

# Yanzhou Qin

## List of Publications by Year in descending order

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Version: 2024-02-01

61  
papers

2,508  
citations

147801

31  
h-index

206112

48  
g-index

62  
all docs

62  
docs citations

62  
times ranked

1390  
citing authors

#	ARTICLE	IF	CITATIONS
1	Humidification strategy for polymer electrolyte membrane fuel cells – A review. <i>Applied Energy</i> , 2018, 230, 643-662.	10.1	148
2	Numerical investigation on the characteristics of mass transport and performance of PEMFC with baffle plates installed in the flow channel. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 8048-8062.	7.1	146
3	Magnetic field alignment of stable proton-conducting channels in an electrolyte membrane. <i>Nature Communications</i> , 2019, 10, 842.	12.8	123
4	Effective removal and transport of water in a PEM fuel cell flow channel having a hydrophilic plate. <i>Applied Energy</i> , 2014, 113, 116-126.	10.1	114
5	Numerical and experimental investigation of baffle plate arrangement on proton exchange membrane fuel cell performance. <i>Journal of Power Sources</i> , 2020, 457, 228034.	7.8	110
6	Numerical investigation of an ejector for anode recirculation in proton exchange membrane fuel cell system. <i>Energy Conversion and Management</i> , 2016, 126, 1106-1117.	9.2	86
7	Study on the operating pressure effect on the performance of a proton exchange membrane fuel cell power system. <i>Energy Conversion and Management</i> , 2017, 142, 357-365.	9.2	85
8	Quantitative analysis of trapezoid baffle block sloping angles on oxygen transport and performance of proton exchange membrane fuel cell. <i>Applied Energy</i> , 2020, 271, 115257.	10.1	76
9	Oriented proton-conductive nano-sponge-facilitated polymer electrolyte membranes. <i>Energy and Environmental Science</i> , 2020, 13, 297-309.	30.8	66
10	Toward alkaline-stable anion exchange membranes in fuel cells: cycloaliphatic quaternary ammonium-based anion conductors. <i>Electrochemical Energy Reviews</i> , 2022, 5, 348-400.	25.5	62
11	Multi-sub-inlets at cathode flow-field plate for current density homogenization and enhancement of PEM fuel cells in low relative humidity. <i>Energy Conversion and Management</i> , 2022, 252, 115069.	9.2	62
12	Magnetic-field-oriented mixed-valence-stabilized ferrocenium anion-exchange membranes for fuel cells. <i>Nature Energy</i> , 2022, 7, 329-339.	39.5	60
13	Multi-scale study on bifunctional Co/Fe–N–C cathode catalyst layers with high active site density for the oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , 2021, 299, 120656.	20.2	58
14	Numerical simulation of gas liquid two-phase flow in anode channel of low-temperature fuel cells. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 3250-3258.	7.1	57
15	Thermodynamic modeling and analysis of a novel PEMFC-ORC combined power system. <i>Energy Conversion and Management</i> , 2020, 217, 112998.	9.2	57
16	Sulfonated polyimides with flexible aliphatic side chains for polymer electrolyte fuel cells. <i>Journal of Membrane Science</i> , 2011, 367, 211-219.	8.2	56
17	Numerical investigation of water dynamics in a novel proton exchange membrane fuel cell flow channel. <i>Journal of Power Sources</i> , 2013, 222, 150-160.	7.8	55
18	Effect of humidity and thermal cycling on the catalyst layer structural changes in polymer electrolyte membrane fuel cells. <i>Energy Conversion and Management</i> , 2019, 189, 24-32.	9.2	55

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19	Bio-inspired design of an auxiliary fishbone-shaped cathode flow field pattern for polymer electrolyte membrane fuel cells. <i>Energy Conversion and Management</i> , 2021, 227, 113588.	9.2	53
20	Three-dimensional numerical study of a cathode gas diffusion layer with a through/in plane synergetic gradient porosity distribution for PEM fuel cells. <i>International Journal of Heat and Mass Transfer</i> , 2022, 188, 122661.	4.8	50
21	Ionomer migration within PEMFC catalyst layers induced by humidity changes. <i>Electrochemistry Communications</i> , 2019, 109, 106590.	4.7	46
22	Numerical simulation of liquid water emerging and transport in the flow channel of PEMFC using the volume of fluid method. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 29861-29873.	7.1	45
23	Effect of the porosity distribution on the liquid water transport in the gas diffusion layer of PEMFC. <i>Electrochimica Acta</i> , 2021, 371, 137814.	5.2	42
24	Three-dimensional modeling of pressure effect on operating characteristics and performance of solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 20059-20076.	7.1	41
25	Durability enhancement of proton exchange membrane fuel cells by ferrocyanide or ferricyanide additives. <i>Journal of Membrane Science</i> , 2021, 629, 119282.	8.2	39
26	Contact angle hysteresis of a water droplet on a hydrophobic fuel cell surface. <i>Journal of Colloid and Interface Science</i> , 2019, 545, 231-241.	9.4	38
27	Effects of needle orientation and gas velocity on water transport and removal in a modified PEMFC gas flow channel having a hydrophilic needle. <i>International Journal of Energy Research</i> , 2019, 43, 2538-2549.	4.5	37
28	Modeling and design of PEM fuel cell stack based on a flow network method. <i>Applied Thermal Engineering</i> , 2018, 144, 411-423.	6.0	36
29	Effect of wettability on water removal from the gas diffusion layer surface in a novel proton exchange membrane fuel cell flow channel. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 12879-12885.	7.1	34
30	Hierarchically Porous Co <sup>N</sup> C Cathode Catalyst Layers for Anion Exchange Membrane Fuel Cells. <i>ChemSusChem</i> , 2019, 12, 4165-4169.	6.8	34
31	Influence of sloping baffle plates on the mass transport and performance of PEMFC. <i>International Journal of Energy Research</i> , 2019, 43, 2643-2655.	4.5	34
32	Droplet dynamic characteristics on PEM fuel cell cathode gas diffusion layer with gradient pore size distribution. <i>Renewable Energy</i> , 2021, 178, 864-874.	8.9	34
33	Numerical investigation of water droplet removal characteristics in novel block channels of PEMFC using dynamic wettability model. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 36890-36902.	7.1	33
34	Thermodynamic modeling and exergy analysis of proton exchange membrane fuel cell power system. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 29799-29811.	7.1	32
35	Design of Pt-C/Fe-N-S-C cathode dual catalyst layers for proton exchange membrane fuel cells under low humidity. <i>Electrochimica Acta</i> , 2019, 296, 450-457.	5.2	30
36	Numerical investigation of water droplet impact on PEM fuel cell flow channel surface. <i>Renewable Energy</i> , 2021, 168, 750-763.	8.9	27

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37	Mass Transfer in a Co/N/C Catalyst Layer for the Anion Exchange Membrane Fuel Cell. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 32842-32850.	8.0	26
38	Modelling of effect of pressure on co-electrolysis of water and carbon dioxide in solid oxide electrolysis cell. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 3456-3469.	7.1	25
39	Ionomer dispersion solvent influence on the microstructure of Co-N-C catalyst layers for anion exchange membrane fuel cell. <i>Journal of Power Sources</i> , 2021, 484, 229259.	7.8	25
40	In-situ electrochemical activation of carbon fiber paper for the highly efficient electroreduction of concentrated nitric acid. <i>Electrochimica Acta</i> , 2018, 291, 328-334.	5.2	23
41	Modelling of mechanical microstructure changes in the catalyst layer of a polymer electrolyte membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 29904-29916.	7.1	22
42	Influence of corner structure of fuel cell serpentine channel on water removal. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 29812-29823.	7.1	21
43	Delamination evolution of PEM fuel cell membrane/CL interface under asymmetric RH cycling and CL crack location. <i>Applied Energy</i> , 2022, 310, 118551.	10.1	19
44	Modeling of liquid water transport in a proton exchange membrane fuel cell gas flow channel with dynamic wettability. <i>International Journal of Energy Research</i> , 2018, 42, 3315-3327.	4.5	18
45	Water Transport and Removal in PEMFC Gas Flow Channel with Various Water Droplet Locations and Channel Surface Wettability. <i>Energies</i> , 2018, 11, 880.	3.1	18
46	Power management optimization in plug-in hybrid electric vehicles subject to uncertain driving cycles. <i>ETransportation</i> , 2020, 3, 100029.	14.8	16
47	Modeling the membrane/CL delamination with the existence of CL crack under RH cycling conditions of PEM fuel cell. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 8722-8735.	7.1	16
48	Water droplet detachment characteristics on surfaces of gas diffusion layers in PEMFCs. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 10341-10351.	7.1	15
49	Effect of micro-porous layer on PEM fuel cells performance: Considering the spatially variable properties. <i>International Journal of Heat and Mass Transfer</i> , 2021, 178, 121592.	4.8	14
50	Performance analysis and optimization of a PEMFC-CAORC system based on 3D construction method of thermodynamic cycle. <i>Energy Conversion and Management</i> , 2021, 247, 114730.	9.2	13
51	Analysis of a combined proton exchange membrane fuel cell and organic Rankine cycle system for waste heat recovery. <i>International Journal of Green Energy</i> , 2021, 18, 271-281.	3.8	12
52	Ex-situ experimental study on dynamic behaviors and detachment characteristics of liquid water in a transparent channel of PEMFC. <i>Renewable Energy</i> , 2022, 187, 1037-1049.	8.9	12
53	Droplet dynamic behaviors on gas diffusion layer surface of various wettabilities in a PEMFC gas flow channel. <i>International Journal of Green Energy</i> , 2021, 18, 1369-1382.	3.8	10
54	Mass transport and performance of proton exchange membrane fuel cell considering the influence of porosity distribution of gas diffusion layer. <i>International Journal of Green Energy</i> , 2022, 19, 1503-1511.	3.8	9

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55	Cost-effective Prussian blue analogue composite proton exchange membranes for low humidity fuel cell operation. <i>Journal of Power Sources</i> , 2022, 537, 231542.	7.8	9
56	Self-adjusting anode catalyst layer for smart water management in anion exchange membrane fuel cells. <i>Cell Reports Physical Science</i> , 2021, 2, 100377.	5.6	7
57	Evaluating the effective diffusion coefficient of reactant gas in the catalyst layer of PEMFC using the fractal method considering the pore size distribution. <i>Nano Select</i> , 2021, 2, 116-120.	3.7	6
58	Numerical simulation of hydrogen filling process in novel high-pressure microtube storage device. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 36859-36871.	7.1	6
59	Synergetic electrochemical HNO <sub>3</sub> reduction on the activated-CFP supported nano-Pt electrodes. <i>Journal of Electroanalytical Chemistry</i> , 2020, 869, 114182.	3.8	4
60	Ex-situ experimental study on extraction of droplet dynamic parameters based on droplet shape in PEMFC. <i>International Journal of Green Energy</i> , 0, , 1-8.	3.8	1
61	Numerical investigation of water droplet dynamics in a PEMFC microchannel. , 2011, , .		0