Haoran Jiang

List of Publications by Year
in descending order

73 papers	4,342 citations	87843 38 h-index	110317 64 g-index
73 all docs	73 docs citations	73 times ranked	4292 citing authors

#	Article	IF	Citations
1	Borophene: A promising anode material offering high specific capacity and high rate capability for lithium-ion batteries. Nano Energy, 2016, 23, 97-104.	8.2	454
2	Boron phosphide monolayer as a potential anode material for alkali metal-based batteries. Journal of Materials Chemistry A, 2017, 5, 672-679.	5.2	217
3	A high power density and long cycle life vanadium redox flow battery. Energy Storage Materials, 2020, 24, 529-540.	9.5	214
4	Advances and challenges in lithium-air batteries. Applied Energy, 2017, 204, 780-806.	5.1	186
5	First-Principles Study of Nitrogen-, Boron-Doped Graphene and Co-Doped Graphene as the Potential Catalysts in Nonaqueous Liâ€“O₂ Batteries. Journal of Physical Chemistry C, 2016, 120, 6612-6618.	1.5	161
6	Highly catalytic and stabilized titanium nitride nanowire array-decorated graphite felt electrodes for all vanadium redox flow batteries. Journal of Power Sources, 2017, 341, 318-326.	4.0	134
7	Borophene and defective borophene as potential anchoring materials for lithiumâ€“sulfur batteries: a first-principles study. Journal of Materials Chemistry A, 2018, 6, 2107-2114.	5.2	127
8	High-performance zinc bromine flow battery via improved design of electrolyte and electrode. Journal of Power Sources, 2017, 355, 62-68.	4.0	111
9	Anion exchange membranes for aqueous acid-based redox flow batteries: Current status and challenges. Applied Energy, 2019, 233-234, 622-643.	5.1	101
10	Improved electrolyte for zinc-bromine flow batteries. Journal of Power Sources, 2018, 384, 232-239.	4.0	100
11	Rational design of spontaneous reactions for protecting porous lithium electrodes in lithiumâ€“sulfur batteries. Nature Communications, 2019, 10, 3249.	5.8	99
12	Highly efficient and ultra-stable boron-doped graphite felt electrodes for vanadium redox flow batteries. Journal of Materials Chemistry A, 2018, 6, 13244-13253.	5.2	97
13	Highly catalytic hollow Ti3C2Tx MXene spheres decorated graphite felt electrode for vanadium redox flow batteries. Energy Storage Materials, 2020, 25, 885-892.	9.5	87
14	Towards a uniform distribution of zinc in the negative electrode for zinc bromine flow batteries. Applied Energy, 2018, 213, 366-374.	5.1	83
15	An efficient Li2S-based lithium-ion sulfur battery realized by a bifunctional electrolyte additive. Nano Energy, 2017, 40, 240-247.	8.2	81
16	Highly active, bi-functional and metal-free B 4 C-nanoparticle-modified graphite felt electrodes for vanadium redox flow batteries. Journal of Power Sources, 2017, 365, 34-42.	4.0	75
17	In-situ Fabrication of a Freestanding Acrylate-based Hierarchical Electrolyte for Lithium-sulfur Batteries. Electrochimica Acta, 2016, 213, 871-878.	2.6	74
18	A uniformly distributed bismuth nanoparticle-modified carbon cloth electrode for vanadium redox flow batteries. Applied Energy, 2019, 240, 226-235.	5.1	73

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19	Achieving multiplexed functionality in a hierarchical MXene-based sulfur host for high-rate, high-loading lithium-sulfur batteries. Energy Storage Materials, 2020, 33, 147-157.	9.5	64
20	A novel energy storage system incorporating electrically rechargeable liquid fuels as the storage medium. Science Bulletin, 2019, 64, 270-280.	4.3	62
21	Ab initio prediction and characterization of phosphorene-like SiS and SiSe as anode materials for sodium-ion batteries. Science Bulletin, 2017, 62, 572-578.	4.3	61
22	A highly-safe lithium-ion sulfur polymer battery with SnO2 anode and acrylate-based gel polymer electrolyte. Nano Energy, 2016, 28, 97-105.	8.2	60
23	A room-temperature activated graphite felt as the cost-effective, highly active and stable electrode for vanadium redox flow batteries. Applied Energy, 2019, 233-234, 544-553.	5.1	59
24	Formation of electrodes by self-assembling porous carbon fibers into bundles for vanadium redox flow batteries. Journal of Power Sources, 2018, 405, 106-113.	4.0	54
25	Carbonized tubular polypyrrole with a high activity for the Br2/Brâˆ’ redox reaction in zinc-bromine flow batteries. Electrochimica Acta, 2018, 284, 569-576.	2.6	54
26	A hybrid battery thermal management system for electric vehicles under dynamic working conditions. International Journal of Heat and Mass Transfer, 2021, 164, 120528.	2.5	54
27	Unraveling the Positive Roles of Point Defects on Carbon Surfaces in Nonaqueous Lithiumâ€“Oxygen Batteries. Journal of Physical Chemistry C, 2016, 120, 18394-18402.	1.5	50
28	Critical Role of Anion Donicity in Li₂S Deposition and Sulfur Utilization in Liâ€“S Batteries. ACS Applied Materials & Interfaces, 2019, 11, 25940-25948.	4.0	50
29	A gradient porous electrode with balanced transport properties and active surface areas for vanadium redox flow batteries. Journal of Power Sources, 2019, 440, 227159.	4.0	49
30	An ultrathin, strong, flexible composite solid electrolyte for high-voltage lithium metal batteries. Journal of Materials Chemistry A, 2020, 8, 18802-18809.	5.2	48
31	Two-dimensional SiS as a potential anode material for lithium-based batteries: A first-principles study. Journal of Power Sources, 2016, 331, 391-399.	4.0	46
32	A self-cleaning Li-S battery enabled by a bifunctional redox mediator. Journal of Power Sources, 2017, 361, 203-210.	4.0	46
33	An aqueous manganese-copper battery for large-scale energy storage applications. Journal of Power Sources, 2019, 423, 203-210.	4.0	46
34	Remedies of capacity fading in room-temperature sodium-sulfur batteries. Journal of Power Sources, 2018, 396, 304-313.	4.0	45
35	Designing Effective Solventâ€“Catalyst Interface for Catalytic Sulfur Conversion in Lithiumâ€“Sulfur Batteries. Chemistry of Materials, 2019, 31, 10186-10196.	3.2	45
36	Towards uniform distributions of reactants via the aligned electrode design for vanadium redox flow batteries. Applied Energy, 2020, 259, 114198.	5.1	45

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37	A low-cost iron-cadmium redox flow battery for large-scale energy storage. Journal of Power Sources, 2016, 330, 55-60.	4.0	44
38	A trifunctional electrolyte for high-performance zinc-iodine flow batteries. Journal of Power Sources, 2021, 484, 229238.	4.0	44
39	A Zincâ€“Bromine Flow Battery with Improved Design of Cell Structure and Electrodes. Energy Technology, 2018, 6, 333-339.	1.8	42
40	A bi-porous graphite felt electrode with enhanced surface area and catalytic activity for vanadium redox flow batteries. Applied Energy, 2019, 233-234, 105-113.	5.1	41
41	Ultra-stable lithium plating/stripping in garnet-based lithium-metal batteries enabled by a SnO2 nanolayer. Journal of Power Sources, 2019, 433, 226691.	4.0	39
42	N-doped graphene nanoplatelets as a highly active catalyst for Br2/Brâ˜’ redox reactions in zinc-bromine flow batteries. Electrochimica Acta, 2019, 318, 69-75.	2.6	36
43	Carboxyl-Functionalized TEMPO Catholyte Enabling High-Cycling-Stability and High-Energy-Density Aqueous Organic Redox Flow Batteries. ACS Sustainable Chemistry and Engineering, 2021, 9, 6258-6265.	3.2	36
44	Cost-effective carbon supported Fe2O3 nanoparticles as an efficient catalyst for non-aqueous lithium-oxygen batteries. Electrochimica Acta, 2016, 211, 545-551.	2.6	35
45	A coupled machine learning and genetic algorithm approach to the design of porous electrodes for redox flow batteries. Applied Energy, 2021, 298, 117177.	5.1	35
46	V2O5-NiO composite nanowires: A novel and highly efficient carbon-free electrode for non-aqueous Li-air batteries operated in ambient air. Journal of Power Sources, 2019, 409, 76-85.	4.0	34
47	Enhanced cycle life of vanadium redox flow battery via a capacity and energy efficiency recovery method. Journal of Power Sources, 2020, 478, 228725.	4.0	33
48	A Li-S battery with ultrahigh cycling stability and enhanced rate capability based on novel ZnO yolk-shell sulfur host. Journal of Energy Chemistry, 2021, 55, 136-144.	7.1	33
49	Holey aligned electrodes through in-situ ZIF-8-assisted-etching for high-performance aqueous redox flow batteries. Science Bulletin, 2021, 66, 904-913.	4.3	32
50	A highly-efficient composite polybenzimidazole membrane for vanadium redox flow battery. Journal of Power Sources, 2021, 489, 229502.	4.0	29
51	Aligned hierarchical electrodes for high-performance aqueous redox flow battery. Applied Energy, 2020, 271, 115235.	5.1	28
52	Superior cycling life of Liâ€“S batteries with high sulfur loading enabled by a bifunctional layered-MoO3 cathode. Journal of Power Sources, 2019, 436, 226840.	4.0	27
53	Advances in the design and fabrication of high-performance flow battery electrodes for renewable energy storage. Advances in Applied Energy, 2021, 2, 100016.	6.6	27
54	Facile preparation of high-performance MnO2/KB air cathode for Zn-air batteries. Electrochimica Acta, 2016, 222, 1438-1444.	2.6	26

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55	An aqueous organic redox flow battery employing a trifunctional electroactive compound as anolyte, catholyte and supporting electrolyte. Journal of Power Sources, 2020, 477, 228985.	4.0	26
56	A Lithium/Polysulfide Battery with Dual-Working Mode Enabled by Liquid Fuel and Acrylate-Based Gel Polymer Electrolyte. ACS Applied Materials & Interfaces, 2017, 9, 2526-2534.	4.0	24
57	A novel electrode formed with electrospun nano- and micro-scale carbon fibers for aqueous redox flow batteries. Journal of Power Sources, 2020, 470, 228441.	4.0	23
58	Machine learning-assisted design of flow fields for redox flow batteries. Energy and Environmental Science, 2022, 15, 2874-2888.	15.6	23
59	Computational insights into the effect of carbon structures at the atomic level for non-aqueous sodium-oxygen batteries. Journal of Power Sources, 2016, 325, 91-97.	4.0	21
60	Mesoporous ultrafine Ta2O5 nanoparticle with abundant oxygen vacancies as a novel and efficient catalyst for non-aqueous Li-O2 batteries. Electrochimica Acta, 2018, 271, 232-241.	2.6	21
61	Ruthenium dioxide-decorated carbonized tubular polypyrrole as a bifunctional catalyst for non-aqueous lithium-oxygen batteries. Electrochimica Acta, 2017, 257, 281-289.	2.6	20
62	Mathematical modeling of the charging process of Li-S batteries by incorporating the size-dependent Li2S dissolution. Electrochimica Acta, 2019, 296, 954-963.	2.6	20
63	Artificial Bifunctional Protective layer Composed of Carbon Nitride Nanosheets for High Performance Lithiumâ€“Sulfur Batteries. Journal of Energy Storage, 2019, 26, 101006.	3.9	19
64	A stabilized high-energy Li-polyiodide semi-liquid battery with a dually-protected Li anode. Journal of Power Sources, 2017, 347, 136-144.	4.0	17
65	A highly selective proton exchange membrane with highly ordered, vertically aligned, and subnanosized 1D channels for redox flow batteries. Journal of Power Sources, 2018, 406, 35-41.	4.0	17
66	Preparations of an inorganic-framework proton exchange nanochannel membrane. Journal of Power Sources, 2016, 326, 466-475.	4.0	15
67	Investigation of an aqueous rechargeable battery consisting of manganese tin redox chemistries for energy storage. Journal of Power Sources, 2019, 437, 226918.	4.0	14
68	On-Site Fluorination for Enhancing Utilization of Lithium in a Lithiumâ€“Sulfur Full Battery. ACS Applied Materials & Interfaces, 2020, 12, 53860-53868.	4.0	12
69	Parameciumâ€Like Iron Oxide Nanotubes as a Costâ€Efficient Catalyst for Nonaqueous Lithiumâ€Oxygen Batteries. Energy Technology, 2018, 6, 263-272.	1.8	10
70	An<i>in situ</i>encapsulation approach for polysulfide retention in lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2020, 8, 6902-6907.	5.2	9
71	Diphenyl ditelluride as a low-potential and fast-kinetics anolyte for nonaqueous redox flow battery applications. Energy Storage Materials, 2021, 35, 761-771.	9.5	7
72	A Janus-faced, perovskite nanofiber framework reinforced composite electrolyte for high-voltage solid lithium-metal batteries. Journal of Power Sources, 2022, 526, 231172.	4.0	7

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73	A Li₂Sâ€Based Sacrificial Layer for Stable Operation of Lithiumâ€Sulfur Batteries. Energy Technology, 2018, 6, 2210-2219.	1.8	4