Lei Xing

List of Publications by Year
in descending order

71	2,960	185998 28	168136 53
papers	citations	h-index	g-index

71	71	71	2489
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Coexisting Singleâ€Atomic Fe and Ni Sites on Hierarchically Ordered Porous Carbon as a Highly Efficient ORR Electrocatalyst. Advanced Materials, 2020, 32, e2004670.	11.1	404
2	A two-phase flow and non-isothermal agglomerate model for a proton exchange membrane (PEM) fuel cell. Energy, 2014, 73, 618-634.	4.5	194
3	A poly (ethylene oxide)/graphene oxide electrolyte membrane for low temperature polymer fuel cells. Journal of Power Sources, 2011, 196, 8377-8382.	4.0	168
4	Membrane electrode assemblies for PEM fuel cells: A review of functional graded design and optimization. Energy, 2019, 177, 445-464.	4.5	162
5	In-situ growth of Znâ€“AgIn5S8 quantum dots onÂg-C3N4 towards 0D/2D heterostructured photocatalysts with enhanced hydrogen production. International Journal of Hydrogen Energy, 2019, 44, 15882-15891.	3.8	135
6	Enhanced visible-light photocatalytic activity of carbonate-doped anatase TiO2 based on the electron-withdrawing bidentate carboxylate linkage. Applied Catalysis B: Environmental, 2017, 202, 642-652.	10.8	125
7	Numerical analysis of the optimum membrane/ionomer water content of PEMFCs: The interaction of NafionÂ® ionomer content and cathode relative humidity. Applied Energy, 2015, 138, 242-257.	5.1	109
8	Numerical investigation of the optimal NafionÂ® ionomer content in cathode catalyst layer: An agglomerate two-phase flow modelling. International Journal of Hydrogen Energy, 2014, 39, 9087-9104.	3.8	86
9	Numerical study of the effect of relative humidity and stoichiometric flow ratio on PEM (proton) Tj ETQq1 1 0.784314 rgBT /Overlock 1 modelling. Energy, 2016, 106, 631-645.	4.5	83
10	Anode partial flooding modelling of proton exchange membrane fuel cells: Model development and validation. Energy, 2016, 96, 80-95.	4.5	75
11	Homogenization of current density of PEM fuel cells by in-plane graded distributions of platinum loading and GDL porosity. Chemical Engineering Science, 2018, 192, 699-713.	1.9	73
12	A two dimensional agglomerate model for a proton exchange membrane fuel cell. Energy, 2013, 61, 196-210.	4.5	70
13	Sandwich Photothermal Membrane with Confined Hierarchical Carbon Cells Enabling Highâ€Efficiency Solar Steam Generation. Small, 2020, 16, e2000573.	5.2	67
14	Multi-variable optimisation of PEMFC cathodes based on surrogate modelling. International Journal of Hydrogen Energy, 2013, 38, 14295-14313.	3.8	64
15	Multi-sub-inlets at cathode flow-field plate for current density homogenization and enhancement of PEM fuel cells in low relative humidity. Energy Conversion and Management, 2022, 252, 115069.	4.4	62
16	Anode partial flooding modelling of proton exchange membrane fuel cells: Optimisation of electrode properties and channel geometries. Chemical Engineering Science, 2016, 146, 88-103.	1.9	56
17	Numerical investigation on the dispersion effect in vanadium redox flow battery. Chemical Engineering Journal, 2020, 393, 124753.	6.6	48
18	Analysis of the kinetics of methanol oxidation in a porous Ptâ€“Ru anode. Journal of Power Sources, 2010, 195, 1-10.	4.0	46

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19	Three-dimensional interconnected MoS2 nanosheets on industrial 316L stainless steel mesh as an efficient hydrogen evolution electrode. International Journal of Hydrogen Energy, 2019, 44, 1555-1564.	3.8	46
20	Stable Surface-Anchored Cu Nanocubes for CO₂ Electroreduction to Ethylene. ACS Applied Nano Materials, 2020, 3, 8328-8334.	2.4	41
21	Sandwich hydrogel with confined plasmonic Cu/carbon cells for efficient solar water purification. Journal of Materials Chemistry A, 2021, 9, 15462-15471.	5.2	41
22	Inhomogeneous distribution of platinum and ionomer in the porous cathode to maximize the performance of a PEM fuel cell. AICHE Journal, 2017, 63, 4895-4910.	1.8	40
23	Numerical matching of anisotropic transport processes in porous electrodes of proton exchange membrane fuel cells. Chemical Engineering Science, 2019, 195, 127-140.	1.9	40
24	A segmented fuel cell unit with functionally graded distributions of platinum loading and operating temperature. Chemical Engineering Journal, 2021, 406, 126889.	6.6	40
25	Mass transfer effect to electrochemical reduction of CO2: Electrode, electrocatalyst and electrolyte. Journal of Energy Storage, 2022, 52, 104764.	3.9	39
26	Modeling and Upscaling Analysis of Gas Diffusion Electrode-Based Electrochemical Carbon Dioxide Reduction Systems. ACS Sustainable Chemistry and Engineering, 2021, 9, 351-361.	3.2	34
27	In-situ diagnosis on performance degradation of high temperature polymer electrolyte membrane fuel cell by examining its electrochemical properties under operation. International Journal of Hydrogen Energy, 2018, 43, 21006-21016.	3.8	33
28	Improving cell performance and alleviating performance degradation by constructing a novel structure of membrane electrode assembly (MEA) of DMFCs. International Journal of Hydrogen Energy, 2019, 44, 32231-32239.	3.8	33
29	Modeling the effect of temperature on performance of an iron-vanadium redox flow battery with deep eutectic solvent (DES) electrolyte. Journal of Power Sources, 2020, 449, 227491.	4.0	29
30	Carbon supported PtPdCr ternary alloy nanoparticles with enhanced electrocatalytic activity and durability for methanol oxidation reaction. International Journal of Hydrogen Energy, 2020, 45, 22752-22760.	3.8	29
31	Cu2O nano-flowers/graphene enabled scaffolding structure catalyst layer for enhanced CO2 electrochemical reduction. Applied Catalysis B: Environmental, 2022, 305, 121022.	10.8	29
32	An agglomerate model for PEM fuel cells operated with non-precious carbon-based ORR catalysts. Chemical Engineering Science, 2018, 179, 198-213.	1.9	26
33	Ordered mesoporous Pt-Ru-Ir nanostructures as superior bifunctional electrocatalyst for oxygen reduction/oxygen evolution reactions. Journal of Colloid and Interface Science, 2022, 608, 207-218.	5.0	26
34	Effect of air supply on the performance of an active direct methanol fuel cell (DMFC) fed with neat methanol. International Journal of Green Energy, 2018, 15, 181-188.	2.1	24
35	Direct Methanol Fuel Cells. Advances in Chemical Engineering, 2012, 41, 145-196.	0.5	23
36	A novel flow field with controllable pressure gradient to enhance mass transport and water removal of PEM fuel cells. AICHE Journal, 2020, 66, e16957.	1.8	23

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37	Bimetallic Pt3Mn nanowire network structures with enhanced electrocatalytic performance for methanol oxidation. International Journal of Hydrogen Energy, 2020, 45, 30455-30462.	3.8	22
38	Comparison of state-of-the-art machine learning algorithms and data-driven optimization methods for mitigating nitrogen crossover in PEM fuel cells. Chemical Engineering Journal, 2022, 442, 136064.	6.6	22
39	Pt-based (Zn, Cu) nanodendrites with enhanced catalytic efficiency and durability toward methanol electro-oxidation via trace Ir-doping engineering. Journal of Colloid and Interface Science, 2021, 598, 126-135.	5.0	18
40	Balancing the electron conduction and mass transfer: Effect of nickel foam thickness on the performance of an alkaline direct ethanol fuel cell (ADEFC) with 3D porous anode. International Journal of Hydrogen Energy, 2020, 45, 19801-19812.	3.8	17
41	Levelling renewable power output using hydrogen-based storage systems: A techno-economic analysis. Journal of Energy Storage, 2021, 37, 102413.	3.9	17
42	Carbon Nanofibers-Assembled Tungsten Oxide as Unique Hybrid Electrode Materials for High-Performance Symmetric Supercapacitors. Energy & Fuels, 2021, 35, 11572-11579.	2.5	16
43	Self-induced Fenton reaction constructed by Fe(III) grafted BiVO4 nanosheets with improved photocatalytic performance and mechanism insight. Applied Surface Science, 2019, 467-468, 673-683.	3.1	15
44	Multiphysics Modeling and Simulation of Subcutaneous Injection and Absorption of Biotherapeutics: Sensitivity Analysis. Pharmaceutical Research, 2021, 38, 1011-1030.	1.7	15
45	Multiphysics Modeling and Simulation of Subcutaneous Injection and Absorption of Biotherapeutics: Model Development. Pharmaceutical Research, 2021, 38, 607-624.	1.7	14
46	A polybenzimidazole/graphite oxide based three layer membrane for intermediate temperature polymer electrolyte membrane fuel cells. RSC Advances, 2016, 6, 72224-72229.	1.7	13
47	Sulfated Ceâ€doped TiO₂ as visible light driven photocatalyst: Preparation, characterization and promotion effects of Ce doping and sulfation on catalyst performance. Environmental Progress and Sustainable Energy, 2017, 36, 494-504.	1.3	13
48	Enhanced low-humidity performance of proton exchange membrane fuel cell by incorporating phosphoric acid-loaded covalent organic framework in anode catalyst layer. International Journal of Hydrogen Energy, 2021, 46, 10903-10912.	3.8	13
49	Boosting the performance of alkaline direct ethanol fuel cell with low-Pd-loading nickel foam electrode via mixed acid-etching. International Journal of Hydrogen Energy, 2022, 47, 9672-9679.	3.8	12
50	A numerical study of dynamic behaviors of a unitized regenerative fuel cell during gas purging. International Journal of Hydrogen Energy, 2022, 47, 22203-22214.	3.8	12
51	Enhanced weathering to capture atmospheric carbon dioxide: Modeling of a trickleâ€bed reactor. AICHE Journal, 2021, 67, e17202.	1.8	11
52	Potential of enhanced weathering of calcite in packed bubble columns with seawater for carbon dioxide removal. Chemical Engineering Journal, 2022, 431, 134096.	6.6	11
53	Enhanced performance of high temperature polymer electrolyte membrane fuel cell using a novel dual catalyst layer structured cathode. Journal of the Taiwan Institute of Chemical Engineers, 2021, 125, 285-290.	2.7	10
54	Acclimated sediment microbial fuel cells from a eutrophic lake for the in situ denitrification process. RSC Advances, 2016, 6, 80079-80085.	1.7	9

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55	Numerical study of inhomogeneous deformation of gas diffusion layers on proton exchange membrane fuel cells performance. Journal of Energy Storage, 2021, 44, 103486.	3.9	9
56	GA Optimization Method for a Multi-Vector Energy System Incorporating Wind, Hydrogen, and Fuel Cells for Rural Village Applications. Applied Sciences (Switzerland), 2019, 9, 3554.	1.3	8
57	Reinforcement of protonâ€exchange membrane fuel cell performance through a novel flow field design with auxiliary channels and a hole array. AICHE Journal, 2022, 68, e17461.	1.8	8
58	Effects of blade thickness on hydraulic performance and structural dynamic characteristics of high-power coolant pump at overload condition. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2018, 232, 992-1003.	0.8	7
59	Combining Baffles and Secondary Porous Layers for Performance Enhancement of Proton Exchange Membrane Fuel Cells. Energies, 2021, 14, 3675.	1.6	7
60	Constructing a graphene-contained layer in anode to improve the performance of direct methanol fuel cells using high-concentration fuel. International Journal of Green Energy, 2021, 18, 566-577.	2.1	6
61	Characterization of excipients to improve pharmaceutical properties of sirolimus in the supercritical anti-solvent fluidized process. International Journal of Pharmaceutics, 2022, 611, 121240.	2.6	6
62	A lowâ€cost clayâ€based heterogeneous Fentonâ€like catalyst: Activation, efficiency enhancement, and mechanism study. Asia-Pacific Journal of Chemical Engineering, 2018, 13, e2156.	0.8	5
63	Silver Nanoparticle/Multiwalled Carbon Nanotube Hybrid as an Efficient Electrocatalyst for the Oxygen Reduction Reaction in Alkaline Medium. ChemElectroChem, 2019, 6, 2489-2496.	1.7	5
64	Improvement of underâ€theâ€rib oxygen concentration and water removal in proton exchange membrane fuel cells through threeâ€dimensional metal printed novel flow fields. AICHE Journal, 2022, 68, .	1.8	5
65	Visibleâ€lightâ€driven photocatalytic activity of kaolinite: Sensitized by in situ growth of <scp>Cuâ€TiO₂</scp>. Environmental Progress and Sustainable Energy, 2021, 40, .	1.3	4
66	Transient Response and Steady-State Analysis of the Anode of Direct Methanol Fuel Cells Based on Dual-Site Kinetics. International Journal of Electrochemistry, 2011, 2011, 1-14.	2.4	2
67	Enhanced Cell Performance and Improved Catalyst Utilization for a Direct Methanol Fuel Cell with an In-Plane Gradient Loading Catalyst Electrode. Processes, 2021, 9, 1787.	1.3	2
68	Nano-Graphene Layer from Facile, Scalable and Eco-Friendly Liquid Phase Exfoliation Strategy as Effective Barrier Layer for High-Performance and Durable Direct Liquid Alcohol Fuel Cells. Molecules, 2022, 27, 3044.	1.7	2
69	Experimental investigation on the effect of mixed acids etched nickel foam electrode on performance of an alkaline direct ethanol fuel cell. E3S Web of Conferences, 2020, 194, 02021.	0.2	1
70	Coating of sodium percarbonate particles using water soluble materials in a fluidised bed to achieve delayed release in aqueous environment. Cogent Engineering, 2017, 4, 1372730.	1.1	0
71	GA-Aided Power Flow Management in a Multi-Vector Energy System. , 2019, , .		0