

Haijiang Wang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

68

papers

13,303

citations

39

h-index

69

g-index

69

ext. papers

14,524

ext. citations

8.9

avg, IF

6.16

L-index

#	Paper	IF	Citations
68	IrOX Supported onto Niobium-Doped Titanium Dioxide as an Anode Reversal Tolerant Electrocatalyst for Proton Exchange Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2022 , 5, 3259-3268	6.1	1
67	Pt atoms on doped carbon nanosheets with ultrahigh N content as a superior bifunctional catalyst for hydrogen evolution/oxidation. <i>Sustainable Energy and Fuels</i> , 2021 , 5, 532-539	5.8	3
66	Novel Proton Exchange Membrane with Long-Range Acid-Base-Pair Proton Transfer Pathways Based on Functionalized Polyethyleneimine. <i>ACS Sustainable Chemistry and Engineering</i> , 2021 , 9, 3963-3974	8.2	4
65	A Novel Approach to Fabricate Membrane Electrode Assembly by Directly Coating the Nafion Ionomer on Catalyst Layers for Proton-Exchange Membrane Fuel Cells. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 9803-9812	8.3	10
64	Interrogation of the Reaction Mechanism in a Na-O Battery Using Transmission Electron Microscopy. <i>ACS Nano</i> , 2020 , 14, 3669-3677	16.7	22
63	Thermodynamic performance analysis of the influence of multi-factor coupling on the methanol steam reforming reaction. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 7015-7024	6.7	18
62	Study of failure mechanisms of the reversal tolerant fuel cell anode via novel in-situ measurements. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 996-1007	6.7	11
61	Performance improvement for air-cooled open-cathode proton exchange membrane fuel cell with different design parameters of the gas diffusion layer. <i>Progress in Natural Science: Materials International</i> , 2020 , 30, 825-831	3.6	8
60	Research progress of catalyst layer and interlayer interface structures in membrane electrode assembly (MEA) for proton exchange membrane fuel cell (PEMFC) system. <i>ETransportation</i> , 2020 , 5, 100075	12.7	23
59	3D-printed fuel-cell bipolar plates for evaluating flow-field performance. <i>Clean Energy</i> , 2020 , 4, 142-157	4.7	6
58	A review of proton exchange membrane water electrolysis on degradation mechanisms and mitigation strategies. <i>Journal of Power Sources</i> , 2017 , 366, 33-55	8.9	179
57	A highly efficient PtCo/C electrocatalyst for the oxygen reduction reaction. <i>RSC Advances</i> , 2016 , 6, 34484-34491	3.4	1
56	Progress in modified carbon support materials for Pt and Pt-alloy cathode catalysts in polymer electrolyte membrane fuel cells. <i>Progress in Materials Science</i> , 2016 , 82, 445-498	42.2	123
55	Effect of different solvent ratio (ethylene glycol/water) on the preparation of Pt/C catalyst and its activity toward oxygen reduction reaction. <i>RSC Advances</i> , 2015 , 5, 56570-56577	3.7	15
54	Carbon-supported Pt-based alloy electrocatalysts for the oxygen reduction reaction in polymer electrolyte membrane fuel cells: particle size, shape, and composition manipulation and their impact to activity. <i>Chemical Reviews</i> , 2015 , 115, 3433-67	68.1	907
53	Fuel Cell Diagnostics 2013 , 265-304		2
52	Manganese dioxide nanotube and nitrogen-doped carbon nanotube based composite bifunctional catalyst for rechargeable zinc-air battery. <i>Electrochimica Acta</i> , 2012 , 69, 295-300	6.7	145

51	Effect of open circuit voltage on degradation of a short proton exchange membrane fuel cell stack with bilayer membrane configurations. <i>Journal of Power Sources</i> , 2012 , 205, 290-300	8.9	24
50	A review on performance degradation of proton exchange membrane fuel cells during startup and shutdown processes: Causes, consequences, and mitigation strategies. <i>Journal of Power Sources</i> , 2012 , 205, 10-23	8.9	198
49	Degradation of a PEM fuel cell stack with Nafion [®] membranes of different thicknesses. Part II: Ex situ diagnosis. <i>Journal of Power Sources</i> , 2012 , 205, 324-334	8.9	53
48	Membrane electrode assembly degradation under idle conditions via unsymmetrical reactant relative humidity cycling. <i>Journal of Power Sources</i> , 2012 , 207, 101-110	8.9	16
47	Molecular Simulation of Gas Transport in Hydrated Nafion Membranes: Influence of Aqueous Nanostructure. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 17424-17430	3.8	17
46	Diagnosis of contamination introduced by ammonia at the cathode in a polymer electrolyte membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , 2012 , 37, 12464-12473	6.7	41
45	Highly active and durable core-corona structured bifunctional catalyst for rechargeable metal-air battery application. <i>Nano Letters</i> , 2012 , 12, 1946-52	11.5	350
44	Highly active PtRu nanowire network catalysts for the methanol oxidation reaction. <i>Catalysis Communications</i> , 2012 , 18, 51-54	3.2	48
43	Accelerated durability testing via reactants relative humidity cycling on PEM fuel cells. <i>Applied Energy</i> , 2012 , 93, 90-97	10.7	74
42	Electrochemical Performance of Carbon-Supported Co-Phthalocyanine Modified with Co-Added Metals (M = Fe, Co, Ni, V) for Oxygen Reduction Reaction. <i>Journal of the Electrochemical Society</i> , 2012 , 159, F577-F584	3.9	32
41	Performance of the Vapor Fed Direct Alcohol Phosphoric Acid Fuel Cell. <i>Journal of the Electrochemical Society</i> , 2012 , 159, B570-B577	3.9	5
40	Atomic force microscopy and infrared analysis of aging processes of polymer electrolyte membrane fuel cell components. <i>Journal of Electroanalytical Chemistry</i> , 2011 , 662, 240-250	4.1	11
39	A review of polymer electrolyte membrane fuel cell durability test protocols. <i>Journal of Power Sources</i> , 2011 , 196, 9107-9116	8.9	225
38	Highly durable and active non-precious air cathode catalyst for zinc air battery. <i>Journal of Power Sources</i> , 2011 , 196, 3673-3677	8.9	74
37	Diagnosis of MEA degradation under accelerated relative humidity cycling. <i>Journal of Power Sources</i> , 2011 , 196, 5045-5052	8.9	49
36	High Pt loading on functionalized multiwall carbon nanotubes as a highly efficient cathode electrocatalyst for proton exchange membrane fuel cells. <i>Journal of Materials Chemistry</i> , 2011 , 21, 8066		78
35	Nitrogen-doped carbon nanotubes as air cathode catalysts in zinc-air battery. <i>Electrochimica Acta</i> , 2011 , 56, 5080-5084	6.7	102
34	Nitrogen-doped carbon nanotubes with high activity for oxygen reduction in alkaline media. <i>International Journal of Hydrogen Energy</i> , 2011 , 36, 2258-2265	6.7	118

33 Catalyst Degradation **2011**, 3-32

32	Proton exchange membrane fuel cell degradation under close to open-circuit conditions: Part I: In situ diagnosis. <i>Journal of Power Sources</i> , 2010 , 195, 1171-1176	8.9	92
31	A review on air cathodes for zinc-air fuel cells. <i>Journal of Power Sources</i> , 2010 , 195, 1271-1291	8.9	449
30	Degradation of a polymer exchange membrane fuel cell stack with Nafion [®] membranes of different thicknesses: Part I. In situ diagnosis. <i>Journal of Power Sources</i> , 2010 , 195, 7594-7599	8.9	75
29	Effect of metal particle size and Nafion content on performance of MEA using Ir-V/C as anode catalyst. <i>International Journal of Hydrogen Energy</i> , 2010 , 35, 5528-5538	6.7	23
28	PEM fuel cell cathode contamination in the presence of cobalt ion (Co ²⁺). <i>Electrochimica Acta</i> , 2010 , 55, 5823-5830	6.7	28
27	Effect of Co ²⁺ on oxygen reduction reaction catalyzed by Pt catalyst, and its implications for fuel cell contamination. <i>Electrochimica Acta</i> , 2010 , 55, 2622-2628	6.7	12
26	PEM Fuel Cell Contamination: Effects of Operating Conditions on Toluene-Induced Cathode Degradation. <i>Journal of the Electrochemical Society</i> , 2009 , 156, B252	3.9	22
25	A review of platinum-based catalyst layer degradation in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2009 , 194, 588-600	8.9	477
24	Synthesis of a highly active carbon-supported Ir/C catalyst for the hydrogen oxidation reaction in PEMFC. <i>Electrochimica Acta</i> , 2009 , 54, 5614-5620	6.7	18
23	A review on water balance in the membrane electrode assembly of proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2009 , 34, 9461-9478	6.7	278
22	A general model for air-side proton exchange membrane fuel cell contamination. <i>Journal of Power Sources</i> , 2009 , 186, 435-445	8.9	17
21	Species, Temperature, and Current Distribution Mapping in Polymer Electrolyte Membrane Fuel Cells. <i>Modern Aspects of Electrochemistry</i> , 2009 , 129-173		
20	PEM Fuel Cell Fundamentals 2008 , 1-87		13
19	A review of PEM fuel cell durability: Degradation mechanisms and mitigation strategies. <i>Journal of Power Sources</i> , 2008 , 184, 104-119	8.9	1030
18	A review of water flooding issues in the proton exchange membrane fuel cell. <i>Journal of Power Sources</i> , 2008 , 178, 103-117	8.9	688
17	PEM fuel cell relative humidity (RH) and its effect on performance at high temperatures. <i>Electrochimica Acta</i> , 2008 , 53, 5315-5321	6.7	132
16	A review of Fe/C and Co/C catalysts for the oxygen reduction reaction. <i>Electrochimica Acta</i> , 2008 , 53, 4937-4951	6.7	938

15	Diagnostic tools in PEM fuel cell research: Part I Electrochemical techniques. <i>International Journal of Hydrogen Energy</i> , 2008 , 33, 1735-1746	6.7	229
14	PEM fuel cell reaction kinetics in the temperature range of 23–20°C. <i>Electrochimica Acta</i> , 2007 , 52, 2552-2561	8.5	136
13	A review of PEM hydrogen fuel cell contamination: Impacts, mechanisms, and mitigation. <i>Journal of Power Sources</i> , 2007 , 165, 739-756	8.9	728
12	A review of heat-treatment effects on activity and stability of PEM fuel cell catalysts for oxygen reduction reaction. <i>Journal of Power Sources</i> , 2007 , 173, 891-908	8.9	350
11	A review of polymer electrolyte membranes for direct methanol fuel cells. <i>Journal of Power Sources</i> , 2007 , 169, 221-238	8.9	741
10	AC impedance diagnosis of a 500W PEM fuel cell stack. <i>Journal of Power Sources</i> , 2006 , 161, 920-928	8.9	112
9	The effect of nitrogen oxides in air on the performance of proton exchange membrane fuel cell. <i>Electrochimica Acta</i> , 2006 , 51, 4039-4044	6.7	78
8	Degradation of polymer electrolyte membranes. <i>International Journal of Hydrogen Energy</i> , 2006 , 31, 1838-1854	8.2	82
7	Progress in preparation of non-noble electrocatalysts for PEM fuel cell reactions. <i>Journal of Power Sources</i> , 2006 , 156, 171-182	8.9	446
6	A review of anode catalysis in the direct methanol fuel cell. <i>Journal of Power Sources</i> , 2006 , 155, 95-110	8.9	1492
5	High temperature PEM fuel cells. <i>Journal of Power Sources</i> , 2006 , 160, 872-891	8.9	820
4	AC impedance diagnosis of a 500 W PEM fuel cell stack: Part II: Individual cell impedance. <i>Journal of Power Sources</i> , 2006 , 161, 929-937	8.9	84
3	Progress in the synthesis of carbon nanotube- and nanofiber-supported Pt electrocatalysts for PEM fuel cell catalysis. <i>Journal of Applied Electrochemistry</i> , 2006 , 36, 507-522	2.6	355
2	Model for the contamination of fuel cell anode catalyst in the presence of fuel stream impurities. <i>Journal of Power Sources</i> , 2005 , 147, 58-71	8.9	59
1	Advances in Fabrication, Characterization, Testing, and Diagnosis of High-Performance Electrodes for PEM Fuel Cells	331-382	