

James Hinebaugh

List of Publications by Year in descending order

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43
papers

1,558
citations

279798

23
h-index

395702

33
g-index

43
all docs

43
docs citations

43
times ranked

1109
citing authors

#	ARTICLE	IF	CITATIONS
1	OpenPNM: A Pore Network Modeling Package. <i>Computing in Science and Engineering</i> , 2016, 18, 60-74.	1.2	235
2	Microscale Tomography Investigations of Heterogeneous Porosity Distributions of PEMFC GDLs. <i>Journal of the Electrochemical Society</i> , 2010, 157, B1643.	2.9	139
3	Synchrotron X-ray radiographic investigations of liquid water transport behavior in a PEMFC with MPL-coated GDLs. <i>Journal of Power Sources</i> , 2013, 227, 123-130.	7.8	131
4	Unstructured Pore Network Modeling with Heterogeneous PEMFC GDL Porosity Distributions. <i>Journal of the Electrochemical Society</i> , 2010, 157, B1651.	2.9	88
5	Balancing mass transport resistance and membrane resistance when tailoring microporous layer thickness for polymer electrolyte membrane fuel cells operating at high current densities. <i>Electrochimica Acta</i> , 2016, 188, 888-897.	5.2	79
6	Effect of porosity heterogeneity on the permeability and tortuosity of gas diffusion layers in polymer electrolyte membrane fuel cells. <i>Journal of Power Sources</i> , 2014, 248, 83-90.	7.8	71
7	Heterogeneous porosity distributions of polymer electrolyte membrane fuel cell gas diffusion layer materials with rib-channel compression. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 14885-14896.	7.1	65
8	Influence of limiting throat and flow regime on oxygen bubble saturation of polymer electrolyte membrane electrolyzer porous transport layers. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 2724-2735.	7.1	62
9	Pore network modeling to explore the effects of compression on multiphase transport in polymer electrolyte membrane fuel cell gas diffusion layers. <i>Journal of Power Sources</i> , 2016, 335, 162-171.	7.8	60
10	Investigating Inlet Condition Effects on PEMFC GDL Liquid Water Transport through Pore Network Modeling. <i>Journal of the Electrochemical Society</i> , 2015, 162, F661-F668.	2.9	49
11	Visualizing Liquid Water Evolution in a PEM Fuel Cell Using Synchrotron X-ray Radiography. <i>Journal of the Electrochemical Society</i> , 2012, 159, F826-F830.	2.9	48
12	Synchrotron X-ray Radiography as a Highly Precise and Accurate Method for Measuring the Spatial Distribution of Liquid Water in Operating Polymer Electrolyte Membrane Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2017, 164, F107-F114.	2.9	43
13	Accelerated Degradation of Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. <i>Journal of the Electrochemical Society</i> , 2017, 164, F704-F713.	2.9	42
14	Accounting for low-frequency synchrotron X-ray beam position fluctuations for dynamic visualizations. <i>Journal of Synchrotron Radiation</i> , 2012, 19, 994-1000.	2.4	41
15	Calibrating the X-ray attenuation of liquid water and correcting sample movement artefacts during <i>in operando</i> synchrotron X-ray radiographic imaging of polymer electrolyte membrane fuel cells. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 590-599.	2.4	41
16	Condensation in PEM Fuel Cell Gas Diffusion Layers: A Pore Network Modeling Approach. <i>Journal of the Electrochemical Society</i> , 2010, 157, B1382.	2.9	40
17	Simultaneous characterization of oxygen transport resistance and spatially resolved liquid water saturation at high-current density of polymer electrolyte membrane fuel cells with varied cathode relative humidity. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 29472-29483.	7.1	38
18	Effect of Liquid Water Presence on PEMFC GDL Effective Thermal Conductivity. <i>Journal of the Electrochemical Society</i> , 2012, 159, F805-F809.	2.9	37

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19	Stochastic modeling of polymer electrolyte membrane fuel cell gas diffusion layers – Part 1: Physical characterization. International Journal of Hydrogen Energy, 2017, 42, 15861-15871.	7.1	31
20	Accelerated Degradation of Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. Journal of the Electrochemical Society, 2017, 164, F714-F721.	2.9	30
21	Stochastic modeling of polymer electrolyte membrane fuel cell gas diffusion layers – Part 2: A comprehensive substrate model with pore size distribution and heterogeneity effects. International Journal of Hydrogen Energy, 2017, 42, 15872-15886.	7.1	28
22	Analytical tortuosity–porosity correlations for Sierpinski carpet fractal geometries. Chaos, Solitons and Fractals, 2015, 78, 124-133.	5.1	27
23	Incorporating Embedded Microporous Layers into Topologically Equivalent Pore Network Models for Oxygen Diffusivity Calculations in Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. Electrochimica Acta, 2016, 216, 364-375.	5.2	26
24	Introducing OpenPNM: An Open Source Pore Network Modeling Software Package. ECS Transactions, 2013, 58, 79-86.	0.5	23
25	Quantifying Percolation Events in PEM Fuel Cell Using Synchrotron Radiography. Electrochimica Acta, 2015, 184, 417-426.	5.2	22
26	Determining the impact of rectangular grain aspect ratio on tortuosity–porosity correlations of two-dimensional stochastically generated porous media. Science Bulletin, 2016, 61, 601-611.	9.0	19
27	Data related to the sinter structure analysis of titanium structures fabricated via binder jetting additive manufacturing. Data in Brief, 2018, 20, 1029-1038.	1.0	11
28	Establishing Accuracy of Watershed-Derived Pore Network Extraction for Characterizing In-Plane Effective Diffusivity in Thin Porous Layers. Journal of the Electrochemical Society, 2019, 166, F3246-F3254.	2.9	9
29	Pore Network Modeling to Study the Effects of Common Assumptions in GDL Liquid Water Invasion Studies. , 2012, , .		5
30	Modeling the Effect of Fibre Surface Morphology on Liquid Water Transport in Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. Transport in Porous Media, 2018, 121, 437-458.	2.6	5
31	PEM Fuel Cell Gas Diffusion Layer Modelling of Pore Structure and Predicted Liquid Water Saturation. , 2011, , .		2
32	Multi-scale modeling of two-phase transport in polymer electrolyte membrane fuel cells. , 2012, , 254-292e.		2
33	Visualizing Liquid Water Evolution in a PEM Fuel Cell Using Synchrotron Radiography. ECS Transactions, 2013, 50, 343-352.	0.5	2
34	Lattice Boltzmann Modeling of the Effective Thermal Conductivity of an Anisotropic Gas Diffusion Layer in a Polymer Electrolyte Membrane Fuel Cell with Residual Water. ECS Transactions, 2013, 50, 221-229.	0.5	2
35	Condensation Based Pore Network Modelling of Water Transport in Hydrophobic PEM Fuel Cell GDLs. , 2009, , .		1
36	Predicted Liquid Water Saturation in Unstructured Pore Networks Based on PEMFC GDL Porosity Profiles. , 2010, , .		1

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37	Comparison of Water Thickness Profiles of Compressed PEMFC GDLs. , 2011, , .		1
38	Investigating Inlet Condition Effects on PEMFC GDL Liquid Water Transport through Pore Network Modeling. ECS Transactions, 2014, 64, 593-602.	0.5	1
39	(Plenary) Advanced Visualization Tools to Investigate PEM Fuel Cell Materials. ECS Transactions, 2014, 64, 27-45.	0.5	1
40	Dynamic Condensation Modelling in PEMFC GDL , 2009, , .		0
41	Anisotropic Porosity Profiles of PEMFC GDLs. , 2010, , .		0
42	The Impact of an MPL on Water Management of an Operating PEMFC Using Synchrotron X-Ray Radiography. , 2012, , .		0
43	Investigating Inlet Condition Effects on PEMFC GDL Liquid Water Transport through Pore Network Modeling. ECS Meeting Abstracts, 2014, , .	0.0	0