Zhen Cao

List of Publications by Year
in descending order

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42 papers	4,375 citations	172386 29 h-index	265120 42 g-index
43 all docs	43 docs citations	43 times ranked	5335 citing authors

#	Article	IF	Citations
1	Towards the online computer-aided design of catalytic pockets. Nature Chemistry, 2019, 11, 872-879.	6.6	710
2	High-valence metals improve oxygen evolution reaction performance by modulating 3d metal oxidation cycle energetics. Nature Catalysis, 2020, 3, 985-992.	16.1	390
3	2D Nanomaterials for Photocatalytic Hydrogen Production. ACS Energy Letters, 2019, 4, 1687-1709.	8.8	375
4	Recognizing the Mechanism of Sulfurized Polyacrylonitrile Cathode Materials for Liâ€“S Batteries and beyond in Alâ€“S Batteries. ACS Energy Letters, 2018, 3, 2899-2907.	8.8	224
5	New Insights on Graphite Anode Stability in Rechargeable Batteries: Li Ion Coordination Structures Prevail over Solid Electrolyte Interphases. ACS Energy Letters, 2018, 3, 335-340.	8.8	217
6	Phenanthroline Covalent Organic Framework Electrodes for High-Performance Zinc-Ion Supercapattery. ACS Energy Letters, 2020, 5, 2256-2264.	8.8	175
7	New Insight on the Role of Electrolyte Additives in Rechargeable Lithium Ion Batteries. ACS Energy Letters, 2019, 4, 2613-2622.	8.8	160
8	Molecular Engineering of Covalent Organic Framework Cathodes for Enhanced Zincâ€ion Batteries. Advanced Materials, 2021, 33, e2103617.	11.1	151
9	Electrolyte Engineering Enables High Stability and Capacity Alloying Anodes for Sodium and Potassium Ion Batteries. ACS Energy Letters, 2020, 5, 766-776.	8.8	134
10	Interfacial Model Deciphering Highâ€Voltage Electrolytes for High Energy Density, High Safety, and Fastâ€Charging Lithiumâ€ion Batteries. Advanced Materials, 2021, 33, e2102964.	11.1	122
11	Molecular-Scale Interfacial Model for Predicting Electrode Performance in Rechargeable Batteries. ACS Energy Letters, 2019, 4, 1584-1593.	8.8	117
12	Toward the Sustainable Lithium Metal Batteries with a New Electrolyte Solvation Chemistry. Advanced Energy Materials, 2020, 10, 2000567.	10.2	111
13	Enhancing Charge Carrier Lifetime in Metal Oxide Photoelectrodes through Mild Hydrogen Treatment. Advanced Energy Materials, 2017, 7, 1701536.	10.2	104
14	Ledge-directed epitaxy of continuously self-aligned single-crystalline nanoribbons of transition metal dichalcogenides. Nature Materials, 2020, 19, 1300-1306.	13.3	104
15	Substrate Lattice-Guided Seed Formation Controls the Orientation of 2D Transition-Metal Dichalcogenides. ACS Nano, 2017, 11, 9215-9222.	7.3	102
16	3D Crumpled Ultrathin 1T MoS₂ for Inkjet Printing of Mg-Ion Asymmetric Micro-supercapacitors. ACS Nano, 2020, 14, 7308-7318.	7.3	100
17	Blind prediction of homoâ€and heteroâ€protein complexes: The CASP13â€CAPRI experiment. Proteins: Structure, Function and Bioinformatics, 2019, 87, 1200-1221.	1.5	99
18	Unraveling the New Role of an Ethylene Carbonate Solvation Shell in Rechargeable Metal Ion Batteries. ACS Energy Letters, 2021, 6, 69-78.	8.8	99

#	Article	IF	Citations
19	Electrolyteâ€Mediated Stabilization of Highâ€Capacity Microâ€Sized Antimony Anodes for Potassiumâ€Ion Batteries. Advanced Materials, 2021, 33, e2005993.	11.1	96
20	Model-Based Design of Graphite-Compatible Electrolytes in Potassium-Ion Batteries. ACS Energy Letters, 2020, 5, 2651-2661.	8.8	88
21	Engineering Sodium-Ion Solvation Structure to Stabilize Sodium Anodes: Universal Strategy for Fast-Charging and Safer Sodium-Ion Batteries. Nano Letters, 2020, 20, 3247-3254.	4.5	78
22	Additives Engineered Nonflammable Electrolyte for Safer Potassium Ion Batteries. Advanced Functional Materials, 2020, 30, 2001934.	7.8	77
23	Model-Based Design of Stable Electrolytes for Potassium Ion Batteries. ACS Energy Letters, 2020, 5, 3124-3131.	8.8	71
24	Phase Inversion Strategy to Flexible Freestanding Electrode: Critical Coupling of Binders and Electrolytes for High Performance Liâ€“S Battery. Advanced Functional Materials, 2018, 28, 1802244.	7.8	64
25	Hydrationâ€Effectâ€Promoting Niâ€“Fe Oxyhydroxide Catalysts for Neutral Water Oxidation. Advanced Materials, 2020, 32, e1906806.	11.1	62
26	Catalysis of silica-based anode (de-)lithiation: compositional design within a hollow structure for accelerated conversion reaction kinetics. Journal of Materials Chemistry A, 2020, 8, 12306-12313.	5.2	43
27	Highly Active Heterogeneous Catalyst for Ethylene Dimerization Prepared by Selectively Doping Ni on the Surface of a Zeolitic Imidazolate Framework. Journal of the American Chemical Society, 2021, 143, 7144-7153.	6.6	42
28	Impact of Interfacial Defects on the Properties of Monolayer Transition Metal Dichalcogenide Lateral Heterojunctions. Journal of Physical Chemistry Letters, 2017, 8, 1664-1669.	2.1	34
29	Tungsten Blue Oxide as a Reusable Electrocatalyst for Acidic Water Oxidation by Plasma-Induced Vacancy Engineering. CCS Chemistry, 2021, 3, 1553-1561.	4.6	34
30	Lithium dendrite-free plating/stripping: a new synergistic lithium ion solvation structure effect for reliable lithiumâ€“sulfur full batteries. Chemical Communications, 2019, 55, 5713-5716.	2.2	24
31	Bio-inspired heteroatom-doped hollow aurilave-like structured carbon for high-performance sodium-ion batteries and supercapacitors. Journal of Power Sources, 2020, 461, 228128.	4.0	24
32	Enhancing the Cycling Stability of Transition-Metal-Oxide-Based Electrochemical Electrode via Pourbaix Diagram Engineering. Energy Storage Materials, 2021, 42, 252-258.	9.5	22
33	Activity enhancement via borate incorporation into a NiFe (oxy)hydroxide catalyst for electrocatalytic oxygen evolution. Journal of Materials Chemistry A, 2018, 6, 16959-16964.	5.2	21
34	Electrochemical Conversion of CO₂ to 2-Bromoethanol in a Membraneless Cell. ACS Energy Letters, 2019, 4, 600-605.	8.8	21
35	Photophysics and electrochemistry relevant to photocatalytic water splitting involved at solidâ€“electrolyte interfaces. Journal of Energy Chemistry, 2017, 26, 259-269.	7.1	20
36	Electrolyte Chemistry in 3D Metal Oxide Nanorod Arrays Deciphers Lithium Dendrite-Free Plating/Stripping Behaviors for High-Performance Lithium Batteries. Journal of Physical Chemistry Letters, 2021, 12, 4857-4866.	2.1	19

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37	[Ag₉(1,2-BDT)₆]^{3â€“}: How Square-Pyramidal Building Blocks Self-Assemble into the Smallest Silver Nanocluster. Inorganic Chemistry, 2021, 60, 4306-4312.	1.9	16
38	Hydrogen atom induced magnetic behaviors in two-dimensional materials: insight on origination in the model of Î±-MoO₃. Nanoscale, 2018, 10, 14100-14106.	2.8	9
39	The CASP13-CAPRI targets as case studies to illustrate a novel scoring pipeline integrating CONSRANK with clustering and interface analyses. BMC Bioinformatics, 2020, 21, 262.	1.2	7
40	A random forest classifier for proteinâ€“protein docking models. Bioinformatics Advances, 2022, 2, .	0.9	5
41	Superconductivity and High-Pressure Performance of 2D Mo₂C Crystals. Journal of Physical Chemistry Letters, 2021, 12, 2219-2225.	2.1	3
42	Solar Water Splitting: Enhancing Charge Carrier Lifetime in Metal Oxide Photoelectrodes through Mild Hydrogen Treatment (Adv. Energy Mater. 22/2017). Advanced Energy Materials, 2017, 7, .	10.2	1