

Haijiang Wang

List of Publications by Year in descending order

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42
papers

4,236
citations

257450

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265206

42
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43
all docs

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docs citations

43
times ranked

4716
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of PEM fuel cell durability: Degradation mechanisms and mitigation strategies. <i>Journal of Power Sources</i> , 2008, 184, 104-119.	7.8	1,263
2	Iron-facilitated dynamic active-site generation on spinel CoAl ₂ O ₄ with self-termination of surface reconstruction for water oxidation. <i>Nature Catalysis</i> , 2019, 2, 763-772.	34.4	678
3	A review of proton exchange membrane water electrolysis on degradation mechanisms and mitigation strategies. <i>Journal of Power Sources</i> , 2017, 366, 33-55.	7.8	355
4	A review of polymer electrolyte membrane fuel cell durability test protocols. <i>Journal of Power Sources</i> , 2011, 196, 9107-9116.	7.8	277
5	Electrochemical Nitrogen Reduction Reaction on Ruthenium. <i>ACS Energy Letters</i> , 2019, 4, 1336-1341.	17.4	187
6	A Spectroscopic Study of Electrochemical Nitrogen and Nitrate Reduction on Rhodium Surfaces. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 10479-10483.	13.8	135
7	Highly active and stable ruthenate pyrochlore for enhanced oxygen evolution reaction in acidic medium electrolysis. <i>Applied Catalysis B: Environmental</i> , 2019, 244, 494-501.	20.2	109
8	A Spectroscopic Study of Electrochemical Nitrogen and Nitrate Reduction on Rhodium Surfaces. <i>Angewandte Chemie</i> , 2020, 132, 10565-10569.	2.0	104
9	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.	14.8	95
10	An air-cooled proton exchange membrane fuel cell with combined oxidant and coolant flow. <i>Journal of Power Sources</i> , 2009, 188, 199-204.	7.8	83
11	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.	7.8	74
12	Electrochemical Synthesis of Ammonia from Nitrogen Under Mild Conditions: Current Status and Challenges. <i>Electrochemical Energy Reviews</i> , 2020, 3, 239-270.	25.5	67
13	Electrochemical Compression Technologies for High-Pressure Hydrogen: Current Status, Challenges and Perspective. <i>Electrochemical Energy Reviews</i> , 2020, 3, 690-729.	25.5	56
14	Current mapping of a proton exchange membrane fuel cell with a segmented current collector during the gas starvation and shutdown processes. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 15288-15300.	7.1	54
15	Mo modulation effect on the hydrogen binding energy of hexagonal-close-packed Ru for hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2019, 7, 2780-2786.	10.3	53
16	Influence of Surface Oxygen Vacancies and Ruthenium Valence State on the Catalysis of Pyrochlore Oxides. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 4520-4530.	8.0	53
17	Oxygen vacancy engineering of yttrium ruthenate pyrochlores as an efficient oxygen catalyst for both proton exchange membrane water electrolyzers and rechargeable zinc-air batteries. <i>Applied Catalysis B: Environmental</i> , 2020, 260, 118176.	20.2	50
18	Optimal design of cathode flow channel for air-cooled PEMFC with open cathode. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 17771-17781.	7.1	49

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19	Chromium Oxynitride Electrocatalysts for Electrochemical Synthesis of Ammonia Under Ambient Conditions. <i>Small Methods</i> , 2019, 3, 1800324.	8.6	41
20	Tungsten Carbide Encapsulated in Grape-Like N-Doped Carbon Nanospheres: One-Step Facile Synthesis for Low-Cost and Highly Active Electrocatalysts in Proton Exchange Membrane Water Electrolyzers. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 25123-25132.	8.0	37
21	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.	6.7	37
22	Benchmarking Phases of Ruthenium Dichalcogenides for Electrocatalysis of Hydrogen Evolution: Theoretical and Experimental Insights. <i>Small</i> , 2021, 17, e2007333.	10.0	35
23	Highly active and durable catalyst for hydrogen generation by the NaBH ₄ hydrolysis reaction: CoWB/NF nanodendrite with an acicular array structure. <i>Journal of Alloys and Compounds</i> , 2020, 836, 155429.	5.5	32
24	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.	7.1	30
25	Study of relative humidity on durability of the reversal tolerant proton exchange membrane fuel cell anode using a segmented cell. <i>Journal of Power Sources</i> , 2020, 449, 227542.	7.8	24
26	An effective strategy to tune the oxygen vacancy of pyrochlore oxides for electrochemical energy storage and conversion systems. <i>Chemical Engineering Journal</i> , 2020, 395, 124428.	12.7	23
27	Recent advances in heat and water management of forced-convection open-cathode proton exchange membrane fuel cells. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 165, 112558.	16.4	23
28	Performance and thermal optimization of different length-width ratio for air-cooled open-cathode fuel cell. <i>Renewable Energy</i> , 2021, 178, 1250-1260.	8.9	22
29	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.	4.4	21
30	NaCl template-directed approach to ultrathin lamellar molybdenum phosphide-carbon hybrids for efficient hydrogen production. <i>Journal of Power Sources</i> , 2019, 438, 227048.	7.8	20
31	Air and H ₂ feed systems optimization for open-cathode proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 11940-11951.	7.1	19
32	Insights into electrochemical hydrogen compressor operating parameters and membrane electrode assembly degradation mechanisms. <i>Journal of Power Sources</i> , 2021, 484, 229249.	7.8	18
33	Elucidating the Correlation between ORR Polarization Curves and Kinetics at Metal-Electrolyte Interfaces. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 13891-13903.	8.0	18
34	An experimental study on pressure distribution and performance of end-plate with different optimization parameters for air-cooled open-cathode LT-PEMFC. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 17902-17915.	7.1	17
35	A hybrid fuel cell system integrated with methanol steam reformer and methanation reactor. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 2565-2576.	7.1	16
36	A self-humidifying proton exchange membrane embedded with phosphonic acid-functionalized mesoporous silica nanoparticles that has excellent dispersion and water retention. <i>Sustainable Energy and Fuels</i> , 2021, 5, 230-245.	4.9	14

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37	Effects of bolt torque and gasket geometric parameters on open-cathode polymer electrolyte fuel cells. <i>Applied Energy</i> , 2021, 303, 117632.	10.1	13
38	Performance and design optimization of different numbers and bolt torque for air-cooled open-cathode proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2022, 530, 231322.	7.8	13
39	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.	4.9	12
40	IrO _x 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.	5.1	7
41	Investigation of three system shut-down strategies alongside optimization suggestion for proton exchange membrane fuel cells via in-situ measurements. <i>International Journal of Green Energy</i> , 2020, 17, 157-170.	3.8	1
42	Simulation of the Dynamic Characteristics of a PEMFC System in Fluctuating Operating Conditions. <i>Energies</i> , 2020, 13, 3596.	3.1	0