

# Huigang Zhang

## List of Publications by Year in Descending Order

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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.

96  
papers

6,206  
citations

30  
h-index

78  
g-index

104  
ext. papers

7,285  
ext. citations

10.8  
avg, IF

5.98  
L-index

#	Paper	IF	Citations
96	Data-informed discovery of hydrolytic nanozymes.. <i>Nature Communications</i> , <b>2022</b> , 13, 827	17.4	9
95	Transferring Liquid Metal to form a Hybrid Solid Electrolyte via a Wettability-Tuning Technology for Lithium Metal Anodes.. <i>Advanced Materials</i> , <b>2022</b> , e2200181	24	4
94	A Lamellar Yolk-Shell Lithium-Sulfur Battery Cathode Displaying Ultralong Cycling Life, High Rate Performance, and Temperature Tolerance. <i>Advanced Science</i> , <b>2021</b> , 9, e2103517	13.6	7
93	Engineering a novel microcapsule of CuS core and SnS quantum dot/carbon nanotube shell as a Li-ion battery anode. <i>Chemical Communications</i> , <b>2021</b> , 57, 13397-13400	5.8	1
92	Novel Doughnutlike Graphene Quantum Dot-Decorated Composites for High-Performance LiS Batteries Displaying Dual Immobilization Toward Polysulfides. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 10998-11003	6.1	1
91	CoSe <sub>2</sub> /MoS <sub>2</sub> Heterostructures to Couple Polysulfide Adsorption and Catalysis in Lithium-Sulfur Batteries <i>Chinese Journal of Chemistry</i> , <b>2021</b> , 39, 1138-1144	4.9	3
90	Sulfophobic and Vacancy Design Enables Self-Cleaning Electrodes for Efficient Desulfurization and Concurrent Hydrogen Evolution with Low Energy Consumption. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2101922	15.6	10
89	A Self-Healing Lithium-Sulfur Battery Using Gel-Infilled Microcapsules. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 6749-6756	6.1	3
88	Engineering Two-Dimensional Metal-Organic Framework on Molecular Basis for Fast Li Conduction. <i>Nano Letters</i> , <b>2021</b> , 21, 5805-5812	11.5	9
87	General Liquid-Driven Coaxial Flow Focusing Preparation of Novel Microcapsules for Rechargeable Magnesium Batteries. <i>Advanced Science</i> , <b>2021</b> , 8, 2002298	13.6	8
86	Hammett Relationship in Oxidase-Mimicking Metal-Organic Frameworks Revealed through a Protein-Engineering-Inspired Strategy. <i>Advanced Materials</i> , <b>2021</b> , 33, e2005024	24	27
85	Self-reduction preparation of porous multi-walled ZnCo <sub>2</sub> O <sub>4</sub> spheres as sulfur host for lithium-sulfur battery cathodes with long cycling life and stable rate-performance. <i>Journal of Electroanalytical Chemistry</i> , <b>2021</b> , 880, 114860	4.1	3
84	A General Template-Induced Sulfuration Approach for Preparing Bifunctional Hollow Sulfides for High-Performance Al- and Li-ion Batteries. <i>Energy Technology</i> , <b>2021</b> , 9, 2000900	3.5	2
83	A yolk-shell FeO@void@carbon nanochain as shuttle effect suppressive and volume-change accommodating sulfur host for long-life lithium-sulfur batteries. <i>Nanoscale</i> , <b>2021</b> , 13, 7744-7750	7.7	6
82	A Self-Healing Flexible Quasi-Solid Zinc-Ion Battery Using All-In-One Electrodes. <i>Advanced Science</i> , <b>2021</b> , 8, 2004689	13.6	23
81	Engineering Nanostructured Silicon and its Practical Applications in Lithium-Ion Batteries: A Critical Review. <i>Energy Technology</i> , <b>2021</b> , 9, 2100400	3.5	1
80	A Polysulfides-Confined All-in-One Porous Microcapsule Lithium-Sulfur Battery Cathode. <i>Small</i> , <b>2021</b> , 17, e2103051	11	6

79	A novel nanosphere-in-nanotube iron phosphide Li-ion battery anode displaying a long cycle life, recoverable rate-performance, and temperature tolerance. <i>Nanoscale</i> , <b>2021</b> , 13, 15624-15630	7.7	2
78	In Situ Formation of Polycyclic Aromatic Hydrocarbons as an Artificial Hybrid Layer for Lithium Metal Anodes.. <i>Nano Letters</i> , <b>2021</b> ,	11.5	3
77	Oxygen-Deficient Ferric Oxide as an Electrochemical Cathode Catalyst for High-Energy Lithium-Sulfur Batteries. <i>Small</i> , <b>2020</b> , 16, e2000870	11	26
76	Aliovalent fluorine doping and anodization-induced amorphization enable bifunctional catalysts for efficient water splitting. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 10831-10838	13	15
75	Rational Design of a NiN Electrocatalyst to Accelerate Polysulfide Conversion in Lithium-Sulfur Batteries. <i>ACS Nano</i> , <b>2020</b> , 14, 6673-6682	16.7	103
74	Silicon Quantum Dots Induce Uniform Lithium Plating in a Sandwiched Metal Anode. <i>ChemElectroChem</i> , <b>2020</b> , 7, 2026-2032	4.3	3
73	Interfacial design principle of sodiophilicity-regulated interlayer deposition in a sandwiched sodium metal anode. <i>Energy Storage Materials</i> , <b>2020</b> , 31, 221-229	19.4	15
72	ZIF-derived ZnO/Sb composite scaffolded on carbon framework for Ni-Zn batteries. <i>Journal of Colloid and Interface Science</i> , <b>2020</b> , 579, 823-831	9.3	3
71	Electronic modulation of nickel phosphide by iron doping and its assembly on a graphene framework for efficient electrocatalytic water oxidation. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 824, 153913	5.7	10
70	Electrodeposition Technologies for Li-Based Batteries: New Frontiers of Energy Storage. <i>Advanced Materials</i> , <b>2020</b> , 32, e1903808	24	28
69	Multiple-interface relay catalysis: Enhancing alkaline hydrogen evolution through a combination of Volmer promoter and electrical-behavior regulation. <i>Chemical Engineering Journal</i> , <b>2020</b> , 397, 125457	14.7	18
68	A novel sulfur@void@hydrogel yolk-shell particle with a high sulfur content for volume-accommodable and polysulfide-adsorptive lithium-sulfur battery cathodes. <i>Nanotechnology</i> , <b>2020</b> , 31, 455402	3.4	5
67	Efficient Ni <sub>2</sub> Co <sub>4</sub> P <sub>3</sub> Nanowires Catalysts Enhance Ultrahigh-Loading Lithium Sulfur Conversion in a Microreactor-Like Battery. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1906661	15.6	77
66	In Situ Tuning of Defects and Phase Transition in Titanium Dioxide by Lithiothermic Reduction. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 5750-5758	9.5	12
65	An artificial sea urchin with hollow spines: improved mechanical and electrochemical stability in high-capacity Li-Ge batteries. <i>Nanoscale</i> , <b>2020</b> , 12, 5812-5816	7.7	2
64	Synergistic effect of ultrafine nano-Ru decorated cobalt carbonate hydroxides nanowires for accelerated alkaline hydrogen evolution reaction. <i>Electrochimica Acta</i> , <b>2020</b> , 331, 135367	6.7	27
63	Renewable Polysulfide Regulation by Versatile Films toward High-Loading Lithium-Sulfur Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 47590-47598	9.5	5
62	A metal organic foam-derived multi-layered and porous copper sulfide scaffold as sulfur host with multiple shields for preventing shuttle effect in lithium-sulfur batteries. <i>Electrochimica Acta</i> , <b>2020</b> , 356, 136853	6.7	8

61	A novel ultrathin single-crystalline Bi <sub>2</sub> O <sub>3</sub> nanosheet wrapped by reduced graphene oxide with improved electron transfer for Li storage. <i>Journal of Solid State Electrochemistry</i> , <b>2020</b> , 24, 2487-2497	2.6	2
60	Sb@SnTe nanocomposite as long-cycle stable anode material for lithium ion batteries. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 814, 152161	5.7	5
59	Enhanced synergistic catalysis by a novel triple-phase interface design of NiO/Ru@Ni for the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 2344-2350	13	43
58	A novel ternary sulfur/carbon@tin dioxide composite with polysulfides-adsorptive shell and conductive core as high-performance lithium-sulfur battery cathodes. <i>Applied Surface Science</i> , <b>2019</b> , 489, 462-469	6.7	11
57	A hollow Co <sub>2</sub> SiO <sub>4</sub> nanosheet Li-ion battery anode with high electrochemical performance and its dynamic lithiation/delithiation using in situ transmission electron microscopy technology. <i>Applied Surface Science</i> , <b>2019</b> , 490, 510-515	6.7	12
56	Conductivity and lithiophilicity gradients guide lithium deposition to mitigate short circuits. <i>Nature Communications</i> , <b>2019</b> , 10, 1896	17.4	150
55	Highly enhanced durability of a graphitic carbon layer decorated PtNi alloy electrocatalyst toward the oxygen reduction reaction. <i>Chemical Communications</i> , <b>2019</b> , 55, 5693-5696	5.8	26
54	(Co/Fe) <sub>4</sub> O <sub>4</sub> Cubane-Containing Nanorings Fabricated by Phosphorylating Cobalt Ferrite for Highly Efficient Oxygen Evolution Reaction. <i>ACS Catalysis</i> , <b>2019</b> , 9, 3878-3887	13.1	25
53	Three-Dimensionally Scaffolded Hydrogel@Sulfur Composite as a Binder-Free Polysulfides-Adsorptive Cathode for High-Performance Lithium-Sulfur Batteries. <i>Energy Technology</i> , <b>2019</b> , 7, 1801158	3.5	2
52	e occupancy as an effective descriptor for the catalytic activity of perovskite oxide-based peroxidase mimics. <i>Nature Communications</i> , <b>2019</b> , 10, 704	17.4	112
51	A bee pupa-infilled honeycomb structure-inspired LiMnSiO cathode for high volumetric energy density secondary batteries. <i>Chemical Communications</i> , <b>2019</b> , 55, 3582-3585	5.8	2
50	Carbon Nanotube@RuO as a High Performance Catalyst for Li-CO Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 5146-5151	9.5	45
49	A novel wheel-confined composite as cathode in Li-S batteries with high capacity retention. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 776, 504-510	5.7	8
48	Biomimetic Bipolar Microcapsules Derived from Staphylococcus aureus for Enhanced Properties of Lithium Sulfur Battery Cathodes. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1702373	21.8	77
47	Hydrogel assisted synthesis of Li <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> composite as high energy density and low-temperature stable secondary battery cathode. <i>Journal of Alloys and Compounds</i> , <b>2018</b> , 739, 837-847	5.7	10
46	Interlayer Lithium Plating in Au Nanoparticles Pillared Reduced Graphene Oxide for Lithium Metal Anodes. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1804133	15.6	105
45	Low Interface Energies Tune the Electrochemical Reversibility of Tin Oxide Composite Nanoframes as Lithium-Ion Battery Anodes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 36892-36901	9.5	14
44	In operando plasmonic monitoring of electrochemical evolution of lithium metal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 11168-11173	11.5	16

43	Nitrogen-Doped CoP Electrocatalysts for Coupled Hydrogen Evolution and Sulfur Generation with Low Energy Consumption. <i>Advanced Materials</i> , <b>2018</b> , 30, e1800140	24	224
42	Electroplating lithium transition metal oxides. <i>Science Advances</i> , <b>2017</b> , 3, e1602427	14.3	45
41	Carbon-Free O Cathode with Three-Dimensional Ultralight Nickel Foam-Supported Ruthenium Electrocatalysts for Li-O Batteries. <i>ChemSusChem</i> , <b>2017</b> , 10, 2714-2719	8.3	31
40	Multifunctional Co <sub>3</sub> S <sub>4</sub> @sulfur nanotubes for enhanced lithium-sulfur battery performance. <i>Nano Energy</i> , <b>2017</b> , 37, 7-14	17.1	254
39	Stable and conductive lead halide perovskites facilitated by X-type ligands. <i>Nanoscale</i> , <b>2017</b> , 9, 7252-7259	9.7	55
38	In situ surface engineering of nickel inverse opal for enhanced overall electrocatalytic water splitting. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 14873-14880	13	26
37	High-performance Li-ion Sn anodes with enhanced electrochemical properties using highly conductive TiN nanotubes array as a 3D multifunctional support. <i>Journal of Power Sources</i> , <b>2017</b> , 360, 189-195	8.9	14
36	Ultra-flexible lithium ion batteries fabricated by electrodeposition and solvothermal synthesis. <i>Electrochimica Acta</i> , <b>2017</b> , 237, 119-126	6.7	10
35	General Metal-Ion Mediated Method for Functionalization of Graphene Fiber. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 37022-37030	9.5	19
34	Porous-Nickel-Scaffolded Tin-Antimony Anodes with Enhanced Electrochemical Properties for Li/Na-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 25250-25256	9.5	27
33	Novel Co VO Anodes Using Ultralight 3D Metallic Current Collector and Carbon Sandwiched Structures for High-Performance Li-Ion Batteries. <i>Small</i> , <b>2017</b> , 13, 1701260	11	36
32	A novel tin hybrid nano-composite with double nets of carbon matrixes as a stable anode in lithium ion batteries. <i>Chemical Communications</i> , <b>2017</b> , 53, 13125-13128	5.8	7
31	3D Scaffolded Nickel-Tin Li-Ion Anodes with Enhanced Cyclability. <i>Advanced Materials</i> , <b>2016</b> , 28, 742-7	24	80
30	Electrochemical Fabrication of Monolithic Electrodes with Core/Shell Sandwiched Transition Metal Oxide/Oxyhydroxide for High-Performance Energy Storage. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 25888-25895	9.5	16
29	Structure design of NiCo <sub>2</sub> O <sub>4</sub> electrodes for high performance pseudocapacitors and lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 17394-17402	13	40
28	Fabrication and structural optimization of porous single-crystal Fe <sub>2</sub> O <sub>3</sub> microrices for high-performance lithium-ion battery anodes. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 16544-16550	13	25
27	Mechanically and chemically robust sandwich-structured C@Si@C nanotube array Li-ion battery anodes. <i>ACS Nano</i> , <b>2015</b> , 9, 1985-94	16.7	103
26	Hydrothermal fabrication of three-dimensional secondary battery anodes. <i>Advanced Materials</i> , <b>2014</b> , 26, 7096-101	24	46

25	Micromechanical devices with controllable stiffness fabricated from regular 3D porous materials. <i>Journal of Micromechanics and Microengineering</i> , <b>2014</b> , 24, 105006	2	14
24	Electrochemically tunable thermal conductivity of lithium cobalt oxide. <i>Nature Communications</i> , <b>2014</b> , 5, 4035	17.4	92
23	Stretchable batteries with self-similar serpentine interconnects and integrated wireless recharging systems. <i>Nature Communications</i> , <b>2013</b> , 4, 1543	17.4	978
22	High-power lithium ion microbatteries from interdigitated three-dimensional bicontinuous nanoporous electrodes. <i>Nature Communications</i> , <b>2013</b> , 4, 1732	17.4	449
21	High power rechargeable batteries. <i>Current Opinion in Solid State and Materials Science</i> , <b>2012</b> , 16, 186-198	18.2	145
20	Three-dimensional metal scaffold supported bicontinuous silicon battery anodes. <i>Nano Letters</i> , <b>2012</b> , 12, 2778-83	11.5	229
19	Three-dimensional bicontinuous ultrafast-charge and -discharge bulk battery electrodes. <i>Nature Nanotechnology</i> , <b>2011</b> , 6, 277-81	28.7	940
18	Query expansion for VHR image detection <b>2011</b> ,		1
17	SYNTHESIS OF NANOSPHERICAL AND ULTRALONG FIBROUS HYDROXYAPATITE AND REINFORCEMENT OF BIODEGRADABLE CHITOSAN/HYDROXYAPATITE COMPOSITE. <i>Modern Physics Letters B</i> , <b>2009</b> , 23, 3967-3976	1.6	11
16	Template-assisted three-dimensional nanolithography via geometrically irreversible processing. <i>Nano Letters</i> , <b>2009</b> , 9, 4424-7	11.5	30
15	One-Pot Synthesis and Hierarchical Assembly of Hollow Cu <sub>2</sub> O Microspheres with Nanocrystals-Composed Porous Multishell and Their Gas-Sensing Properties. <i>Advanced Functional Materials</i> , <b>2007</b> , 17, 2766-2771	15.6	481
14	Selected-control synthesis of hierarchical nickel structures. <i>Materials Research Bulletin</i> , <b>2007</b> , 42, 1450-1456	15.6	16
13	Low-cost synthesis of hollow Cu <sub>2</sub> O octahedra with more than one shell. <i>Materials Letters</i> , <b>2007</b> , 61, 4508-4511	15.6	11
12	Preparation of porous hydroxyapatite with interconnected pore architecture. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2007</b> , 18, 1825-9	4.5	20
11	Gas-sensing properties of hollow and hierarchical copper oxide microspheres. <i>Sensors and Actuators B: Chemical</i> , <b>2007</b> , 128, 293-298	8.5	71
10	Fabrication and magnetic properties of hierarchical porous hollow nickel microspheres. <i>Journal of Materials Chemistry</i> , <b>2006</b> , 16, 1212		65
9	Preparation of fluoride-substituted hydroxyapatite by a molten salt synthesis route. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2006</b> , 17, 691-5	4.5	15
8	Morphologically Controlled Synthesis of Hydroxyapatite with Partial Substitution of Fluorine. <i>Chemistry of Materials</i> , <b>2005</b> , 17, 5824-5830	9.6	81

7	Fabrication of beta-Ni(OH) <sub>2</sub> and NiO hollow spheres by a facile template-free process. <i>Chemical Communications</i> , <b>2005</b> , 5231-3	5.8	224
6	Glutamic Acid-mediated Synthesis of Ultralong Hydroxyapatite Nanoribbons under Hydrothermal Conditions. <i>Chemistry Letters</i> , <b>2005</b> , 34, 788-789	1.7	13
5	Mechanochemical Hydrothermal synthesis and characterization of fluoridated hydroxyapatite. <i>Materials Research Bulletin</i> , <b>2005</b> , 40, 1326-1334	5.1	37
4	Surfactant-assisted preparation of fluoride-substituted hydroxyapatite nanorods. <i>Materials Letters</i> , <b>2005</b> , 59, 3054-3058	3.3	24
3	Greener and higher conversion of esterification via interfacial photothermal catalysis. <i>Nature Sustainability</i> ,	22.1	3
2	Synergistic Role of Eg Filling and Anion Cation Hybridization in Enhancing the Oxygen Evolution Reaction Activity in Nickelates. <i>ACS Applied Energy Materials</i> ,	6.1	3
1	Engineering Polymer Glue towards 90% Zinc Utilization for 1000 Hours to Make High-Performance Zn-Ion Batteries. <i>Advanced Functional Materials</i> , 2107652	15.6	27