Hongzhang Zhang

List of Publications by Year
in descending order

88 papers	5,930 citations	61857 43 h-index	71532 76 g-index
89 all docs	89 docs citations	89 times ranked	5840 citing authors

#	Article	IF	Citations
1	Sb-Doped high-voltage LiCoO₂ enabled improved structural stability and rate capability for high-performance Li-ion batteries. Chemical Communications, 2022, 58, 5379-5382.	2.2	4
2	New insights into the formation of siliconâ€“oxygen layer on lithium metal anode via in situ reaction with tetraethoxysilane. Journal of Energy Chemistry, 2021, 56, 14-22.	7.1	18
3	The Applications of Waterâ€•inâ€•Salt Electrolytes in Electrochemical Energy Storage Devices. Advanced Functional Materials, 2021, 31, 2006749.	7.8	111
4	Controlled synthesis of pure-phase metastable tetragonal Nb2O5 anode material for high-performance lithium batteries. Journal of Solid State Chemistry, 2021, 299, 122136.	1.4	11
5	Fluorinated Graphite (FG)-Modified Liâ€“S Batteries with Superhigh Primary Specific Capacity and Improved Cycle Stability. ACS Applied Materials & Interfaces, 2021, 13, 52717-52726.	4.0	4
6	Trithiocyanuric acid derived gâ€“C3N4 for anchoring the polysulfide in Liâ€“S batteries application. Journal of Energy Chemistry, 2020, 43, 71-77.	7.1	61
7	Affinity Laminated Chromatography Membrane Builtâ€•in Electrodes for Suppressing Polysulfide Shuttling in Lithiumâ€“Sulfur Batteries. Advanced Energy Materials, 2020, 10, 1903233.	10.2	14
8	A simple pre-sodiation strategy to improve the performance and energy density of sodium ion batteries with Na₄V₂(PO₄)₃ as the cathode material. Journal of Materials Chemistry A, 2020, 8, 23368-23375.	5.2	22
9	An all-weather Li/LiV₂(PO₄)₃ 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
10	Towards the understanding of acetonitrile suppressing salt precipitation mechanism in a water-in-salt electrolyte for low-temperature supercapacitors. Journal of Materials Chemistry A, 2020, 8, 17998-18006.	5.2	69
11	Stop Four Gaps with One Bush: Versatile Hierarchical Polybenzimidazole Nanoporous Membrane for Highly Durable Liâ€“S Battery. ACS Applied Materials & Interfaces, 2020, 12, 55809-55819.	4.0	14
12	A rational designed high-rate CuxTi2(PO4)3@Cu/C core-composite-shell structure for aqueous lithium ion batteries. Journal of Power Sources, 2020, 468, 228248.	4.0	4
13	â€œWater in salt/ionic liquidâ€•electrolyte for 2.8Â V aqueous lithium-ion capacitor. Science Bulletin, 2020, 65, 1812-1822.	4.3	56
14	K2Fe3(SO4)3(OH)2(H2O)2: A new high-performance hydroxysulfate cathode material for alkali metal ion batteries. Journal of Power Sources, 2020, 452, 227835.	4.0	8
15	Principle of progressively and strongly immobilizing polysulfides on polyoxovanadate clusters for excellent Liâ€“S batteries application. Nano Energy, 2020, 71, 104596.	8.2	15
16	Niobium-based oxide anodes toward fast and safe energy storage: a review. Materials Today Nano, 2020, 11, 100082.	2.3	36
17	Porous membrane with improved dendrite resistance for high-performance lithium metal-based battery. Journal of Membrane Science, 2020, 605, 118108.	4.1	52
18	Ultrafast and Stable Liâ€(De)intercalation in a Large Single Crystal Hâ€Nb₂O₅ Anode via Optimizing the Homogeneity of Electron and Ion Transport. Advanced Materials, 2020, 32, e2001001.	11.1	78

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19	3D-metal-embroidered electrodes: dreaming for next generation flexible and personalizable energy storage devices. Science Bulletin, 2020, 65, 917-925.	4.3	2
20	LiCr(MoO₄)₂: a new high specific capacity cathode material for lithium ion batteries. Journal of Materials Chemistry A, 2019, 7, 567-573.	5.2	25
21	Promoting the Transformation of Li₂S₂ to Li₂S: Significantly Increasing Utilization of Active Materials for Highâ€Sulfurâ€Loading Liâ€“S Batteries. Advanced Materials, 2019, 31, e1901220.	11.1	303
22	A novel aqueous Li⁺(or Na⁺)/Br^{âˆ’}hybrid-ion battery with super high areal capacity and energy density. Journal of Materials Chemistry A, 2019, 7, 13050-13059.	5.2	13
23	The Challenge of Lithium Metal Anodes for Practical Applications. Small Methods, 2019, 3, 1800551.	4.6	74
24	Fast kinetics of Mg²⁺/Li⁺ hybrid ions in a polyanion Li₃V₂(PO₄)₃ cathode in a wide temperature range. Journal of Materials Chemistry A, 2019, 7, 9968-9976.	5.2	40
25	Long Cycle Life Lithium Metal Batteries Enabled with Upright Lithium Anode. Advanced Functional Materials, 2019, 29, 1806752.	7.8	78
26	Vertically aligned laminate porous electrode: Amaze the performance with a maze structure. Energy Storage Materials, 2019, 19, 88-93.	9.5	22
27	Quasiâ€Stable Electroless Niâ€“P Deposition: A Pivotal Strategy to Create Flexible Liâ€“S Pouch Batteries with Bench Mark Cycle Stability and Specific Capacity. Advanced Functional Materials, 2018, 28, 1707272.	7.8	22
28	Low-Cost Room-Temperature Synthesis of NaV₃O₈Â·1.69H₂O Nanobelts for Mg Batteries. ACS Applied Materials & Interfaces, 2018, 10, 4757-4766.	4.0	48
29	Polysulfide Stabilization: A Pivotal Strategy to Achieve High Energy Density Liâ€“S Batteries with Long Cycle Life. Advanced Functional Materials, 2018, 28, 1704987.	7.8	60
30	Li_{0.93}V_{2.07}BO₅: a new nano-rod cathode material for lithium ion batteries. Nanoscale, 2018, 10, 1997-2003.	2.8	6
31	Anchor and activate sulfide with LiTi₂(PO₄)_{2.88}F_{0.12} nano spheres for lithium sulfur battery application. Journal of Materials Chemistry A, 2018, 6, 7639-7648.	5.2	15
32	Multi-functional nanowall arrays with unrestricted Li⁺ transport channels and an integrated conductive network for high-areal-capacity Liâ€“S batteries. Journal of Materials Chemistry A, 2018, 6, 22958-22965.	5.2	31
33	Vapour induced phase inversion: preparing high performance self-standing sponge-like electrodes with a sulfur loading of over 10Âmg cmâˆ’2. Journal of Materials Chemistry A, 2018, 6, 24066-24070.	5.2	5
34	Li3Cr(MoO4)3: a NASICON-type high specific capacity cathode material for lithium ion batteries. Journal of Materials Chemistry A, 2018, 6, 19107-19112.	5.2	21
35	Bi₂Mn₄O₁₀: a new mullite-type anode material for lithium-ion batteries. Dalton Transactions, 2018, 47, 7739-7746.	1.6	11
36	All-NASICON LVP-LTP aqueous lithium ion battery with excellent stability and low-temperature performance. Electrochimica Acta, 2018, 278, 279-289.	2.6	67

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37	Practical Challenges in Employing Graphene for Lithium-Ion Batteries and Beyond. Small Methods, 2017, 1, 1700099.	4.6	31
38	Porous membranes in secondary battery technologies. Chemical Society Reviews, 2017, 46, 2199-2236.	18.7	357
39	â€œThreeâ€inâ€One:â€•A New 3D Hybrid Structure of Li₃V₂(PO₄)₃ @ Biomorphic Carbon for Highâ€Rate and Lowâ€Temperature Lithium Ion Batteries. Advanced Materials Interfaces, 2017, 4, 1700686.	1.9	16
40	Shapeable electrodes with extensive materials options and ultra-high loadings for energy storage devices. Nano Energy, 2017, 39, 418-428.	8.2	49
41	One-pot synthesis of 3D hierarchical porous Li₃V₂(PO₄)₃/C nanocomposites for high-rate and long-life lithium ion batteries. RSC Advances, 2017, 7, 38415-38423.	1.7	13
42	LiNO3-free electrolyte for Li-S battery: A solvent of choice with low Ksp of polysulfide and low dendrite of lithium. Nano Energy, 2017, 39, 262-272.	8.2	104
43	Liâ€"S and Liâ€"O2 Batteries with High Specific Energy. Springer Briefs in Molecular Science, 2017, , 1-48.	0.1	3
44	The catalytic effect of bismuth for VO 2 + /VO 2+ and V 3+ /V 2+ redox couples in vanadium flow batteries. Journal of Energy Chemistry, 2017, 26, 1-7.	7.1	48
45	Rational design and synthesis of LiTi₂(PO₄)_{3â^'x}F_x anode materials for high-performance aqueous lithium ion batteries. Journal of Materials Chemistry A, 2017, 5, 593-599.	5.2	53
46	Effect of the pore length and orientation upon the electrochemical capacitive performance of ordered mesoporous carbons. Journal of Energy Chemistry, 2017, 26, 121-128.	7.1	15
47	Phase Inversion: A Universal Method to Create Highâ€Performance Porous Electrodes for Nanoparticleâ€Based Energy Storage Devices. Advanced Functional Materials, 2016, 26, 8427-8434.	7.8	132
48	A novel facile and fast hydrothermal-assisted method to synthesize sulfur/carbon composites for high-performance lithiumâ€"sulfur batteries. RSC Advances, 2016, 6, 81950-81957.	1.7	10
49	Phase-change enabled 2D Li3V2(PO4)3/C submicron sheets for advanced lithium-ion batteries. Journal of Power Sources, 2016, 326, 203-210.	4.0	31
50	Rational design of a nested pore structure sulfur host for fast Li/S batteries with a long cycle life. Journal of Materials Chemistry A, 2016, 4, 1653-1662.	5.2	57
51	1-D oriented cross-linking hierarchical porous carbon fibers as a sulfur immobilizer for high performance lithiumâ€"sulfur batteries. Journal of Materials Chemistry A, 2016, 4, 5965-5972.	5.2	92
52	Tri-modal mesoporous carbon/sulfur nanocomposite for high performance Li-S battery. Electrochimica Acta, 2016, 190, 322-328.	2.6	9
53	Advanced porous membranes with ultra-high selectivity and stability for vanadium flow batteries. Energy and Environmental Science, 2016, 9, 441-447.	15.6	265
54	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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55	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
56	Polysulfide-bromine flow batteries (PBBs) for medium- and large-scale energy storage. , 2015, , 317-327.		7
57	Steam-Etched Spherical Carbon/Sulfur Composite with High Sulfur Capacity and Long Cycle Life for Li/S Battery Application. ACS Applied Materials & Interfaces, 2015, 7, 3590-3599.	4.0	62
58	Hierarchical Micron-Sized Mesoporous/Macroporous Graphene with Well-Tuned Surface Oxygen Chemistry for High Capacity and Cycling Stability Liâ€“O₂ Battery. ACS Applied Materials & Interfaces, 2015, 7, 3389-3397.	4.0	96
59	Solvent responsive silica composite nanofiltration membrane with controlled pores and improved ion selectivity for vanadium flow battery application. Journal of Power Sources, 2015, 274, 1126-1134.	4.0	38
60	Fabrication of a nano-Li⁺-channel interlayer for high performance Liâ€“S battery application. RSC Advances, 2015, 5, 26273-26280.	1.7	33
61	Iridium incorporated into deoxygenated hierarchical graphene as a high-performance cathode for rechargeable Liâ€“O₂batteries. Journal of Materials Chemistry A, 2015, 3, 14556-14561.	5.2	35
62	Sulfur embedded in one-dimensional French fries-like hierarchical porous carbon derived from a metalâ€“organic framework for high performance lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2015, 3, 15314-15323.	5.2	101
63	Carbon-Free CoO Mesoporous Nanowire Array Cathode for High-Performance Aprotic Liâ€“O₂ Batteries. ACS Applied Materials & Interfaces, 2015, 7, 23182-23189.	4.0	62
64	Sulfur impregnated in a mesoporous covalent organic framework for high performance lithiumâ€“sulfur batteries. RSC Advances, 2015, 5, 86137-86143.	1.7	66
65	Synthesis and electrochemical properties of Li₃V₂(P_{1âˆ’x}B_xO₄)₃/C cathode materials. Journal of Materials Chemistry A, 2015, 3, 19469-19475.	5.2	37
66	A Bi-doped Li₃V₂(PO₄)₃/C cathode material with an enhanced high-rate capacity and long cycle stability for lithium ion batteries. Dalton Transactions, 2015, 44, 17579-17586.	1.6	46
67	Layer-by-Layer Assembled C/S Cathode with Trace Binder for Liâ€“S Battery Application. ACS Applied Materials & Interfaces, 2015, 7, 25002-25006.	4.0	48
68	A Microsized Cagelike Sulfur/Carbon Composite for a Lithium/Sulfur Battery with Excellent Performance. ChemPlusChem, 2014, 79, 919-924.	1.3	17
69	The numerical simulation of dynamic performance in the vanadium flow battery. Electrochimica Acta, 2014, 118, 51-57.	2.6	7
70	A novel solvent-template method to manufacture nano-scale porous membranes for vanadium flow battery applications. Journal of Materials Chemistry A, 2014, 2, 9524.	5.2	57
71	Hydrophilic porous poly(sulfone) membranes modified by UV-initiated polymerization for vanadium flow battery application. Journal of Membrane Science, 2014, 454, 478-487.	4.1	49
72	Membranes with well-defined ions transport channels fabricated via solvent-responsive layer-by-layer assembly method for vanadium flow battery. Scientific Reports, 2014, 4, 4016.	1.6	34

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73	Anionâ€Conductive Membranes with Ultralow Vanadium Permeability and Excellent Performance in Vanadium Flow Batteries. ChemSusChem, 2013, 6, 328-335.	3.6	79
74	Hydrophobic asymmetric ultrafiltration PVDF membranes: an alternative separator for VFB with excellent stability. Physical Chemistry Chemical Physics, 2013, 15, 1766-1771.	1.3	87
75	Advanced charged membranes with highly symmetric spongy structures for vanadium flow battery application. Energy and Environmental Science, 2013, 6, 776.	15.6	123
76	Porous poly (ether sulfone) membranes with tunable morphology: Fabrication and their application for vanadium flow battery. Journal of Power Sources, 2013, 233, 202-208.	4.0	71
77	Morphology and Electrochemical Properties of Perfluorosulfonic Acid Ionomers for Vanadium Flow Battery Applications: Effect of Sideâ€Chain Length. ChemSusChem, 2013, 6, 1262-1269.	3.6	45
78	Nanofiltration Membranes for Vanadium Flow Battery Application. ECS Transactions, 2013, 53, 65-68.	0.3	9
79	Silica modified nanofiltration membranes with improved selectivity for redox flow battery application. Energy and Environmental Science, 2012, 5, 6299-6303.	15.6	171
80	Crosslinkable sulfonated poly (diallyl-bisphenol ether ether ketone) membranes for vanadium redox flow battery application. Journal of Power Sources, 2012, 217, 309-315.	4.0	52
81	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
82	Nanofiltration (NF) membranes: the next generation separators for all vanadium redox flow batteries (VRBs)?. Energy and Environmental Science, 2011, 4, 1676.	15.6	292
83	Ion exchange membranes for vanadium redox flow battery (VRB) applications. Energy and Environmental Science, 2011, 4, 1147.	15.6	856
84	Polymer electrolyte based on chemically stable and highly conductive alkali-doped polyoxadiazole for direct borohydride fuel cell. Electrochemistry Communications, 2011, 13, 1009-1012.	2.3	16
85	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
86	Properties of Polymer Electrolyte Membranes Based on Poly(Aryl Ether Benzimidazole) and Sulphonated Poly(Aryl Ether Benzimidazole) for High Temperature PEMFCs. Fuel Cells, 2010, 10, 754-761.	1.5	43
87	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
88	Poly(arylene ether sulfone) Membrane Crosslinked with Biâ€Guanidinium for Vanadium Flow Battery Applications. Macromolecular Chemistry and Physics, 0, , 2100338.	1.1	1