

# Cun-man Zhang

## List of Publications by Year in descending order

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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	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
2	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
3	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
4	Effect of Microstructural Damage on the Thermomechanical Properties of Electrodes in Proton Exchange Membrane Fuel Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 2918-2929.	4.0	2
5	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
6	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
7	The Effects of Testing Conditions on Corrosion Behaviours of SS316L for Bipolar Plate of PEMFC. <i>Journal of the Electrochemical Society</i> , 2022, 169, 034513.	1.3	2
8	A High-Durability Graphitic Black Pearl Supported Pt Catalyst for a Proton Exchange Membrane Fuel Cell Stack. <i>Membranes</i> , 2022, 12, 301.	1.4	3
9	Overpotential 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
10	Single-Crystalline Cathodes for Advanced Li-Ion Batteries: Progress and Challenges. <i>Small</i> , 2022, 18, e2107048.	5.2	43
11	High-Performance Zinc-Air Batteries Based on Bifunctional Hierarchically Porous Nitrogen-Doped Carbon. <i>Small</i> , 2022, 18, e2105928.	5.2	23
12	The conductive network optimization of composite graphite plates and its morphological analysis. <i>Chemical Engineering Journal</i> , 2022, 446, 136652.	6.6	4
13	Influence of Degassing Treatment on the Ink Properties and Performance of Proton Exchange Membrane Fuel Cells. <i>Membranes</i> , 2022, 12, 541.	1.4	2
14	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
15	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
16	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
17	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
18	The Controllable Design of Catalyst Inks to Enhance PEMFC Performance: A Review. <i>Electrochemical Energy Reviews</i> , 2021, 4, 67-100.	13.1	79

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19	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
20	An Overview on Design Parameters of Practical Lithium-Ion Capacitors. <i>Batteries and Supercaps</i> , 2021, 4, 749-757.	2.4	29
21	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
22	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
23	Defects tailoring IrO <sub>2</sub> @TiN <sub>1+x</sub> nano-heterojunctions for superior water oxidation activity and stability. <i>Materials Chemistry Frontiers</i> , 2021, 5, 8047-8055.	3.2	5
24	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
25	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
26	Pre-Lithiation Strategies for Next-Generation Practical Lithium-Ion Batteries. <i>Advanced Science</i> , 2021, 8, e2005031.	5.6	103
27	Performance degradation and process engineering of the 10 kW proton exchange membrane fuel cell stack. <i>Energy</i> , 2021, 219, 119623.	4.5	41
28	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
29	Long-term dynamic durability test datasets for single proton exchange membrane fuel cell. <i>Data in Brief</i> , 2021, 35, 106775.	0.5	13
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	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
32	Preface for Special Section on Fuel Cell Technology. <i>Automotive Innovation</i> , 2021, 4, 117-118.	3.1	2
33	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
34	Improvement of Corrosion Resistance and Electrical Conductivity of Stainless Steel 316L Bipolar Plate by Pickling and Passivation. <i>World Electric Vehicle Journal</i> , 2021, 12, 101.	1.6	2
35	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
36	Constructing Supports Network with TiO <sub>2</sub> Nanofibres for Highly Efficient Hydrogen Production of PEM Electrolyzer. <i>World Electric Vehicle Journal</i> , 2021, 12, 124.	1.6	2

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37	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
38	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
39	Defect engineering assisted support effect: IrO <sub>2</sub> /N defective g-C <sub>3</sub> N <sub>4</sub> composite as highly efficient anode catalyst in PEM water electrolysis. <i>Chemical Engineering Journal</i> , 2021, 419, 129455.	6.6	28
40	Research on Multi-Period Hydrogen Refueling Station Location Model in Jiading District. <i>World Electric Vehicle Journal</i> , 2021, 12, 146.	1.6	6
41	Research on the Influence of Collector Microstructure on the Performance of PEM Electrolyzer. <i>World Electric Vehicle Journal</i> , 2021, 12, 165.	1.6	3
42	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
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	Synthesis of Anti-poisoning Spinel Mn-Co-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
45	Control of Cluster Structures in Catalyst Inks by a Dispersion Medium. <i>ACS Omega</i> , 2021, 6, 32960-32969.	1.6	8
46	Metallically conductive TiB <sub>2</sub> as a multi-functional separator modifier for improved lithium sulfur batteries. <i>Journal of Power Sources</i> , 2020, 448, 227336.	4.0	34
47	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
48	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
49	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
50	Self-assembled RuO <sub>2</sub> @IrO <sub>x</sub> core-shell nanocomposite as high efficient anode catalyst for PEM water electrolyzer. <i>Applied Surface Science</i> , 2020, 514, 145943.	3.1	37
51	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
52	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
53	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
54	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

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55	High-Repetitive Reversal Tolerant Performance of Proton-Exchange Membrane Fuel Cell by Designing a Suitable Anode. ACS Omega, 2020, 5, 10099-10105.	1.6	26
56	Stainless steel bipolar plates for proton exchange membrane fuel cells: Materials, flow channel design and forming processes. Journal of Power Sources, 2020, 451, 227783.	4.0	123
57	A universal matching approach for high power-density and high cycling-stability lithium ion capacitor. Journal of Power Sources, 2019, 441, 227211.	4.0	51
58	A literature review of failure prediction and analysis methods for composite high-pressure hydrogen storage tanks. International Journal of Hydrogen Energy, 2019, 44, 25777-25799.	3.8	93
59	The simulation and analysis of leakage and explosion at a renewable hydrogen refuelling station. International Journal of Hydrogen Energy, 2019, 44, 22608-22619.	3.8	73
60	Target-oriented electrode constructions toward ultra-fast and ultra-stable all-graphene lithium ion capacitors. Energy Storage Materials, 2019, 23, 409-417.	9.5	42
61	Toward high energy-density and long cycling-lifespan lithium ion capacitors: a 3D carbon modified low-potential Li <sub>2</sub> TiSiO <sub>5</sub> anode coupled with a lignin-derived activated carbon cathode. Journal of Materials Chemistry A, 2019, 7, 8234-8244.	5.2	46
62	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. ChemElectroChem, 2019, 6, 3020-3029.	1.7	16
63	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. ChemCatChem, 2019, 11, 2511-2519.	1.8	19
64	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
65	TiO <sub>2</sub> microboxes as effective polysulfide reservoirs for lithium sulfur batteries. Electrochimica Acta, 2019, 296, 39-48.	2.6	26
66	High performance octahedral PtNi/C catalysts investigated from rotating disk electrode to membrane electrode assembly. Nano Research, 2019, 12, 281-287.	5.8	44
67	Mangosteen peel-derived porous carbon: synthesis and its application in the sulfur cathode for lithium sulfur battery. Journal of Materials Science, 2018, 53, 11062-11077.	1.7	51
68	Oxygen-doped carbon host with enhanced bonding and electron attraction abilities for efficient and stable SnO <sub>2</sub> /carbon composite battery anode. Science China Materials, 2018, 61, 1067-1077.	3.5	12
69	Electrode Materials, Electrolytes, and Challenges in Nonaqueous Lithium-Ion Capacitors. Advanced Materials, 2018, 30, e1705670.	11.1	334
70	From rotating disk electrode to single cell: Exploration of PtNi/C octahedral nanocrystal as practical proton exchange membrane fuel cell cathode catalyst. Journal of Power Sources, 2018, 406, 118-127.	4.0	16
71	A novel mangosteen peels derived hierarchical porous carbon for lithium sulfur battery. Materials Letters, 2017, 209, 594-597.	1.3	27
72	Agricultural waste-derived activated carbon for high performance lithium-ion capacitors. RSC Advances, 2017, 7, 37923-37928.	1.7	38

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73	Proton Exchange Membrane Fuel Cell Reversal: A Review. <i>Catalysts</i> , 2016, 6, 197.	1.6	98
74	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
75	Activated Carbon from Biomass Transfer for High-Energy Density Lithium-Ion Supercapacitors. <i>Advanced Energy Materials</i> , 2016, 6, 1600802.	10.2	229
76	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
77	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
78	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
79	Nitrogen-doped activated carbon for a high energy hybrid supercapacitor. <i>Energy and Environmental Science</i> , 2016, 9, 102-106.	15.6	910
80	Inward lithium-ion breathing of hierarchically porous silicon anodes. <i>Nature Communications</i> , 2015, 6, 8844.	5.8	217
81	Effects of thermal activation conditions on the microstructure regulation of corncob-derived activated carbon for hydrogen storage. <i>Journal of Energy Chemistry</i> , 2014, 23, 601-608.	7.1	20