

# Zheng Chen

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

82

papers

7,645

citations

38

h-index

85

g-index

85

ext. papers

9,549

ext. citations

16.1

avg, IF

6.25

L-index

#	Paper	IF	Citations
82	Self-healing chemistry enables the stable operation of silicon microparticle anodes for high-energy lithium-ion batteries. <i>Nature Chemistry</i> , <b>2013</b> , 5, 1042-8	17.6	856
81	High-performance supercapacitors based on intertwined CNT/V2O5 nanowire nanocomposites. <i>Advanced Materials</i> , <b>2011</b> , 23, 791-5	24	715
80	A highly stretchable, transparent, and conductive polymer. <i>Science Advances</i> , <b>2017</b> , 3, e1602076	14.3	674
79	High-performance sodium-ion pseudocapacitors based on hierarchically porous nanowire composites. <i>ACS Nano</i> , <b>2012</b> , 6, 4319-27	16.7	574
78	High-Performance Supercapacitors Based on Nanocomposites of Nb2O5 Nanocrystals and Carbon Nanotubes. <i>Advanced Energy Materials</i> , <b>2011</b> , 1, 1089-1093	21.8	285
77	A Three-Dimensionally Interconnected Carbon Nanotube-Conducting Polymer Hydrogel Network for High-Performance Flexible Battery Electrodes. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1400207	21.8	242
76	High-Performance Lithium Metal Negative Electrode with a Soft and Flowable Polymer Coating. <i>ACS Energy Letters</i> , <b>2016</b> , 1, 1247-1255	20.1	218
75	Iridium single-atom catalyst on nitrogen-doped carbon for formic acid oxidation synthesized using a general host-guest strategy. <i>Nature Chemistry</i> , <b>2020</b> , 12, 764-772	17.6	207
74	3D Porous Sponge-Inspired Electrode for Stretchable Lithium-Ion Batteries. <i>Advanced Materials</i> , <b>2016</b> , 28, 3578-83	24	199
73	Fast and reversible thermoresponsive polymer switching materials for safer batteries. <i>Nature Energy</i> , <b>2016</b> , 1,	62.3	190
72	From nanoscale interface characterization to sustainable energy storage using all-solid-state batteries. <i>Nature Nanotechnology</i> , <b>2020</b> , 15, 170-180	28.7	187
71	Effective regeneration of LiCoO2 from spent lithium-ion batteries: a direct approach towards high-performance active particles. <i>Green Chemistry</i> , <b>2018</b> , 20, 851-862	10	178
70	Ultrahigh Surface Area Three-Dimensional Porous Graphitic Carbon from Conjugated Polymeric Molecular Framework. <i>ACS Central Science</i> , <b>2015</b> , 1, 68-76	16.8	177
69	High-Performance Supercapacitors Based on Hierarchically Porous Graphite Particles. <i>Advanced Energy Materials</i> , <b>2011</b> , 1, 551-556	21.8	171
68	High-Areal-Capacity Silicon Electrodes with Low-Cost Silicon Particles Based on Spatial Control of Self-Healing Binder. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1401826	21.8	166
67	Electrospun core-shell microfiber separator with thermal-triggered flame-retardant properties for lithium-ion batteries. <i>Science Advances</i> , <b>2017</b> , 3, e1601978	14.3	164
66	High-performance flexible lithium-ion electrodes based on robust network architecture. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 6845	35.4	137

65	Resolving the Compositional and Structural Defects of Degraded LiNi <sub>x</sub> Co <sub>y</sub> Mn <sub>z</sub> O <sub>2</sub> Particles to Directly Regenerate High-Performance Lithium-Ion Battery Cathodes. <i>ACS Energy Letters</i> , <b>2018</b> , 3, 1683-1692	20.1	136
64	Hierarchical Nanostructured WO <sub>3</sub> with Biomimetic Proton Channels and Mixed Ionic-Electronic Conductivity for Electrochemical Energy Storage. <i>Nano Letters</i> , <b>2015</b> , 15, 6802-8	11.5	129
63	Tailoring Electrolyte Solvation for Li Metal Batteries Cycled at Ultra-Low Temperature. <i>Nature Energy</i> , <b>2021</b> , 2021,	62.3	122
62	Stretchable Lithium-Ion Batteries Enabled by Device-Scaled Wavy Structure and Elastic-Sticky Separator. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1701076	21.8	120
61	3D nanocomposite architectures from carbon-nanotube-threaded nanocrystals for high-performance electrochemical energy storage. <i>Advanced Materials</i> , <b>2014</b> , 26, 339-45	24	119
60	Elucidating Reversible Electrochemical Redox of Li <sub>6</sub> PS <sub>5</sub> Cl Solid Electrolyte. <i>ACS Energy Letters</i> , <b>2019</b> , 4, 2418-2427	20.1	113
59	High-performance energy-storage architectures from carbon nanotubes and nanocrystal building blocks. <i>Advanced Materials</i> , <b>2012</b> , 24, 2030-6	24	109
58	An All-Fluorinated Ester Electrolyte for Stable High-Voltage Li Metal Batteries Capable of Ultra-Low-Temperature Operation. <i>ACS Energy Letters</i> , <b>2020</b> , 5, 1438-1447	20.1	102
57	Hierarchical manganese oxide/carbon nanocomposites for supercapacitor electrodes. <i>Nano Research</i> , <b>2011</b> , 4, 216-225	10	92
56	Ionic Liquid-Assisted Synthesis of TiO <sub>2</sub> /Carbon Hybrid Nanostructures for Lithium-Ion Batteries. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 1338-1346	15.6	91
55	Carbon-free high-loading silicon anodes enabled by sulfide solid electrolytes. <i>Science</i> , <b>2021</b> , 373, 1494-1499	39.5	81
54	Promoting HO <sub>2</sub> production via 2-electron oxygen reduction by coordinating partially oxidized Pd with defect carbon. <i>Nature Communications</i> , <b>2020</b> , 11, 2178	17.4	79
53	Ambient-Pressure Relithiation of Degraded Li <sub>x</sub> Ni <sub>0.5</sub> Co <sub>0.2</sub> Mn <sub>0.3</sub> O <sub>2</sub> (0 <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1900454	21.8	73
52	The Effects of Cross-Linking in a Supramolecular Binder on Cycle Life in Silicon Microparticle Anodes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 2318-24	9.5	73
51	Efficient Direct Recycling of Lithium-Ion Battery Cathodes by Targeted Healing. <i>Joule</i> , <b>2020</b> , 4, 2609-2626	27.8	62
50	Understanding the Electrochemical Properties of Naphthalene Diimide: Implication for Stable and High-Rate Lithium-Ion Battery Electrodes. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 3508-3517	9.6	60
49	Exploiting Mechanistic Solvation Kinetics for Dual-Graphite Batteries with High Power Output at Extremely Low Temperature. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 18892-18897	16.4	59
48	Enhancing C-H Bond Scission for Efficient Ethanol Oxidation using PtIr Nanocube Electrocatalysts. <i>ACS Catalysis</i> , <b>2019</b> , 9, 7618-7625	13.1	44

47	Enabling Thin and Flexible Solid-State Composite Electrolytes by the Scalable Solution Process. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 6542-6550	6.1	42
46	Nanosheet-assembled hierarchical Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> microspheres for high-volumetric-density and high-rate Li-ion battery anode. <i>Energy Storage Materials</i> , <b>2019</b> , 21, 361-371	19.4	39
45	A long-lasting dual-function electrolyte additive for stable lithium metal batteries. <i>Nano Energy</i> , <b>2020</b> , 75, 104889	17.1	38
44	Highly compact, free-standing porous electrodes from polymer-derived nanoporous carbons for efficient electrochemical capacitive deionization. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 1768-1778	13	33
43	Function-driven design of stimuli-responsive polymer composites: recent progress and challenges. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 11817-11834	7.1	26
42	Understanding the formation of ultrathin mesoporous LiTiO nanosheets and their application in high-rate, long-life lithium-ion anodes. <i>Nanoscale</i> , <b>2019</b> , 11, 520-531	7.7	25
41	Polyacrylic Acid Assisted Assembly of Oxide Particles and Carbon Nanotubes for High-Performance Flexible Battery Anodes. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1401207	21.8	24
40	Efficient Direct Recycling of Degraded LiMnO Cathodes by One-Step Hydrothermal Relithiation. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 51546-51554	9.5	23
39	Robust lithium-ion anodes based on nanocomposites of iron oxide/carbon/silicate. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 4539	13	22
38	Enhanced Cycling Stability of Sulfur Electrodes through Effective Binding of Pyridine-Functionalized Polymer. <i>ACS Energy Letters</i> , <b>2017</b> , 2, 2454-2462	20.1	22
37	An ester electrolyte for lithium-sulfur batteries capable of ultra-low temperature cycling. <i>Chemical Communications</i> , <b>2020</b> , 56, 9114-9117	5.8	21
36	Characterization and Understanding of Thermoresponsive Polymer Composites Based on Spiky Nanostructured Fillers. <i>Advanced Electronic Materials</i> , <b>2017</b> , 3, 1600397	6.4	19
35	Stabilizing Metallic Iron Nanoparticles by Conformal Graphitic Carbon Coating for High-Rate Anode in Ni-Fe Batteries. <i>Nano Letters</i> , <b>2020</b> , 20, 1700-1706	11.5	19
34	Enabling the Low-Temperature Cycling of NMC  Graphite Pouch Cells with an Ester-Based Electrolyte. <i>ACS Energy Letters</i> , <b>2021</b> , 6, 2016-2023	20.1	18
33	Diatomite-Derived Hierarchical Porous Crystalline-Amorphous Network for High-Performance and Sustainable Si Anodes. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2005956	15.6	17
32	Boosting Activity and Selectivity of CO Electroreduction by Pre-Hydrizing Pd Nanocubes. <i>Small</i> , <b>2020</b> , 16, e2005305	11	16
31	Sub-nanometer confinement enables facile condensation of gas electrolyte for low-temperature batteries. <i>Nature Communications</i> , <b>2021</b> , 12, 3395	17.4	16
30	Ready fabrication of thin-film electrodes from building nanocrystals for micro-supercapacitors. <i>Chemical Communications</i> , <b>2012</b> , 48, 3736-8	5.8	15

29	Fabrication of High-Quality Thin Solid-State Electrolyte Films Assisted by Machine Learning. <i>ACS Energy Letters</i> , 1639-1648	20.1	15
28	Phase-Separation-Induced Porous Lithiophilic Polymer Coating for High-Efficiency Lithium Metal Batteries. <i>Nano Letters</i> , <b>2021</b> , 21, 4757-4764	11.5	15
27	Exploiting Mechanistic Solvation Kinetics for Dual-Graphite Batteries with High Power Output at Extremely Low Temperature. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 19068-19073	3.6	14
26	Sustainable design of fully recyclable all solid-state batteries. <i>MRS Energy &amp; Sustainability</i> , <b>2020</b> , 7, 1	2.2	14
25	Electrolyte design implications of ion-pairing in low-temperature Li metal batteries. <i>Energy and Environmental Science</i> ,	35.4	14
24	High-performance aqueous supercapacitors based on hierarchically porous graphitized carbon. <i>RSC Advances</i> , <b>2012</b> , 2, 1755	3.7	13
23	Mn-doped Li <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> nanocrystal with enhanced electrochemical properties based on aerosol synthesis method. <i>Journal of Materials Science</i> , <b>2015</b> , 50, 3075-3082	4.3	12
22	Aerosol-Assisted Heteroassembly of Oxide Nanocrystals and Carbon Nanotubes into 3D Mesoporous Composites for High-Rate Electrochemical Energy Storage. <i>Small</i> , <b>2015</b> , 11, 3135-42	11	12
21	Better lithium-ion storage materials made through hierarchical assemblies of active nanorods and nanocrystals. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 17536-17544	13	12
20	Enabling sustainable critical materials for battery storage through efficient recycling and improved design: A perspective. <i>MRS Energy &amp; Sustainability</i> , <b>2020</b> , 7, 1	2.2	11
19	Emerging trends in sustainable battery chemistries. <i>Trends in Chemistry</i> , <b>2021</b> , 3, 620-630	14.8	10
18	Design and Optimization of the Direct Recycling of Spent Li-Ion Battery Cathode Materials. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2021</b> , 9, 4543-4553	8.3	9
17	Bio-Inspired Nanospiky Metal Particles Enable Thin, Flexible, and Thermo-Responsive Polymer Nanocomposites for Thermal Regulation. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1910328	15.6	6
16	Boosting the cycling stability of Ni-rich layered oxide cathode by dry coating of ultrastable LiV(PO) <sub>4</sub> nanoparticles. <i>Nanoscale</i> , <b>2021</b> , 13, 2811-2819	7.7	6
15	Predicting the Ion Desolvation Pathway of Lithium Electrolytes and Their Dependence on Chemistry and Temperature.. <i>Journal of Physical Chemistry Letters</i> , <b>2022</b> , 4426-4433	6.4	6
14	Scalable Synthesis of Uniform Nanosized Microporous Carbon Particles from Rigid Polymers for Rapid Ion and Molecule Adsorption. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 25429-25437	9.5	5
13	Seeking Direct Cathode Regeneration for More Efficient Lithium-Ion Battery Recycling. <i>Current Opinion in Electrochemistry</i> , <b>2021</b> , 31, 100875	7.2	4
12	Investigating dry room compatibility of sulfide solid-state electrolytes for scalable manufacturing. <i>Journal of Materials Chemistry A</i> , <b>2022</b> , 10, 7155-7164	13	4

11	Forming Solid-Electrolyte Interphases with Rich Grain Boundaries on 3D Lithiophilic Skeleton for Low-Temperature Lithium Metal Batteries. <i>Energy Storage Materials</i> , <b>2022</b> , 49, 454-462	19.4	4
10	Thermo-responsive polymers for thermal regulation in electrochemical energy devices. <i>Journal of Polymer Science</i> , <b>2021</b> , 59, 2230	2.4	3
9	Achieving complete electrooxidation of ethanol by single atomic Rh decoration of Pt nanocubes.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119, e2112109119 <sup>11.5</sup>	11.5	3
8	Energy Storage: Aerosol-Assisted Heteroassembly of Oxide Nanocrystals and Carbon Nanotubes into 3D Mesoporous Composites for High-Rate Electrochemical Energy Storage (Small 26/2015). <i>Small</i> , <b>2015</b> , 11, 3196-3196	11	1
7	Mesoporous Metal and Metal Alloy Particles Synthesized by Aerosol-Assisted Confined Growth of Nanocrystals. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 10698-10702	3.6	1
6	Oxidative Stabilization of Dilute Ether Electrolytes via Anion Modification. <i>ACS Energy Letters</i> , <b>2022</b> , 7, 675-682	20.1	1
5	Boosting the Recycling Efficiency of Spent Lithium-Ion Battery Cathodes Using a Green Reductant. <i>Advanced Energy and Sustainability Research</i> , <b>2021</b> , 2, 2100040	1.6	1
4	Lithium-Ion Batteries: Ionic Liquid-Assisted Synthesis of TiO <sub>2</sub> /Carbon Hybrid Nanostructures for Lithium-Ion Batteries (Adv. Funct. Mater. 9/2016). <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 1487-1487	15.6	1
3	Scalable Solvent-Based Fabrication of Thermo-Responsive Polymer Nanocomposites for Battery Safety Regulation. <i>Journal of the Electrochemical Society</i> , <b>2021</b> , 168, 080507	3.9	1
2	Sustainable design of fully recyclable all solid-state batteries. <i>MRS Bulletin</i> , <b>2020</b> , 45, 990-991	3.2	0
1	Recycling of Li-Ion Batteries for Electric Vehicles <b>2021</b> ,		0