

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
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all docs

76
docs citations

76
times ranked

5099
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Thermochromic Cholesteric Liquid Crystal Microcapsules with Cellulose Nanocrystals and a Melamine Resin Hybrid Shell. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 4588-4597.	8.0	37
3	Integrating Nanoreactor with O ₂ /N ₂ C Heterointerface Design and Defects Engineering Toward High Efficiency and Longevous Sodium Ion Battery. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	40
4	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
5	Emerging Trends in Sustainable CO ₂ Management Materials. <i>Advanced Materials</i> , 2022, 34, e2201547.	21.0	52
6	Bioinspired Tough Solid-State Electrolyte for Flexible Ultralong-Life Zinc-Air Battery. <i>Advanced Materials</i> , 2022, 34, e2110585.	21.0	58
7	Hierarchically Nanostructured Solid-State Electrolyte for Flexible Rechargeable Zinc-Air Batteries. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	13.8	43
8	Hierarchically Nanostructured Solid-State Electrolyte for Flexible Rechargeable Zinc-Air Batteries. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	13
9	Cryo-Electron Tomography of Highly Deformable and Adherent Solid-Electrolyte Interphase Exoskeleton in Li-Metal Batteries with Ether-Based Electrolyte (Adv. Mater. 13/2022). <i>Advanced Materials</i> , 2022, 34, .	21.0	2
10	Sustainable cellulose nanomaterials for environmental remediation - Achieving clean air, water, and energy: A review. <i>Carbohydrate Polymers</i> , 2022, 285, 119251.	10.2	23
11	Synthesis of dual-functionalized APTES-Bentonite/PVDF mixed-matrix membranes for the efficient separation of CO ₂ /CH ₄ and CO ₂ /N ₂ . <i>Materials Today Communications</i> , 2022, 31, 103431.	1.9	3
12	Engineering checkerboard-like heterostructured sulfur electrocatalyst towards high-performance lithium sulfur batteries. <i>Chemical Engineering Journal</i> , 2022, 440, 135990.	12.7	20
13	Engineering Electrochemical Surface for Efficient Carbon Dioxide Upgrade. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	33
14	Materials Engineering toward Durable Electrocatalysts for Proton Exchange Membrane Fuel Cells. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	61
15	Sustainable and Versatile Superhydrophobic Cellulose Nanocrystals. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 5939-5948.	6.7	36
16	Nano-crumpled induced Sn-Bi bimetallic interface pattern with moderate electron bank for highly efficient CO ₂ electroreduction. <i>Nature Communications</i> , 2022, 13, 2486.	12.8	99
17	Cellulose nanocrystal chiral photonic micro-flakes for multilevel anti-counterfeiting and identification. <i>Chemical Engineering Journal</i> , 2022, 446, 136630.	12.7	23
18	Three-dimensionally ordered mesoporous Co ₃ O ₄ decorated with Mg as bifunctional oxygen electrocatalysts for high-performance zinc-air batteries. <i>Nano Energy</i> , 2022, 100, 107425.	16.0	39

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19	Quasi-Covalently Coupled Ni-Cu Atomic Pair for Synergistic Electroreduction of CO ₂ . Journal of the American Chemical Society, 2022, 144, 9661-9671.	13.7	134
20	Fully π -conjugated dense topological salphen organic frameworks with atomic dispersed tetradentate cobalt sites for high-efficiency electrocatalytic oxygen reduction. Applied Catalysis B: Environmental, 2022, 315, 121590.	20.2	17
21	Unsaturated coordination polymer frameworks as multifunctional sulfur reservoir for fast and durable lithium-sulfur batteries. Nano Energy, 2021, 79, 105393.	16.0	37
22	Self-templated Hierarchically Porous Carbon Nanorods Embedded with Atomic Fe ₄ Active Sites as Efficient Oxygen Reduction Electrocatalysts in Zn-Air Batteries. Advanced Functional Materials, 2021, 31, 2008085.	14.9	117
23	Microporous framework membranes for precise molecule/ion separations. Chemical Society Reviews, 2021, 50, 986-1029.	38.1	191
24	Analogous Mixed Matrix Membranes with Self-Assembled Interface Pathways. Angewandte Chemie - International Edition, 2021, 60, 5864-5870.	13.8	29
25	Analogous Mixed Matrix Membranes with Self-Assembled Interface Pathways. Angewandte Chemie, 2021, 133, 5928-5934.	2.0	3
26	Constructing multifunctional solid electrolyte interface via in-situ polymerization for dendrite-free and low N/P ratio lithium metal batteries. Nature Communications, 2021, 12, 186.	12.8	163
27	Additive stabilization of SEI on graphite observed using cryo-electron microscopy. Energy and Environmental Science, 2021, 14, 4882-4889.	30.8	73
28	Modulating Metal-Organic Frameworks as Advanced Oxygen Electrocatalysts. Advanced Energy Materials, 2021, 11, 2003291.	19.5	105
29	A Gas-Phase Migration Strategy to Synthesize Atomically Dispersed Mn ₂ C Catalysts for Zn-Air Batteries. Small Methods, 2021, 5, e2100024.	8.6	44
30	"Two Ships in a Bottle" Design for Zn-Ag-O Catalyst Enabling Selective and Long-Lasting CO ₂ Electroreduction. Journal of the American Chemical Society, 2021, 143, 6855-6864.	13.7	139
31	Poor Stability of Li ₂ CO ₃ in the Solid Electrolyte Interphase of a Lithium-Metal Anode Revealed by Cryo-Electron Microscopy. Advanced Materials, 2021, 33, e2100404.	21.0	147
32	Bridging the gap between highly active oxygen reduction reaction catalysts and effective catalyst layers for proton exchange membrane fuel cells. Nature Energy, 2021, 6, 475-486.	39.5	252
33	Stable Lithium Metal Anodes with a GaO _x Artificial Solid Electrolyte Interphase in Damp Air. ACS Applied Materials & Interfaces, 2021, 13, 21467-21473.	8.0	9
34	Probing the Na metal solid electrolyte interphase via cryo-transmission electron microscopy. Nature Communications, 2021, 12, 3066.	12.8	92
35	Electrolyte Design for Lithium Metal Anode-Based Batteries Toward Extreme Temperature Application. Advanced Science, 2021, 8, e2101051.	11.2	95
36	Self-Assembled Facilitated Transport Membranes with Tunable Carrier Distribution for Ethylene/Ethane Separation. Advanced Functional Materials, 2021, 31, 2104349.	14.9	12

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37	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
38	Hierarchically Porous Ti ₃ C ₂ 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
39	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
40	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
41	Deep-Breathing Honeycomb-like Co-Nx-C Nanopolyhedron Bifunctional Oxygen Electrocatalysts for Rechargeable Zn-Air Batteries. <i>IScience</i> , 2020, 23, 101404.	4.1	38
42	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
43	500 Wh kg ⁻¹ Class Li Metal Battery Enabled by a Self-Organized Core-Shell Composite Anode. <i>Advanced Materials</i> , 2020, 32, e2004793.	21.0	86
44	Ternary Sn-Ti-O Electrocatalyst Boosts the Stability and Energy Efficiency of CO ₂ Reduction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 12860-12867.	13.8	68
45	Ternary Sn-Ti-O Electrocatalyst Boosts the Stability and Energy Efficiency of CO ₂ Reduction. <i>Angewandte Chemie</i> , 2020, 132, 12960-12967.	2.0	8
46	Revealing the Rapid Electrocatalytic Behavior of Ultrafine Amorphous Defective Nb ₂ O ₅ Nanocluster toward Superior Li-S Performance. <i>ACS Nano</i> , 2020, 14, 4849-4860.	14.6	201
47	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
48	Tantalum-Based Electrocatalyst for Polysulfide Catalysis and Retention for High-Performance Lithium-Sulfur Batteries. <i>Matter</i> , 2020, 3, 920-934.	10.0	104
49	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
50	Self-Regulated Phenomenon of Inorganic Artificial Solid Electrolyte Interphase for Lithium Metal Batteries. <i>Nano Letters</i> , 2020, 20, 4029-4037.	9.1	78
51	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
52	Boron Nitride Membranes with a Distinct Nanoconfinement Effect for Efficient Ethylene/Ethane Separation. <i>Angewandte Chemie</i> , 2019, 131, 14107-14113.	2.0	29
53	Polymeric hollow microcapsules (PHM) via cellulose nanocrystal stabilized Pickering emulsion polymerization. <i>Journal of Colloid and Interface Science</i> , 2019, 555, 489-497.	9.4	55
54	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

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55	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
56	Rational design of tailored porous carbon-based materials for CO ₂ capture. <i>Journal of Materials Chemistry A</i> , 2019, 7, 20985-21003.	10.3	150
57	Cinnamate-Functionalized Cellulose Nanocrystals as UV-Shielding Nanofillers in Sunscreen and Transparent Polymer Films. <i>Advanced Sustainable Systems</i> , 2019, 3, 1800156.	5.3	34
58	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. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 25123-25132.	8.0	37
59	A 3D ordered hierarchically porous non-carbon electrode for highly effective and efficient capacitive deionization. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15633-15639.	10.3	43
60	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
61	“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
62	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
63	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
64	Syndioselective Polymerization of Vinyl naphthalene. <i>Macromolecular Rapid Communications</i> , 2019, 40, 1900061.	3.9	5
65	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
66	In-situ ion-activated carbon nanospheres with tunable ultramicroporosity for superior CO ₂ capture. <i>Carbon</i> , 2019, 143, 531-541.	10.3	96
67	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
68	UV-Absorbing Cellulose Nanocrystals as Functional Reinforcing Fillers in Poly(vinyl chloride) Films. <i>ACS Applied Nano Materials</i> , 2018, 1, 632-641.	5.0	56
69	New strategy to prepare ultramicroporous carbon by ionic activation for superior CO ₂ capture. <i>Chemical Engineering Journal</i> , 2018, 337, 290-299.	12.7	58
70	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
71	Convenient characterization of polymers grafted on cellulose nanocrystals via SI-ATRP without chain cleavage. <i>Carbohydrate Polymers</i> , 2018, 199, 603-609.	10.2	48
72	Improved catalytic cracking performance of USY in the presence of metal contaminants by post-synthesis modification. <i>Fuel</i> , 2016, 178, 243-252.	6.4	30

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73	An Easily Accessible Isoindigo-Based Polymer for High-Performance Polymer Solar Cells. Journal of the American Chemical Society, 2011, 133, 14244-14247.	13.7	363
74	An isoindigo-based low band gap polymer for efficient polymer solar cells with high photo-voltage. Chemical Communications, 2011, 47, 4908.	4.1	134
75	Preparation of azithromycin microcapsules by a layer-by-layer self-assembly approach and release behaviors of azithromycin. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 362, 135-139.	4.7	15