

Ned Djilali

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6724730/publications.pdf>

Version: 2024-02-01

256
papers

12,491
citations

23565

58
h-index

30081

103
g-index

262
all docs

262
docs citations

262
times ranked

8084
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-dimensional computational analysis of transport phenomena in a PEM fuel cell. <i>Journal of Power Sources</i> , 2002, 106, 284-294.	7.8	590
2	An assessment of alkaline fuel cell technology. <i>International Journal of Hydrogen Energy</i> , 2002, 27, 507-526.	7.1	517
3	Microfluidic fuel cells: A review. <i>Journal of Power Sources</i> , 2009, 186, 353-369.	7.8	507
4	Ex situ visualization of liquid water transport in PEM fuel cell gas diffusion layers. <i>Journal of Power Sources</i> , 2006, 154, 95-105.	7.8	365
5	A 3D, Multiphase, Multicomponent Model of the Cathode and Anode of a PEM Fuel Cell. <i>Journal of the Electrochemical Society</i> , 2003, 150, A1589.	2.9	353
6	A Microfluidic Fuel Cell with Flow-Through Porous Electrodes. <i>Journal of the American Chemical Society</i> , 2008, 130, 4000-4006.	13.7	301
7	Smart technologies for promotion of energy efficiency, utilization of sustainable resources and waste management. <i>Journal of Cleaner Production</i> , 2019, 231, 565-591.	9.3	282
8	Effect of compression on liquid water transport and microstructure of PEMFC gas diffusion layers. <i>Journal of Power Sources</i> , 2007, 163, 784-792.	7.8	281
9	Three-dimensional computational analysis of transport phenomena in a PEM fuel cell—a parametric study. <i>Journal of Power Sources</i> , 2003, 124, 440-452.	7.8	266
10	CFD-based modelling of proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2005, 141, 65-78.	7.8	224
11	Computational model of a PEM fuel cell with serpentine gas flow channels. <i>Journal of Power Sources</i> , 2004, 130, 149-157.	7.8	221
12	Computational modelling of polymer electrolyte membrane (PEM) fuel cells: Challenges and opportunities. <i>Energy</i> , 2007, 32, 269-280.	8.8	209
13	Influence of heat transfer on gas and water transport in fuel cells. <i>International Journal of Thermal Sciences</i> , 2002, 41, 29-40.	4.9	196
14	Dynamic water transport and droplet emergence in PEMFC gas diffusion layers. <i>Journal of Power Sources</i> , 2008, 176, 240-246.	7.8	178
15	Multi-variable optimization of PEMFC cathodes using an agglomerate model. <i>Electrochimica Acta</i> , 2007, 52, 6318-6337.	5.2	167
16	A two-dimensional analysis of mass transport in proton exchange membrane fuel cells. <i>International Journal of Engineering Science</i> , 1999, 37, 431-452.	5.0	163
17	Improved fuel utilization in microfluidic fuel cells: A computational study. <i>Journal of Power Sources</i> , 2005, 143, 57-66.	7.8	162
18	Pore Scale Simulation of Transport and Electrochemical Reactions in Reconstructed PEMFC Catalyst Layers. <i>Journal of the Electrochemical Society</i> , 2010, 157, B1434.	2.9	157

#	ARTICLE	IF	CITATIONS
19	PV array power output maximization under partial shading using new shifted PV array arrangements. <i>Applied Energy</i> , 2017, 187, 326-337.	10.1	149
20	Dynamic behaviour of liquid water emerging from a GDL pore into a PEMFC gas flow channel. <i>Journal of Power Sources</i> , 2007, 172, 287-295.	7.8	141
21	Three-dimensional numerical simulations of water droplet dynamics in a PEMFC gas channel. <i>Journal of Power Sources</i> , 2008, 181, 101-115.	7.8	137
22	Effect of Polytetrafluoroethylene (PTFE) and micro porous layer (MPL) on thermal conductivity of fuel cell gas diffusion layers: Modeling and experiments. <i>Journal of Power Sources</i> , 2014, 248, 632-641.	7.8	135
23	GridLAB-D: An Agent-Based Simulation Framework for Smart Grids. <i>Journal of Applied Mathematics</i> , 2014, 2014, 1-12.	0.9	133
24	High-performance microfluidic vanadium redox fuel cell. <i>Electrochimica Acta</i> , 2007, 52, 4942-4946.	5.2	127
25	Planar and three-dimensional microfluidic fuel cell architectures based on graphite rod electrodes. <i>Journal of Power Sources</i> , 2007, 168, 379-390.	7.8	123
26	Effective thermal conductivity and thermal contact resistance of gas diffusion layers in proton exchange membrane fuel cells. Part 1: Effect of compressive load. <i>Journal of Power Sources</i> , 2011, 196, 246-254.	7.8	116
27	Hydrogen Peroxide as an Oxidant for Microfluidic Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2007, 154, B1220.	2.9	115
28	Modeling framework and validation of a smart grid and demand response system for wind power integration. <i>Applied Energy</i> , 2014, 113, 199-207.	10.1	113
29	An alkaline microfluidic fuel cell based on formate and hypochlorite bleach. <i>Electrochimica Acta</i> , 2008, 54, 698-705.	5.2	108
30	Numerical investigation of water droplet dynamics in a low-temperature fuel cell microchannel: Effect of channel geometry. <i>Journal of Power Sources</i> , 2010, 195, 801-812.	7.8	108
31	Online voltage security assessment considering comfort-constrained demand response control of distributed heat pump systems. <i>Applied Energy</i> , 2012, 96, 104-114.	10.1	108
32	Determination of transport parameters for multiphase flow in porous gas diffusion electrodes using a capillary network model. <i>Journal of Power Sources</i> , 2007, 171, 706-717.	7.8	98
33	Determination of the effective diffusion coefficient in porous media including Knudsen effects. <i>Microfluidics and Nanofluidics</i> , 2008, 4, 257-260.	2.2	92
34	Lab-on-chip methodologies for the study of transport in porous media: energy applications. <i>Lab on A Chip</i> , 2008, 8, 689.	6.0	90
35	Transactive control of fast-acting demand response based on thermostatic loads in real-time retail electricity markets. <i>Applied Energy</i> , 2018, 210, 1310-1320.	10.1	89
36	Renewable resources portfolio optimization in the presence of demand response. <i>Applied Energy</i> , 2016, 162, 139-148.	10.1	88

#	ARTICLE	IF	CITATIONS
37	Pore scale modeling of a proton exchange membrane fuel cell catalyst layer: Effects of water vapor and temperature. <i>Journal of Power Sources</i> , 2011, 196, 3195-3203.	7.8	86
38	Experimental study on different preheating methods for the cold-start of PEMFC stacks. <i>Energy</i> , 2018, 162, 1029-1040.	8.8	80
39	Transport Phenomena in Polymer Electrolyte Membranes. <i>Journal of the Electrochemical Society</i> , 2005, 152, A1804.	2.9	77
40	Hierarchical market integration of responsive loads as spinning reserve. <i>Applied Energy</i> , 2013, 104, 229-238.	10.1	77
41	A techno-economic analysis of decentralized electrolytic hydrogen production for fuel cell vehicles. <i>International Journal of Hydrogen Energy</i> , 2005, 30, 1159-1179.	7.1	76
42	Numerical and microfluidic pore networks: Towards designs for directed water transport in GDLs. <i>Electrochimica Acta</i> , 2008, 53, 7630-7637.	5.2	76
43	A numerical study of the propulsive efficiency of a flapping hydrofoil. <i>International Journal for Numerical Methods in Fluids</i> , 2003, 42, 493-526.	1.6	75
44	Numerical optimization of proton exchange membrane fuel cell cathodes. <i>Electrochimica Acta</i> , 2007, 52, 2668-2682.	5.2	74
45	A novel approach to determine the in-plane thermal conductivity of gas diffusion layers in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2011, 196, 3565-3571.	7.8	74
46	Analytic determination of the effective thermal conductivity of PEM fuel cell gas diffusion layers. <i>Journal of Power Sources</i> , 2008, 179, 200-208.	7.8	72
47	Aggregation and Bidirectional Charging Power Control of Plug-in Hybrid Electric Vehicles: Generation System Adequacy Analysis. <i>IEEE Transactions on Sustainable Energy</i> , 2015, 6, 325-335.	8.8	67
48	Natural Convection in an Enclosure with Distributed Heat Sources. <i>Numerical Heat Transfer; Part A: Applications</i> , 2006, 49, 655-667.	2.1	65
49	A new thermostat for real-time price demand response: Cost, comfort and energy impacts of discrete-time control without deadband. <i>Applied Energy</i> , 2015, 155, 816-825.	10.1	65
50	Experimental investigation of water droplet emergence in a model polymer electrolyte membrane fuel cell microchannel. <i>Journal of Power Sources</i> , 2012, 208, 248-256.	7.8	64
51	Systematic parameter estimation for PEM fuel cell models. <i>Journal of Power Sources</i> , 2005, 144, 83-93.	7.8	63
52	Determination of effective transport properties in a PEMFC catalyst layer using different reconstruction algorithms. <i>Journal of Power Sources</i> , 2012, 208, 354-365.	7.8	63
53	Effective thermal conductivity and thermal contact resistance of gas diffusion layers in proton exchange membrane fuel cells. Part 2: Hysteresis effect under cyclic compressive load. <i>Journal of Power Sources</i> , 2010, 195, 8104-8109.	7.8	62
54	Computational modeling of air-breathing microfluidic fuel cells with flow-over and flow-through anodes. <i>Journal of Power Sources</i> , 2014, 259, 15-24.	7.8	62

#	ARTICLE	IF	CITATIONS
55	Turbulent Flow Around a Bluff Rectangular Plate. Part I: Experimental Investigation. Journal of Fluids Engineering, Transactions of the ASME, 1991, 113, 51-59.	1.5	61
56	Modeling of PEM Fuel Cell Catalyst Layers: Status and Outlook. Electrochemical Energy Reviews, 2019, 2, 428-466.	25.5	60
57	On the effects of non-uniform property distribution due to compression in the gas diffusion layer of a PEMFC. International Journal of Hydrogen Energy, 2010, 35, 2936-2948.	7.1	59
58	Modeling the Effect of Chemical Membrane Degradation on PEMFC Performance. Journal of the Electrochemical Society, 2018, 165, F3328-F3336.	2.9	59
59	Computational analysis of heat and mass transfer in a micro-structured PEMFC cathode. Journal of Power Sources, 2006, 156, 334-344.	7.8	58
60	Numerical simulation of emergence of a water droplet from a pore into a microchannel gas stream. Microfluidics and Nanofluidics, 2008, 4, 543-555.	2.2	57
61	A multi-criteria model analysis framework for assessing integrated water-energy system transformation pathways. Applied Energy, 2018, 210, 477-486.	10.1	57
62	A Continental-scale Hydroeconomic Model for Integrating Water-Energy-Land Nexus Solutions. Water Resources Research, 2018, 54, 7511-7533.	4.2	57
63	Mathematical modelling of ambient air-breathing fuel cells for portable devices. Electrochimica Acta, 2007, 52, 3849-3862.	5.2	56
64	Transient electrolyser response in a renewable-regenerative energy system. International Journal of Hydrogen Energy, 2009, 34, 64-70.	7.1	53
65	3D Modeling of Catalyst Layers in PEM Fuel Cells. Journal of the Electrochemical Society, 2007, 154, B1167.	2.9	51
66	In-fibre Bragg grating sensors for distributed temperature measurement in a polymer electrolyte membrane fuel cell. Journal of Power Sources, 2009, 192, 376-380.	7.8	50
67	Analysis of coupled electron and mass transport in the gas diffusion layer of a PEM fuel cell. Journal of Power Sources, 2006, 161, 294-300.	7.8	49
68	Comfort-Constrained Distributed Heat Pump Management. Energy Procedia, 2011, 12, 849-855.	1.8	49
69	Flow Structures in a U-Shaped Fuel Cell Flow Channel: Quantitative Visualization Using Particle Image Velocimetry. Journal of Fuel Cell Science and Technology, 2005, 2, 70-80.	0.8	48
70	Modelling and simulations of carbon corrosion during operation of a Polymer Electrolyte Membrane fuel cell. Electrochimica Acta, 2009, 54, 5583-5592.	5.2	48
71	Balancing clean water-climate change mitigation trade-offs. Environmental Research Letters, 2019, 14, 014009.	5.2	48
72	Prediction of the effective diffusion coefficient in random porous media using the finite element method. Journal of Porous Materials, 2007, 14, 49-54.	2.6	47

#	ARTICLE	IF	CITATIONS
73	Advanced computational tools for PEM fuel cell design. <i>Journal of Power Sources</i> , 2008, 180, 410-422.	7.8	47
74	Transboundary cooperation a potential route to sustainable development in the Indus basin. <i>Nature Sustainability</i> , 2021, 4, 331-339.	23.7	47
75	Transport Phenomena in Polymer Electrolyte Membranes. <i>Journal of the Electrochemical Society</i> , 2005, 152, A1815.	2.9	45
76	A statistically-based thermal conductivity model for fuel cell Gas Diffusion Layers. <i>Journal of Power Sources</i> , 2013, 233, 369-379.	7.8	45
77	Dual-Beam FIB/SEM Characterization, Statistical Reconstruction, and Pore Scale Modeling of a PEMFC Catalyst Layer. <i>Journal of the Electrochemical Society</i> , 2014, 161, F415-F424.	2.9	44
78	Parametric study of a polymer-coated fibre-optic humidity sensor. <i>Measurement Science and Technology</i> , 2012, 23, 035103.	2.6	43
79	A self-humidifying acidic-alkaline bipolar membrane fuel cell. <i>Journal of Power Sources</i> , 2015, 299, 273-279.	7.8	43
80	Thermal conductivity of a graphite bipolar plate (BPP) and its thermal contact resistance with fuel cell gas diffusion layers: Effect of compression, PTFE, micro porous layer (MPL), BPP out-of-flatness and cyclic load. <i>Journal of Power Sources</i> , 2015, 273, 96-104.	7.8	42
81	Numerical analysis of ice-induced stresses in the membrane electrode assembly of a PEM fuel cell under sub-freezing operating conditions. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 4563-4582.	7.1	41
82	CALCULATION OF CONVECTIVE HEAT TRANSFER IN RECIRCULATING TURBULENT FLOW USING VARIOUS NEAR-WALL TURBULENCE MODELS. <i>Numerical Heat Transfer; Part A: Applications</i> , 1989, 16, 189-212.	2.1	39
83	Experimental and Computational Assessment of Windage Losses in Rotating Machinery. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 1996, 118, 116-122.	1.5	39
84	Analysis of coupled proton and water transport in a PEM fuel cell using the binary friction membrane model. <i>Electrochimica Acta</i> , 2006, 52, 1038-1052.	5.2	39
85	Multi-objective optimization of a polymer electrolyte fuel cell membrane electrode assembly. <i>Energy and Environmental Science</i> , 2008, 1, 378.	30.8	39
86	Convective transport and interface kinetics in liquid phase epitaxy. <i>Journal of Crystal Growth</i> , 1994, 143, 334-348.	1.5	38
87	Effect of Pt nano-particle size on the microstructure of PEM fuel cell catalyst layers: Insights from molecular dynamics simulations. <i>Electrochimica Acta</i> , 2010, 55, 1588-1597.	5.2	38
88	Simultaneous In Situ Measurement of Temperature and Relative Humidity in a PEMFC Using Optical Fiber Sensors. <i>Journal of the Electrochemical Society</i> , 2010, 157, B1173.	2.9	37
89	Optical distortion correction for liquid droplet visualization using the ray tracing method: further considerations. <i>Measurement Science and Technology</i> , 2007, 18, L23-L28.	2.6	36
90	Integrated electrochemical velocimetry for microfluidic devices. <i>Microfluidics and Nanofluidics</i> , 2007, 3, 403-416.	2.2	36

#	ARTICLE	IF	CITATIONS
91	Integrating renewable energy using a smart distribution system: Potential of self-regulating demand response. <i>Renewable Energy</i> , 2013, 52, 46-56.	8.9	35
92	A coupled machine learning and genetic algorithm approach to the design of porous electrodes for redox flow batteries. <i>Applied Energy</i> , 2021, 298, 117177.	10.1	35
93	Non-planar architecture for proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2001, 102, 178-185.	7.8	34
94	Micro-porous layer stochastic reconstruction and transport parameter determination. <i>Journal of Power Sources</i> , 2015, 282, 58-64.	7.8	34
95	A new model for thermal contact resistance between fuel cell gas diffusion layers and bipolar plates. <i>Journal of Power Sources</i> , 2014, 266, 51-59.	7.8	33
96	Computational modeling of alkaline air-breathing microfluidic fuel cells with an array of cylinder anodes. <i>Journal of Power Sources</i> , 2015, 288, 150-159.	7.8	33
97	Effect of compression on pore size distribution and porosity of PEM fuel cell catalyst layers. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 23396-23405.	7.1	33
98	Coupled stress-strain and transport in proton exchange membrane fuel cell with metallic bipolar plates. <i>Applied Energy</i> , 2019, 251, 113316.	10.1	33
99	Cell Interaction Phenomena in Polymer Electrolyte Fuel Cell Stacks. <i>Journal of the Electrochemical Society</i> , 2008, 155, B704.	2.9	32
100	Reduced-dimensional models for straight-channel proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2010, 195, 3240-3249.	7.8	32
101	Multi-level adaptive simulation of transient two-phase flow in heterogeneous porous media. <i>Computers and Fluids</i> , 2010, 39, 1585-1596.	2.5	32
102	Robust response to hydro-climatic change in electricity generation planning. <i>Climatic Change</i> , 2015, 130, 475-489.	3.6	32
103	Two-phase computational modelling of a membraneless microfluidic fuel cell with a flow-through porous anode. <i>Journal of Power Sources</i> , 2019, 420, 88-98.	7.8	32
104	Liquid water transport between graphite paper and a solid surface. <i>Journal of Power Sources</i> , 2008, 185, 1147-1153.	7.8	31
105	Transport phenomena in fuel cells: from microscale to macroscale. <i>International Journal of Computational Fluid Dynamics</i> , 2008, 22, 115-133.	1.2	31
106	The NExus Solutions Tool (NEST) v1.0: an open platform for optimizing multi-scale energy-water-land system transformations. <i>Geoscientific Model Development</i> , 2020, 13, 1095-1121.	3.6	31
107	Optimal Design of Ultralow-Platinum PEMFC Anode Electrodes. <i>Journal of the Electrochemical Society</i> , 2008, 155, B125.	2.9	29
108	Optimization of a proton exchange membrane fuel cell membrane electrode assembly. <i>Structural and Multidisciplinary Optimization</i> , 2010, 40, 563-583.	3.5	29

#	ARTICLE	IF	CITATIONS
109	Large-eddy simulation of separated flow over a bluff rectangular plate. International Journal of Heat and Fluid Flow, 2000, 21, 655-663.	2.4	26
110	Two-scale modeling in porous media: Relative permeability predictions. Physics of Fluids, 2006, 18, 033101.	4.0	26
111	Active power regulation of wind power systems through demand response. Science China Technological Sciences, 2012, 55, 1667-1676.	4.0	26
112	Analysis of Water Transport in Proton Exchange Membranes Using a Phenomenological Model. Journal of Fuel Cell Science and Technology, 2005, 2, 149-155.	0.8	24
113	Wind integration in self-regulating electric load distributions. Energy Systems, 2012, 3, 341-377.	3.0	24
114	PEM fuel cell CL characterization using a standalone FIB and SEM: Experiments and simulation. Electrochimica Acta, 2012, 85, 322-331.	5.2	24
115	Climate and human development impacts on municipal water demand: A spatially-explicit global modeling framework. Environmental Modelling and Software, 2016, 85, 266-278.	4.5	24
116	Electric Vehicle Participation in Transactive Power Systems Using Real-Time Retail Prices. , 2016, , .		24
117	A test bed for self-regulating distribution systems: Modeling integrated renewable energy and demand response in the GridLAB-D/MATLAB environment. , 2012, , .		23
118	Impacts of Groundwater Constraints on Saudi Arabia's Low-Carbon Electricity Supply Strategy. Environmental Science & Technology, 2016, 50, 1653-1662.	10.0	23
119	Pore-scale modeling of oxygen transport in the catalyst layer of air-breathing cathode in membraneless microfluidic fuel cells. Applied Energy, 2020, 277, 115536.	10.1	23
120	Machine learning-assisted design of flow fields for redox flow batteries. Energy and Environmental Science, 2022, 15, 2874-2888.	30.8	23
121	A model for liquid phase electroepitaxy under an external magnetic field II. Application. Journal of Crystal Growth, 1995, 153, 131-139.	1.5	22
122	Advanced computational tools for PEM fuel cell design. Journal of Power Sources, 2008, 180, 423-432.	7.8	22
123	Transient supersonic release of hydrogen from a high pressure vessel: A computational analysis. International Journal of Hydrogen Energy, 2009, 34, 5817-5827.	7.1	22
124	Spectroscopic detection of Hydrogen peroxide with an optical fiber probe using chemically deposited Prussian blue. Electrochimica Acta, 2014, 115, 416-424.	5.2	22
125	Power system operation risk analysis considering charging load self-management of plug-in hybrid electric vehicles. Applied Energy, 2014, 136, 662-670.	10.1	22
126	Theoretical design strategies of bipolar membrane fuel cell with enhanced self-humidification behavior. Journal of Power Sources, 2016, 307, 358-367.	7.8	22

#	ARTICLE	IF	CITATIONS
127	Woven gas diffusion layers for polymer electrolyte membrane fuel cells: Liquid water transport and conductivity trade-offs. <i>Journal of Power Sources</i> , 2018, 403, 192-198.	7.8	22
128	In situ measurement of relative humidity in a PEM fuel cell using fibre Bragg grating sensors. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 17638-17644.	7.1	21
129	Role of thermosolutal convection in liquid phase electroepitaxial growth of gallium arsenide. <i>Journal of Crystal Growth</i> , 1995, 149, 153-166.	1.5	20
130	Turbulent Flow Around a Bluff Rectangular Plate. Part II: Numerical Predictions. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 1991, 113, 60-67.	1.5	19
131	Fluid mechanics and mass transport in centrifugal membrane separation. <i>Journal of Membrane Science</i> , 2000, 176, 277-289.	8.2	19
132	Convective mass transfer in helical pipes: effect of curvature and torsion. <i>Heat and Mass Transfer</i> , 2006, 42, 387-397.	2.1	19
133	Three-dimensional modelling of catalyst layers in PEM fuel cells: Effects of non-uniform catalyst loading. <i>International Journal of Energy Research</i> , 2009, 33, 631-644.	4.5	19
134	Fractal Flow Patterns in Hydrophobic Microfluidic Pore Networks: Experimental Modeling of Two-Phase Flow in Porous Electrodes. <i>Journal of the Electrochemical Society</i> , 2010, 157, B760.	2.9	19
135	Long-term energy planning with uncertain environmental performance metrics. <i>Applied Energy</i> , 2015, 147, 402-412.	10.1	19
136	Investigation of PEMFC under Static Magnetic Field: Temperature, Relative Humidity and Performance. <i>Journal of the Electrochemical Society</i> , 2017, 164, F1-F8.	2.9	19
137	Climate-Land-Energy-Water Nexus Models Across Scales: Progress, Gaps and Best Accessibility Practices. <i>Frontiers in Environmental Science</i> , 2021, 9, .	3.3	19
138	A two-dimensional diffusion model for liquid phase electroepitaxial growth of GaAs. <i>Journal of Crystal Growth</i> , 1994, 143, 141-154.	1.5	18
139	Thermal Spreading Resistance of Arbitrary-Shape Heat Sources on a Half-Space: A Unified Approach. <i>IEEE Transactions on Components and Packaging Technologies</i> , 2010, 33, 267-277.	1.3	18
140	Detection of hydrogen peroxide using an optical fiber-based sensing probe. <i>Sensors and Actuators B: Chemical</i> , 2013, 185, 166-173.	7.8	18
141	Counter-intuitive reduction of thermal contact resistance with porosity: A case study of polymer electrolyte membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 6833-6841.	7.1	18
142	Large eddy simulation of the influence of high free-stream turbulence on a spatially evolving boundary layer. <i>International Journal of Heat and Fluid Flow</i> , 2000, 21, 640-647.	2.4	17
143	Turbulent flow in the distribution header of a PEM fuel cell stack. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 7136-7151.	7.1	17
144	Interconnection-wide hour-ahead scheduling in the presence of intermittent renewables and demand response: A surplus maximizing approach. <i>Applied Energy</i> , 2017, 189, 336-351.	10.1	17

#	ARTICLE	IF	CITATIONS
145	A finite element model for liquid phase electroepitaxy. International Journal for Numerical Methods in Engineering, 1995, 38, 3949-3968.	2.8	16
146	Experimental assessment of a residential scale renewableâ€“regenerative energy system. Journal of Power Sources, 2009, 186, 158-166.	7.8	16
147	Estimation of Nusselt Number in Microchannels of Arbitrary Cross Section with Constant Axial Heat Flux. Heat Transfer Engineering, 2010, 31, 666-674.	1.9	16
148	Analysis of liquid water transport in fuel cell gas diffusion media using two-mobile phase pore network simulations. Journal of Power Sources, 2011, 196, 2725-2734.	7.8	16
149	Experimental and numerical investigation of turbulent jets issuing through a realistic pipeline geometry: Asymmetry effects for air, helium, and hydrogen. International Journal of Hydrogen Energy, 2018, 43, 9379-9398.	7.1	16
150	Two-phase transport in porous gas diffusion electrodes. WIT Transactions on State-of-the-art in Science and Engineering, 2005, , 175-213.	0.0	16
151	Natural convection with distributed heat source modulation. International Journal of Heat and Mass Transfer, 2007, 50, 1649-1655.	4.8	15
152	transactive control of electric power regulation from fast-acting demand response in the presence of high renewables. Applied Energy, 2017, 205, 304-315.	10.1	15
153	Flow sharing and turbulence phenomena in proton exchange membrane fuel cell stack headers. International Journal of Hydrogen Energy, 2019, 44, 30306-30318.	7.1	15
154	Development of a dynamic regenerative fuel cell system. Journal of Power Sources, 2007, 164, 624-630.	7.8	14
155	Toward low carbon energy systems: The convergence of wind power, demand response, and the electricity grid. , 2012, , .		14
156	Coordinated charging of electric vehicles connected to a net-metered PV parking lot. , 2017, , .		14
157	A demand response system for wind power integration: greenhouse gas mitigation and reduction of generator cycling. CSEE Journal of Power and Energy Systems, 2018, 4, 121-129.	1.1	14
158	Investigation of solutal convection during the dissolution of silicon in a sandwich system. International Journal of Heat and Mass Transfer, 1993, 36, 3017-3027.	4.8	13
159	Flow within a water droplet subjected to an air stream in a hydrophobic microchannel. Fluid Dynamics Research, 2009, 41, 045506.	1.3	13
160	Predicting the interaction between nanoparticles in shear flow using lattice Boltzmann method and Derjaguinâ€“Landauâ€“Verweyâ€“Overbeek (DLVO) theory. Physics of Fluids, 2020, 32, .	4.0	13
161	Pore-scale modeling of mass transport in the air-breathing cathode of membraneless microfluidic fuel cells. International Journal of Heat and Mass Transfer, 2022, 188, 122590.	4.8	13
162	Transition of heavyâ€“duty trucks from diesel to hydrogen fuel cells: Opportunities, challenges, and recommendations. International Journal of Energy Research, 2022, 46, 11718-11729.	4.5	13

#	ARTICLE	IF	CITATIONS
163	On the Scaling of Separation Bubbles.. JSME International Journal Series B, 1995, 38, 541-548.	0.3	12
164	Numerical Modeling of PEM Fuel Cells Under Partially Hydrated Membrane Conditions. Journal of Energy Resources Technology, Transactions of the ASME, 2005, 127, 26-36.	2.3	12
165	A numerical study on preconditioning and partitioning schemes for reactive transport in a PEMFC catalyst layer. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 905-916.	6.6	12
166	Numerical and experimental investigation of buoyant gas release: Application to hydrogen jets. International Journal of Hydrogen Energy, 2011, 36, 2645-2655.	7.1	12
167	A compact closed-form Nusselt formula for laminar longitudinal flow between rectangular/square arrays of parallel cylinders with unequal row temperatures. International Journal of Thermal Sciences, 2016, 100, 248-254.	4.9	12
168	Multi-component high aspect ratio turbulent jets issuing from non-planar nozzles. International Journal of Hydrogen Energy, 2019, 44, 15262-15277.	7.1	12
169	FORCED LAMINAR CONVECTION IN AN ARRAY OF STACKED PLATES. Numerical Heat Transfer; Part A: Applications, 1994, 25, 393-408.	2.1	11
170	Fiber Bragg grating sensor for two-phase flow in microchannels. Microfluidics and Nanofluidics, 2012, 13, 99-106.	2.2	11
171	Using an ILU/Deflation Preconditioner for Simulation of a PEM Fuel Cell Cathode Catalyst Layer. Communications in Computational Physics, 2013, 14, 537-573.	1.7	11
172	Investigation of Two-Phase Flow in a Hydrophobic Fuel-Cell Micro-Channel. Energies, 2019, 12, 2061.	3.1	11
173	Techno-economic feasibility of a photovoltaic-equipped plug-in electric vehicle public parking lot with coordinated charging. IET Energy Systems Integration, 2020, 2, 261-272.	1.8	11
174	Liquid phase epitaxy of silicon: an experimental and numerical parametric study. Journal of Crystal Growth, 1996, 167, 516-524.	1.5	10
175	Structure of porous electrodes in polymer electrolyte membrane fuel cells: An optical reconstruction technique. Journal of Power Sources, 2010, 195, 1936-1939.	7.8	10
176	An Adaptive Operator Splitting Method for Two-Phase Flow in 3D Heterogeneous Porous Media. SIAM Journal of Scientific Computing, 2013, 35, B149-B175.	2.8	10
177	Dynamics of Emerging Water Droplet Subjected to Sidewall with Different Wettabilities in a Fuel Cell Cathode Channel. Fuel Cells, 2011, 11, 404-412.	2.4	9
178	Direct numerical simulations of agglomeration of circular colloidal particles in two-dimensional shear flow. Physics of Fluids, 2016, 28, .	4.0	9
179	Compressive behaviour of thin catalyst layers. Part I - Experimental study. International Journal of Hydrogen Energy, 2019, 44, 18450-18460.	7.1	9
180	Numerical simulation on mass transport in a passive vapor-fed direct methanol fuel cell operating with neat methanol. Journal of Power Sources, 2020, 477, 228541.	7.8	9

#	ARTICLE	IF	CITATIONS
181	Effect of leading-edge geometry on a turbulent separation bubble. AIAA Journal, 1992, 30, 559-561.	2.6	8
182	The fundamental principles and design considerations for the implementation of centrifugal reverse osmosis. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 1997, 211, 67-81.	2.5	8
183	Modelling of Carbon Corrosion in a PEMFC caused by Local Fuel Starvation. ECS Transactions, 2007, 11, 1031-1039.	0.5	8
184	Agent-Based Simulation for Interconnection-Scale Renewable Integration and Demand Response Studies. Engineering, 2015, 1, 422-435.	6.7	8
185	Experimental and numerical investigation of a solar eductor-assisted low-pressure water desalination system. Science Bulletin, 2016, 61, 959-973.	9.0	8
186	Structure of a Flat Plate Boundary Layer Subjected to Free-Stream Turbulence. International Journal of Computational Fluid Dynamics, 2004, 18, 175-188.	1.2	7
187	Temperature response and durability characterization of an optical fiber sensor for the detection of hydrogen peroxide. Electrochimica Acta, 2014, 129, 416-424.	5.2	7
188	Numerical investigation of subsonic hydrogen jet release. International Journal of Hydrogen Energy, 2014, 39, 6242-6251.	7.1	7
189	Electrode-Integrated Textile-Based Sensors for In Situ Temperature and Relative Humidity Monitoring in Electrochemical Cells. ACS Omega, 2021, 6, 9509-9519.	3.5	7
190	Water Transport in Gas Diffusion Layers of PEMFCs. ECS Transactions, 2006, 3, 409-414.	0.5	6
191	Advances in Microfluidic Fuel Cells. , 2009, , 99-139.		6
192	Modelling and Simulations on Mitigation Techniques for Carbon Oxidation Reaction Caused by Local Fuel Starvation in a PEMFC. ECS Transactions, 2009, 16, 1313-1322.	0.5	6
193	Improved modelling of the fuel cell power module within a system-level model for solid-oxide fuel cell cogeneration systems. Journal of Power Sources, 2010, 195, 2283-2290.	7.8	6
194	Numerical Investigation of Flowfield in PEM Fuel Cell Stack Headers. Energy Procedia, 2012, 29, 102-111.	1.8	6
195	pH-Dependent response of a hydrogen peroxide sensing probe. Sensors and Actuators B: Chemical, 2016, 237, 113-119.	7.8	6
196	Materials for energy conversion. Science Bulletin, 2016, 61, 585-586.	9.0	6
197	Optimal subhourly electricity resource dispatch under multiple price signals with high renewable generation availability. Applied Energy, 2018, 213, 262-271.	10.1	6
198	Effect of geometrical configurations on alkaline air-breathing membraneless microfluidic fuel cells with cylinder anodes. Science China Technological Sciences, 2019, 62, 388-396.	4.0	6

#	ARTICLE	IF	CITATIONS
199	Accuracy and nonuniqueness aspects of numerical solutions of some natural convection problems. Applied Mathematical Modelling, 1996, 20, 371-378.	4.2	5
200	Numerical and Experimental Investigations of Bipolar Membrane Fuel Cells: 3D Model Development and Effect of Gas Channel Width. Journal of the Electrochemical Society, 2018, 165, F994-F1001.	2.9	5
201	Compressive behaviour of thin catalyst layers. Part II - Model development and validation. International Journal of Hydrogen Energy, 2019, 44, 18461-18471.	7.1	5
202	Forcing of unsteady separated flow and convective heat transfer via bulk upstream oscillations. International Journal of Heat and Fluid Flow, 2003, 24, 77-90.	2.4	4
203	Optimization of a Planar Self-Breathing PEM Fuel Cell Cathode. , 2006, , .		4
204	Integration of price-driven demand response using plug-in electric vehicles in smart grids. , 2016, , .		4
205	Measurements of flow velocity and scalar concentration in turbulent multi-component jets: asymmetry and buoyancy effects. Experiments in Fluids, 2020, 61, 1.	2.4	4
206	Coupled Proton and Water Transport in Polymer Electrolyte Membranes. Topics in Applied Physics, 2009, , 123-155.	0.8	4
207	An experimental assessment of centrifugal membrane separation using spiral wound RO membrane elements. Desalination, 2003, 154, 225-232.	8.2	3
208	Water Transport Dynamics in Fuel Cell Micro-Channels. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 153-170.	0.2	3
209	Theoretical Performance Analysis of Microstructured Air-Breathing Fuel Cells. Electrochemical and Solid-State Letters, 2008, 11, B1.	2.2	3
210	Thermal Conductivity and Thermal Contact Resistance of Metal Foams. , 2009, , .		3
211	Lattice-Boltzmann simulation of multi-phase phenomena related to fuel cells. AIP Conference Proceedings, 2017, , .	0.4	3
212	Estimation of Nusselt Number in Microchannels of Arbitrary Cross-Section With Constant Axial Heat Flux. , 2008, , .		3
213	Effect of Solutal Convection During the Growth of Silicon in a Sandwich System. Materials Research Society Symposia Proceedings, 1994, 299, 335.	0.1	2
214	CFD and Flow Network Analysis of Manifolding in a PEMFC. , 2006, , 401.		2
215	The Effect of Pt Cluster Size on Micro-Morphology of PEMFC Catalyst Layers- A Molecular Dynamics Simulation. ECS Transactions, 2009, 16, 1405-1411.	0.5	2
216	Effect of PTFE on Thermal Conductivity of Gas Diffusion Layers of PEM Fuel Cells. , 2013, , .		2

#	ARTICLE	IF	CITATIONS
217	Assessing the impact of an electric bus duty cycle on battery pack life span. , 2017, , .		2
218	Lattice Boltzmann simulation of particles agglomeration and rheology in a particulate flow. Journal of Dispersion Science and Technology, 2018, 39, 777-791.	2.4	2
219	Performance Analysis of Microstructured Fuel Cells for Portable Applications. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 47-74.	0.2	2
220	Shared Automated Electric Vehicle Prospects for Low Carbon Road Transportation in British Columbia, Canada. Vehicles, 2022, 4, 102-123.	3.1	2
221	Application of Momentum Integral Methods and Linearized Potential Theory for Predicting Separation Bubble Characteristics. Journal of Fluids Engineering, Transactions of the ASME, 1990, 112, 416-424.	1.5	1
222	Multiple-time-scale turbulence model computations of flow over a square rib. AIAA Journal, 1996, 34, 626-629.	2.6	1
223	Analytic Solution of Thermal Spreading Resistance: Generalization to Arbitrary-Shape Heat Sources on a Half-Space. , 2008, , .		1
224	A Microfluidic Pore Network Approach to Investigate Water Transport in Fuel Cell Porous Transport Layers. , 2008, , .		1
225	Molecular Level Investigation of PBI Based High Temperature Fuel Cells. ECS Transactions, 2009, 25, 1135-1140.	0.5	1
226	Numerical Investigation on the Transport in a PEMFC using a Microstructure Reconstruction Technique. ECS Transactions, 2008, 16, 2133-2144.	0.5	1
227	FUEL CELLS “ PROTON-EXCHANGE MEMBRANE FUEL CELLS Modeling. , 2009, , 868-878.		1
228	Effect of Compression on the Effective Thermal Conductivity and Thermal Contact Resistance in PEM Fuel Cell Gas Diffusion Layers. , 2010, , .		1
229	Computational Science in Smart Grids and Energy Systems. Journal of Applied Mathematics, 2015, 2015, 1-2.	0.9	1
230	Effect of Deposition Conditions on Stability of PB Films at PEMFC's Operating Temperatures and pH. Journal of the Electrochemical Society, 2016, 163, B185-B187.	2.9	1
231	Reactor Dynamics of PEM Fuel Cells. Topics in Applied Physics, 2009, , 91-122.	0.8	1
232	A Compact Thermal Resistance Model for Determining Effective Thermal Conductivity in the Fibrous Gas Diffusion Layers of Fuel Cells. , 2008, , .		1
233	Fundamental aspects of centrifugal membrane separation. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2001, 215, 355-365.	2.5	1
234	A Pore Scale Model for the Transport Phenomena in the Catalyst Layer of a PEM Fuel Cell. , 2008, , .		1

#	ARTICLE	IF	CITATIONS
235	LOW REYNOLDS NUMBER FLOW OVER A SQUARE RIB. Transactions of the Canadian Society for Mechanical Engineering, 1997, 21, 371-387.	0.8	0
236	Fundamental aspects of centrifugal membrane separation. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2001, 215, 355-365.	2.5	0
237	Parametric Study of Transport Phenomena in PEM Fuel Cells Using a 3D Computational Model. , 2003, , 187.		0
238	Membraneless Liquid-Fuel Microfluidic Fuel Cells: A Computational Study. , 2004, , 891.		0
239	An Analytical Model of the Membrane Electrode Assembly in a PEMFC. , 2005, , 739.		0
240	Fluid-Structure Interaction Issues in Deformation Based Subsea Propulsion Systems. , 2005, , .		0
241	Water Transport in Gas Diffusion Layers of PEMFCs. ECS Meeting Abstracts, 2006, , .	0.0	0
242	Performance Analysis of Air-Breathing Fuel Cells. ECS Transactions, 2006, 3, 1217-1226.	0.5	0
243	Planar and Three-Dimensional Microfluidic Fuel Cell Architectures. , 2007, , 941.		0
244	Optimization of Membrane Electrode Assemblies for PEMFC. , 2008, , .		0
245	Design of a Polymer Electrolyte Fuel Cell Membrane Electrode Assembly for Maximum Performance under Different Operating Conditions. , 2008, , .		0
246	Development of a Rapid Simulation Tool for PEM Fuel Cell Stacks. , 2008, , .		0
247	In-Plane Thermal Conductivity of PEM Fuel Cell Gas Diffusion Layers. , 2011, , .		0
248	A Statistically Based Thermal Conductivity Model for PEMFC Gas Diffusion Layers. , 2012, , .		0
249	Stability of Prussian Blue Films for Sensing H ₂ O ₂ in a PEM-fuel Cell Environment. ECS Transactions, 2015, 66, 35-42.	0.5	0
250	An adaptive extended finite element method for the analysis of agglomeration of colloidal particles in a flowing fluid. AIP Conference Proceedings, 2015, , .	0.4	0
251	Optimal Operation of a Self-regulating Smart Distribution System with Wind Energy Integration and Demand Response. Lecture Notes in Energy, 2017, , 707-734.	0.3	0
252	Numerical Simulation of Unsteady Separated Flow and Convective Heat Transfer. Kluwer International Series in Engineering and Computer Science, 2002, , 481-498.	0.2	0

#	ARTICLE	IF	CITATIONS
253	Numerical study of a pitching and heaving hydrofoil. , 2003, , 1083-1086.		0
254	Effect of Channel Geometry on the Dynamics of a Water Droplet in a Microchannel. , 2008, , .		0
255	DEPENDENCE OF SINGLE-PHASE AND MULTIPHASE PERMEABILITY ON CAPILLARY PRESSURE: A UNIFIED APPROACH. Journal of Porous Media, 2011, 14, 1077-1086.	1.9	0
256	Microfluidic Fuel Cells. , 2008, , 1169-1177.		0