Changkun Zhang

List of Publications by Year
in descending order

68 papers	4,588 citations	76326 40 h-index	98798 67 g-index
68 all docs	68 docs citations	68 times ranked	4969 citing authors

#	Article	IF	Citations
1	Molecular engineering of organic electroactive materials for redox flow batteries. Chemical Society Reviews, 2018, 47, 69-103.	38.1	442
2	Progress and prospects of next-generation redox flow batteries. Energy Storage Materials, 2018, 15, 324-350.	18.0	239
3	Mesocrystal MnO cubes as anode for Li-ion capacitors. Nano Energy, 2016, 22, 290-300.	16.0	189
4	Fast and Reversible Li Ion Insertion in Carbonâ€Encapsulated Li₃VO₄ as Anode for Lithiumâ€Ion Battery. Advanced Functional Materials, 2015, 25, 3497-3504.	14.9	173
5	Anode for Zinc-Based Batteries: Challenges, Strategies, and Prospects. ACS Energy Letters, 2021, 6, 2765-2785.	17.4	159
6	Exploiting Highâ€Performance Anode through Tuning the Character of Chemical Bonds for Liâ€Ion Batteries and Capacitors. Advanced Energy Materials, 2017, 7, 1601127.	19.5	149
7	A Selfâ€Healing Roomâ€Temperature Liquidâ€Metal Anode for Alkaliâ€Ion Batteries. Advanced Functional Materials, 2018, 28, 1804649.	14.9	147
8	Self-doped V 4+ â€“V 2 O 5 nanoflake for 2 Li-ion intercalation with enhanced rate and cycling performance. Nano Energy, 2016, 22, 1-10.	16.0	143
9	Eutectic Electrolytes as a Promising Platform for Next-Generation Electrochemical Energy Storage. Accounts of Chemical Research, 2020, 53, 1648-1659.	15.6	143
10	Phenothiazineâ€Based Organic Catholyte for Highâ€Capacity and Longâ€Life Aqueous Redox Flow Batteries. Advanced Materials, 2019, 31, e1901052.	21.0	138
11	A Dualâ€Ion Organic Symmetric Battery Constructed from Phenazineâ€Based Artificial Bipolar Molecules. Angewandte Chemie - International Edition, 2019, 58, 9902-9906.	13.8	123
12	A Sustainable Redoxâ€Flow Battery with an Aluminumâ€Based, Deepâ€Eutecticâ€Solvent Anolyte. Angewandte Chemie - International Edition, 2017, 56, 7454-7459.	13.8	121
13	A Low-Cost and High-Energy Hybrid Iron-Aluminum Liquid Battery Achieved by Deep Eutectic Solvents. Joule, 2017, 1, 623-633.	24.0	116
14	Highly Concentrated Phthalimide-Based Anolytes for Organic Redox Flow Batteries with Enhanced Reversibility. CheM, 2018, 4, 2814-2825.	11.7	105
15	Pathways to Widespread Applications: Development of Redox Flow Batteries Based on New Chemistries. CheM, 2019, 5, 1964-1987.	11.7	105
16	Enhanced storage of sodium ions in Prussian blue cathode material through nickel doping. Journal of Materials Chemistry A, 2017, 5, 9604-9610.	10.3	95
17	Eutectic Electrolytes for High-Energy-Density Redox Flow Batteries. ACS Energy Letters, 2018, 3, 2875-2883.	17.4	95
18	Supported Noble Metals on Hydrogenâ€Treated TiO₂ Nanotube Arrays as Highly Ordered Electrodes for Fuel Cells. ChemSusChem, 2013, 6, 659-666.	6.8	94

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19	MnO nanoparticles with cationic vacancies and discrepant crystallinity dispersed into porous carbon for Li-ion capacitors. Journal of Materials Chemistry A, 2016, 4, 3362-3370.	10.3	85
20	Hollowâ€“Cuboid Li₃VO₄/C as High-Performance Anodes for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 680-688.	8.0	82
21	Biredox Eutectic Electrolytes Derived from Organic Redoxâ€Active Molecules: Highâ€Energy Storage Systems. Angewandte Chemie - International Edition, 2019, 58, 7045-7050.	13.8	82
22	Reversible redox chemistry in azobenzene-based organic molecules for high-capacity and long-life nonaqueous redox flow batteries. Nature Communications, 2020, 11, 3843.	12.8	76
23	Gradientâ€Distributed Metalâ€“Organic Frameworkâ€“Based Porous Membranes for Nonaqueous Redox Flow Batteries. Advanced Energy Materials, 2018, 8, 1802533.	19.5	70
24	Enabling Graphene-Oxide-Based Membranes for Large-Scale Energy Storage by Controlling Hydrophilic Microstructures. CheM, 2018, 4, 1035-1046.	11.7	65
25	Molecular Engineering of Azobenzeneâ€Based Anolytes Towards Highâ€Capacity Aqueous Redox Flow Batteries. Angewandte Chemie - International Edition, 2020, 59, 22163-22170.	13.8	65
26	Insights into Hydrotropic Solubilization for Hybrid Ion Redox Flow Batteries. ACS Energy Letters, 2018, 3, 2641-2648.	17.4	54
27	Effect of water and annealing temperature of anodized TiO2 nanotubes on hydrogen production in photoelectrochemical cell. Electrochimica Acta, 2013, 107, 313-319.	5.2	53
28	Fine microstructure of high performance electrode in alkaline anion exchange membrane fuel cells. Journal of Power Sources, 2014, 267, 39-47.	7.8	53
29	Cobalt Phosphate Group Modified Hematite Nanorod Array as Photoanode for Efficient Solar Water Splitting. Electrochimica Acta, 2014, 136, 363-369.	5.2	52
30	Enhanced Electrochemical Properties of Sn-doped V2O5 as a Cathode Material for Lithium Ion Batteries. Electrochimica Acta, 2016, 222, 1831-1838.	5.2	51
31	â€œFishnet-likeâ€•ion-selective nanochannels in advanced membranes for flow batteries. Journal of Materials Chemistry A, 2019, 7, 21112-21119.	10.3	50
32	Coherent Mn3O4-carbon nanocomposites with enhanced energy-storage capacitance. Nano Research, 2015, 8, 3372-3383.	10.4	49
33	Enhancement of photoelectrochemical response by Au modified in TiO2 nanorods. International Journal of Hydrogen Energy, 2013, 38, 13023-13030.	7.1	46
34	Vertically aligned carbon-coated titanium dioxide nanorod arrays on carbon paper with low platinum for proton exchange membrane fuel cells. Journal of Power Sources, 2015, 276, 80-88.	7.8	46
35	High power high safety battery with electrospun Li3V2(PO4)3 cathode and Li4Ti5O12 anode with 95% energy efficiency. Energy Storage Materials, 2016, 5, 93-102.	18.0	46
36	Zn-based eutectic mixture as anolyte for hybrid redox flow batteries. Scientific Reports, 2018, 8, 5740.	3.3	46

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37	Highly stable ternary tinâ€“palladiumâ€“platinum catalysts supported on hydrogenated TiO2 nanotube arrays for fuel cells. Nanoscale, 2013, 5, 6834.	5.6	45
38	Enhanced Electrochemical Properties of Li₃VO₄ with Controlled Oxygen Vacancies as Liâ€Ion Battery Anode. Chemistry - A European Journal, 2017, 23, 5368-5374.	3.3	44
39	Efficient Solar Energy Harvesting and Storage through a Robust Photocatalyst Driving Reversible Redox Reactions. Advanced Materials, 2018, 30, e1802294.	21.0	43
40	Impacts of Surface Energy on Lithium Ion Intercalation Properties of V₂O₅. ACS Applied Materials & Interfaces, 2016, 8, 19542-19549.	8.0	42
41	Effects of Preinserted Na Ions on Li-Ion Electrochemical Intercalation Properties of V₂O₅. ACS Applied Materials & Interfaces, 2016, 8, 24629-24637.	8.0	41
42	Highly Efficient Storage of Pulse Energy Produced by Triboelectric Nanogenerator in Li₃V₂(PO₄)₃/C Cathode Li-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 862-870.	8.0	40
43	Effects of high surface energy on lithium-ion intercalation properties of Ni-doped Li3VO4. NPG Asia Materials, 2016, 8, e287-e287.	7.9	39
44	Opportunities and challenges of organic flow battery for electrochemical energy storage technology. Journal of Energy Chemistry, 2022, 67, 621-639.	12.9	39
45	Preparation of Pt catalysts decorated TiO2 nanotube arrays by redox replacement of Ni precursors for proton exchange membrane fuel cells. Electrochimica Acta, 2012, 80, 1-6.	5.2	38
46	Ethylene glycol adjusted nanorod hematite film for active photoelectrochemical water splitting. Physical Chemistry Chemical Physics, 2014, 16, 4284.	2.8	37
47	Interface Reduction Synthesis of H₂V₃O₈ Nanobeltsâ€“Graphene for High-Rate Li-Ion Batteries. Journal of Physical Chemistry C, 2015, 119, 11391-11399.	3.1	31
48	A Sustainable Redoxâ€Flow Battery with an Aluminumâ€Based, Deepâ€Eutecticâ€Solvent Anolyte. Angewandte Chemie, 2017, 129, 7562-7567.	2.0	27
49	An Oriented Ultrathin Catalyst Layer Derived from High Conductive TiO2 Nanotube for Polymer Electrolyte Membrane Fuel Cell. Electrochimica Acta, 2015, 153, 361-369.	5.2	25
50	General Design Methodology for Organic Eutectic Electrolytes toward Highâ€Energyâ€Density Redox Flow Batteries. Advanced Materials, 2021, 33, e2008560.	21.0	25
51	Polyeutectic-based stable and effective electrolytes for high-performance energy storage systems. Energy and Environmental Science, 2021, 14, 931-939.	30.8	21
52	Biredox Eutectic Electrolytes Derived from Organic Redoxâ€Active Molecules: Highâ€Energy Storage Systems. Angewandte Chemie, 2019, 131, 7119-7124.	2.0	19
53	Molecular Engineering of Azobenzeneâ€Based Anolytes Towards Highâ€Capacity Aqueous Redox Flow Batteries. Angewandte Chemie, 2020, 132, 22347-22354.	2.0	19
54	Simple synthesis of Pt/TiO 2 nanotube arrays with high activity and stability. Journal of Electroanalytical Chemistry, 2013, 701, 14-19.	3.8	18

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55	A new anode material for high performance lithium-ion batteries: V₂(PO₄)O/C. Journal of Materials Chemistry A, 2016, 4, 9789-9796.	10.3	18
56	Insights into the Redox Chemistry of Organosulfides Towards Stable Molecule Design in Nonaqueous Energy Storage Systems. Angewandte Chemie - International Edition, 2021, 60, 4322-4328.	13.8	18
57	Preparation and characterization of Ti0.7Sn0.3O2 as catalyst support for oxygen reduction reaction. Journal of Energy Chemistry, 2014, 23, 331-337.	12.9	16
58	Amorphous VPO4/C with the enhanced performances as an anode for lithium ion batteries. Journal of Materiomics, 2016, 2, 350-357.	5.7	16
59	Machine learning for flow batteries: opportunities and challenges. Chemical Science, 2022, 13, 4740-4752.	7.4	15
60	Electrodeposition of Ni oxide on TiO2 nanotube arrays for enhancing visible light photoelectrochemical water splitting. Journal of Electroanalytical Chemistry, 2013, 688, 228-231.	3.8	14
61	Multicore Ferrocene Derivative as a Highly Soluble Cathode Material for Nonaqueous Redox Flow Batteries. ACS Applied Energy Materials, 2021, 4, 855-861.	5.1	11
62	Perspective on organic flow batteries for large-scale energy storage. Current Opinion in Electrochemistry, 2021, 30, 100836.	4.8	10
63	A novel ultra-thin catalyst layer based on wheat ear-like catalysts for polymer electrolyte membrane fuel cells. RSC Advances, 2014, 4, 58591-58595.	3.6	9
64	Porous polybenzimidazole membranes with positive charges enable an excellent anti-fouling ability for vanadium-methylene blue flow battery. Journal of Energy Chemistry, 2022, 68, 247-254.	12.9	7
65	Highly effective oxygen reduction activity and durability of antimony-doped tin oxide modified PtPd/C electrocatalysts. RSC Advances, 2015, 5, 69479-69486.	3.6	5
66	Insights into the Redox Chemistry of Organosulfides Towards Stable Molecule Design in Nonaqueous Energy Storage Systems. Angewandte Chemie, 2021, 133, 4368-4374.	2.0	5
67	Redox Flow Batteries: Phenothiazineâ€Based Organic Catholyte for Highâ€Capacity and Longâ€Life Aqueous Redox Flow Batteries (Adv. Mater. 24/2019). Advanced Materials, 2019, 31, 1970175.	21.0	3
68	Solar-Powered Redox Cells: Efficient Solar Energy Harvesting and Storage through a Robust Photocatalyst Driving Reversible Redox Reactions (Adv. Mater. 31/2018). Advanced Materials, 2018, 30, 1870229.	21.0	1