

# Haijiang Wang

## List of Publications by Citations

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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	A review of anode catalysis in the direct methanol fuel cell. <i>Journal of Power Sources</i> , <b>2006</b> , 155, 95-110	8.9	1492
67	A review of PEM fuel cell durability: Degradation mechanisms and mitigation strategies. <i>Journal of Power Sources</i> , <b>2008</b> , 184, 104-119	8.9	1030
66	A review of Fe <sub>N</sub> /C and Co <sub>N</sub> /C catalysts for the oxygen reduction reaction. <i>Electrochimica Acta</i> , <b>2008</b> , 53, 4937-4951	6.7	938
65	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> , <b>2015</b> , 115, 3433-67	68.1	907
64	High temperature PEM fuel cells. <i>Journal of Power Sources</i> , <b>2006</b> , 160, 872-891	8.9	820
63	A review of polymer electrolyte membranes for direct methanol fuel cells. <i>Journal of Power Sources</i> , <b>2007</b> , 169, 221-238	8.9	741
62	A review of PEM hydrogen fuel cell contamination: Impacts, mechanisms, and mitigation. <i>Journal of Power Sources</i> , <b>2007</b> , 165, 739-756	8.9	728
61	A review of water flooding issues in the proton exchange membrane fuel cell. <i>Journal of Power Sources</i> , <b>2008</b> , 178, 103-117	8.9	688
60	A review of platinum-based catalyst layer degradation in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , <b>2009</b> , 194, 588-600	8.9	477
59	A review on air cathodes for zinc-air fuel cells. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 1271-1291	8.9	449
58	Progress in preparation of non-noble electrocatalysts for PEM fuel cell reactions. <i>Journal of Power Sources</i> , <b>2006</b> , 156, 171-182	8.9	446
57	Degradation of polymer electrolyte membranes. <i>International Journal of Hydrogen Energy</i> , <b>2006</b> , 31, 1838-1854	3.82	382
56	Progress in the synthesis of carbon nanotube- and nanofiber-supported Pt electrocatalysts for PEM fuel cell catalysis. <i>Journal of Applied Electrochemistry</i> , <b>2006</b> , 36, 507-522	2.6	355
55	Highly active and durable core-corona structured bifunctional catalyst for rechargeable metal-air battery application. <i>Nano Letters</i> , <b>2012</b> , 12, 1946-52	11.5	350
54	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> , <b>2007</b> , 173, 891-908	8.9	350
53	A review on water balance in the membrane electrode assembly of proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2009</b> , 34, 9461-9478	6.7	278
52	Diagnostic tools in PEM fuel cell research: Part I Electrochemical techniques. <i>International Journal of Hydrogen Energy</i> , <b>2008</b> , 33, 1735-1746	6.7	229

51	A review of polymer electrolyte membrane fuel cell durability test protocols. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 9107-9116	8.9	225
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> , <b>2012</b> , 205, 10-23	8.9	198
49	A review of proton exchange membrane water electrolysis on degradation mechanisms and mitigation strategies. <i>Journal of Power Sources</i> , <b>2017</b> , 366, 33-55	8.9	179
48	Manganese dioxide nanotube and nitrogen-doped carbon nanotube based composite bifunctional catalyst for rechargeable zinc-air battery. <i>Electrochimica Acta</i> , <b>2012</b> , 69, 295-300	6.7	145
47	PEM fuel cell reaction kinetics in the temperature range of 23-120°C. <i>Electrochimica Acta</i> , <b>2007</b> , 52, 2552-2561	6.7	136
46	PEM fuel cell relative humidity (RH) and its effect on performance at high temperatures. <i>Electrochimica Acta</i> , <b>2008</b> , 53, 5315-5321	6.7	132
45	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> , <b>2016</b> , 82, 445-498	42.2	123
44	Nitrogen-doped carbon nanotubes with high activity for oxygen reduction in alkaline media. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 2258-2265	6.7	118
43	AC impedance diagnosis of a 500W PEM fuel cell stack. <i>Journal of Power Sources</i> , <b>2006</b> , 161, 920-928	8.9	112
42	Nitrogen-doped carbon nanotubes as air cathode catalysts in zinc-air battery. <i>Electrochimica Acta</i> , <b>2011</b> , 56, 5080-5084	6.7	102
41	Proton exchange membrane fuel cell degradation under close to open-circuit conditions: Part I: In situ diagnosis. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 1171-1176	8.9	92
40	AC impedance diagnosis of a 500 W PEM fuel cell stack: Part II: Individual cell impedance. <i>Journal of Power Sources</i> , <b>2006</b> , 161, 929-937	8.9	84
39	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> , <b>2011</b> , 21, 8066		78
38	The effect of nitrogen oxides in air on the performance of proton exchange membrane fuel cell. <i>Electrochimica Acta</i> , <b>2006</b> , 51, 4039-4044	6.7	78
37	Degradation of a polymer exchange membrane fuel cell stack with Nafion <sup>®</sup> membranes of different thicknesses: Part I. In situ diagnosis. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 7594-7599	8.9	75
36	Accelerated durability testing via reactants relative humidity cycling on PEM fuel cells. <i>Applied Energy</i> , <b>2012</b> , 93, 90-97	10.7	74
35	Highly durable and active non-precious air cathode catalyst for zinc air battery. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 3673-3677	8.9	74
34	Model for the contamination of fuel cell anode catalyst in the presence of fuel stream impurities. <i>Journal of Power Sources</i> , <b>2005</b> , 147, 58-71	8.9	59

33	Degradation of a PEM fuel cell stack with Nafion <sup>®</sup> membranes of different thicknesses. Part II: Ex situ diagnosis. <i>Journal of Power Sources</i> , <b>2012</b> , 205, 324-334	8.9	53
32	Diagnosis of MEA degradation under accelerated relative humidity cycling. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 5045-5052	8.9	49
31	Highly active PtRu nanowire network catalysts for the methanol oxidation reaction. <i>Catalysis Communications</i> , <b>2012</b> , 18, 51-54	3.2	48
30	Diagnosis of contamination introduced by ammonia at the cathode in a polymer electrolyte membrane fuel cell. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 12464-12473	6.7	41
29	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> , <b>2012</b> , 159, F577-F584	3.9	32
28	PEM fuel cell cathode contamination in the presence of cobalt ion (Co <sup>2+</sup> ). <i>Electrochimica Acta</i> , <b>2010</b> , 55, 5823-5830	6.7	28
27	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> , <b>2012</b> , 205, 290-300	8.9	24
26	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> , <b>2010</b> , 35, 5528-5538	6.7	23
25	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> , <b>2020</b> , 5, 100075	12.7	23
24	Interrogation of the Reaction Mechanism in a Na-O Battery Using Transmission Electron Microscopy. <i>ACS Nano</i> , <b>2020</b> , 14, 3669-3677	16.7	22
23	PEM Fuel Cell Contamination: Effects of Operating Conditions on Toluene-Induced Cathode Degradation. <i>Journal of the Electrochemical Society</i> , <b>2009</b> , 156, B252	3.9	22
22	Thermodynamic performance analysis of the influence of multi-factor coupling on the methanol steam reforming reaction. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 7015-7024	6.7	18
21	Synthesis of a highly active carbon-supported IrV/C catalyst for the hydrogen oxidation reaction in PEMFC. <i>Electrochimica Acta</i> , <b>2009</b> , 54, 5614-5620	6.7	18
20	Molecular Simulation of Gas Transport in Hydrated Nafion Membranes: Influence of Aqueous Nanostructure. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 17424-17430	3.8	17
19	A general model for air-side proton exchange membrane fuel cell contamination. <i>Journal of Power Sources</i> , <b>2009</b> , 186, 435-445	8.9	17
18	Membrane electrode assembly degradation under idle conditions via unsymmetrical reactant relative humidity cycling. <i>Journal of Power Sources</i> , <b>2012</b> , 207, 101-110	8.9	16
17	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> , <b>2015</b> , 5, 56570-56577	3.7	15
16	PEM Fuel Cell Fundamentals <b>2008</b> , 1-87		13

15	Effect of Co <sup>2+</sup> on oxygen reduction reaction catalyzed by Pt catalyst, and its implications for fuel cell contamination. <i>Electrochimica Acta</i> , <b>2010</b> , 55, 2622-2628	6.7	12
14	Atomic force microscopy and infrared analysis of aging processes of polymer electrolyte membrane fuel cell components. <i>Journal of Electroanalytical Chemistry</i> , <b>2011</b> , 662, 240-250	4.1	11
13	Study of failure mechanisms of the reversal tolerant fuel cell anode via novel in-situ measurements. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 996-1007	6.7	11
12	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> , <b>2020</b> , 8, 9803-9812	8.3	10
11	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> , <b>2020</b> , 30, 825-831	3.6	8
10	A highly efficient PtCo/C electrocatalyst for the oxygen reduction reaction. <i>RSC Advances</i> , <b>2016</b> , 6, 34484-34494	3.7	7
9	3D-printed fuel-cell bipolar plates for evaluating flow-field performance. <i>Clean Energy</i> , <b>2020</b> , 4, 142-157	4.7	6
8	Performance of the Vapor Fed Direct Alcohol Phosphoric Acid Fuel Cell. <i>Journal of the Electrochemical Society</i> , <b>2012</b> , 159, B570-B577	3.9	5
7	Novel Proton Exchange Membrane with Long-Range Acid-Base-Pair Proton Transfer Pathways Based on Functionalized Polyethyleneimine. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2021</b> , 9, 3963-3974	8.3	4
6	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> , <b>2021</b> , 5, 532-539	5.8	3
5	Fuel Cell Diagnostics <b>2013</b> , 265-304		2
4	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> , <b>2022</b> , 5, 3259-3268	6.1	1
3	Species, Temperature, and Current Distribution Mapping in Polymer Electrolyte Membrane Fuel Cells. <i>Modern Aspects of Electrochemistry</i> , <b>2009</b> , 129-173		
2	Advances in Fabrication, Characterization, Testing, and Diagnosis of High-Performance Electrodes for PEM Fuel Cells 331-382		
1	Catalyst Degradation <b>2011</b> , 3-32		