

# Cun-man Zhang

## List of Publications by Year in descending order

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Version: 2024-02-01

81  
papers

3,887  
citations

172207

29  
h-index

123241

61  
g-index

82  
all docs

82  
docs citations

82  
times ranked

4806  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nitrogen-doped activated carbon for a high energy hybrid supercapacitor. <i>Energy and Environmental Science</i> , 2016, 9, 102-106.	15.6	910
2	Electrode Materials, Electrolytes, and Challenges in Nonaqueous Lithium-ion Capacitors. <i>Advanced Materials</i> , 2018, 30, e1705670.	11.1	334
3	Activated Carbon from Biomass Transfer for High-energy Density Lithium-ion Supercapacitors. <i>Advanced Energy Materials</i> , 2016, 6, 1600802.	10.2	229
4	Inward lithium-ion breathing of hierarchically porous silicon anodes. <i>Nature Communications</i> , 2015, 6, 8844.	5.8	217
5	Stainless steel bipolar plates for proton exchange membrane fuel cells: Materials, flow channel design and forming processes. <i>Journal of Power Sources</i> , 2020, 451, 227783.	4.0	123
6	Surface Modification of Li-Rich Mn-Based Layered Oxide Cathodes: Challenges, Materials, Methods, and Characterization. <i>Advanced Energy Materials</i> , 2020, 10, 2002506.	10.2	108
7	Pre-lithiation Strategies for Next-generation Practical Lithium-ion Batteries. <i>Advanced Science</i> , 2021, 8, e2005031.	5.6	103
8	Proton Exchange Membrane Fuel Cell Reversal: A Review. <i>Catalysts</i> , 2016, 6, 197.	1.6	98
9	A literature review of failure prediction and analysis methods for composite high-pressure hydrogen storage tanks. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 25777-25799.	3.8	93
10	One-Step Synthesis of Microporous Carbon Monoliths Derived from Biomass with High Nitrogen Doping Content for Highly Selective CO <sub>2</sub> Capture. <i>Scientific Reports</i> , 2016, 6, 30049.	1.6	82
11	The Controllable Design of Catalyst Inks to Enhance PEMFC Performance: A Review. <i>Electrochemical Energy Reviews</i> , 2021, 4, 67-100.	13.1	79
12	The simulation and analysis of leakage and explosion at a renewable hydrogen refuelling station. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 22608-22619.	3.8	73
13	Recent advances in Pt-based octahedral nanocrystals as high performance fuel cell catalysts. <i>Journal of Materials Chemistry A</i> , 2016, 4, 11559-11581.	5.2	54
14	Mangosteen peel-derived porous carbon: synthesis and its application in the sulfur cathode for lithium sulfur battery. <i>Journal of Materials Science</i> , 2018, 53, 11062-11077.	1.7	51
15	A universal matching approach for high power-density and high cycling-stability lithium ion capacitor. <i>Journal of Power Sources</i> , 2019, 441, 227211.	4.0	51
16	Improved Electrochemical Performance of Biomass-Derived Nanoporous Carbon/Sulfur Composites Cathode for Lithium-Sulfur Batteries by Nitrogen Doping. <i>Electrochimica Acta</i> , 2016, 202, 131-139.	2.6	49
17	Research on hydrogen permeability of polyamide 6 as the liner material for type A hydrogen storage tank. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 24980-24990.	3.8	48
18	Experimental study of the influence of dynamic load cycle and operating parameters on the durability of PEMFC. <i>Energy</i> , 2022, 239, 122356.	4.5	48

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19	Toward high energy-density and long cycling-lifespan lithium ion capacitors: a 3D carbon modified low-potential $\text{Li}_2\text{TiSiO}_5$ anode coupled with a lignin-derived activated carbon cathode. <i>Journal of Materials Chemistry A</i> , 2019, 7, 8234-8244.	5.2	46
20	High performance octahedral PtNi/C catalysts investigated from rotating disk electrode to membrane electrode assembly. <i>Nano Research</i> , 2019, 12, 281-287.	5.8	44
21	Single-Crystalline Cathodes for Advanced Li-Ion Batteries: Progress and Challenges. <i>Small</i> , 2022, 18, e2107048.	5.2	43
22	Target-oriented electrode constructions toward ultra-fast and ultra-stable all-graphene lithium ion capacitors. <i>Energy Storage Materials</i> , 2019, 23, 409-417.	9.5	42
23	Performance degradation and process engineering of the 10kW proton exchange membrane fuel cell stack. <i>Energy</i> , 2021, 219, 119623.	4.5	41
24	A novel approach based on semi-empirical model for degradation prediction of fuel cells. <i>Journal of Power Sources</i> , 2021, 488, 229435.	4.0	40
25	Agricultural waste-derived activated carbon for high performance lithium-ion capacitors. <i>RSC Advances</i> , 2017, 7, 37923-37928.	1.7	38
26	Self-assembled $\text{RuO}_2@ \text{IrO}_x$ core-shell nanocomposite as high efficient anode catalyst for PEM water electrolyzer. <i>Applied Surface Science</i> , 2020, 514, 145943.	3.1	37
27	Metallically conductive $\text{TiB}_2$ as a multi-functional separator modifier for improved lithium sulfur batteries. <i>Journal of Power Sources</i> , 2020, 448, 227336.	4.0	34
28	Understanding the functions and modifications of interfaces in membrane electrode assemblies of proton exchange membrane fuel cells. <i>Journal of Materials Chemistry A</i> , 2021, 9, 15111-15139.	5.2	34
29	Potential Tailored Thin and Dense Lithium Carbonate Growth in Solid Electrolyte Interphase for Advanced Lithium Ion Batteries. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	32
30	Research progress of heat transfer inside proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2021, 492, 229613.	4.0	30
31	Highly efficient, cell reversal resistant PEMFC based on PtNi/C octahedral and OER composite catalyst. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 8930-8940.	3.8	29
32	An Overview on Design Parameters of Practical Lithium-Ion Capacitors. <i>Batteries and Supercaps</i> , 2021, 4, 749-757.	2.4	29
33	Review of the Hydrogen Permeability of the Liner Material of Type IV On-Board Hydrogen Storage Tank. <i>World Electric Vehicle Journal</i> , 2021, 12, 130.	1.6	28
34	Defect engineering assisted support effect: $\text{IrO}_2/\text{N}$ defective g-C $_3\text{N}_4$ composite as highly efficient anode catalyst in PEM water electrolysis. <i>Chemical Engineering Journal</i> , 2021, 419, 129455.	6.6	28
35	Safety study of a wind-solar hybrid renewable hydrogen refuelling station in China. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 13315-13321.	3.8	27
36	A novel mangosteen peels derived hierarchical porous carbon for lithium sulfur battery. <i>Materials Letters</i> , 2017, 209, 594-597.	1.3	27

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37	TiO <sub>2</sub> microboxes as effective polysulfide reservoirs for lithium sulfur batteries. <i>Electrochimica Acta</i> , 2019, 296, 39-48.	2.6	26
38	Efficient synthesis of Pt-Co nanowires as cathode catalysts for proton exchange membrane fuel cells. <i>RSC Advances</i> , 2020, 10, 6287-6296.	1.7	26
39	High-Repetitive Reversal Tolerant Performance of Proton-Exchange Membrane Fuel Cell by Designing a Suitable Anode. <i>ACS Omega</i> , 2020, 5, 10099-10105.	1.6	26
40	Preparation of a Graphitized-Carbon-Supported PtNi Octahedral Catalyst and Application in a Proton-Exchange Membrane Fuel Cell. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 7047-7056.	4.0	23
41	High-Performance Zinc-Air Batteries Based on Bifunctional Hierarchically Porous Nitrogen-Doped Carbon. <i>Small</i> , 2022, 18, e2105928.	5.2	23
42	Effects of thermal activation conditions on the microstructure regulation of corn-cob-derived activated carbon for hydrogen storage. <i>Journal of Energy Chemistry</i> , 2014, 23, 601-608.	7.1	20
43	A comparative study of corrosion resistance evaluation of bipolar plate materials for proton exchange membrane fuel cell. <i>ETransportation</i> , 2021, 10, 100139.	6.8	20
44	Oxygen-Deficient Ti <sub>0.9</sub> Nb <sub>0.1</sub> O <sub>2</sub> as an Efficient Anodic Catalyst Support for PEM Water Electrolyzer. <i>ChemCatChem</i> , 2019, 11, 2511-2519.	1.8	19
45	Advanced Reversal Tolerant Anode in Proton Exchange Membrane Fuel Cells: Study on the Attenuation Mechanism during Fuel Starvation. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 2455-2461.	4.0	17
46	From rotating disk electrode to single cell: Exploration of PtNi/C octahedral nanocrystal as practical proton exchange membrane fuel cell cathode catalyst. <i>Journal of Power Sources</i> , 2018, 406, 118-127.	4.0	16
47	Fabrication of Dual-Modified Carbon Network Enabling Improved Electronic and Ionic Conductivities for Fast and Durable Li <sub>2</sub> TiSiO <sub>5</sub> Anodes. <i>ChemElectroChem</i> , 2019, 6, 3020-3029.	1.7	16
48	Graph theory model and mechanism analysis of carbon fiber paper conductivity in fuel cell based on physical structure. <i>Journal of Power Sources</i> , 2021, 491, 229546.	4.0	16
49	Effect of Dispersion Solvents and Ionomers on the Rheology of Catalyst Inks and Catalyst Layer Structure for Proton Exchange Membrane Fuel Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 27119-27128.	4.0	16
50	Effect of ionomer content on cathode catalyst layer for PEMFC via molecular dynamics simulations and experiments. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 23335-23347.	3.8	16
51	Highly active and durable carbon support Pt-rare earth catalyst for proton exchange membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 27291-27298.	3.8	15
52	A novel hierarchical porous carbon derived from durian shell as enhanced sulfur carrier for high performance Li-S batteries. <i>Journal of Electroanalytical Chemistry</i> , 2021, 893, 115306.	1.9	15
53	Compressive stress and its impact on the gas diffusion layer: A review. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 3994-4009.	3.8	15
54	Mechanism and Model for Optimizing Polytetrafluoroethylene Distribution to Improve the Electrical and Thermal Conductivity of Treated Carbon Fiber Paper in Fuel Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 14207-14220.	4.0	14

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55	Synthesis of Anti-poisoning Spinel Mn <sup>2+</sup> Co <sup>2+</sup> C as Cathode Catalysts for Low-Temperature Anion Exchange Membrane Direct Ammonia Fuel Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 53945-53954.	4.0	14
56	A Review of the Transition Region of Membrane Electrode Assembly of Proton Exchange Membrane Fuel Cells: Design, Degradation, and Mitigation. <i>Membranes</i> , 2022, 12, 306.	1.4	14
57	Long-term dynamic durability test datasets for single proton exchange membrane fuel cell. <i>Data in Brief</i> , 2021, 35, 106775.	0.5	13
58	Oxygen-doped carbon host with enhanced bonding and electron attraction abilities for efficient and stable SnO <sub>2</sub> /carbon composite battery anode. <i>Science China Materials</i> , 2018, 61, 1067-1077.	3.5	12
59	MOF-derived CoFe alloy nanoparticles encapsulated within N,O Co-doped multilayer graphitized shells as an efficient bifunctional catalyst for zinc-air batteries. <i>Journal of Materials Chemistry A</i> , 2022, 10, 14866-14874.	5.2	12
60	Enhanced PEMFC durability with graphitized carbon black cathode catalyst supports under accelerated stress testing. <i>RSC Advances</i> , 2021, 11, 19417-19425.	1.7	11
61	Enhanced Al/Ta co-doped Li <sub>7</sub> La <sub>3</sub> Zr <sub>2</sub> O <sub>12</sub> ceramic electrolytes with the reduced Ta doping level for solid-state lithium batteries. <i>Journal of Materials Science</i> , 2021, 56, 19614-19622.	1.7	10
62	Stress-strain and burst failure analysis of fiber wound composite material high-pressure vessel. <i>Polymers and Polymer Composites</i> , 2021, 29, 1291-1303.	1.0	9
63	Droplets dynamics theory and micro-flow field experiments of improving self-humidifying feature and maximum power density in fuel cells. <i>Chemical Engineering Journal</i> , 2022, 429, 131974.	6.6	9
64	Control of Cluster Structures in Catalyst Inks by a Dispersion Medium. <i>ACS Omega</i> , 2021, 6, 32960-32969.	1.6	8
65	Research on Multi-Period Hydrogen Refueling Station Location Model in Jiading District. <i>World Electric Vehicle Journal</i> , 2021, 12, 146.	1.6	6
66	Degradation analysis of the core components of metal plate proton exchange membrane fuel cell stack under dynamic load cycles. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 7432-7442.	3.8	6
67	TiO <sub>2</sub> microbox/carbon nanotube composite-modified separator for high-performance lithium-sulfur batteries. <i>Journal of Solid State Electrochemistry</i> , 2021, 25, 949-961.	1.2	5
68	Defects tailoring IrO <sub>2</sub> @TiN nano-heterojunctions for superior water oxidation activity and stability. <i>Materials Chemistry Frontiers</i> , 2021, 5, 8047-8055.	3.2	5
69	Tensile progressive damage and compressive postbuckling analysis of open-hole laminate composites. <i>Journal of Reinforced Plastics and Composites</i> , 2020, 39, 637-653.	1.6	4
70	The synergetic effect of air pollutants and metal ions on performance of a 5 kW proton exchange membrane fuel cell stack. <i>International Journal of Energy Research</i> , 2021, 45, 7974-7986.	2.2	4
71	The conductive network optimization of composite graphite plates and its morphological analysis. <i>Chemical Engineering Journal</i> , 2022, 446, 136652.	6.6	4
72	The influences of gas diffusion layer material models and parameters on mechanical analysis of proton exchange membrane fuel cell. <i>Fuel Cells</i> , 2021, 21, 373-389.	1.5	3

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73	Research on the Influence of Collector Microstructure on the Performance of PEM Electrolyzer. World Electric Vehicle Journal, 2021, 12, 165.	1.6	3
74	A High-Durability Graphitic Black Pearl Supported Pt Catalyst for a Proton Exchange Membrane Fuel Cell Stack. Membranes, 2022, 12, 301.	1.4	3
75	Preface for Special Section on Fuel Cell Technology. Automotive Innovation, 2021, 4, 117-118.	3.1	2
76	Improvement of Corrosion Resistance and Electrical Conductivity of Stainless Steel 316L Bipolar Plate by Pickling and Passivation. World Electric Vehicle Journal, 2021, 12, 101.	1.6	2
77	Constructing Supports' Network with N-TiO <sub>2</sub> Nanofibres for Highly Efficient Hydrogen Production of PEM Electrolyzer. World Electric Vehicle Journal, 2021, 12, 124.	1.6	2
78	Effect of Microstructural Damage on the Thermomechanical Properties of Electrodes in Proton Exchange Membrane Fuel Cells. ACS Applied Materials & Interfaces, 2022, 14, 2918-2929.	4.0	2
79	The Effects of Testing Conditions on Corrosion Behaviours of SS316L for Bipolar Plate of PEMFC. Journal of the Electrochemical Society, 2022, 169, 034513.	1.3	2
80	Influence of Degassing Treatment on the Ink Properties and Performance of Proton Exchange Membrane Fuel Cells. Membranes, 2022, 12, 541.	1.4	2
81	The Effect of Structural and Process Parameters on the Effective Properties of Polymer Composites Reinforced by Fiber-rod and Three-dimensional Weaving. Fibers and Polymers, 2019, 20, 2625-2636.	1.1	1