2</sub> electroreduction. <i>Nature Communications</i> , 2022, 13, 2486.	12.8	99
21	In-situ ion-activated carbon nanospheres with tunable ultramicroporosity for superior CO <sub>2</sub> capture. <i>Carbon</i> , 2019, 143, 531-541.	10.3	96
22	Electrolyte Design for Lithium Metal Anode-Based Batteries Toward Extreme Temperature Application. <i>Advanced Science</i> , 2021, 8, e2101051.	11.2	95
23	Probing the Na metal solid electrolyte interphase via cryo-transmission electron microscopy. <i>Nature Communications</i> , 2021, 12, 3066.	12.8	92
24	500 Wh kg <sup>-1</sup> Class Li Metal Battery Enabled by a Self-Organized Core-Shell Composite Anode. <i>Advanced Materials</i> , 2020, 32, e2004793.	21.0	86
25	Microencapsulation of Phase Change Materials with Polystyrene/Cellulose Nanocrystal Hybrid Shell via Pickering Emulsion Polymerization. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 17756-17767.	6.7	84
26	Self-Regulated Phenomenon of Inorganic Artificial Solid Electrolyte Interphase for Lithium Metal Batteries. <i>Nano Letters</i> , 2020, 20, 4029-4037.	9.1	78
27	Facile fabrication of high sensitivity cellulose nanocrystals based QCM humidity sensors with asymmetric electrode structure. <i>Sensors and Actuators B: Chemical</i> , 2020, 302, 127192.	7.8	76
28	Additive stabilization of SEI on graphite observed using cryo-electron microscopy. <i>Energy and Environmental Science</i> , 2021, 14, 4882-4889.	30.8	73
29	Ternary Sn-Ti-O Electrocatalyst Boosts the Stability and Energy Efficiency of CO <sub>2</sub> Reduction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 12860-12867.	13.8	68
30	A comparative study on grafting polymers from cellulose nanocrystals via surface-initiated atom transfer radical polymerization (ATRP) and activator re-generated by electron transfer ATRP. <i>Carbohydrate Polymers</i> , 2019, 205, 322-329.	10.2	66
31	Boron Nitride Membranes with a Distinct Nanoconfinement Effect for Efficient Ethylene/Ethane Separation. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 13969-13975.	13.8	64
32	Hierarchically Porous Ti <sub>3</sub> C <sub>2</sub> MXene with Tunable Active Edges and Unsaturated Coordination Bonds for Superior Lithium-Sulfur Batteries. <i>ACS Nano</i> , 2021, 15, 19457-19467.	14.6	63
33	Materials Engineering toward Durable Electrocatalysts for Proton Exchange Membrane Fuel Cells. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	61
34	Inverse Pickering Emulsions Stabilized by Cinnamate Modified Cellulose Nanocrystals as Templates To Prepare Silica Colloidosomes. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 2583-2590.	6.7	59
35	New strategy to prepare ultramicroporous carbon by ionic activation for superior CO <sub>2</sub> capture. <i>Chemical Engineering Journal</i> , 2018, 337, 290-299.	12.7	58
36	Bioinspired Tough Solid-State Electrolyte for Flexible Ultralong-Life Zinc-Air Battery. <i>Advanced Materials</i> , 2022, 34, e2110585.	21.0	58

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37	UV-Absorbing Cellulose Nanocrystals as Functional Reinforcing Fillers in Poly(vinyl chloride) Films. ACS Applied Nano Materials, 2018, 1, 632-641.	5.0	56
38	Polymeric hollow microcapsules (PHM) via cellulose nanocrystal stabilized Pickering emulsion polymerization. Journal of Colloid and Interface Science, 2019, 555, 489-497.	9.4	55
39	Emerging Trends in Sustainable CO <sub>2</sub> Management Materials. Advanced Materials, 2022, 34, e2201547.	21.0	52
40	Convenient characterization of polymers grafted on cellulose nanocrystals via SI-ATRP without chain cleavage. Carbohydrate Polymers, 2018, 199, 603-609.	10.2	48
41	A Gas-Phase Migration Strategy to Synthesize Atomically Dispersed Mn-N-C Catalysts for Zn-Air Batteries. Small Methods, 2021, 5, e2100024.	8.6	44
42	A 3D ordered hierarchically porous non-carbon electrode for highly effective and efficient capacitive deionization. Journal of Materials Chemistry A, 2019, 7, 15633-15639.	10.3	43
43	Hierarchically Nanostructured Solid-State Electrolyte for Flexible Rechargeable Zinc-Air Batteries. Angewandte Chemie - International Edition, 2022, 61, .	13.8	43
44	Integrating Nanoreactor with Nb-C Heterointerface Design and Defects Engineering Toward High-Efficiency and Longevous Sodium Ion Battery. Advanced Energy Materials, 2022, 12, .	19.5	40
45	Three-dimensionally ordered mesoporous Co <sub>3</sub> O <sub>4</sub> decorated with Mg as bifunctional oxygen electrocatalysts for high-performance zinc-air batteries. Nano Energy, 2022, 100, 107425.	16.0	39
46	Deep-Breathing Honeycomb-like Co-N <sub>x</sub> -C Nanopolyhedron Bifunctional Oxygen Electrocatalysts for Rechargeable Zn-Air Batteries. IScience, 2020, 23, 101404.	4.1	38
47	Tungsten Carbide Encapsulated in Grape-Like N-Doped Carbon Nanospheres: One-Step Facile Synthesis for Low-Cost and Highly Active Electrocatalysts in Proton Exchange Membrane Water Electrolyzers. ACS Applied Materials & Interfaces, 2019, 11, 25123-25132.	8.0	37
48	Unsaturated coordination polymer frameworks as multifunctional sulfur reservoir for fast and durable lithium-sulfur batteries. Nano Energy, 2021, 79, 105393.	16.0	37
49	Thermochromic Cholesteric Liquid Crystal Microcapsules with Cellulose Nanocrystals and a Melamine Resin Hybrid Shell. ACS Applied Materials & Interfaces, 2022, 14, 4588-4597.	8.0	37
50	Sustainable and Versatile Superhydrophobic Cellulose Nanocrystals. ACS Sustainable Chemistry and Engineering, 2022, 10, 5939-5948.	6.7	36
51	Cinnamate-Functionalized Cellulose Nanocrystals as UV-Shielding Nanofillers in Sunscreen and Transparent Polymer Films. Advanced Sustainable Systems, 2019, 3, 1800156.	5.3	34
52	Engineering Electrochemical Surface for Efficient Carbon Dioxide Upgrade. Advanced Energy Materials, 2022, 12, .	19.5	33
53	Improved catalytic cracking performance of USY in the presence of metal contaminants by post-synthesis modification. Fuel, 2016, 178, 243-252.	6.4	30
54	Boron Nitride Membranes with a Distinct Nanoconfinement Effect for Efficient Ethylene/Ethane Separation. Angewandte Chemie, 2019, 131, 14107-14113.	2.0	29

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55	Analogous Mixed Matrix Membranes with Self-Assembled Interface Pathways. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 5864-5870.	13.8	29
56	Sustainable cellulose nanomaterials for environmental remediation - Achieving clean air, water, and energy: A review. <i>Carbohydrate Polymers</i> , 2022, 285, 119251.	10.2	23
57	Cellulose nanocrystal chiral photonic micro-flakes for multilevel anti-counterfeiting and identification. <i>Chemical Engineering Journal</i> , 2022, 446, 136630.	12.7	23
58	Grafting polymers from cellulose nanocrystals via surface-initiated atom transfer radical polymerization. <i>Journal of Applied Polymer Science</i> , 2021, 138, 51458.	2.6	20
59	Cryo-Electron Tomography of Highly Deformable and Adherent Solid-Electrolyte Interphase Exoskeleton in Li-Metal Batteries with Ether-Based Electrolyte. <i>Advanced Materials</i> , 2022, 34, e2108252.	21.0	20
60	Engineering checkerboard-like heterostructured sulfur electrocatalyst towards high-performance lithium sulfur batteries. <i>Chemical Engineering Journal</i> , 2022, 440, 135990.	12.7	20
61	Syndioselective 3,4-Polymerization of 1-Phenyl-1,3-Butadiene by Rare-Earth Metal Catalysts. <i>ACS Catalysis</i> , 2020, 10, 5223-5229.	11.2	17
62	Fully $\pi$ -conjugated dense topological salphen organic frameworks with atomic dispersed tetradentate cobalt sites for high-efficiency electrocatalytic oxygen reduction. <i>Applied Catalysis B: Environmental</i> , 2022, 315, 121590.	20.2	17
63	Preparation of azithromycin microcapsules by a layer-by-layer self-assembly approach and release behaviors of azithromycin. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2010, 362, 135-139.	4.7	15
64	Hierarchically Nanostructured Solid-State Electrolyte for Flexible Rechargeable Zinc-Air Batteries. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	13
65	Self-Assembled Facilitated Transport Membranes with Tunable Carrier Distribution for Ethylene/Ethane Separation. <i>Advanced Functional Materials</i> , 2021, 31, 2104349.	14.9	12
66	Surface Si decoration of ultrafine NaFeMn-Si catalyst enabling high Fe-phase electron density for effectively converting syngas to aromatics. <i>Chemical Engineering Journal</i> , 2022, 433, 134599.	12.7	10
67	ARGET ATRP of Triblock Copolymers (PMMA-b-PEO-b-PMMA) and Their Microstructure in Aqueous Solution. <i>ACS Omega</i> , 2018, 3, 15996-16004.	3.5	9
68	Stable Lithium Metal Anodes with a GaO Artificial Solid Electrolyte Interphase in Damp Air. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 21467-21473.	8.0	9
69	Substituent Effects of Pyridyl-methylene Cyclopentadienyl Rare-earth Metal Complexes on Styrene Polymerization. <i>Chinese Journal of Polymer Science (English Edition)</i> , 2019, 37, 570-577.	3.8	8
70	Ternary Sn-Ti-O Electrocatalyst Boosts the Stability and Energy Efficiency of CO <sub>2</sub> Reduction. <i>Angewandte Chemie</i> , 2020, 132, 12960-12967.	2.0	8
71	Syndioselective Polymerization of Vinyl naphthalene. <i>Macromolecular Rapid Communications</i> , 2019, 40, 1900061.	3.9	5
72	Analogous Mixed Matrix Membranes with Self-Assembled Interface Pathways. <i>Angewandte Chemie</i> , 2021, 133, 5928-5934.	2.0	3

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73	Synthesis of dual-functionalized APTES-Bentonite/PVDF mixed-matrix membranes for the efficient separation of CO <sub>2</sub> /CH <sub>4</sub> and CO <sub>2</sub> /N <sub>2</sub> . <i>Materials Today Communications</i> , 2022, 31, 103431.	1.9	3
74	Cryo-Transmission Electron Tomography of Highly Deformable and Adherent Solid-Electrolyte Interphase Exoskeleton in Li-Metal Batteries with Ether-Based Electrolyte ( <i>Adv. Mater.</i> 13/2022). <i>Advanced Materials</i> , 2022, 34, .	21.0	2
75	In situ derived nanocomposites electrocatalysts from cobalt molybdates for hydrogen evolution reaction. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 14977-14985.	2.2	1