

Hongtan Liu

List of Publications by Year in descending order

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105
papers

4,436
citations

109321

35
h-index

106344

65
g-index

105
all docs

105
docs citations

105
times ranked

2887
citing authors

#	ARTICLE	IF	CITATIONS
1	Two-dimensional model for proton exchange membrane fuel cells. <i>AICHE Journal</i> , 1998, 44, 2410-2422.	3.6	531
2	A two-phase flow and transport model for the cathode of PEM fuel cells. <i>International Journal of Heat and Mass Transfer</i> , 2002, 45, 2277-2287.	4.8	372
3	Effect of gas diffusion layer compression on PEM fuel cell performance. <i>Journal of Power Sources</i> , 2006, 159, 922-927.	7.8	263
4	An Analytical Solution of a Half-Cell Model for PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2000, 147, 2468.	2.9	199
5	Experimental studies of a direct methanol fuel cell. <i>Journal of Power Sources</i> , 2005, 142, 56-69.	7.8	175
6	Performance studies of PEM fuel cells with interdigitated flow fields. <i>Journal of Power Sources</i> , 2004, 134, 185-196.	7.8	118
7	Real time measurements of methanol crossover in a DMFC. <i>Journal of Power Sources</i> , 2007, 164, 166-173.	7.8	115
8	A two-phase flow and transport model for PEM fuel cells. <i>Journal of Power Sources</i> , 2006, 155, 219-230.	7.8	86
9	PEM fuel cell performance and its two-phase mass transport. <i>Journal of Power Sources</i> , 2005, 143, 125-135.	7.8	85
10	Effects of the electrical resistances of the GDL in a PEM fuel cell. <i>Journal of Power Sources</i> , 2006, 161, 444-453.	7.8	84
11	Characteristics and applications of the cold heat exergy of liquefied natural gas. <i>Energy Conversion and Management</i> , 1999, 40, 1515-1525.	9.2	83
12	A three-dimensional mathematical model for liquid-fed direct methanol fuel cells. <i>Journal of Power Sources</i> , 2006, 160, 413-421.	7.8	83
13	Simultaneous measurement of current and temperature distributions in a proton exchange membrane fuel cell. <i>Journal of Power Sources</i> , 2010, 195, 3597-3604.	7.8	83
14	A novel technique for measuring current distributions in PEM fuel cells. <i>Journal of Power Sources</i> , 2006, 158, 326-332.	7.8	82
15	Dynamic characteristics of local current densities and temperatures in proton exchange membrane fuel cells during reactant starvations. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 1884-1892.	7.1	76
16	A novel composite photocatalyst for water splitting hydrogen production. <i>Journal of Power Sources</i> , 2006, 159, 1305-1309.	7.8	75
17	A polarization model for a solid oxide fuel cell with a mixed ionic and electronic conductor as electrolyte. <i>Journal of Power Sources</i> , 2014, 256, 43-51.	7.8	71
18	Corrosion characteristics of SS316L as bipolar plate material in PEMFC cathode environments with different acidities. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 1654-1663.	7.1	70

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19	Highly efficient and reactivated electrocatalyst of ruthenium electrodeposited on nickel foam for hydrogen evolution from NaBH ₄ alkaline solution. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 592-600.	7.1	67
20	Mitigation strategies for hydrogen starvation under dynamic loading in proton exchange membrane fuel cells. <i>Energy Conversion and Management</i> , 2017, 139, 175-181.	9.2	62
21	Comparison of current distributions in proton exchange membrane fuel cells with interdigitated and serpentine flow fields. <i>Journal of Power Sources</i> , 2009, 188, 213-219.	7.8	59
22	A composite visible-light photocatalyst for hydrogen production. <i>Journal of Power Sources</i> , 2006, 159, 1300-1304.	7.8	57
23	A three-dimensional two-phase flow model for a liquid-fed direct methanol fuel cell. <i>Journal of Power Sources</i> , 2007, 163, 907-915.	7.8	57
24	Optimization of PEM fuel cell flow field via local current density measurement. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 2144-2150.	7.1	57
25	A 3D model for PEM fuel cells operated on reformat. <i>Journal of Power Sources</i> , 2004, 138, 101-110.	7.8	52
26	Effects of humidification temperatures on local current characteristics in a PEM fuel cell. <i>Journal of Power Sources</i> , 2007, 168, 400-407.	7.8	52
27	The effects of excess phosphoric acid in a Polybenzimidazole-based high temperature proton exchange membrane fuel cell. <i>Journal of Power Sources</i> , 2010, 195, 181-184.	7.8	52
28	A Study of dynamic characteristics of PEM fuel cells by measuring local currents. <i>International Journal of Hydrogen Energy</i> , 2009, 34, 5529-5536.	7.1	51
29	Overall and local effects of operating conditions in PEM fuel cells with dead-ended anode. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 4690-4698.	7.1	51
30	Separate measurement of current density under the channel and the shoulder in PEM fuel cells. <i>Journal of Power Sources</i> , 2008, 180, 365-372.	7.8	50
31	Effects of carbon corrosion on mass transfer losses in proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 4699-4705.	7.1	49
32	In situ measurements of water transfer due to different mechanisms in a proton exchange membrane fuel cell. <i>Journal of Power Sources</i> , 2008, 183, 240-246.	7.8	48
33	Direct measurement of current density under the land and channel in a PEM fuel cell with serpentine flow fields. <i>Journal of Power Sources</i> , 2009, 193, 639-648.	7.8	43
34	Effect of fluoride ions on corrosion behavior of SS316L in simulated proton exchange membrane fuel cell (PEMFC) cathode environments. <i>Journal of Power Sources</i> , 2010, 195, 5651-5659.	7.8	43
35	Effects of passive films on corrosion resistance of uncoated SS316L bipolar plates for proton exchange membrane fuel cell application. <i>Applied Surface Science</i> , 2014, 320, 274-280.	6.1	40
36	Recovery mechanisms in proton exchange membrane fuel cells after accelerated stress tests. <i>Journal of Power Sources</i> , 2015, 296, 327-334.	7.8	38

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37	Effect of cathode catalyst layer thickness on methanol cross-over in a DMFC. <i>Electrochimica Acta</i> , 2010, 56, 600-606.	5.2	36
38	Experimental Studies of Effect of Land Width in PEM Fuel Cells with Serpentine Flow Field and Carbon Cloth. <i>Energies</i> , 2019, 12, 471.	3.1	32
39	In-situ measurements of GDL effective permeability and under-land cross-flow in a PEM fuel cell. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 13725-13730.	7.1	31
40	A novel membrane for DMFC " Na ₂ Ti ₃ O ₇ Nanotubes/Nafion® composite membrane: Performances studies. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 1857-1864.	7.1	31
41	Modeling the cathode catalyst layer of a Direct Methanol Fuel Cell. <i>Journal of Power Sources</i> , 2013, 243, 195-202.	7.8	31
42	Systematic study on the functions and mechanisms of micro porous layer on water transport in proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 5063-5073.	7.1	31
43	Identification of performance degradations in catalyst layer and gas diffusion layer in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2020, 449, 227580.	7.8	31
44	Dynamic characteristics and mitigations of hydrogen starvations in proton exchange membrane fuel cells during start-ups. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 12835-12841.	7.1	29
45	Influence of fluoride ions on corrosion performance of 316L stainless steel as bipolar plate material in simulated PEMFC anode environments. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 1875-1883.	7.1	28
46	Different flow fields, operation modes and designs for proton exchange membrane fuel cells with dead-ended anode. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 1769-1780.	7.1	28
47	Ab initio simulation on the mechanism of proton transport in water. <i>Journal of Power Sources</i> , 2006, 161, 1420-1427.	7.8	27
48	The effect of temperature on corrosion behavior of SS316L in the cathode environment of proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2011, 196, 5503-5510.	7.8	26
49	Transport Phenomena Analysis in Proton Exchange Membrane Fuel Cells. <i>Journal of Heat Transfer</i> , 2005, 127, 1363-1379.	2.1	24
50	A novel membrane for DMFC - Na ₂ Ti ₃ O ₇ nanotubes/Nafion® composite membrane. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 5088-5095.	7.1	24
51	Self-sustained electrochemical promotion catalysts for partial oxidation reforming of heavy hydrocarbons. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 17928-17935.	7.1	23
52	Local degradation in proton exchange membrane fuel cells with dead-ended anode. <i>Journal of Power Sources</i> , 2020, 477, 229021.	7.8	23
53	Effects of the difference in electrical resistance under the land and channel in a PEM fuel cell. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 1664-1670.	7.1	22
54	Error of Darcy's law for serpentine flow fields: An analytical approach. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 6686-6695.	7.1	22

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55	A study on current overshoot during start-ups and optimal start-up strategy of proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 7754-7761.	7.1	19
56	Factors affecting corrosion behavior of SS316L as bipolar plate material in PEMFC cathode environments. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 13822-13828.	7.1	18
57	An analytical model for solid oxide fuel cells with bi-layer electrolyte. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 1967-1975.	7.1	18
58	Degradation mitigation effects of pressure swing in proton exchange membrane fuel cells with dead-ended anode. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 24435-24447.	7.1	18
59	Performance Enhancements of PEM Fuel Cells with Narrower Outlet Channels in Interdigitated Flow Field. <i>Energy Procedia</i> , 2019, 158, 1412-1417.	1.8	18
60	Performance Degradation of Proton Exchange Membrane Fuel Cell Caused by an Accelerated Stress Test. <i>Fuel Cells</i> , 2019, 19, 160-168.	2.4	18
61	Effect of pressure difference between adjacent channels in an adjustable flow field in PEM fuel cells. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 4667-4672.	7.1	17
62	Separate measurement of current density under land and channel in Direct Methanol Fuel Cells. <i>Journal of Power Sources</i> , 2014, 246, 899-905.	7.8	16
63	Error of Darcy's law for serpentine flow fields: Dimensional analysis. <i>Journal of Power Sources</i> , 2019, 412, 391-397.	7.8	15
64	Study of partial oxidation reforming of methane to syngas over self-sustained electrochemical promotion catalyst. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 6391-6396.	7.1	14
65	Mechanisms of reverse current and mitigation strategies in proton exchange membrane fuel cells during startups. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 6469-6475.	7.1	14
66	Separate in situ measurements of ECA under land and channel in PEM fuel cells. <i>Journal of Power Sources</i> , 2012, 215, 11-17.	7.8	13
67	Direct measurement of current density under land and two channels in PEM fuel cells with interdigitated flow fields. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 9440-9446.	7.1	13
68	Direct measurement of lateral current density distribution in a PEM fuel cell with a serpentine flow field. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 1449-1456.	7.1	12
69	Fault Diagnosis of Solid Oxide Fuel Cell Based on a Supervised Self-Organization Map Model. <i>Journal of Fuel Cell Science and Technology</i> , 2015, 12, .	0.8	11
70	A polarization model for solid oxide fuel cells with a Bi-layer electrolyte. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 3646-3654.	7.1	11
71	Mechanisms of voltage spikes and mitigation strategies for proton exchange membrane fuel cells with dead-ended anode under pressure swing operation. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 28578-28587.	7.1	11
72	Dynamic characteristics of internal current during startups/shutdowns in proton exchange membrane fuel cells. <i>International Journal of Energy Research</i> , 2019, 43, 3768-3778.	4.5	9

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73	Direct measurement of methanol crossover fluxes under land and channel in direct methanol fuel cells. International Journal of Hydrogen Energy, 2015, 40, 10969-10978.	7.1	8
74	Laser-perforated anode gas diffusion layers for direct methanol fuel cells. International Journal of Hydrogen Energy, 2021, 46, 17886-17896.	7.1	8
75	Fuel Cell Performance Augmentation: Mass Transfer Enhancement. Journal of Enhanced Heat Transfer, 2003, 10, 257-274.	1.1	8
76	An ultrasound enhanced direct methanol fuel cell. Journal of Power Sources, 2007, 164, 90-93.	7.8	7
77	A kinetic model for analyzing partial oxidation reforming of heavy hydrocarbon over a novel self-sustained electrochemical promotion catalyst. International Journal of Hydrogen Energy, 2012, 37, 15125-15134.	7.1	7
78	Theoretical analysis of the characteristics of the solid oxide fuel cells with a bi-layer electrolyte. International Journal of Hydrogen Energy, 2013, 38, 13084-13090.	7.1	7
79	Measurement of Current Distributions in a PEM Fuel Cell with Interdigitated Flow Field. ECS Transactions, 2007, 11, 1545-1552.	0.5	6
80	Cold pre-compression of membrane electrode assembly for PEM fuel cells. International Journal of Hydrogen Energy, 2012, 37, 13674-13680.	7.1	6
81	3-D Model of Proton Exchange Membrane Fuel Cells. , 2000, , .		5
82	Mathematical Model for Proton Exchange Membrane Fuel Cells. , 1998, , .		5
83	A Parametric Study of PEM Fuel Cell Performances. , 2002, , 139.		4
84	A CFD model for partial oxidation of methane over self-sustained electrochemical promotion catalyst. International Journal of Hydrogen Energy, 2016, 41, 208-218.	7.1	4
85	Numerical Modeling with Electrochemical Active Area (ECA) Distribution in the Lateral Direction in a PEM Fuel Cell. Energy Procedia, 2017, 105, 1513-1519.	1.8	4
86	A method of determining interface methanol concentration in an operating direct methanol fuel cell. Journal of Power Sources, 2014, 256, 183-189.	7.8	3
87	Experimental investigation of reverse voltage phenomenon during galvanostatic start-up of a proton exchange membrane fuel cell. Energy Conversion and Management, 2022, 258, 115386.	9.2	3
88	A 3D model for PEM fuel cells operated on reformat. International Journal of Pharmaceutics, 2004, 138, 101-101.	5.2	2
89	Performance Modeling of PEM Fuel Cell Operated on Reformate. , 2003, , 233.		1
90	AB Initio Simulation on Grotthuss Mechanism. , 2005, , 449.		1

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91	Atomistic Simulation of Interface between Nafion Electrolyte and Pt Catalysts. ECS Transactions, 2013, 58, 57-68.	0.5	1
92	Current Density Variations Under Land and Channel in DMFCs. Energy Procedia, 2014, 61, 2315-2318.	1.8	1
93	Modeling Research of Exposure to Oil Aerosols During Oil Spills. International Oil Spill Conference Proceedings, 2001, 2001, 413-416.	0.1	1
94	A Pseudo-Homogeneous Model for Cathode Catalyst Layer of PEM Fuel Cells. , 2000, , .		1
95	Experimental and Modeling Studies of PEM Fuel Cell Performances With Interdigitated Flow Fields. , 2003, , 299.		0
96	Performance and Modeling of a Liquid-Fed Direct Methanol Fuel Cell. , 2004, , 233.		0
97	Two Phase Flow Study in Direct Methanol Fuel Cell. , 2005, , 309.		0
98	Effects of Electrical Resistance of the Gas Diffusion Layer of a PEM Fuel Cell. , 2005, , 249.		0
99	In-Situ Measurements of Water Transfer Due to Different Mechanisms in a PEM Fuel Cell. , 2007, , .		0
100	In-Situ and Ex-Situ Investigation of Lateral Current Density Variations in a PEM Fuel Cell With Serpentine Flow Field. , 2009, , .		0
101	Cold Pre-Compression Treatment of Gas Diffusion Electrode for PEM Fuel Cells. , 2011, , .		0
102	Numerical Analysis of the Cross-Flow Under the Land in a Serpentine Flow Field of a PEM Fuel Cell. , 2011, , .		0
103	Direct Measurement of the Local Current Density Under Land-Channel Areas With Partially-Catalyzed MEAs. , 2012, , .		0
104	Numerical Studies of the Effectiveness of Electrodes With Conductive Dots in Flow Batteries. , 2016, , .		0
105	Separate Measurement of Current Density Under the Channel and the Shoulder in PEM Fuel Cells. , 2007, , .		0