

Xiao-Zi Yuan

List of Publications by Year in descending order

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89
papers

4,796
citations

117625

34
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98798

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89
all docs

89
docs citations

89
times ranked

5216
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of platinum-based catalyst layer degradation in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2009, 194, 588-600.	7.8	547
2	Degradation Mechanisms and Mitigation Strategies of Nickel-Rich NMC-Based Lithium-Ion Batteries. <i>Electrochemical Energy Reviews</i> , 2020, 3, 43-80.	25.5	393
3	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.	7.1	342
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	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.	7.8	249
6	Electrochemical Nitrogen Reduction Reaction on Ruthenium. <i>ACS Energy Letters</i> , 2019, 4, 1336-1341.	17.4	187
7	Proton exchange membrane fuel cell degradation under close to open-circuit conditions. <i>Journal of Power Sources</i> , 2010, 195, 1171-1176.	7.8	112
8	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
9	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.	7.8	99
10	Synthesis and characterization of high-density LiFePO ₄ /C composites as cathode materials for lithium-ion batteries. <i>Electrochimica Acta</i> , 2009, 54, 4595-4599.	5.2	95
11	Accelerated durability testing via reactants relative humidity cycling on PEM fuel cells. <i>Applied Energy</i> , 2012, 93, 90-97.	10.1	90
12	A review of accelerated conditioning for a polymer electrolyte membrane fuel cell. <i>Journal of Power Sources</i> , 2011, 196, 9097-9106.	7.8	83
13	Effects of open-circuit operation on membrane and catalyst layer degradation in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2010, 195, 1142-1148.	7.8	82
14	FeS anchored reduced graphene oxide nanosheets as advanced anode material with superior high-rate performance for alkaline secondary batteries. <i>Journal of Power Sources</i> , 2016, 327, 187-195.	7.8	75
15	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
16	A review of all-vanadium redox flow battery durability: Degradation mechanisms and mitigation strategies. <i>International Journal of Energy Research</i> , 2019, 43, 6599.	4.5	70
17	FeS/C composite as high-performance anode material for alkaline nickel-iron rechargeable batteries. <i>Journal of Power Sources</i> , 2015, 291, 29-39.	7.8	68
18	Diagnosis of MEA degradation under accelerated relative humidity cycling. <i>Journal of Power Sources</i> , 2011, 196, 5045-5052.	7.8	64

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19	Molecular Simulation of Gas Adsorption, Diffusion, and Permeation in Hydrated Nafion Membranes. <i>Journal of Physical Chemistry B</i> , 2011, 115, 11352-11358.	2.6	63
20	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
21	In situ accelerated degradation of gas diffusion layer in proton exchange membrane fuel cell Part I: Effect of elevated temperature and flow rate. <i>Journal of Power Sources</i> , 2010, 195, 1888-1894.	7.8	51
22	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.	7.1	50
23	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
24	A comparative study of structural and electrochemical properties of high-density aluminum substituted δ -nickel hydroxide containing different interlayer anions. <i>Journal of Power Sources</i> , 2015, 282, 158-168.	7.8	47
25	Synthesis and characterization of high-density non-spherical Ni(OH) ₂ cathode material for Ni-MH batteries. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 9716-9724.	7.1	46
26	Synthesis, characterization and electrochemical performance of high-density aluminum substituted δ -nickel hydroxide cathode material for nickel-based rechargeable batteries. <i>Journal of Power Sources</i> , 2014, 270, 121-130.	7.8	46
27	The synthesis of Li(Ni _{1/3} Co _{1/3} Mn _{1/3})O ₂ using eutectic mixed lithium salt LiNO ₃ -LiOH. <i>Electrochimica Acta</i> , 2009, 54, 6529-6535.	5.2	44
28	Comparative structural and electrochemical study of high density spherical and non-spherical Ni(OH) ₂ as cathode materials for Ni-metal hydride batteries. <i>Journal of Power Sources</i> , 2011, 196, 7797-7805.	7.8	42
29	A review of functions, attributes, properties and measurements for the quality control of proton exchange membrane fuel cell components. <i>Journal of Power Sources</i> , 2021, 491, 229540.	7.8	42
30	Chromium Oxynitride Electrocatalysts for Electrochemical Synthesis of Ammonia Under Ambient Conditions. <i>Small Methods</i> , 2019, 3, 1800324.	8.6	41
31	Facile synthesis of LiAl _{0.1} Mn _{1.9} O ₄ as cathode material for lithium ion batteries: towards rate and cycling capabilities at an elevated temperature. <i>Electrochimica Acta</i> , 2014, 134, 338-346.	5.2	40
32	Facile and Nonradiation Pretreated Membrane as a High Conductive Separator for Li-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 20184-20189.	8.0	39
33	Effects of Fast Charging at Low Temperature on a High Energy Li-Ion Battery. <i>Journal of the Electrochemical Society</i> , 2020, 167, 140521.	2.9	39
34	Electrochemical performance of solid sphere spinel LiMn ₂ O ₄ with high tap density synthesized by porous spherical Mn ₃ O ₄ . <i>Electrochimica Acta</i> , 2014, 123, 254-259.	5.2	38
35	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
36	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

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37	Cogeneration of cyclohexylamine and electrical power using PEM fuel cell reactor. <i>Electrochemistry Communications</i> , 2001, 3, 599-602.	4.7	34
38	Accelerated conditioning for a proton exchange membrane fuel cell. <i>Journal of Power Sources</i> , 2012, 205, 340-344.	7.8	34
39	Influence of annealing temperature on the structure and electrochemical performance of the Fe ₃ O ₄ anode material for alkaline secondary batteries. <i>Electrochimica Acta</i> , 2015, 178, 34-44.	5.2	32
40	Measurement of water transport rates across the gas diffusion layer in a proton exchange membrane fuel cell, and the influence of polytetrafluoroethylene content and micro-porous layer. <i>Journal of Power Sources</i> , 2009, 188, 122-126.	7.8	31
41	Atomic force microscopy studies of conductive nanostructures in solid polymer electrolytes. <i>Electrochimica Acta</i> , 2013, 110, 292-305.	5.2	31
42	Impacts of operating conditions on the effects of chloride contamination on PEM fuel cell performance and durability. <i>Journal of Power Sources</i> , 2012, 218, 375-382.	7.8	30
43	Facile synthesis of high tap density ZnO microspheres as advanced anode material for alkaline nickel-zinc rechargeable batteries. <i>Electrochimica Acta</i> , 2015, 182, 173-182.	5.2	29
44	Facile fabrication of LiMn ₂ O ₄ microspheres from multi-shell MnO ₂ for high-performance lithium-ion batteries. <i>Materials Letters</i> , 2014, 135, 75-78.	2.6	28
45	Glucose-Assisted Synthesis of Highly Dispersed LiMnPO ₄ Nanoparticles at a Low Temperature for Lithium Ion Batteries. <i>Electrochimica Acta</i> , 2016, 189, 205-214.	5.2	28
46	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.	7.8	27
47	Oxygen Reduction Reaction in 1-Butyl-1-methyl-pyrrolidinium Bis(trifluoromethanesulfonyl)imide: Addition of Water as a Proton Species. <i>Journal of the Electrochemical Society</i> , 2014, 161, A451-A457.	2.9	26
48	The porous transport layer in proton exchange membrane water electrolysis: perspectives on a complex component. <i>Sustainable Energy and Fuels</i> , 2022, 6, 1824-1853.	4.9	26
49	Synthesis and electrochemical properties of high performance polyhedron sphere like lithium manganese oxide for lithium ion batteries. <i>Journal of Alloys and Compounds</i> , 2015, 632, 222-228.	5.5	25
50	Molecular Simulation of Gas Transport in Hydrated Nafion Membranes: Influence of Aqueous Nanostructure. <i>Journal of Physical Chemistry C</i> , 2012, 116, 17424-17430.	3.1	24
51	Glucose assisted synthesis of hollow spindle LiMnPO ₄ /C nanocomposites for high performance Li-ion batteries. <i>Electrochimica Acta</i> , 2015, 178, 420-428.	5.2	24
52	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
53	Microscopic Investigation of Platinum Deposition in PEMFC Cross-Sections Using AFM and SEM. <i>Journal of the Electrochemical Society</i> , 2013, 160, F687-F697.	2.9	23
54	Effect of Water and Dimethyl Sulfoxide on Oxygen Reduction Reaction in Bis(trifluoromethanesulfonyl)imide-based Ionic Liquids. <i>Journal of the Electrochemical Society</i> , 2014, 161, A458-A466.	2.9	21

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55	Carbon gel assisted low temperature liquid-phase synthesis of C-LiFePO ₄ /graphene layers with high rate and cycle performances. <i>Journal of Power Sources</i> , 2015, 295, 131-138.	7.8	21
56	Electro-generative hydrogenation of allyl alcohol applying PEM fuel cell reactor. <i>Electrochemistry Communications</i> , 2003, 5, 189-193.	4.7	20
57	Synthesis of LiNi _{1/3} Co _{1/3} Al _{1/3} O ₂ cathode material with eutectic molten salt LiOH-LiNO ₃ . <i>Powder Technology</i> , 2011, 207, 396-400.	4.2	20
58	Effects of precursor treatment on the structure and electrochemical properties of spinel LiMn ₂ O ₄ cathode. <i>Journal of Alloys and Compounds</i> , 2013, 566, 16-21.	5.5	20
59	Hexagonal-layered Na _{0.7} MnO _{2.05} via solvothermal synthesis as an electrode material for aqueous Na-ion supercapacitors. <i>Materials Chemistry and Physics</i> , 2016, 171, 137-144.	4.0	20
60	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
61	Standardized testing framework for quality control of fuel cell bipolar plates. <i>Journal of Power Sources</i> , 2021, 482, 228972.	7.8	20
62	Structural and electrochemical characterization of carbonaceous mesophase spherule anode material for rechargeable lithium batteries. <i>Electrochemistry Communications</i> , 2002, 4, 188-192.	4.7	19
63	Effects of precursor treatment with reductant or oxidant on the structure and electrochemical properties of LiNi _{0.5} Mn _{1.5} O ₄ . <i>Electrochimica Acta</i> , 2010, 55, 5506-5510.	5.2	19
64	Regulation of the discharge reservoir of negative electrodes in Ni-MH batteries by using Ni(OH) ₂ . <i>Journal of Power Sources</i> , 2009, 20, 1000-1007.	7.8	19
65	Membrane electrode assembly degradation under idle conditions via unsymmetrical reactant relative humidity cycling. <i>Journal of Power Sources</i> , 2012, 207, 101-110.	7.8	19
66	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.	7.1	19
67	Effects of γ -CoOOH coating on the high-temperature and high-rate performances of spherical nickel hydroxide electrodes. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 3895-3903.	7.1	18
68	Synthesis and performance of high tap density LiFePO ₄ /C cathode materials doped with copper ions. <i>Journal of Alloys and Compounds</i> , 2010, 501, 14-17.	5.5	17
69	Comparative investigation of the impact of fast charging at low temperature on commercial Li-ion cells. <i>Journal of Power Sources</i> , 2022, 524, 231071.	7.8	17
70	Effects of different Ni(OH) ₂ precursors on the structure and electrochemical properties of NiOOH. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 10057-10064.	7.1	16
71	Enhancement of the high-temperature performance of advanced nickel-metal hydride batteries with NaOH electrolyte containing NaBO ₂ . <i>International Journal of Hydrogen Energy</i> , 2013, 38, 10616-10624.	7.1	16
72	Synthesis of high-purity LiMn ₂ O ₄ with enhanced electrical properties from electrolytic manganese dioxide treated by sulfuric acid-assisted hydrothermal method. <i>Journal of Solid State Electrochemistry</i> , 2013, 17, 2849-2856.	2.5	15

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73	Calcium metaborate as a cathode additive to improve the high-temperature properties of nickel hydroxide electrodes for nickel-metal hydride batteries. <i>Journal of Power Sources</i> , 2014, 263, 110-117.	7.8	15
74	Enhanced electrochemical performance of high-density Al-substituted γ -nickel hydroxide by a novel anion exchange method using NaCl solution. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 1852-1858.	7.1	15
75	Synthesis of CoO/Reduced Graphene Oxide Composite as an Alternative Additive for the Nickel Electrode in Alkaline Secondary Batteries. <i>Electrochimica Acta</i> , 2015, 180, 373-381.	5.2	15
76	Sodium tungstate as electrolyte additive to improve high-temperature performance of nickel-metal hydride batteries. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 5133-5138.	7.1	14
77	Effects of different electrolytes containing Na ₂ WO ₄ on the electrochemical performance of nickel hydroxide electrodes for nickel-metal hydride batteries. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 3412-3422.	7.1	14
78	Synthesis and properties of LiMn ₂ O ₄ from hydrazine hydrate reduced electrolytic manganese dioxide. <i>Solid State Ionics</i> , 2013, 237, 34-39.	2.7	13
79	Influence of acidity and auxiliary electrode reaction on the oxidation of epinephrine on the pre-anodized carbon paste electrode. <i>Electrochimica Acta</i> , 2015, 186, 209-215.	5.2	11
80	Synthesis and Electrochemical Properties of High Density LiNi _{0.8} Co _{0.2} Ti _x O ₂ for Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2009, 156, A478.	2.9	9
81	DMSO-Assisted Liquid-Phase Synthesis of LiFePO ₄ /C Nanocomposites with High-Rate Cycling as Cathode Materials for Lithium Ion Batteries. <i>Electrochemical and Solid-State Letters</i> , 2011, 14, A90.	2.2	9
82	Effects of Membrane Additives on PEMFC Conditioning. <i>ChemistrySelect</i> , 2019, 4, 12649-12655.	1.5	7
83	Measurements of GDL Properties for Quality Control in Fuel Cell Mass Production Line. <i>World Electric Vehicle Journal</i> , 2016, 8, 422-430.	3.0	6
84	Atomic Force Microscopy Investigation of Polymer Fuel Cell Gas Diffusion Layers before and after Operation. <i>ECS Transactions</i> , 2010, 28, 79-84.	0.5	5
85	Development of a 3-in-1 device to simultaneously measure properties of gas diffusion layer for the quality control of proton exchange membrane fuel cell components. <i>Journal of Power Sources</i> , 2020, 477, 229009.	7.8	5
86	High Rate Performance of Surface Metalized Spherical Nickel Hydroxide via in situ Chemical Reduction. <i>Electrochimica Acta</i> , 2016, 207, 28-36.	5.2	3
87	Evaluation of an Early Stage Air Cathode for Zinc Air Battery Applications. <i>ECS Transactions</i> , 2014, 59, 115-125.	0.5	1
88	(Invited) A Functional Analysis of MEA Attributes and Properties for the Quality Control of Polymer Electrolyte Fuel Cells. <i>ECS Meeting Abstracts</i> , 2021, MA2021-02, 1064-1064.	0.0	0
89	Lithium-Ion Battery Second Life: Cell Performance Assessment for Stationary Energy Storage Applications. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 603-603.	0.0	0