ChungHyuk Lee

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/6428471/publications.pdf

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28	669	566801	552369
papers	citations	15 h-index	26 g-index

29	29	29	471
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Pore network modelling to enhance liquid water transport through porous transport layers for polymer electrolyte membrane electrolyzers. Journal of Power Sources, 2019, 437, 226910.	4.0	64
2	Influence of limiting throat and flow regime on oxygen bubble saturation of polymer electrolyte membrane electrolyzer porous transport layers. International Journal of Hydrogen Energy, 2017, 42, 2724-2735.	3.8	62
3	Non-isothermal two-phase transport in a polymer electrolyte membrane fuel cell with crack-free microporous layers. International Journal of Heat and Mass Transfer, 2017, 107, 418-431.	2.5	60
4	Temperature-dependent gas accumulation in polymer electrolyte membrane electrolyzer porous transport layers. Journal of Power Sources, 2020, 446, 227312.	4.0	49
5	Bubble Formation in the Electrolyte Triggers Voltage Instability in CO2 Electrolyzers. IScience, 2020, 23, 101094.	1.9	43
6	Critical Current Density as a Performance Indicator for Gas-Evolving Electrochemical Devices. Cell Reports Physical Science, 2020, 1, 100147.	2.8	38
7	Accelerating Bubble Detachment in Porous Transport Layers with Patterned Through-Pores. ACS Applied Energy Materials, 2020, 3, 9676-9684.	2.5	37
8	Spatially graded porous transport layers for gas evolving electrochemical energy conversion: High performance polymer electrolyte membrane electrolyzers. Energy Conversion and Management, 2020, 226, 113545.	4.4	34
9	Transient Gas Distribution in Porous Transport Layers of Polymer Electrolyte Membrane Electrolyzers. Journal of the Electrochemical Society, 2020, 167, 024508.	1.3	31
10	Designing Tailored Gas Diffusion Layers with Pore Size Gradients via Electrospinning for Polymer Electrolyte Membrane Fuel Cells. ACS Applied Energy Materials, 2020, 3, 2695-2707.	2.5	31
11	The effect of cathode nitrogen purging on cell performance and in operando neutron imaging of a polymer electrolyte membrane electrolyzer. Electrochimica Acta, 2018, 279, 91-98.	2.6	30
12	Compressible-Gas Invasion into Liquid-Saturated Porous Media: Application to Polymer-Electrolyte-Membrane Electrolyzers. Physical Review Applied, 2019, 11, .	1.5	26
13	Boosting Membrane Hydration for High Current Densities in Membrane Electrode Assembly CO₂ Electrolysis. ACS Applied Materials & Interfaces, 2020, 12, 54585-54595.	4.0	22
14	Reconciling temperature-dependent factors affecting mass transport losses in polymer electrolyte membrane electrolyzers. Energy Conversion and Management, 2020, 213, 112797.	4.4	20
15	Tailoring catalyst layer interface with titanium mesh porous transport layers. Electrochimica Acta, 2021, 373, 137879.	2.6	20
16	Formation of Liquid Water Pathways in PEM Fuel Cells: A 3-D Pore-Scale Perspective. Journal of the Electrochemical Society, 2020, 167, 054516.	1.3	14
17	Unstable Cathode Potential in Alkaline Flow Cells for CO₂ Electroreduction Driven by Gas Evolution. ACS Sustainable Chemistry and Engineering, 2021, 9, 5570-5579.	3.2	14
18	In-Plane Transport in Water Electrolyzer Porous Transport Layers with Through Pores. Journal of the Electrochemical Society, 2020, 167, 124522.	1.3	14

#	Article	IF	Citations
19	Superhydrophilic porous transport layer enhances efficiency of polymer electrolyte membrane electrolyzers. Cell Reports Physical Science, 2021, 2, 100580.	2.8	12
20	Resolving the gas diffusion layer substrate land and channel region contributions to the oxygen transport resistance of a partially-saturated substrate. Electrochimica Acta, 2019, 328, 135001.	2.6	10
21	Degradation Characteristics of Electrospun Gas Diffusion Layers with Custom Pore Structures for Polymer Electrolyte Membrane Fuel Cells. ACS Applied Materials & Interfaces, 2021, 13, 2414-2427.	4.0	8
22	Detecting cathode corrosion in polymer electrolyte membrane fuel cells in dead-ended anode mode via alternating current impedance. Journal of Power Sources, 2019, 439, 227089.	4.0	7
23	Temperature enhances the ohmic and mass transport behaviour in membrane electrode assembly carbon dioxide electrolyzers. Energy Conversion and Management, 2021, 243, 114302.	4.4	7
24	Electrolyte layer gas triggers cathode potential instability in CO2 electrolyzers. Journal of Power Sources, 2022, 520, 230879.	4.0	6
25	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.	1.2	5
26	In-plane Mass Transport in Polymer Electrolyte Membrane Electrolyzer Porous Transport Layers with Through Pores. ECS Transactions, 2019, 92, 787-799.	0.3	4
27	Groovy Electrodes Enable Facile O₂ and H⁺ Transport in PEMFCs. ECS Meeting Abstracts, 2022, MA2022-01, 1420-1420.	0.0	1
28	Tuning Electrode-Membrane Interface for Highly Efficient Polymer Electrolyte Membrane Fuel Cells. ECS Meeting Abstracts, 2022, MA2022-01, 1419-1419.	0.0	0