

# 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	Establishing Accuracy of Watershed-Derived Pore Network Extraction for Characterizing In-Plane Effective Diffusivity in Thin Porous Layers. <i>Journal of the Electrochemical Society</i> , 2019, 166, F3246-F3254.	2.9	9
2	Modeling the Effect of Fibre Surface Morphology on Liquid Water Transport in Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. <i>Transport in Porous Media</i> , 2018, 121, 437-458.	2.6	5
3	Data related to the sinter structure analysis of titanium structures fabricated via binder jetting additive manufacturing. <i>Data in Brief</i> , 2018, 20, 1029-1038.	1.0	11
4	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
5	Accelerated Degradation of Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. <i>Journal of the Electrochemical Society</i> , 2017, 164, F714-F721.	2.9	30
6	Stochastic modeling of polymer electrolyte membrane fuel cell gas diffusion layers – Part 1: Physical characterization. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 15861-15871.	7.1	31
7	Stochastic modeling of polymer electrolyte membrane fuel cell gas diffusion layers – Part 2: A comprehensive substrate model with pore size distribution and heterogeneity effects. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 15872-15886.	7.1	28
8	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
9	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
10	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
11	Incorporating Embedded Microporous Layers into Topologically Equivalent Pore Network Models for Oxygen Diffusivity Calculations in Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. <i>Electrochimica Acta</i> , 2016, 216, 364-375.	5.2	26
12	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
13	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
14	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
15	OpenPNM: A Pore Network Modeling Package. <i>Computing in Science and Engineering</i> , 2016, 18, 60-74.	1.2	235
16	Determining the impact of rectangular grain aspect ratio on tortuosity – porosity correlations of two-dimensional stochastically generated porous media. <i>Science Bulletin</i> , 2016, 61, 601-611.	9.0	19
17	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
18	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

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19	Analytical tortuosity- porosity correlations for Sierpinski carpet fractal geometries. Chaos, Solitons and Fractals, 2015, 78, 124-133.	5.1	27
20	Quantifying Percolation Events in PEM Fuel Cell Using Synchrotron Radiography. Electrochimica Acta, 2015, 184, 417-426.	5.2	22
21	Investigating Inlet Condition Effects on PEMFC GDL Liquid Water Transport through Pore Network Modeling. ECS Transactions, 2014, 64, 593-602.	0.5	1
22	(Plenary) Advanced Visualization Tools to Investigate PEM Fuel Cell Materials. ECS Transactions, 2014, 64, 27-45.	0.5	1
23	Effect of porosity heterogeneity on the permeability and tortuosity of gas diffusion layers in polymer electrolyte membrane fuel cells. Journal of Power Sources, 2014, 248, 83-90.	7.8	71
24	Investigating Inlet Condition Effects on PEMFC GDL Liquid Water Transport through Pore Network Modeling. ECS Meeting Abstracts, 2014, , .	0.0	0
25	Synchrotron X-ray radiographic investigations of liquid water transport behavior in a PEMFC with MPL-coated GDLs. Journal of Power Sources, 2013, 227, 123-130.	7.8	131
26	Visualizing Liquid Water Evolution in a PEM Fuel Cell Using Synchrotron Radiography. ECS Transactions, 2013, 50, 343-352.	0.5	2
27	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
28	Introducing OpenPNM: An Open Source Pore Network Modeling Software Package. ECS Transactions, 2013, 58, 79-86.	0.5	23
29	Effect of Liquid Water Presence on PEMFC GDL Effective Thermal Conductivity. Journal of the Electrochemical Society, 2012, 159, F805-F809.	2.9	37
30	Multi-scale modeling of two-phase transport in polymer electrolyte membrane fuel cells. , 2012, , 254-292e.		2
31	Visualizing Liquid Water Evolution in a PEM Fuel Cell Using Synchrotron X-ray Radiography. Journal of the Electrochemical Society, 2012, 159, F826-F830.	2.9	48
32	Pore Network Modeling to Study the Effects of Common Assumptions in GDL Liquid Water Invasion Studies. , 2012, , .		5
33	The Impact of an MPL on Water Management of an Operating PEMFC Using Synchrotron X-Ray Radiography. , 2012, , .		0
34	Accounting for low-frequency synchrotron X-ray beam position fluctuations for dynamic visualizations. Journal of Synchrotron Radiation, 2012, 19, 994-1000.	2.4	41
35	Comparison of Water Thickness Profiles of Compressed PEMFC GDLs. , 2011, , .		1
36	PEM Fuel Cell Gas Diffusion Layer Modelling of Pore Structure and Predicted Liquid Water Saturation. , 2011, , .		2

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37	Anisotropic Porosity Profiles of PEMFC GDLs. , 2010, , .		0
38	Predicted Liquid Water Saturation in Unstructured Pore Networks Based on PEMFC GDL Porosity Profiles. , 2010, , .		1
39	Unstructured Pore Network Modeling with Heterogeneous PEMFC GDL Porosity Distributions. Journal of the Electrochemical Society, 2010, 157, B1651.	2.9	88
40	Microscale Tomography Investigations of Heterogeneous Porosity Distributions of PEMFC GDLs. Journal of the Electrochemical Society, 2010, 157, B1643.	2.9	139
41	Condensation in PEM Fuel Cell Gas Diffusion Layers: A Pore Network Modeling Approach. Journal of the Electrochemical Society, 2010, 157, B1382.	2.9	40
42	Condensation Based Pore Network Modelling of Water Transport in Hydrophobic PEM Fuel Cell GDLs. , 2009, , .		1
43	Dynamic Condensation Modelling in PEMFC GDL. , 2009, , .		0