Huamin Zhang

List of Publications by Year
in descending order

217 papers	15,949 citations	10956 71 h-index	20307 116 g-index
221 all docs	221 docs citations	221 times ranked	10603 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	Vanadium Flow Battery for Energy Storage: Prospects and Challenges. Journal of Physical Chemistry Letters, 2013, 4, 1281-1294.	2.1	443
3	An aqueous hybrid electrolyte for low-temperature zinc-based energy storage devices. Energy and Environmental Science, 2020, 13, 3527-3535.	15.6	442
4	Porous membranes in secondary battery technologies. Chemical Society Reviews, 2017, 46, 2199-2236.	18.7	357
5	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
6	Structural Design of Lithiumâ€“Sulfur Batteries: From Fundamental Research to Practical Application. Electrochemical Energy Reviews, 2018, 1, 239-293.	13.1	298
7	Nanofiltration (NF) membranes: the next generation separators for all vanadium redox flow batteries (VRBs)?. Energy and Environmental Science, 2011, 4, 1676.	15.6	292
8	Inhibition of Zinc Dendrite Growth in Zincâ€Based Batteries. ChemSusChem, 2018, 11, 3996-4006.	3.6	291
9	Imidazolium functionalized polysulfone anion exchange membrane for fuel cell application. Journal of Materials Chemistry, 2011, 21, 12744.	6.7	281
10	Advanced porous membranes with ultra-high selectivity and stability for vanadium flow batteries. Energy and Environmental Science, 2016, 9, 441-447.	15.6	265
11	Dendriteâ€Free Zinc Deposition Induced by Tinâ€Modified Multifunctional 3D Host for Stable Zincâ€Based Flow Battery. Advanced Materials, 2020, 32, e1906803.	11.1	263
12	Carbon paper coated with supported tungsten trioxide as novel electrode for all-vanadium flow battery. Journal of Power Sources, 2012, 218, 455-461.	4.0	207
13	Characteristics and performance of 10kW class all-vanadium redox-flow battery stack. Journal of Power Sources, 2006, 162, 1416-1420.	4.0	197
14	A comparative study of carbon felt and activated carbon based electrodes for sodium polysulfide/bromine redox flow battery. Electrochimica Acta, 2006, 51, 6304-6312.	2.6	188
15	A novel single flow zincâ€“bromine battery with improved energy density. Journal of Power Sources, 2013, 235, 1-4.	4.0	181
16	Highly stable zincâ€“iodine single flow batteries with super high energy density for stationary energy storage. Energy and Environmental Science, 2019, 12, 1834-1839.	15.6	181
17	A highly reversible neutral zinc/manganese battery for stationary energy storage. Energy and Environmental Science, 2020, 13, 135-143.	15.6	180
18	A high-energy sulfur cathode in carbonate electrolyte by eliminating polysulfides via solid-phase lithium-sulfur transformation. Nature Communications, 2018, 9, 4509.	5.8	175

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19	Nitrogen-doped carbon xerogel: A novel carbon-based electrocatalyst for oxygen reduction reaction in proton exchange membrane (PEM) fuel cells. Energy and Environmental Science, 2011, 4, 3389.	15.6	171
20	Silica modified nanofiltration membranes with improved selectivity for redox flow battery application. Energy and Environmental Science, 2012, 5, 6299-6303.	15.6	171
21	Nickel foam and carbon felt applications for sodium polysulfide/bromine redox flow battery electrodes. Electrochimica Acta, 2005, 51, 1091-1098.	2.6	169
22	Degradation mechanism of sulfonated poly(ether ether ketone) (SPEEK) ion exchange membranes under vanadium flow battery medium. Physical Chemistry Chemical Physics, 2014, 16, 19841-19847.	1.3	161
23	Bismuth nanodendrites as a high performance electrocatalyst for selective conversion of CO₂to formate. Journal of Materials Chemistry A, 2016, 4, 13746-13753.	5.2	160
24	Advanced Materials for Zincâ€Based Flow Battery: Development and Challenge. Advanced Materials, 2019, 31, e1902025.	11.1	160
25	Anode for Zinc-Based Batteries: Challenges, Strategies, and Prospects. ACS Energy Letters, 2021, 6, 2765-2785.	8.8	159
26	A Long Cycle Life, Selfâ€Healing Zincâ€"Iodine Flow Battery with High Power Density. Angewandte Chemie - International Edition, 2018, 57, 11171-11176.	7.2	150
27	A Highly Ionâ€Selective Zeolite Flake Layer on Porous Membranes for Flow Battery Applications. Angewandte Chemie - International Edition, 2016, 55, 3058-3062.	7.2	148
28	Degradation mechanism of polystyrene sulfonic acid membrane and application of its composite membranes in fuel cells. Physical Chemistry Chemical Physics, 2003, 5, 611-615.	1.3	143
29	Advanced Charged Spongeâ€Like Membrane with Ultrahigh Stability and Selectivity for Vanadium Flow Batteries. Advanced Functional Materials, 2016, 26, 210-218.	7.8	139
30	Progress and Perspectives of Flow Battery Technologies. Electrochemical Energy Reviews, 2019, 2, 492-506.	13.1	138
31	Intercalated polyaniline in V2O5 as a unique vanadium oxide bronze cathode for highly stable aqueous zinc ion battery. Energy Storage Materials, 2021, 38, 590-598.	9.5	135
32	Negatively charged nanoporous membrane for a dendrite-free alkaline zinc-based flow battery with long cycle life. Nature Communications, 2018, 9, 3731.	5.8	133
33	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
34	Thin-film composite membrane breaking the trade-off between conductivity and selectivity for a flow battery. Nature Communications, 2020, 11, 13.	5.8	127
35	Advanced charged membranes with highly symmetric spongy structures for vanadium flow battery application. Energy and Environmental Science, 2013, 6, 776.	15.6	123
36	Mechanism of Polysulfone-Based Anion Exchange Membranes Degradation in Vanadium Flow Battery. ACS Applied Materials & Interfaces, 2015, 7, 19446-19454.	4.0	123

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37	Activated Carbon Fiber Paper Based Electrodes with High Electrocatalytic Activity for Vanadium Flow Batteries with Improved Power Density. ACS Applied Materials & Interfaces, 2017, 9, 4626-4633.	4.0	122
38	The next generation vanadium flow batteries with high power density â€“ a perspective. Physical Chemistry Chemical Physics, 2018, 20, 23-35.	1.3	121
39	Toward a Low-Cost Alkaline Zinc-Iron Flow Battery with a Polybenzimidazole Custom Membrane for Stationary Energy Storage. IScience, 2018, 3, 40-49.	1.9	119
40	Porous V₂O₅ yolkâ€“shell microspheres for zinc ion battery cathodes: activation responsible for enhanced capacity and rate performance. Journal of Materials Chemistry A, 2020, 8, 5186-5193.	5.2	119
41	Ultrathin Bismuth Nanosheets as a Highly Efficient CO₂ Reduction Electrocatalyst. ChemSusChem, 2018, 11, 848-853.	3.6	116
42	A Lowâ€Cost Neutral Zincâ€“Iron Flow Battery with High Energy Density for Stationary Energy Storage. Angewandte Chemie - International Edition, 2017, 56, 14953-14957.	7.2	115
43	Highly Stable Anion Exchange Membranes with Internal Crossâ€Linking Networks. Advanced Functional Materials, 2015, 25, 2583-2589.	7.8	114
44	VSC-doping and VSU-doping of Na3V2-xTix(PO4)2F3 compounds for sodium ion battery cathodes: Analysis of electrochemical performance and kinetic properties. Nano Energy, 2018, 47, 340-352.	8.2	113
45	Y-Doped Na₃V₂(PO₄)₂F₃ compounds for sodium ion battery cathodes: electrochemical performance and analysis of kinetic properties. Journal of Materials Chemistry A, 2017, 5, 10928-10935.	5.2	109
46	High-performance porous uncharged membranes for vanadium flow battery applications created by tuning cohesive and swelling forces. Energy and Environmental Science, 2016, 9, 2319-2325.	15.6	108
47	High Capacity, Dendriteâ€Free Growth, and Minimum Volume Change Na Metal Anode. Small, 2018, 14, e1703717.	5.2	104
48	Progress and prospect for NASICON-type Na3V2(PO4)3 for electrochemical energy storage. Journal of Energy Chemistry, 2018, 27, 1597-1617.	7.1	104
49	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
50	Development and perspective in vanadium flow battery modeling. Applied Energy, 2014, 132, 254-266.	5.1	99
51	Layered double hydroxide membrane with high hydroxide conductivity and ion selectivity for energy storage device. Nature Communications, 2021, 12, 3409.	5.8	94
52	Investigation on the effect of catalyst on the electrochemical performance of carbon felt and graphite felt for vanadium flow batteries. Journal of Power Sources, 2015, 286, 73-81.	4.0	92
53	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
54	A high-performance anion exchange membrane based on bi-guanidinium bridged polysilsesquioxane for alkaline fuel cell application. Journal of Materials Chemistry, 2012, 22, 8203.	6.7	91

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55	Cageâ€Like Porous Carbon with Superhigh Activity and Br₂â€Complexâ€Entrapping Capability for Bromineâ€Based Flow Batteries. Advanced Materials, 2017, 29, 1605815.	11.1	88
56	Hydrophobic asymmetric ultrafiltration PVDF membranes: an alternative separator for VFB with excellent stability. Physical Chemistry Chemical Physics, 2013, 15, 1766-1771.	1.3	87
57	A three-dimensional model for thermal analysis in a vanadium flow battery. Applied Energy, 2014, 113, 1675-1685.	5.1	86
58	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
59	Development of carbon coated membrane for zinc/bromine flow battery with high power density. Journal of Power Sources, 2013, 227, 41-47.	4.0	83
60	Superior Thermally Stable and Nonflammable Porous Polybenzimidazole Membrane with High Wettability for High-Power Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 8742-8750.	4.0	83
61	Shunt current loss of the vanadium redox flow battery. Journal of Power Sources, 2011, 196, 10753-10757.	4.0	81
62	Zn electrode with a layer of nanoparticles for selective electroreduction of CO₂ to formate in aqueous solutions. Journal of Materials Chemistry A, 2016, 4, 16670-16676.	5.2	81
63	Poly(vinylidene fluoride) porous membranes precipitated in water/ethanol dual-coagulation bath: The relationship between morphology and performance in vanadium flow battery. Journal of Power Sources, 2014, 249, 84-91.	4.0	80
64	Porous membrane with high curvature, three-dimensional heat-resistance skeleton: a new and practical separator candidate for high safety lithium ion battery. Scientific Reports, 2015, 5, 8255.	1.6	80
65	Advanced porous PBI membranes with tunable performance induced by the polymer-solvent interaction for flow battery application. Energy Storage Materials, 2018, 10, 40-47.	9.5	80
66	Bimodal highly ordered mesostructure carbon with high activity for Br2/Brâˆ’ redox couple in bromine based batteries. Nano Energy, 2016, 21, 217-227.	8.2	79
67	Ion conducting membranes for aqueous flow battery systems. Chemical Communications, 2018, 54, 7570-7588.	2.2	79
68	Aqueous Flow Batteries: Research and Development. Chemistry - A European Journal, 2019, 25, 1649-1664.	1.7	79
69	Vanadium-based polyanionic compounds as cathode materials for sodium-ion batteries: Toward high-energy and high-power applications. Journal of Energy Chemistry, 2021, 55, 361-390.	7.1	79
70	A highly stable neutral viologen/bromine aqueous flow battery with high energy and power density. Chemical Communications, 2019, 55, 4801-4804.	2.2	78
71	Long Cycle Life Lithium Metal Batteries Enabled with Upright Lithium Anode. Advanced Functional Materials, 2019, 29, 1806752.	7.8	78
72	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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73	The Challenge of Lithium Metal Anodes for Practical Applications. Small Methods, 2019, 3, 1800551.	4.6	74
74	Endogenous Symbiotic Li₃N/Cellulose Skin to Extend the Cycle Life of Lithium Anode. Angewandte Chemie - International Edition, 2021, 60, 11718-11724.	7.2	74
75	Simulation of the self-discharge process in vanadium redox flow battery. Journal of Power Sources, 2011, 196, 1578-1585.	4.0	73
76	Dendrite-Free Zinc-Based Battery with High Areal Capacity via the Region-Induced Deposition Effect of Turing Membrane. Journal of the American Chemical Society, 2021, 143, 13135-13144.	6.6	73
77	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
78	Progress on the electrode materials towards vanadium flow batteries (VFBs) with improved power density. Journal of Energy Chemistry, 2018, 27, 1292-1303.	7.1	69
79	Flow field design and optimization based on the mass transport polarization regulation in a flow-through type vanadium flow battery. Journal of Power Sources, 2016, 324, 402-411.	4.0	68
80	A Long Cycle Life, Selfâ€Healing Zincâ€"Iodine Flow Battery with High Power Density. Angewandte Chemie, 2018, 130, 11341-11346.	1.6	67
81	All-NASICON LVP-LTP aqueous lithium ion battery with excellent stability and low-temperature performance. Electrochimica Acta, 2018, 278, 279-289.	2.6	67
82	A Boron Nitride Nanosheets Composite Membrane for a Longâ€Life Zincâ€Based Flow Battery. Angewandte Chemie - International Edition, 2020, 59, 6715-6719.	7.2	67
83	Sulfur impregnated in a mesoporous covalent organic framework for high performance lithiumâ€"sulfur batteries. RSC Advances, 2015, 5, 86137-86143.	1.7	66
84	Solventâ€Induced Rearrangement of Ionâ€Transport Channels: A Way to Create Advanced Porous Membranes for Vanadium Flow Batteries. Advanced Functional Materials, 2017, 27, 1604587.	7.8	66
85	A Coralâ€Like FeP@NC Anode with Increasing Cycle Capacity for Sodiumâ€Ion and Lithiumâ€Ion Batteries Induced by Particle Refinement. Angewandte Chemie - International Edition, 2021, 60, 25013-25019.	7.2	66
86	Nitrogen-doped hierarchically porous carbon as efficient oxygen reduction electrocatalysts in acid electrolyte. Journal of Materials Chemistry A, 2014, 2, 17047-17057.	5.2	62
87	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
88	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
89	Improving the electrochemical performance of Na 3 V 2 (PO 4) 3 cathode in sodium ion batteries through Ce/V substitution based on rational design and synthesis optimization. Electrochimica Acta, 2017, 238, 288-297.	2.6	59
90	Cost, performance prediction and optimization of a vanadium flow battery by machine-learning. Energy and Environmental Science, 2020, 13, 4353-4361.	15.6	59

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91	A highly reversible zinc deposition for flow batteries regulated by critical concentration induced nucleation. Energy and Environmental Science, 2021, 14, 4077-4084.	15.6	58
92	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
93	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
94	Challenging reinforced composite polymer electrolyte membranes based on disulfonated poly(arylene) Tj ETQq0 0 0 rgBT /Overlock 10 T 2007, 17, 386-397.	6.7	56
95	Composite porous membranes with an ultrathin selective layer for vanadium flow batteries. Chemical Communications, 2014, 50, 4596-4599.	2.2	55
96	Free-Standing Thin Webs of Activated Carbon Nanofibers by Electrospinning for Rechargeable Liâ€“O₂ Batteries. ACS Applied Materials & Interfaces, 2016, 8, 1937-1942.	4.0	54
97	Towards enhanced sodium storage by investigation of the Li ion doping and rearrangement mechanism in Na₃V₂(PO₄)₃ for sodium ion batteries. Journal of Materials Chemistry A, 2018, 6, 4209-4218.	5.2	54
98	Membranes with Wellâ€Defined Selective Layer Regulated by Controlled Solvent Diffusion for High Power Density Flow Battery. Advanced Energy Materials, 2020, 10, 2001382.	10.2	54
99	PTFE based composite anion exchange membranes: thermally induced in situ polymerization and direct hydrazine hydrate fuel cell application. Journal of Materials Chemistry, 2010, 20, 8139.	6.7	53
100	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
101	Low-cost hydrocarbon membrane enables commercial-scale flow batteries for long-duration energy storage. Joule, 2022, 6, 884-905.	11.7	53
102	Magnesium/Lithium-Ion Hybrid Battery with High Reversibility by Employing NaV₃O₈Â·1.69H₂O Nanobelts as a Positive Electrode. ACS Applied Materials & Interfaces, 2018, 10, 21313-21320.	4.0	51
103	Highly stable aromatic poly (ether sulfone) composite ion exchange membrane for vanadium flow battery. Journal of Membrane Science, 2017, 541, 465-473.	4.1	50
104	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
105	Shapeable electrodes with extensive materials options and ultra-high loadings for energy storage devices. Nano Energy, 2017, 39, 418-428.	8.2	49
106	Electrode Design for High-Performance Sodium-Ion Batteries: Coupling Nanorod-Assembled Na₃V₂(PO₄)₃@C Microspheres with a 3D Conductive Charge Transport Network. ACS Applied Materials & Interfaces, 2020, 12, 13869-13877.	4.0	49
107	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
108	A highly efficient electrocatalyst for oxygen reduction reaction: phosphorus and nitrogen co-doped hierarchically ordered porous carbon derived from an iron-functionalized polymer. Nanoscale, 2016, 8, 1580-1587.	2.8	48

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109	Low-Cost Room-Temperature Synthesis of NaV₃O₈Â·1.69H₂O Nanobelts for Mg Batteries. ACS Applied Materials & Interfaces, 2018, 10, 4757-4766.	4.0	48
110	Advanced porous membranes with slit-like selective layer for flow battery. Nano Energy, 2018, 54, 73-81.	8.2	48
111	A Durable Alternative for Protonâ€Exchange Membranes: Sulfonated Poly(Benzoxazole Thioether) Tj ETQq1 1 0.784314 rgBT /Overlock	10.2	46
112	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
113	Polypyrrole modified porous poly(ether sulfone) membranes with high performance for vanadium flow batteries. Journal of Materials Chemistry A, 2016, 4, 12955-12962.	5.2	46
114	A TiN Nanorod Array 3D Hierarchical Composite Electrode for Ultrahighâ€Powerâ€Density Bromineâ€Based Flow Batteries. Advanced Materials, 2019, 31, e1904690.	11.1	46
115	N-Doped Nanoporous Carbon from Biomass as a Highly Efficient Electrocatalyst for the CO₂ Reduction Reaction. ACS Sustainable Chemistry and Engineering, 2019, 7, 5249-5255.	3.2	46
116	Effects of phosphate additives on the stability of positive electrolytes for vanadium flow batteries. Electrochimica Acta, 2015, 164, 307-314.	2.6	45
117	Relationship between activity and structure of carbon materials for Br₂/Br^{â^’} in zinc bromine flow batteries. RSC Advances, 2016, 6, 40169-40174.	1.7	44
118	Bi-Modified Zn Catalyst for Efficient CO₂ Electrochemical Reduction to Formate. ACS Sustainable Chemistry and Engineering, 2019, 7, 15190-15196.	3.2	44
119	Vanadium batteries will be cost-effective. Nature, 2014, 508, 319-319.	13.7	42
120	Advanced Porous Membranes with Tunable Morphology Regulated by Ionic Strength of Nonsolvent for Flow Battery. ACS Applied Materials & Interfaces, 2019, 11, 24107-24113.	4.0	42
121	Multifunctional Carbon Felt Electrode with Nâ€Rich Defects Enables a Longâ€Cycle Zincâ€Bromine Flow Battery with Ultrahigh Power Density. Advanced Functional Materials, 2021, 31, 2102913.	7.8	42
122	Flow field design and optimization of high power density vanadium flow batteries: A novel trapezoid flow battery. AIChE Journal, 2018, 64, 782-795.	1.8	41
123	Design and synthesis of a free-standing carbon nano-fibrous web electrode with ultra large pores for high-performance vanadium flow batteries. RSC Advances, 2017, 7, 45932-45937.	1.7	40
124	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
125	Superior Na-storage performance of molten-state-blending-synthesized monoclinic NaVPO₄F nanoplates for Na-ion batteries. Journal of Materials Chemistry A, 2018, 6, 24201-24209.	5.2	39
126	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

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127	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
128	In Situ Defectâ€Free Vertically Aligned Layered Double Hydroxide Composite Membrane for High Areal Capacity and Longâ€Cycle Zincâ€Based Flow Battery. Advanced Functional Materials, 2021, 31, 2102167.	7.8	36
129	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
130	A defect-free MOF composite membrane prepared via in-situ binder-controlled restrained second-growth method for energy storage device. Energy Storage Materials, 2021, 35, 687-694.	9.5	35
131	Application and degradation mechanism of polyoxadiazole based membrane for vanadium flow batteries. Journal of Membrane Science, 2015, 488, 194-202.	4.1	34
132	Dramatic performance gains of a novel circular vanadium flow battery. Journal of Power Sources, 2015, 277, 104-109.	4.0	34
133	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
134	Advanced charged porous membranes with flexible internal crosslinking structures for vanadium flow batteries. Journal of Materials Chemistry A, 2017, 5, 6193-6199.	5.2	34
135	Controllable Design Coupled with Finite Element Analysis of Lowâ€Tortuosity Electrode Architecture for Advanced Sodiumâ€Ion Batteries with Ultraâ€High Mass Loading. Advanced Energy Materials, 2021, 11, 2003725.	10.2	34
136	Morphology and performance of poly(ether sulfone)/sulfonated poly(ether ether ketone) blend porous membranes for vanadium flow battery application. RSC Advances, 2014, 4, 40400-40406.	1.7	33
137	Fabrication of a nano-Li⁺-channel interlayer for high performance Liâ€“S battery application. RSC Advances, 2015, 5, 26273-26280.	1.7	33
138	A Venus-flytrap-inspired pH-responsive porous membrane with internal crosslinking networks. Journal of Materials Chemistry A, 2017, 5, 25555-25561.	5.2	32
139	Battery assembly optimization: Tailoring the electrode compression ratio based on the polarization analysis in vanadium flow batteries. Applied Energy, 2019, 235, 495-508.	5.1	32
140	Hydrophilic poly(vinylidene fluoride) porous membrane with well connected ion transport networks for vanadium flow battery. Journal of Power Sources, 2015, 298, 228-235.	4.0	31
141	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
142	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
143	Recent Development in Composite Membranes for Flow Batteries. ChemSusChem, 2020, 13, 3805-3819.	3.6	31
144	A high potential biphenol derivative cathode: toward a highly stable air-insensitive aqueous organic flow battery. Science Bulletin, 2021, 66, 457-463.	4.3	31

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145	Ultrathin free-standing electrospun carbon nanofibers web as the electrode of the vanadium flow batteries. Journal of Energy Chemistry, 2017, 26, 730-737.	7.1	29
146	Performance and potential problems of high power density zincâ€“nickel single flow batteries. RSC Advances, 2015, 5, 1772-1776.	1.7	28
147	Facile construction of nanoscale laminated Na₃V₂(PO₄)₃for a high-performance sodium ion battery cathode. Journal of Materials Chemistry A, 2016, 4, 19170-19178.	5.2	28
148	The porous membrane with tunable performance for vanadium flow battery: The effect of charge. Journal of Power Sources, 2017, 342, 327-334.	4.0	28
149	Tuning the electrocatalytic properties of a Cu electrode with organic additives containing amine group for CO₂ reduction. Journal of Materials Chemistry A, 2019, 7, 5453-5462.	5.2	28
150	Highly stable membranes based on sulfonated fluorinated poly(ether ether ketone)s with bifunctional groups for vanadium flow battery application. Polymer Chemistry, 2015, 6, 5385-5392.	1.9	27
151	Influence of anode diffusion layer on the performance of a liquid feed direct methanol fuel cell by AC impedance spectroscopy. International Journal of Energy Research, 2006, 30, 1216-1227.	2.2	25
152	A modified hierarchical porous carbon for lithium/sulfur batteries with improved capacity and cycling stability. Journal of Solid State Electrochemistry, 2013, 17, 2243-2250.	1.2	25
153	A Highly Ionâ€Selective Zeolite Flake Layer on Porous Membranes for Flow Battery Applications. Angewandte Chemie, 2016, 128, 3110-3114.	1.6	25
154	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
155	High-energy-density aqueous zinc-based hybrid supercapacitor-battery with uniform zinc deposition achieved by multifunctional decoupled additive. Nano Energy, 2022, 96, 107120.	8.2	24
156	Ion conductive membranes for flow batteries: Design and ions transport mechanism. Journal of Membrane Science, 2021, 632, 119355.	4.1	23
157	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
158	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
159	Revisiting of Tetragonal NaVPO₄F: A High Energy Density Cathode for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 30510-30519.	4.0	22
160	Impact of Proton Concentration on Equilibrium Potential and Polarization of Vanadium Flow Batteries. ChemPlusChem, 2015, 80, 382-389.	1.3	21
161	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
162	A low-cost bromine-fixed additive enables a high capacity retention zinc-bromine batteries. Journal of Energy Chemistry, 2022, 65, 89-93.	7.1	21

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163	A membrane-free interfacial battery with high energy density. Chemical Communications, 2018, 54, 11626-11629.	2.2	20
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