

Kui Jiao

List of Publications by Year in descending order

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307
papers

19,482
citations

11639

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15716

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all docs

315
docs citations

315
times ranked

8751
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of polymer electrolyte membrane fuel cells: Technology, applications, and needs on fundamental research. <i>Applied Energy</i> , 2011, 88, 981-1007.	5.1	2,692
2	Designing the next generation of proton-exchange membrane fuel cells. <i>Nature</i> , 2021, 595, 361-369.	13.7	1,012
3	Materials, technological status, and fundamentals of PEM fuel cells – A review. <i>Materials Today</i> , 2020, 32, 178-203.	8.3	784
4	Water transport in polymer electrolyte membrane fuel cells. <i>Progress in Energy and Combustion Science</i> , 2011, 37, 221-291.	15.8	730
5	Transient analysis of polymer electrolyte fuel cells. <i>Electrochimica Acta</i> , 2005, 50, 1307-1315.	2.6	259
6	A Nonisothermal, Two-Phase Model for Polymer Electrolyte Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2006, 153, A1193.	1.3	253
7	Multi-phase models for water and thermal management of proton exchange membrane fuel cell: A review. <i>Journal of Power Sources</i> , 2018, 391, 120-133.	4.0	251
8	Fundamentals, materials, and machine learning of polymer electrolyte membrane fuel cell technology. <i>Energy and AI</i> , 2020, 1, 100014.	5.8	228
9	Cold start of proton exchange membrane fuel cell. <i>Progress in Energy and Combustion Science</i> , 2018, 64, 29-61.	15.8	215
10	Three-dimensional multiphase modeling of cold start processes in polymer electrolyte membrane fuel cells. <i>Electrochimica Acta</i> , 2009, 54, 6876-6891.	2.6	196
11	A 3D model of PEMFC considering detailed multiphase flow and anisotropic transport properties. <i>International Journal of Heat and Mass Transfer</i> , 2017, 115, 714-724.	2.5	186
12	Modeling two-phase flow in PEM fuel cell channels. <i>Journal of Power Sources</i> , 2008, 179, 603-617.	4.0	180
13	Numerical and analytical modeling of lithium ion battery thermal behaviors with different cooling designs. <i>Journal of Power Sources</i> , 2013, 233, 47-61.	4.0	176
14	Dynamics of polymer electrolyte fuel cells undergoing load changes. <i>Electrochimica Acta</i> , 2006, 51, 3924-3933.	2.6	170
15	Elucidating differences between carbon paper and carbon cloth in polymer electrolyte fuel cells. <i>Electrochimica Acta</i> , 2007, 52, 3965-3975.	2.6	170
16	PEM Fuel cell and electrolysis cell technologies and hydrogen infrastructure development – a review. <i>Energy and Environmental Science</i> , 2022, 15, 2288-2328.	15.6	167
17	Characteristics of PEMFC operating at high current density with low external humidification. <i>Energy Conversion and Management</i> , 2017, 150, 763-774.	4.4	159
18	Multi-phase simulation of proton exchange membrane fuel cell with 3D fine mesh flow field. <i>International Journal of Energy Research</i> , 2018, 42, 4697-4709.	2.2	158

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19	Additive manufacturing for energy: A review. <i>Applied Energy</i> , 2021, 282, 116041.	5.1	146
20	Three-dimensional multi-phase simulation of PEMFC at high current density utilizing Eulerian-Eulerian model and two-fluid model. <i>Energy Conversion and Management</i> , 2018, 176, 409-421.	4.4	137
21	Numerical investigation of thermal behaviors in lithium-ion battery stack discharge. <i>Applied Energy</i> , 2014, 132, 288-297.	5.1	136
22	Optimization design of the cathode flow channel for proton exchange membrane fuel cells. <i>Energy Conversion and Management</i> , 2018, 171, 1813-1821.	4.4	131
23	De Novo Design of Covalent Organic Framework Membranes toward Ultrafast Anion Transport. <i>Advanced Materials</i> , 2020, 32, e2001284.	11.1	130
24	Magnetic field alignment of stable proton-conducting channels in an electrolyte membrane. <i>Nature Communications</i> , 2019, 10, 842.	5.8	123
25	Liquid water transport in straight micro-parallel-channels with manifolds for PEM fuel cell cathode. <i>Journal of Power Sources</i> , 2006, 157, 226-243.	4.0	121
26	Thermal management of polymer electrolyte membrane fuel cells: A review of cooling methods, material properties, and durability. <i>Applied Energy</i> , 2021, 286, 116496.	5.1	120
27	Two-Phase Transients of Polymer Electrolyte Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2007, 154, B636.	1.3	118
28	Experimental investigations on liquid water removal from the gas diffusion layer by reactant flow in a PEM fuel cell. <i>Applied Energy</i> , 2010, 87, 2770-2777.	5.1	118
29	Investigation and design optimization of exhaust-based thermoelectric generator system for internal combustion engine. <i>Energy Conversion and Management</i> , 2014, 85, 85-101.	4.4	116
30	Effects of various operating and initial conditions on cold start performance of polymer electrolyte membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2009, 34, 8171-8184.	3.8	115
31	Multi-physics-resolved digital twin of proton exchange membrane fuel cells with a data-driven surrogate model. <i>Energy and AI</i> , 2020, 1, 100004.	5.8	115
32	Liquid water transport in parallel serpentine channels with manifolds on cathode side of a PEM fuel cell stack. <i>Journal of Power Sources</i> , 2006, 154, 124-137.	4.0	114
33	Droplet dynamics in a polymer electrolyte fuel cell gas flow channel: Forces, deformation, and detachment. I: Theoretical and numerical analyses. <i>Journal of Power Sources</i> , 2012, 206, 119-128.	4.0	114
34	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.	5.1	114
35	Life cycle analysis of internal combustion engine, electric and fuel cell vehicles for China. <i>Energy</i> , 2013, 59, 402-412.	4.5	111
36	AI-based optimization of PEM fuel cell catalyst layers for maximum power density via data-driven surrogate modeling. <i>Energy Conversion and Management</i> , 2020, 205, 112460.	4.4	111

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37	Cold start characteristics of proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 11832-11845.	3.8	107
38	Large-scale multi-phase simulation of proton exchange membrane fuel cell. <i>International Journal of Heat and Mass Transfer</i> , 2019, 130, 555-563.	2.5	107
39	Simultaneous measurement of current and temperature distributions in a proton exchange membrane fuel cell during cold start processes. <i>Electrochimica Acta</i> , 2011, 56, 2967-2982.	2.6	104
40	Gas diffusion layer deformation and its effect on the transport characteristics and performance of proton exchange membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 12891-12903.	3.8	101
41	Cold start analysis of polymer electrolyte membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 5077-5094.	3.8	100
42	On the water transport behavior and phase transition mechanisms in cold start operation of PEM fuel cell. <i>Applied Energy</i> , 2019, 233-234, 776-788.	5.1	100
43	Effects of operating conditions on water and heat management by a transient multi-dimensional PEMFC system model. <i>Energy</i> , 2019, 183, 462-476.	4.5	98
44	Modeling of two-phase transport in the diffusion media of polymer electrolyte fuel cells. <i>Journal of Power Sources</i> , 2008, 185, 261-271.	4.0	95
45	Polymer electrolyte membrane fuel cell and hydrogen station networks for automobiles: Status, technology, and perspectives. <i>Advances in Applied Energy</i> , 2021, 2, 100011.	6.6	95
46	Ultra large-scale simulation of polymer electrolyte fuel cells. <i>Journal of Power Sources</i> , 2006, 153, 130-135.	4.0	94
47	Start-up modes of thermoelectric generator based on vehicle exhaust waste heat recovery. <i>Applied Energy</i> , 2015, 138, 276-290.	5.1	94
48	Life cycle assessment of fuel cell, electric and internal combustion engine vehicles under different fuel scenarios and driving mileages in China. <i>Energy</i> , 2020, 198, 117365.	4.5	94
49	Analysis of the Key Parameters in the Cold Start of Polymer Electrolyte Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2007, 154, B1041.	1.3	93
50	Cold start of polymer electrolyte fuel cells: Three-stage startup characterization. <i>Electrochimica Acta</i> , 2010, 55, 2636-2644.	2.6	93
51	Modeling Polymer Electrolyte Fuel Cells with Large Density and Velocity Changes. <i>Journal of the Electrochemical Society</i> , 2005, 152, A445.	1.3	92
52	Modeling of assisted cold start processes with anode catalytic hydrogen-oxygen reaction in proton exchange membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 1004-1015.	3.8	90
53	Numerical investigations on liquid water removal from the porous gas diffusion layer by reactant flow. <i>Applied Energy</i> , 2010, 87, 2180-2186.	5.1	88
54	Two-phase flow in the mixed-wettability gas diffusion layer of proton exchange membrane fuel cells. <i>Applied Energy</i> , 2018, 232, 443-450.	5.1	87

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55	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.	4.4	86
56	Three-dimensional multi-phase simulation of PEM fuel cell considering the full morphology of metal foam flow field. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 2978-2989.	3.8	86
57	Maximum power cold start mode of proton exchange membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 8390-8400.	3.8	85
58	Simulation of flow and transport phenomena in a polymer electrolyte fuel cell under low-humidity operation. <i>Journal of Power Sources</i> , 2005, 147, 148-161.	4.0	83
59	Three-dimensional simulation of a new cooling strategy for proton exchange membrane fuel cell stack using a non-isothermal multiphase model. <i>Applied Energy</i> , 2019, 255, 113865.	5.1	83
60	A quasi-2D transient model of proton exchange membrane fuel cell with anode recirculation. <i>Energy Conversion and Management</i> , 2018, 171, 1463-1475.	4.4	82
61	Analysis of cold start processes in proton exchange membrane fuel cell stacks. <i>Journal of Power Sources</i> , 2013, 224, 99-114.	4.0	81
62	Three-dimensional non-isothermal modeling of carbon monoxide poisoning in high temperature proton exchange membrane fuel cells with phosphoric acid doped polybenzimidazole membranes. <i>Fuel</i> , 2011, 90, 568-582.	3.4	80
63	Experimental investigation on PEM fuel cell cold start behavior containing porous metal foam as cathode flow distributor. <i>Applied Energy</i> , 2017, 203, 101-114.	5.1	80
64	Stochastic modeling and direct simulation of the diffusion media for polymer electrolyte fuel cells. <i>International Journal of Heat and Mass Transfer</i> , 2010, 53, 1128-1138.	2.5	79
65	Three-dimensional multi-phase model of PEM fuel cell coupled with improved agglomerate sub-model of catalyst layer. <i>Energy Conversion and Management</i> , 2019, 199, 112051.	4.4	79
66	Analysis of single- and two-phase flow characteristics of 3-D fine mesh flow field of proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2019, 438, 226995.	4.0	77
67	Subfreezing operation of polymer electrolyte fuel cells: Ice formation and cell performance loss. <i>Electrochimica Acta</i> , 2012, 65, 127-133.	2.6	74
68	Modeling of cold start processes and performance optimization for proton exchange membrane fuel cell stacks. <i>Journal of Power Sources</i> , 2014, 247, 738-748.	4.0	74
69	Sensitivity analysis of uncertain parameters based on an improved proton exchange membrane fuel cell analytical model. <i>Energy Conversion and Management</i> , 2018, 164, 639-654.	4.4	74
70	Purge strategy optimization of proton exchange membrane fuel cell with anode recirculation. <i>Applied Energy</i> , 2018, 225, 1-13.	5.1	74
71	Comparative analysis of two-phase flow in sinusoidal channel of different geometric configurations with application to PEMFC. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 13807-13819.	3.8	73
72	A Three-dimensional Non-isothermal Model of High Temperature Proton Exchange Membrane Fuel Cells with Phosphoric Acid Doped Polybenzimidazole Membranes. <i>Fuel Cells</i> , 2010, 10, 351-362.	1.5	72

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73	Measurement of current distribution in a proton exchange membrane fuel cell with various flow arrangements – A parametric study. <i>Applied Energy</i> , 2012, 93, 80-89.	5.1	72
74	Numerical simulation for metal foam two-phase flow field of proton exchange membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 6229-6244.	3.8	72
75	Droplet dynamics in a polymer electrolyte fuel cell gas flow channel: Forces, Deformation and detachment. II: Comparisons of analytical solution with numerical and experimental results. <i>Journal of Power Sources</i> , 2012, 210, 191-197.	4.0	70
76	A comprehensive design method for segmented thermoelectric generator. <i>Energy Conversion and Management</i> , 2015, 106, 510-519.	4.4	70
77	Modeling of hydrogen alkaline membrane fuel cell with interfacial effect and water management optimization. <i>Renewable Energy</i> , 2016, 91, 166-177.	4.3	70
78	Numerical investigation of innovative 3D cathode flow channel in proton exchange membrane fuel cell. <i>International Journal of Energy Research</i> , 2018, 42, 3328-3338.	2.2	70
79	A dot matrix and sloping baffle cathode flow field of proton exchange membrane fuel cell. <i>Journal of Power Sources</i> , 2019, 434, 226741.	4.0	70
80	Effects of various operating conditions on the hydrogen absorption processes in a metal hydride tank. <i>Applied Energy</i> , 2012, 94, 257-269.	5.1	69
81	Effects of electrode wettabilities on liquid water behaviours in PEM fuel cell cathode. <i>Journal of Power Sources</i> , 2008, 175, 106-119.	4.0	68
82	Effect of vehicle driving conditions on the performance of thermoelectric generator. <i>Energy Conversion and Management</i> , 2015, 96, 363-376.	4.4	68
83	Three-dimensional modeling of hydrogen sorption in metal hydride hydrogen storage beds. <i>Journal of Power Sources</i> , 2009, 194, 997-1006.	4.0	67
84	Three-dimensional multiphase modeling of alkaline anion exchange membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 5981-5995.	3.8	67
85	Recent progress of gas diffusion layer in proton exchange membrane fuel cell: Two-phase flow and material properties. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 8640-8671.	3.8	67
86	Investigation of the effect of micro-porous layer on PEM fuel cell cold start operation. <i>Renewable Energy</i> , 2018, 117, 125-134.	4.3	66
87	Oriented proton-conductive nano-sponge-facilitated polymer electrolyte membranes. <i>Energy and Environmental Science</i> , 2020, 13, 297-309.	15.6	66
88	Multi-functional anodes boost the transient power and durability of proton exchange membrane fuel cells. <i>Nature Communications</i> , 2020, 11, 1191.	5.8	65
89	Mechanism of signal uncertainty generation for laser-induced breakdown spectroscopy. <i>Frontiers of Physics</i> , 2021, 16, 1.	2.4	65
90	Innovative gas diffusion layers and their water removal characteristics in PEM fuel cell cathode. <i>Journal of Power Sources</i> , 2007, 169, 296-314.	4.0	64

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91	Numerical analysis of operating conditions effects on PEMFC with anode recirculation. Energy, 2019, 173, 844-856.	4.5	64
92	Porous-Media Flow Fields for Polymer Electrolyte Fuel Cells. Journal of the Electrochemical Society, 2009, 156, B1134.	1.3	62
93	Modeling discharge deposit formation and its effect on lithium-air battery performance. Electrochimica Acta, 2012, 75, 239-246.	2.6	62
94	Investigation of current density spatial distribution in PEM fuel cells using a comprehensively validated multi-phase non-isothermal model. International Journal of Heat and Mass Transfer, 2020, 150, 119294.	2.5	62
95	Elucidating the constant power, current and voltage cold start modes of proton exchange membrane fuel cell. International Journal of Heat and Mass Transfer, 2014, 77, 489-500.	2.5	61
96	Water management in alkaline anion exchange membrane fuel cell anode. International Journal of Hydrogen Energy, 2012, 37, 18389-18402.	3.8	60
97	Numerical simulation of two-phase cross flow in the gas diffusion layer microstructure of proton exchange membrane fuel cells. International Journal of Energy Research, 2018, 42, 802-816.	2.2	59
98	Two-phase flow and oxygen transport in the perforated gas diffusion layer of proton exchange membrane fuel cell. International Journal of Heat and Mass Transfer, 2019, 139, 58-68.	2.5	59
99	A comprehensive and time-efficient model for determination of thermoelectric generator length and cross-section area. Energy Conversion and Management, 2016, 122, 85-94.	4.4	58
100	Two-Phase Flow Dynamics in the Gas Diffusion Layer of Proton Exchange Membrane Fuel Cells: Volume of Fluid Modeling and Comparison with Experiment. Journal of the Electrochemical Society, 2018, 165, F613-F620.	1.3	58
101	Numerical simulation of gas liquid two-phase flow in anode channel of low-temperature fuel cells. International Journal of Hydrogen Energy, 2017, 42, 3250-3258.	3.8	57
102	Effect of cooling design on the characteristics and performance of thermoelectric generator used for internal combustion engine. Energy Conversion and Management, 2015, 101, 9-18.	4.4	56
103	Experimental and theoretical analysis of ionomer/carbon ratio effect on PEM fuel cell cold start operation. International Journal of Hydrogen Energy, 2017, 42, 12521-12530.	3.8	56
104	Lattice Boltzmann simulation of liquid water transport inside and at interface of gas diffusion and micro-porous layers of PEM fuel cells. International Journal of Heat and Mass Transfer, 2019, 140, 1074-1090.	2.5	56
105	Numerical investigation of water dynamics in a novel proton exchange membrane fuel cell flow channel. Journal of Power Sources, 2013, 222, 150-160.	4.0	55
106	Porous-Media Flow Fields for Polymer Electrolyte Fuel Cells. Journal of the Electrochemical Society, 2009, 156, B1124.	1.3	54
107	Challenges and opportunities in modelling of proton exchange membrane fuel cells (PEMFC). International Journal of Energy Research, 2017, 41, 1793-1797.	2.2	54
108	3D modeling approach toward large-scale PEM fuel cell simulation and partitioned optimization study on flow field. ETransportation, 2020, 6, 100090.	6.8	51

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109	Analysis of Reaction Rates in the Cathode Electrode of Polymer Electrolyte Fuel Cell I. Single-Layer Electrodes. <i>Journal of the Electrochemical Society</i> , 2008, 155, B1289.	1.3	50
110	Counter-flow formic acid microfluidic fuel cell with high fuel utilization exceeding 90%. <i>Applied Energy</i> , 2015, 160, 930-936.	5.1	49
111	Two-phase flow in compressed gas diffusion layer: Finite element and volume of fluid modeling. <i>Journal of Power Sources</i> , 2019, 437, 226933.	4.0	49
112	Through-Plane Water Distribution in a Polymer Electrolyte Fuel Cell: Comparison of Numerical Prediction with Neutron Radiography Data. <i>Journal of the Electrochemical Society</i> , 2010, 157, B1878.	1.3	48
113	Multi-component multi-phase lattice Boltzmann modeling of droplet coalescence in flow channel of fuel cell. <i>Journal of Power Sources</i> , 2018, 393, 83-91.	4.0	48
114	Effect of Spatially-Varying GDL Properties and Land Compression on Water Distribution in PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2011, 158, B1292.	1.3	47
115	Elucidating modeling aspects of thermoelectric generator. <i>International Journal of Heat and Mass Transfer</i> , 2015, 85, 12-32.	2.5	47
116	3D lattice Boltzmann modeling of droplet motion in PEM fuel cell channel with realistic GDL microstructure and fluid properties. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 12476-12488.	3.8	47
117	Analysis of Air Cathode Performance for Lithium-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2013, 160, A1847-A1855.	1.3	46
118	Pore-scale investigation of catalyst layer ingredient and structure effect in proton exchange membrane fuel cell. <i>Applied Energy</i> , 2019, 253, 113561.	5.1	46
119	Two-dimensional multi-physics modeling of porous transport layer in polymer electrolyte membrane electrolyzer for water splitting. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 32984-32994.	3.8	45
120	Analysis of the Reaction Rates in the Cathode Electrode of Polymer Electrolyte Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2009, 156, B403.	1.3	44
121	Two-phase flow dynamics in a micro channel with heterogeneous surfaces. <i>International Journal of Heat and Mass Transfer</i> , 2014, 71, 349-360.	2.5	44
122	Numerical simulation of two-phase cross flow in microstructure of gas diffusion layer with variable contact angle. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 15772-15785.	3.8	44
123	Enhancing Hydroxide Conductivity and Stability of Anion Exchange Membrane by Blending Quaternary Ammonium Functionalized Polymers. <i>Electrochimica Acta</i> , 2017, 240, 486-494.	2.6	44
124	Three-dimensional simulation of water droplet movement in PEM fuel cell flow channels with hydrophilic surfaces. <i>International Journal of Energy Research</i> , 2011, 35, 1200-1212.	2.2	42
125	Effect of membrane electrode assembly design on the cold start process of proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 25372-25387.	3.8	42
126	Measurement of thermal conductivity and heat pipe effect in hydrophilic and hydrophobic carbon papers. <i>International Journal of Heat and Mass Transfer</i> , 2013, 60, 134-142.	2.5	41

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127	Numerical simulations of carbon monoxide poisoning in high temperature proton exchange membrane fuel cells with various flow channel designs. <i>Applied Energy</i> , 2013, 104, 21-41.	5.1	41
128	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.	3.8	41
129	An analytical model for hydrogen alkaline anion exchange membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 3300-3312.	3.8	40
130	Current density and temperature distribution measurement and homogeneity analysis for a large-area proton exchange membrane fuel cell. <i>Energy</i> , 2022, 239, 121922.	4.5	40
131	Ex situ and modeling study of two-phase flow in a single channel of polymer electrolyte membrane fuel cells. <i>Journal of Power Sources</i> , 2011, 196, 9544-9551.	4.0	39
132	Experimental study on the effect of reactant flow arrangements on the current distribution in proton exchange membrane fuel cells. <i>Electrochimica Acta</i> , 2011, 56, 2591-2598.	2.6	39
133	Transient analysis of alkaline anion exchange membrane fuel cell anode. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 6509-6525.	3.8	39
134	Optimization of porous media flow field for proton exchange membrane fuel cell using a data-driven surrogate model. <i>Energy Conversion and Management</i> , 2020, 226, 113513.	4.4	39
135	Numerical investigations of assisted heating cold start strategies for proton exchange membrane fuel cell systems. <i>Energy</i> , 2021, 222, 119910.	4.5	39
136	Numerical simulation of air flow through turbocharger compressors with dual volute design. <i>Applied Energy</i> , 2009, 86, 2494-2506.	5.1	38
137	Analytical modeling of liquid saturation jump effect for hydrogen alkaline anion exchange membrane fuel cell. <i>International Journal of Heat and Mass Transfer</i> , 2017, 112, 891-902.	2.5	38
138	Investigation of two-phase flow in the compressed gas diffusion layer microstructures. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 26498-26516.	3.8	38
139	Three-dimensional modeling of flow field optimization for co-electrolysis solid oxide electrolysis cell. <i>Applied Thermal Engineering</i> , 2020, 172, 114959.	3.0	38
140	Numerical investigation of ejector transient characteristics for a 130kW PEMFC system. <i>International Journal of Energy Research</i> , 2020, 44, 3697-3710.	2.2	38
141	Power and efficiency factors for comprehensive evaluation of thermoelectric generator materials. <i>International Journal of Heat and Mass Transfer</i> , 2016, 93, 1034-1037.	2.5	37
142	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.	2.2	37
143	Effects of surface wettability on two-phase flow in the compressed gas diffusion layer microstructures. <i>International Journal of Heat and Mass Transfer</i> , 2020, 151, 119370.	2.5	37
144	A comprehensive proton exchange membrane fuel cell system model integrating various auxiliary subsystems. <i>Applied Energy</i> , 2019, 256, 113959.	5.1	36

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145	Experimental investigation and optimization of proton exchange membrane fuel cell using different flow fields. <i>Energy</i> , 2021, 217, 119313.	4.5	36
146	Catalytic hydrogen-oxygen reaction in anode and cathode for cold start of proton exchange membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 10293-10307.	3.8	35
147	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.	3.8	34
148	Modeling of high temperature proton exchange membrane fuel cells with novel sulfonated polybenzimidazole membranes. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 13671-13680.	3.8	34
149	A lattice Boltzmann model for multi-component two-phase gas-liquid flow with realistic fluid properties. <i>International Journal of Heat and Mass Transfer</i> , 2019, 128, 536-549.	2.5	34
150	Liquid droplet detachment and dispersion in metal foam flow field of polymer electrolyte membrane fuel cell. <i>Journal of Power Sources</i> , 2020, 480, 229150.	4.0	34
151	Towards the digitalisation of porous energy materials: evolution of digital approaches for microstructural design. <i>Energy and Environmental Science</i> , 2021, 14, 2549-2576.	15.6	34
152	Ni migration of Ni-YSZ electrode in solid oxide electrolysis cell: An integrated model study. <i>Journal of Power Sources</i> , 2021, 516, 230660.	4.0	34
153	Probing the water content in polymer electrolyte fuel cells using neutron radiography. <i>Electrochimica Acta</i> , 2012, 75, 1-10.	2.6	33
154	Exergy Analysis of High-Temperature Proton Exchange Membrane Fuel Cell Systems. <i>International Journal of Green Energy</i> , 2015, 12, 917-929.	2.1	33
155	Effect of electrode design and operating condition on performance of hydrogen alkaline membrane fuel cell. <i>Applied Energy</i> , 2016, 183, 1272-1278.	5.1	33
156	Investigation of performance heterogeneity of PEMFC stack based on 1+1D and flow distribution models. <i>Energy Conversion and Management</i> , 2020, 207, 112502.	4.4	33
157	Transport properties of gas diffusion layer of proton exchange membrane fuel cells: Effects of compression. <i>International Journal of Heat and Mass Transfer</i> , 2021, 178, 121608.	2.5	33
158	Direct numerical simulation of low Reynolds number turbulent air-water transport in fuel cell flow channel. <i>Science Bulletin</i> , 2017, 62, 31-39.	4.3	31
159	A comprehensive three-dimensional model coupling channel multi-phase flow and electrochemical reactions in proton exchange membrane fuel cell. <i>Advances in Applied Energy</i> , 2021, 2, 100033.	6.6	31
160	A three-dimensional multi-phase numerical model of DMFC utilizing Eulerian-Eulerian model. <i>Applied Thermal Engineering</i> , 2018, 132, 140-153.	3.0	30
161	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.	2.6	30
162	An experimental study on the atomization characteristics of impinging jets of power law fluid. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2015, 217, 49-57.	1.0	29

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163	Direct numerical simulation of droplet deformation in turbulent flows with different velocity profiles. <i>Fuel</i> , 2019, 247, 302-314.	3.4	29
164	Two-dimensional simulation of cold start processes for proton exchange membrane fuel cell with different hydrogen flow arrangements. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 17795-17812.	3.8	29
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