

# Hongzhang Zhang

## List of Publications by Year in descending order

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88  
papers

5,930  
citations

61857

43  
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71532

76  
g-index

89  
all docs

89  
docs citations

89  
times ranked

5840  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ion exchange membranes for vanadium redox flow battery (VRB) applications. Energy and Environmental Science, 2011, 4, 1147.	15.6	856
2	Porous membranes in secondary battery technologies. Chemical Society Reviews, 2017, 46, 2199-2236.	18.7	357
3	Promoting the Transformation of $\text{Li}_2\text{S}$ to $\text{Li}_2\text{S}_2$ : Significantly Increasing Utilization of Active Materials for High-Sulfur Loading Li-S Batteries. Advanced Materials, 2019, 31, e1901220.	11.1	303
4	Nanofiltration (NF) membranes: the next generation separators for all vanadium redox flow batteries (VRBs)? Energy and Environmental Science, 2011, 4, 1676.	15.6	292
5	Advanced porous membranes with ultra-high selectivity and stability for vanadium flow batteries. Energy and Environmental Science, 2016, 9, 441-447.	15.6	265
6	Preparation and characterization of Nafion/SPEEK layered composite membrane and its application in vanadium redox flow battery. Journal of Membrane Science, 2008, 325, 553-558.	4.1	218
7	Silica modified nanofiltration membranes with improved selectivity for redox flow battery application. Energy and Environmental Science, 2012, 5, 6299-6303.	15.6	171
8	Nafion/polyvinylidene fluoride blend membranes with improved ion selectivity for vanadium redox flow battery application. Journal of Power Sources, 2011, 196, 5737-5741.	4.0	161
9	Phase Inversion: A Universal Method to Create High-Performance Porous Electrodes for Nanoparticle-Based Energy Storage Devices. Advanced Functional Materials, 2016, 26, 8427-8434.	7.8	132
10	Advanced charged membranes with highly symmetric spongy structures for vanadium flow battery application. Energy and Environmental Science, 2013, 6, 776.	15.6	123
11	The Applications of Water-in-Salt Electrolytes in Electrochemical Energy Storage Devices. Advanced Functional Materials, 2021, 31, 2006749.	7.8	111
12	$\text{LiNO}_3$ -free electrolyte for Li-S battery: A solvent of choice with low $K_{sp}$ of polysulfide and low dendrite of lithium. Nano Energy, 2017, 39, 262-272.	8.2	104
13	Sulfur embedded in one-dimensional French fries-like hierarchical porous carbon derived from a metal-organic framework for high performance lithium-sulfur batteries. Journal of Materials Chemistry A, 2015, 3, 15314-15323.	5.2	101
14	Hierarchical Micron-Sized Mesoporous/Macroporous Graphene with Well-Tuned Surface Oxygen Chemistry for High Capacity and Cycling Stability $\text{Li}_2\text{O}_2$ Battery. ACS Applied Materials & Interfaces, 2015, 7, 3389-3397.	4.0	96
15	Poly(tetrafluoroethylene) reinforced sulfonated poly(ether ether ketone) membranes for vanadium redox flow battery application. Journal of Power Sources, 2012, 208, 421-425.	4.0	92
16	1-D oriented cross-linking hierarchical porous carbon fibers as a sulfur immobilizer for high performance lithium-sulfur batteries. Journal of Materials Chemistry A, 2016, 4, 5965-5972.	5.2	92
17	Hydrophobic asymmetric ultrafiltration PVDF membranes: an alternative separator for VFB with excellent stability. Physical Chemistry Chemical Physics, 2013, 15, 1766-1771.	1.3	87
18	Lithium Sulfur Primary Battery with Super High Energy Density: Based on the Cauliflower-like Structured C/S Cathode. Scientific Reports, 2015, 5, 14949.	1.6	86

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19	Anion-Conductive Membranes with Ultralow Vanadium Permeability and Excellent Performance in Vanadium Flow Batteries. <i>ChemSusChem</i> , 2013, 6, 328-335.	3.6	79
20	Long Cycle Life Lithium Metal Batteries Enabled with Upright Lithium Anode. <i>Advanced Functional Materials</i> , 2019, 29, 1806752.	7.8	78
21	Ultrafast and Stable Li(De)intercalation in a Large Single Crystal $\text{HfNb}_2\text{O}_5$ Anode via Optimizing the Homogeneity of Electron and Ion Transport. <i>Advanced Materials</i> , 2020, 32, e2001001.	11.1	78
22	The Challenge of Lithium Metal Anodes for Practical Applications. <i>Small Methods</i> , 2019, 3, 1800551.	4.6	74
23	Porous poly (ether sulfone) membranes with tunable morphology: Fabrication and their application for vanadium flow battery. <i>Journal of Power Sources</i> , 2013, 233, 202-208.	4.0	71
24	Towards the understanding of acetonitrile suppressing salt precipitation mechanism in a water-in-salt electrolyte for low-temperature supercapacitors. <i>Journal of Materials Chemistry A</i> , 2020, 8, 17998-18006.	5.2	69
25	All-NASICON LVP-LTP aqueous lithium ion battery with excellent stability and low-temperature performance. <i>Electrochimica Acta</i> , 2018, 278, 279-289.	2.6	67
26	Sulfur impregnated in a mesoporous covalent organic framework for high performance lithium-sulfur batteries. <i>RSC Advances</i> , 2015, 5, 86137-86143.	1.7	66
27	Steam-Etched Spherical Carbon/Sulfur Composite with High Sulfur Capacity and Long Cycle Life for Li/S Battery Application. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 3590-3599.	4.0	62
28	Carbon-Free CoO Mesoporous Nanowire Array Cathode for High-Performance Aprotic Li-O <sub>2</sub> Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 23182-23189.	4.0	62
29	Trithiocyanuric acid derived g-C <sub>3</sub> N <sub>4</sub> for anchoring the polysulfide in Li-S batteries application. <i>Journal of Energy Chemistry</i> , 2020, 43, 71-77.	7.1	61
30	Polysulfide Stabilization: A Pivotal Strategy to Achieve High Energy Density Li-S Batteries with Long Cycle Life. <i>Advanced Functional Materials</i> , 2018, 28, 1704987.	7.8	60
31	A novel solvent-template method to manufacture nano-scale porous membranes for vanadium flow battery applications. <i>Journal of Materials Chemistry A</i> , 2014, 2, 9524.	5.2	57
32	Rational design of a nested pore structure sulfur host for fast Li/S batteries with a long cycle life. <i>Journal of Materials Chemistry A</i> , 2016, 4, 1653-1662.	5.2	57
33	Water in salt/ionic liquid-electrolyte for 2.8V aqueous lithium-ion capacitor. <i>Science Bulletin</i> , 2020, 65, 1812-1822.	4.3	56
34	Rational design and synthesis of LiTi <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> x <sub>2</sub> F <sub>x</sub> anode materials for high-performance aqueous lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 593-599.	5.2	53
35	Crosslinkable sulfonated poly (diallyl-bisphenol ether ether ketone) membranes for vanadium redox flow battery application. <i>Journal of Power Sources</i> , 2012, 217, 309-315.	4.0	52
36	Porous membrane with improved dendrite resistance for high-performance lithium metal-based battery. <i>Journal of Membrane Science</i> , 2020, 605, 118108.	4.1	52

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37	Hydrophilic porous poly(sulfone) membranes modified by UV-initiated polymerization for vanadium flow battery application. <i>Journal of Membrane Science</i> , 2014, 454, 478-487.	4.1	49
38	Shapeable electrodes with extensive materials options and ultra-high loadings for energy storage devices. <i>Nano Energy</i> , 2017, 39, 418-428.	8.2	49
39	Layer-by-Layer Assembled C/S Cathode with Trace Binder for Li <sup>+</sup> S Battery Application. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 25002-25006.	4.0	48
40	The catalytic effect of bismuth for VO <sub>2</sub> + /VO <sub>2</sub> <sup>+</sup> and V <sup>3+</sup> /V <sup>2+</sup> redox couples in vanadium flow batteries. <i>Journal of Energy Chemistry</i> , 2017, 26, 1-7.	7.1	48
41	Low-Cost Room-Temperature Synthesis of NaV <sub>3</sub> O <sub>8</sub> ·1.69H <sub>2</sub> O Nanobelts for Mg Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 4757-4766.	4.0	48
42	A Bi-doped Li <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> /C cathode material with an enhanced high-rate capacity and long cycle stability for lithium ion batteries. <i>Dalton Transactions</i> , 2015, 44, 17579-17586.	1.6	46
43	Morphology and Electrochemical Properties of Perfluorosulfonic Acid Ionomers for Vanadium Flow Battery Applications: Effect of Side-Chain Length. <i>ChemSusChem</i> , 2013, 6, 1262-1269.	3.6	45
44	Properties of Polymer Electrolyte Membranes Based on Poly(Aryl Ether Benzimidazole) and Sulphonated Poly(Aryl Ether Benzimidazole) for High Temperature PEMFCs. <i>Fuel Cells</i> , 2010, 10, 754-761.	1.5	43
45	Fast kinetics of Mg <sup>2+</sup> /Li <sup>+</sup> hybrid ions in a polyanion Li <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> cathode in a wide temperature range. <i>Journal of Materials Chemistry A</i> , 2019, 7, 9968-9976.	5.2	40
46	Solvent responsive silica composite nanofiltration membrane with controlled pores and improved ion selectivity for vanadium flow battery application. <i>Journal of Power Sources</i> , 2015, 274, 1126-1134.	4.0	38
47	Synthesis and electrochemical properties of Li <sub>3</sub> V <sub>2</sub> (P <sub>1-x</sub> B <sub>x</sub> O <sub>4</sub> ) <sub>3</sub> /C cathode materials. <i>Journal of Materials Chemistry A</i> , 2015, 3, 19469-19475.	5.2	37
48	Niobium-based oxide anodes toward fast and safe energy storage: a review. <i>Materials Today Nano</i> , 2020, 11, 100082.	2.3	36
49	Iridium incorporated into deoxygenated hierarchical graphene as a high-performance cathode for rechargeable Li <sup>+</sup> O <sub>2</sub> batteries. <i>Journal of Materials Chemistry A</i> , 2015, 3, 14556-14561.	5.2	35
50	Membranes with well-defined ions transport channels fabricated via solvent-responsive layer-by-layer assembly method for vanadium flow battery. <i>Scientific Reports</i> , 2014, 4, 4016.	1.6	34
51	Fabrication of a nano-Li <sup>+</sup> -channel interlayer for high performance Li <sup>+</sup> S battery application. <i>RSC Advances</i> , 2015, 5, 26273-26280.	1.7	33
52	Phase-change enabled 2D Li <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> /C submicron sheets for advanced lithium-ion batteries. <i>Journal of Power Sources</i> , 2016, 326, 203-210.	4.0	31
53	Practical Challenges in Employing Graphene for Lithium-Ion Batteries and Beyond. <i>Small Methods</i> , 2017, 1, 1700099.	4.6	31
54	Multi-functional nanowall arrays with unrestricted Li <sup>+</sup> transport channels and an integrated conductive network for high-areal-capacity Li <sup>+</sup> S batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 22958-22965.	5.2	31

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55	LiCr(MoO <sub>4</sub> ) <sub>2</sub> : a new high specific capacity cathode material for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 567-573.	5.2	25
56	Quasi-Stable Electroless Ni-P Deposition: A Pivotal Strategy to Create Flexible Li-S Pouch Batteries with Bench Mark Cycle Stability and Specific Capacity. <i>Advanced Functional Materials</i> , 2018, 28, 1707272.	7.8	22
57	Vertically aligned laminate porous electrode: Amaze the performance with a maze structure. <i>Energy Storage Materials</i> , 2019, 19, 88-93.	9.5	22
58	A simple pre-sodiation strategy to improve the performance and energy density of sodium ion batteries with Na <sub>4</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> as the cathode material. <i>Journal of Materials Chemistry A</i> , 2020, 8, 23368-23375.	5.2	22
59	Li <sub>3</sub> Cr(MoO <sub>4</sub> ) <sub>3</sub> : a NASICON-type high specific capacity cathode material for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 19107-19112.	5.2	21
60	New insights into the formation of silicon-oxygen layer on lithium metal anode via in situ reaction with tetraethoxysilane. <i>Journal of Energy Chemistry</i> , 2021, 56, 14-22.	7.1	18
61	A Microsized Cage-like Sulfur/Carbon Composite for a Lithium/Sulfur Battery with Excellent Performance. <i>ChemPlusChem</i> , 2014, 79, 919-924.	1.3	17
62	Polymer electrolyte based on chemically stable and highly conductive alkali-doped polyoxadiazole for direct borohydride fuel cell. <i>Electrochemistry Communications</i> , 2011, 13, 1009-1012.	2.3	16
63	Li <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> @ Biomorphic Carbon for High-Rate and Low-Temperature Lithium Ion Batteries. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700686.	1.9	16
64	Effect of the pore length and orientation upon the electrochemical capacitive performance of ordered mesoporous carbons. <i>Journal of Energy Chemistry</i> , 2017, 26, 121-128.	7.1	15
65	Anchor and activate sulfide with LiTi <sub>2</sub> (PO <sub>4</sub> ) <sub>2.88</sub> F <sub>0.12</sub> nano spheres for lithium sulfur battery application. <i>Journal of Materials Chemistry A</i> , 2018, 6, 7639-7648.	5.2	15
66	Principle of progressively and strongly immobilizing polysulfides on polyoxovanadate clusters for excellent Li-S batteries application. <i>Nano Energy</i> , 2020, 71, 104596.	8.2	15
67	Affinity Laminated Chromatography Membrane Built in Electrodes for Suppressing Polysulfide Shuttling in Lithium-Sulfur Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 1903233.	10.2	14
68	Stop Four Gaps with One Bush: Versatile Hierarchical Polybenzimidazole Nanoporous Membrane for Highly Durable Li-S Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 55809-55819.	4.0	14
69	One-pot synthesis of 3D hierarchical porous Li <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> /C nanocomposites for high-rate and long-life lithium ion batteries. <i>RSC Advances</i> , 2017, 7, 38415-38423.	1.7	13
70	A novel aqueous Li <sup>+</sup> (or Na <sup>+</sup> )/Br <sup>-</sup> hybrid-ion battery with super high areal capacity and energy density. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13050-13059.	5.2	13
71	Bi <sub>2</sub> Mn <sub>4</sub> O <sub>10</sub> : a new mullite-type anode material for lithium-ion batteries. <i>Dalton Transactions</i> , 2018, 47, 7739-7746.	1.6	11
72	Controlled synthesis of pure-phase metastable tetragonal Nb <sub>2</sub> O <sub>5</sub> anode material for high-performance lithium batteries. <i>Journal of Solid State Chemistry</i> , 2021, 299, 122136.	1.4	11

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73	A novel facile and fast hydrothermal-assisted method to synthesize sulfur/carbon composites for high-performance lithium-sulfur batteries. RSC Advances, 2016, 6, 81950-81957.	1.7	10
74	Nanofiltration Membranes for Vanadium Flow Battery Application. ECS Transactions, 2013, 53, 65-68.	0.3	9
75	Tri-modal mesoporous carbon/sulfur nanocomposite for high performance Li-S battery. Electrochimica Acta, 2016, 190, 322-328.	2.6	9
76	Room temperature non-aqueous ferrocene/lithium semi-liquid battery with advanced C-rate capability for energy storage application. International Journal of Hydrogen Energy, 2015, 40, 16429-16433.	3.8	8
77	An all-weather Li/LiV <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> primary battery with improved shelf-life based on the <i>in situ</i> modification of the cathode/electrolyte interface. Journal of Materials Chemistry A, 2020, 8, 16951-16959.	5.2	8
78	K <sub>2</sub> Fe <sub>3</sub> (SO <sub>4</sub> ) <sub>3</sub> (OH) <sub>2</sub> (H <sub>2</sub> O) <sub>2</sub> : A new high-performance hydroxysulfate cathode material for alkali metal ion batteries. Journal of Power Sources, 2020, 452, 227835.	4.0	8
79	The numerical simulation of dynamic performance in the vanadium flow battery. Electrochimica Acta, 2014, 118, 51-57.	2.6	7
80	Polysulfide-bromine flow batteries (PBBs) for medium- and large-scale energy storage. , 2015, , 317-327.		7
81	Li <sub>0.93</sub> V <sub>2.07</sub> BO <sub>5</sub> : a new nano-rod cathode material for lithium ion batteries. Nanoscale, 2018, 10, 1997-2003.	2.8	6
82	Vapour induced phase inversion: preparing high performance self-standing sponge-like electrodes with a sulfur loading of over 10 Åmg cm <sup>-2</sup> . Journal of Materials Chemistry A, 2018, 6, 24066-24070.	5.2	5
83	A rational designed high-rate CuxTi <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> @Cu/C core-composite-shell structure for aqueous lithium ion batteries. Journal of Power Sources, 2020, 468, 228248.	4.0	4
84	Fluorinated Graphite (FG)-Modified Li-S Batteries with Superhigh Primary Specific Capacity and Improved Cycle Stability. ACS Applied Materials & Interfaces, 2021, 13, 52717-52726.	4.0	4
85	Sb-Doped high-voltage LiCoO <sub>2</sub> enabled improved structural stability and rate capability for high-performance Li-ion batteries. Chemical Communications, 2022, 58, 5379-5382.	2.2	4
86	Li-S and Li-O <sub>2</sub> Batteries with High Specific Energy. Springer Briefs in Molecular Science, 2017, , 1-48.	0.1	3
87	3D-metal-embroidered electrodes: dreaming for next generation flexible and personalizable energy storage devices. Science Bulletin, 2020, 65, 917-925.	4.3	2
88	Poly(arylene ether sulfone) Membrane Crosslinked with Bi-Guanidinium for Vanadium Flow Battery Applications. Macromolecular Chemistry and Physics, 0, , 2100338.	1.1	1