Huamin Zhang

List of Publications by Citations

214 papers	10,971 citations	60 h-index	96 g-index
221 ext. papers	13,395 ext. citations	12.8 avg, IF	6.94 L-index

#	Paper	IF	Citations
214	Ion exchange membranes for vanadium redox flow battery (VRB) applications. *Energy and Environmental Science*, **2011**, 4, 1147	35.4	712
213	Vanadium Flow Battery for Energy Storage: Prospects and Challenges. *Journal of Physical Chemistry Letters*, **2013**, 4, 1281-94	6.4	357
212	Nanofiltration (NF) membranes: the next generation separators for all vanadium redox flow batteries (VRBs)?. *Energy and Environmental Science*, **2011**, 4, 1676	35.4	261
211	Porous membranes in secondary battery technologies. *Chemical Society Reviews*, **2017**, 46, 2199-2236	58.5	256
210	Imidazolium functionalized polysulfone anion exchange membrane for fuel cell application. *Journal of Materials Chemistry*, **2011**, 21, 12744		251
209	Advanced porous membranes with ultra-high selectivity and stability for vanadium flow batteries. *Energy and Environmental Science*, **2016**, 9, 441-447	35.4	208
208	Structural Design of Lithium–Sulfur Batteries: From Fundamental Research to Practical Application. *Electrochemical Energy Reviews*, **2018**, 1, 239-293	29.3	197
207	Promoting the Transformation of Li S to Li S: Significantly Increasing Utilization of Active Materials for High-Sulfur-Loading Li-S Batteries. *Advanced Materials*, **2019**, 31, e1901220	24	186
206	An aqueous hybrid electrolyte for low-temperature zinc-based energy storage devices. *Energy and Environmental Science*, **2020**, 13, 3527-3535	35.4	175
205	Carbon paper coated with supported tungsten trioxide as novel electrode for all-vanadium flow battery. *Journal of Power Sources*, **2012**, 218, 455-461	8.9	172
204	Characteristics and performance of 10 kW class all-vanadium redox-flow battery stack. *Journal of Power Sources*, **2006**, 162, 1416-1420	8.9	161
203	Silica modified nanofiltration membranes with improved selectivity for redox flow battery application. *Energy and Environmental Science*, **2012**, 5, 6299-6303	35.4	158
202	A comparative study of carbon felt and activated carbon based electrodes for sodium polysulfide/bromine redox flow battery. *Electrochimica Acta*, **2006**, 51, 6304-6312	6.7	153
201	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	35.4	149
200	Inhibition of Zinc Dendrite Growth in Zinc-Based Batteries. *ChemSusChem*, **2018**, 11, 3996-4006	8.3	149
199	Nickel foam and carbon felt applications for sodium polysulfide/bromine redox flow battery electrodes. *Electrochimica Acta*, **2005**, 51, 1091-1098	6.7	147
198	A novel single flow zinc–bromine battery with improved energy density. *Journal of Power Sources*, **2013**, 235, 1-4	8.9	137

197	Dendrite-Free Zinc Deposition Induced by Tin-Modified Multifunctional 3D Host for Stable Zinc-Based Flow Battery. *Advanced Materials*, **2020**, 32, e1906803	24	135
196	Degradation mechanism of polystyrene sulfonic acid membrane and application of its composite membranes in fuel cells. *Physical Chemistry Chemical Physics*, **2003**, 5, 611-615	3.6	132
195	Bismuth nanodendrites as a high performance electrocatalyst for selective conversion of CO2 to formate. *Journal of Materials Chemistry A*, **2016**, 4, 13746-13753	13	130
194	A high-energy sulfur cathode in carbonate electrolyte by eliminating polysulfides via solid-phase lithium-sulfur transformation. *Nature Communications*, **2018**, 9, 4509	17.4	123
193	Degradation mechanism of sulfonated poly(ether ether ketone) (SPEEK) ion exchange membranes under vanadium flow battery medium. *Physical Chemistry Chemical Physics*, **2014**, 16, 19841-7	3.6	122
192	A Highly Ion-Selective Zeolite Flake Layer on Porous Membranes for Flow Battery Applications. *Angewandte Chemie - International Edition*, **2016**, 55, 3058-62	16.4	120
191	Advanced Charged Sponge-Like Membrane with Ultrahigh Stability and Selectivity for Vanadium Flow Batteries. *Advanced Functional Materials*, **2016**, 26, 210-218	15.6	115
190	Phase Inversion: A Universal Method to Create High-Performance Porous Electrodes for Nanoparticle-Based Energy Storage Devices. *Advanced Functional Materials*, **2016**, 26, 8427-8434	15.6	112
189	Advanced charged membranes with highly symmetric spongy structures for vanadium flow battery application. *Energy and Environmental Science*, **2013**, 6, 776	35.4	110
188	Highly stable zinc□iodine single flow batteries with super high energy density for stationary energy storage. *Energy and Environmental Science*, **2019**, 12, 1834-1839	35.4	101
187	Mechanism of Polysulfone-Based Anion Exchange Membranes Degradation in Vanadium Flow Battery. *ACS Applied Materials & Interfaces*, **2015**, 7, 19446-54	9.5	99
186	Highly Stable Anion Exchange Membranes with Internal Cross-Linking Networks. *Advanced Functional Materials*, **2015**, 25, 2583-2589	15.6	98
185	A Long Cycle Life, Self-Healing Zinc-Iodine Flow Battery with High Power Density. *Angewandte Chemie - International Edition*, **2018**, 57, 11171-11176	16.4	91
184	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	13	89
183	The next generation vanadium flow batteries with high power density - a perspective. *Physical Chemistry Chemical Physics*, **2017**, 20, 23-35	3.6	89
182	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	9.5	86
181	Ultrathin Bismuth Nanosheets as a Highly Efficient CO Reduction Electrocatalyst. *ChemSusChem*, **2018**, 11, 848-853	8.3	84
180	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	35.4	84

179	A highly reversible neutral zinc/manganese battery for stationary energy storage. *Energy and Environmental Science*, **2020**, 13, 135-143	35.4	83
178	A high-performance anion exchange membrane based on bi-guanidinium bridged polysilsesquioxane for alkaline fuel cell application. *Journal of Materials Chemistry*, **2012**, 22, 8203		82
177	Development and perspective in vanadium flow battery modeling. *Applied Energy*, **2014**, 132, 254-266	10.7	80
176	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	13	79
175	Advanced Materials for Zinc-Based Flow Battery: Development and Challenge. *Advanced Materials*, **2019**, 31, e1902025	24	77
174	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	13	76
173	Negatively charged nanoporous membrane for a dendrite-free alkaline zinc-based flow battery with long cycle life. *Nature Communications*, **2018**, 9, 3731	17.4	76
172	High Capacity, Dendrite-Free Growth, and Minimum Volume Change Na Metal Anode. *Small*, **2018**, 14, e1703717	11	75
171	Hydrophobic asymmetric ultrafiltration PVDF membranes: an alternative separator for VFB with excellent stability. *Physical Chemistry Chemical Physics*, **2013**, 15, 1766-71	3.6	75
170	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	17.1	74
169	Lithium Sulfur Primary Battery with Super High Energy Density: Based on the Cauliflower-like Structured C/S Cathode. *Scientific Reports*, **2015**, 5, 14949	4.9	74
168	A Low-Cost Neutral Zinc-Iron Flow Battery with High Energy Density for Stationary Energy Storage. *Angewandte Chemie - International Edition*, **2017**, 56, 14953-14957	16.4	71
167	Toward a Low-Cost Alkaline Zinc-Iron Flow Battery with a Polybenzimidazole Custom Membrane for Stationary Energy Storage. *IScience*, **2018**, 3, 40-49	6.1	71
166	Development of carbon coated membrane for zinc/bromine flow battery with high power density. *Journal of Power Sources*, **2013**, 227, 41-47	8.9	69
165	Shunt current loss of the vanadium redox flow battery. *Journal of Power Sources*, **2011**, 196, 10753-10757	8.9	68
164	Thin-film composite membrane breaking the trade-off between conductivity and selectivity for a flow battery. *Nature Communications*, **2020**, 11, 13	17.4	67
163	A three-dimensional model for thermal analysis in a vanadium flow battery. *Applied Energy*, **2014**, 113, 1675-1685	10.7	66
162	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	8.9	65

161	Progress and Perspectives of Flow Battery Technologies. *Electrochemical Energy Reviews*, **2019**, 2, 492-506	29.3	65
160	Porous poly (ether sulfone) membranes with tunable morphology: Fabrication and their application for vanadium flow battery. *Journal of Power Sources*, **2013**, 233, 202-208	8.9	64
159	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	4.9	63
158	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	8.9	63
157	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	9.5	60
156	Cage-Like Porous Carbon with Superhigh Activity and Br -Complex-Entrapping Capability for Bromine-Based Flow Batteries. *Advanced Materials*, **2017**, 29, 1605815	24	60
155	Long Cycle Life Lithium Metal Batteries Enabled with Upright Lithium Anode. *Advanced Functional Materials*, **2019**, 29, 1806752	15.6	60
154	Porous V2O5 yolk□shell microspheres for zinc ion battery cathodes: activation responsible for enhanced capacity and rate performance. *Journal of Materials Chemistry A*, **2020**, 8, 5186-5193	13	59
153	Sulfur impregnated in a mesoporous covalent organic framework for high performance lithium□sulfur batteries. *RSC Advances*, **2015**, 5, 86137-86143	3.7	58
152	Ion conducting membranes for aqueous flow battery systems. *Chemical Communications*, **2018**, 54, 7570-7588	5.8	58
151	Nitrogen-doped hierarchically porous carbon as efficient oxygen reduction electrocatalysts in acid electrolyte. *Journal of Materials Chemistry A*, **2014**, 2, 17047-17057	13	57
150	Carbon-Free CoO Mesoporous Nanowire Array Cathode for High-Performance Aprotic Li-O2 Batteries. *ACS Applied Materials & Interfaces*, **2015**, 7, 23182-9	9.5	56
149	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	8.9	56
148	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	13	56
147	Progress and prospect for NASICON-type Na3V2(PO4)3 for electrochemical energy storage. *Journal of Energy Chemistry*, **2018**, 27, 1597-1617	12	56
146	Bimodal highly ordered mesostructure carbon with high activity for Br2/Br□ redox couple in bromine based batteries. *Nano Energy*, **2016**, 21, 217-227	17.1	55
145	Aqueous Flow Batteries: Research and Development. *Chemistry - A European Journal*, **2019**, 25, 1649-1664	4.8	54
144	Simulation of the self-discharge process in vanadium redox flow battery. *Journal of Power Sources*, **2011**, 196, 1578-1585	8.9	53

143	Advanced porous PBI membranes with tunable performance induced by the polymer-solvent interaction for flow battery application. *Energy Storage Materials*, **2018**, 10, 40-47	19.4	52
142	Solvent-Induced Rearrangement of Ion-Transport Channels: A Way to Create Advanced Porous Membranes for Vanadium Flow Batteries. *Advanced Functional Materials*, **2017**, 27, 1604587	15.6	51
141	Challenging reinforced composite polymer electrolyte membranes based on disulfonated poly(arylene ether sulfone)-impregnated expanded PTFE for fuel cell applications. *Journal of Materials Chemistry*, **2007**, 17, 386-397		50
140	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	13	49
139	Free-Standing Thin Webs of Activated Carbon Nanofibers by Electrospinning for Rechargeable Li-O2 Batteries. *ACS Applied Materials & Interfaces*, **2016**, 8, 1937-42	9.5	49
138	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		49
137	Composite porous membranes with an ultrathin selective layer for vanadium flow batteries. *Chemical Communications*, **2014**, 50, 4596-9	5.8	48
136	Hydrophilic porous poly(sulfone) membranes modified by UV-initiated polymerization for vanadium flow battery application. *Journal of Membrane Science*, **2014**, 454, 478-487	9.6	47
135	A highly stable neutral viologen/bromine aqueous flow battery with high energy and power density. *Chemical Communications*, **2019**, 55, 4801-4804	5.8	45
134	Layer-by-Layer Assembled C/S Cathode with Trace Binder for Li-S Battery Application. *ACS Applied Materials & Interfaces*, **2015**, 7, 25002-6	9.5	45
133	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	6.7	44
132	Progress on the electrode materials towards vanadium flow batteries (VFBs) with improved power density. *Journal of Energy Chemistry*, **2018**, 27, 1292-1303	12	44
131	A Long Cycle Life, Self-Healing Zinc–Iodine Flow Battery with High Power Density. *Angewandte Chemie*, **2018**, 130, 11341-11346	3.6	44
130	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, 1580-7	7.7	43
129	A Durable Alternative for Proton-Exchange Membranes: Sulfonated Poly(Benzoxazole Thioether Sulfone)s. *Advanced Energy Materials*, **2011**, 1, 203-211	21.8	43
128	The Challenge of Lithium Metal Anodes for Practical Applications. *Small Methods*, **2019**, 3, 1800551	12.8	42
127	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, 17579-86	4.3	42
126	Shapeable electrodes with extensive materials options and ultra-high loadings for energy storage devices. *Nano Energy*, **2017**, 39, 418-428	17.1	42

125	A novel solvent-template method to manufacture nano-scale porous membranes for vanadium flow battery applications. *Journal of Materials Chemistry A*, **2014**, 2, 9524	13	41
124	Rational design and synthesis of LiTi2(PO4)3□Fx anode materials for high-performance aqueous lithium ion batteries. *Journal of Materials Chemistry A*, **2017**, 5, 593-599	13	41
123	All-NASICON LVP-LTP aqueous lithium ion battery with excellent stability and low-temperature performance. *Electrochimica Acta*, **2018**, 278, 279-289	6.7	40
122	Magnesium/Lithium-Ion Hybrid Battery with High Reversibility by Employing NaVO□1.69HO Nanobelts as a Positive Electrode. *ACS Applied Materials & Interfaces*, **2018**, 10, 21313-21320	9.5	40
121	Polysulfide Stabilization: A Pivotal Strategy to Achieve High Energy Density Li□ Batteries with Long Cycle Life. *Advanced Functional Materials*, **2018**, 28, 1704987	15.6	39
120	Highly stable aromatic poly (ether sulfone) composite ion exchange membrane for vanadium flow battery. *Journal of Membrane Science*, **2017**, 541, 465-473	9.6	39
119	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	13	38
118	Low-Cost Room-Temperature Synthesis of NaVO□1.69HO Nanobelts for Mg Batteries. *ACS Applied Materials & Interfaces*, **2018**, 10, 4757-4766	9.5	38
117	Ultrafast and Stable Li-(De)intercalation in a Large Single Crystal H-Nb O Anode via Optimizing the Homogeneity of Electron and Ion Transport. *Advanced Materials*, **2020**, 32, e2001001	24	36
116	Effects of phosphate additives on the stability of positive electrolytes for vanadium flow batteries. *Electrochimica Acta*, **2015**, 164, 307-314	6.7	35
115	A Boron Nitride Nanosheets Composite Membrane for a Long-Life Zinc-Based Flow Battery. *Angewandte Chemie - International Edition*, **2020**, 59, 6715-6719	16.4	35
114	Synthesis and electrochemical properties of Li3V2(P1□BxO4)3/C cathode materials. *Journal of Materials Chemistry A*, **2015**, 3, 19469-19475	13	33
113	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	8.9	33
112	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	19.4	33
111	Advanced porous membranes with slit-like selective layer for flow battery. *Nano Energy*, **2018**, 54, 73-81	17.1	33
110	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	4.9	32
109	Iridium incorporated into deoxygenated hierarchical graphene as a high-performance cathode for rechargeable Li□2 batteries. *Journal of Materials Chemistry A*, **2015**, 3, 14556-14561	13	31
108	Phase-change enabled 2D Li3V2(PO4)3/C submicron sheets for advanced lithium-ion batteries. *Journal of Power Sources*, **2016**, 326, 203-210	8.9	30

107	Polypyrrole modified porous poly(ether sulfone) membranes with high performance for vanadium flow batteries. *Journal of Materials Chemistry A*, **2016**, 4, 12955-12962	13	30
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105	Application and degradation mechanism of polyoxadiazole based membrane for vanadium flow batteries. *Journal of Membrane Science*, **2015**, 488, 194-202	9.6	29
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103	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	3.7	28
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101	Flow field design and optimization of high power density vanadium flow batteries: A novel trapezoid flow battery. *AICHE Journal*, **2018**, 64, 782-795	3.6	28
100	Rechargeables: Vanadium batteries will be cost-effective. *Nature*, **2014**, 508, 319	50.4	28
99	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	3.7	28
98	Membranes with Well-Defined Selective Layer Regulated by Controlled Solvent Diffusion for High Power Density Flow Battery. *Advanced Energy Materials*, **2020**, 10, 2001382	21.8	28
97	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	12	28
96	Advanced Porous Membranes with Tunable Morphology Regulated by Ionic Strength of Nonsolvent for Flow Battery. *ACS Applied Materials & Interfaces*, **2019**, 11, 24107-24113	9.5	27
95	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	13	27
94	Dramatic performance gains of a novel circular vanadium flow battery. *Journal of Power Sources*, **2015**, 277, 104-109	8.9	26
93	Electrode Design for High-Performance Sodium-Ion Batteries: Coupling Nanorod-Assembled NaV(PO)@C Microspheres with a 3D Conductive Charge Transport Network. *ACS Applied Materials & Interfaces*, **2020**, 12, 13869-13877	9.5	26
92	Endogenous Symbiotic Li N/Cellulose Skin to Extend the Cycle Life of Lithium Anode. *Angewandte Chemie - International Edition*, **2021**, 60, 11718-11724	16.4	25
91	Multi-functional nanowall arrays with unrestricted Li+ transport channels and an integrated conductive network for high-areal-capacity Li□ batteries. *Journal of Materials Chemistry A*, **2018**, 6, 22958-22965	13	25
90	Hydrophilic poly(vinylidene fluoride) porous membrane with well connected ion transport networks for vanadium flow battery. *Journal of Power Sources*, **2015**, 298, 228-235	8.9	24

89	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	4.5	24
88	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	13	24
87	The porous membrane with tunable performance for vanadium flow battery: The effect of charge. *Journal of Power Sources*, **2017**, 342, 327-334	8.9	23
86	A TiN Nanorod Array 3D Hierarchical Composite Electrode for Ultrahigh-Power-Density Bromine-Based Flow Batteries. *Advanced Materials*, **2019**, 31, e1904690	24	23
85	A modified hierarchical porous carbon for lithium/sulfur batteries with improved capacity and cycling stability. *Journal of Solid State Electrochemistry*, **2013**, 17, 2243-2250	2.6	23
84	Battery assembly optimization: Tailoring the electrode compression ratio based on the polarization analysis in vanadium flow batteries. *Applied Energy*, **2019**, 235, 495-508	10.7	23
83	Advanced charged porous membranes with flexible internal crosslinking structures for vanadium flow batteries. *Journal of Materials Chemistry A*, **2017**, 5, 6193-6199	13	22
82	Ultrathin free-standing electrospun carbon nanofibers web as the electrode of the vanadium flow batteries. *Journal of Energy Chemistry*, **2017**, 26, 730-737	12	22
81	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	13	22
80	Performance and potential problems of high power density zinc–nickel single flow batteries. *RSC Advances*, **2015**, 5, 1772-1776	3.7	22
79	Bi-Modified Zn Catalyst for Efficient CO2 Electrochemical Reduction to Formate. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 15190-15196	8.3	22
78	A Venus-flytrap-inspired pH-responsive porous membrane with internal crosslinking networks. *Journal of Materials Chemistry A*, **2017**, 5, 25555-25561	13	22
77	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	8.3	21
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75	Facile construction of nanoscale laminated Na3V2(PO4)3 for a high-performance sodium ion battery cathode. *Journal of Materials Chemistry A*, **2016**, 4, 19170-19178	13	21
74	Layered double hydroxide membrane with high hydroxide conductivity and ion selectivity for energy storage device. *Nature Communications*, **2021**, 12, 3409	17.4	19
73	Impact of Proton Concentration on Equilibrium Potential and Polarization of Vanadium Flow Batteries. *ChemPlusChem*, **2015**, 80, 382-389	2.8	18
72	Quasi-Stable Electroless Ni–P Deposition: A Pivotal Strategy to Create Flexible Li–S Pouch Batteries with Bench Mark Cycle Stability and Specific Capacity. *Advanced Functional Materials*, **2018**, 28, 1707272	15.6	17

71	Cost, performance prediction and optimization of a vanadium flow battery by machine-learning. *Energy and Environmental Science*, **2020**, 13, 4353-4361	35.4	17
70	LiCr(MoO4)2: a new high specific capacity cathode material for lithium ion batteries. *Journal of Materials Chemistry A*, **2019**, 7, 567-573	13	16
69	A Highly Ion-Selective Zeolite Flake Layer on Porous Membranes for Flow Battery Applications. *Angewandte Chemie*, **2016**, 128, 3110-3114	3.6	16
68	A Microsized Cagelike Sulfur/Carbon Composite for a Lithium/Sulfur Battery with Excellent Performance. *ChemPlusChem*, **2014**, 79, 919-924	2.8	16
67	A Coral-Like FeP@NC Anode with Increasing Cycle Capacity for Sodium-Ion and Lithium-Ion Batteries Induced by Particle Refinement. *Angewandte Chemie - International Edition*, **2021**, 60, 25013-25019	16.4	16
66	Recent Development in Composite Membranes for Flow Batteries. *ChemSusChem*, **2020**, 13, 3805	8.3	15
65	Anchor and activate sulfide with LiTi2(PO4)2.88F0.12 nano spheres for lithium sulfur battery application. *Journal of Materials Chemistry A*, **2018**, 6, 7639-7648	13	15
64	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	16.4	15
63	A highly reversible zinc deposition for flow batteries regulated by critical concentration induced nucleation. *Energy and Environmental Science*, **2021**, 14, 4077-4084	35.4	15
62	Controllable Design Coupled with Finite Element Analysis of Low-Tortuosity Electrode Architecture for Advanced Sodium-Ion Batteries with Ultra-High Mass Loading. *Advanced Energy Materials*, **2021**, 11, 2003725	21.8	14
61	A Cost-Effective Mixed Matrix Polyethylene Porous Membrane for Long-Cycle High Power Density Alkaline Zinc-Based Flow Batteries. *Advanced Functional Materials*, **2019**, 29, 1901674	15.6	13
60	Solvent treatment: the formation mechanism of advanced porous membranes for flow batteries. *Journal of Materials Chemistry A*, **2018**, 6, 15569-15576	13	13
59	Three-in-One: A New 3D Hybrid Structure of Li3V2(PO4)3 @ Biomorphic Carbon for High-Rate and Low-Temperature Lithium Ion Batteries. *Advanced Materials Interfaces*, **2017**, 4, 1700686	4.6	13
58	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	13	13
57	Li3Cr(MoO4)3: a NASICON-type high specific capacity cathode material for lithium ion batteries. *Journal of Materials Chemistry A*, **2018**, 6, 19107-19112	13	13
56	A multi-electron transfer ferrocene derivative positive redox moiety with improved solubility and potential. *Chemical Communications*, **2018**, 54, 8419-8422	5.8	13
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51	Multifunctional Carbon Felt Electrode with N-Rich Defects Enables a Long-Cycle Zinc-Bromine Flow Battery with Ultrahigh Power Density. *Advanced Functional Materials*, **2021**, 31, 2102913	15.6	11
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