Feng-Yuan Zhang

List of Publications by Year
in descending order

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75 papers	2,999 citations	136740 32 h-index	161609 54 g-index
77 all docs	77 docs citations	77 times ranked	1599 citing authors

#	Article	IF	Citations
1	Morphology engineering of iridium electrodes via modifying titanium substrates with controllable pillar structures for highly efficient oxygen evolution reaction. Electrochimica Acta, 2022, 405, 139797.	2.6	9
2	Exploring the Impacts of Conditioning on Proton Exchange Membrane Electrolyzers by In Situ Visualization and Electrochemistry Characterization. ACS Applied Materials & Interfaces, 2022, 14, 9002-9012.	4.0	20
3	Tuning Catalyst Activation and Utilization Via Controlled Electrode Patterning for Lowâ€Loading and Highâ€Efficiency Water Electrolyzers. Small, 2022, 18, e2107745.	5.2	30
4	Recent progress in in-situ visualization of electrochemical reactions in electrochemical energy devices. Current Opinion in Electrochemistry, 2022, 35, 101088.	2.5	7
5	Unveiling mechanism of surface-guided platinum nanowire growth. Journal of Materials Science, 2022, 57, 12875-12885.	1.7	2
6	Optimization of catalyst-coated membranes for enhancing performance in proton exchange membrane electrolyzer cells. International Journal of Hydrogen Energy, 2021, 46, 1155-1162.	3.8	22
7	Durability of anion exchange membrane water electrolyzers. Energy and Environmental Science, 2021, 14, 3393-3419.	15.6	213
8	High-speed characterization of two-phase flow and bubble dynamics in titanium felt porous media for hydrogen production. Electrochimica Acta, 2021, 370, 137751.	2.6	31
9	A simple convertible electrolyzer in membraneless and membrane-based modes for understanding water splitting mechanism. Journal of Power Sources, 2021, 487, 229353.	4.0	15
10	Constructing Ultrathin W-Doped NiFe Nanosheets via Facile Electrosynthesis as Bifunctional Electrocatalysts for Efficient Water Splitting. ACS Applied Materials & Interfaces, 2021, 13, 20070-20080.	4.0	54
11	Favorable morphology and electronic conductivity of functional sublayers for highly efficient water splitting electrodes. Journal of Energy Storage, 2021, 36, 102342.	3.9	7
12	Ultrathin platinum nanowire based electrodes for high-efficiency hydrogen generation in practical electrolyzer cells. Chemical Engineering Journal, 2021, 410, 128333.	6.6	40
13	Visualizing highly selective electrochemical CO2 reduction on a molecularly dispersed catalyst. Materials Today Physics, 2021, 19, 100427.	2.9	15
14	Mathematical modeling of novel porous transport layer architectures for proton exchange membrane electrolysis cells. International Journal of Hydrogen Energy, 2021, 46, 25341-25354.	3.8	21
15	W-induced morphological modification of NiFe layered double hydroxides as efficient electrocatalysts for overall water splitting. Electrochimica Acta, 2021, 395, 139199.	2.6	32
16	All-in-one bipolar electrode: A new concept for compact and efficient water electrolyzers. Nano Energy, 2021, 90, 106551.	8.2	17
17	Engineered Thin Diffusion Layers for Anion-Exchange Membrane Electrolyzer Cells with Outstanding Performance. ACS Applied Materials & Interfaces, 2021, 13, 50957-50964.	4.0	19
18	Insights into the rapid two-phase transport dynamics in different structured porous transport layers of water electrolyzers through high-speed visualization. Journal of Power Sources, 2021, 516, 230641.	4.0	39

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19	Impacts of catalyst nanolayers on water permeation and swelling of polymer electrolyte membranes. Journal of Power Sources, 2020, 448, 227582.	4.0	8
20	Role of electron pathway in dimensionally increasing water splitting reaction sites in liquid electrolytes. Electrochimica Acta, 2020, 362, 137113.	2.6	13
21	Experimental studies on the effects of sheet resistance and wettability of catalyst layer on electro-catalytic activities for oxygen evolution reaction in proton exchange membrane electrolysis cells. International Journal of Hydrogen Energy, 2020, 45, 26595-26603.	3.8	14
22	Carbon-Supported Nickel Nanoparticles on SiO₂ Cores for Protein Adsorption and Nitroaromatics Reduction. ACS Applied Nano Materials, 2020, 3, 4623-4634.	2.4	31
23	In-situ visualization of corrosion behavior of Al CoCrFeNi high-entropy alloys during electrochemical polarization. Journal of Alloys and Compounds, 2020, 844, 156014.	2.8	37
24	Building Electron/Proton Nanohighways for Full Utilization of Water Splitting Catalysts. Advanced Energy Materials, 2020, 10, 1903871.	10.2	38
25	Electrocatalysts: Building Electron/Proton Nanohighways for Full Utilization of Water Splitting Catalysts (Adv. Energy Mater. 16/2020). Advanced Energy Materials, 2020, 10, 2070075.	10.2	3
26	In-situ investigation and modeling of electrochemical reactions with simultaneous oxygen and hydrogen microbubble evolutions in water electrolysis. International Journal of Hydrogen Energy, 2019, 44, 28283-28293.	3.8	59
27	Direct thermal visualization of micro-scale hydrogen evolution reactions in proton exchange membrane electrolyzer cells. Energy Conversion and Management, 2019, 199, 111935.	4.4	15
28	Performance improvement of proton exchange membrane electrolyzer cells by introducing in-plane transport enhancement layers. Electrochimica Acta, 2019, 316, 43-51.	2.6	56
29	Wettability effects of thin titanium liquid/gas diffusion layers in proton exchange membrane electrolyzer cells. Electrochimica Acta, 2019, 298, 704-708.	2.6	34
30	A novel PEMEC with 3D printed non-conductive bipolar plate for low-cost hydrogen production from water electrolysis. Energy Conversion and Management, 2019, 182, 108-116.	4.4	65
31	Highly Conductive Catalyst with Advanced Manufacturing for Efficient Oxygen Evolution Reaction. ECS Meeting Abstracts, 2019, , .	0.0	0
32	(Invited) Developing Thin and Tunable Catalyst â€“Coated Liquid/Gas Diffusion Layers with Ultralow Catalyst Loadings. ECS Meeting Abstracts, 2019, , .	0.0	0
33	Direct Visualization of Ultra-Fast and Micro-Scale Bubble Evolutions and Electrochemical Reactions in Proton Exchange Membrane Electrolyzer Cells. ECS Meeting Abstracts, 2019, , .	0.0	1
34	Pore Morphology Effects of Liquid/Gas Diffusion Layers in Proton Exchange Membrane Electrolyzer Cells. ECS Meeting Abstracts, 2019, , .	0.0	1
35	Fully printed and integrated electrolyzer cells with additive manufacturing for high-efficiency water splitting. Applied Energy, 2018, 215, 202-210.	5.1	69
36	Novel thin/tunable gas diffusion electrodes with ultra-low catalyst loading for hydrogen evolution reactions in proton exchange membrane electrolyzer cells. Nano Energy, 2018, 47, 434-441.	8.2	118

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37	Direct Synthesis of Conformal Layered Protonated Titanate Nanoarray Coatings on Various Substrate Surfaces Boosted by Low-Temperature Microwave-Assisted Hydrothermal Synthesis. ACS Applied Materials & Interfaces, 2018, 10, 35164-35174.	4.0	10
38	In-situ investigation of bubble dynamics and two-phase flow in proton exchange membrane electrolyzer cells. International Journal of Hydrogen Energy, 2018, 43, 11223-11233.	3.8	62
39	Bipolar plate development with additive manufacturing and protective coating for durable and high-efficiency hydrogen production. Journal of Power Sources, 2018, 396, 590-598.	4.0	74
40	Developing titanium micro/nano porous layers on planar thin/tunable LGDLs for high-efficiency hydrogen production. International Journal of Hydrogen Energy, 2018, 43, 14618-14628.	3.8	52
41	Modeling of two-phase transport in proton exchange membrane electrolyzer cells for hydrogen energy. International Journal of Hydrogen Energy, 2017, 42, 4478-4489.	3.8	81
42	Additive manufactured bipolar plate for high-efficiency hydrogen production in proton exchange membrane electrolyzer cells. International Journal of Hydrogen Energy, 2017, 42, 14734-14740.	3.8	67
43	Investigation of titanium liquid/gas diffusion layers in proton exchange membrane electrolyzer cells. International Journal of Green Energy, 2017, 14, 162-170.	2.1	45
44	Performance Modeling and Current Mapping of Proton Exchange Membrane Electrolyzer Cells with Novel Thin/Tunable Liquid/Gas Diffusion Layers. Electrochimica Acta, 2017, 255, 405-416.	2.6	56
45	Study on corrosion migrations within catalyst-coated membranes of proton exchangeÂmembrane electrolyzer cells. International Journal of Hydrogen Energy, 2017, 42, 27343-27349.	3.8	24
46	In situ investigation on ultrafast oxygen evolution reactions of water splitting in proton exchange membrane electrolyzer cells. Journal of Materials Chemistry A, 2017, 5, 18469-18475.	5.2	87
47	Flow dynamics in transient heat transfer of n-decane at supercritical pressure. International Journal of Heat and Mass Transfer, 2017, 115, 206-215.	2.5	19
48	Thin film surface modifications of thin/tunable liquid/gas diffusion layers for high-efficiency proton exchange membrane electrolyzer cells. Applied Energy, 2017, 206, 983-990.	5.1	58
49	An inkjet-printed capacitive sensor for water level or quality monitoring: investigated theoretically and experimentally. Journal of Materials Chemistry A, 2017, 5, 17841-17847.	5.2	24
50	Investigation of thin/well-tunable liquid/gas diffusion layers exhibiting superior multifunctional performance in low-temperature electrolytic water splitting. Energy and Environmental Science, 2017, 10, 166-175.	15.6	154
51	Visualization on rapid and micro-scale dynamics of oxygen bubble evolution in PEMECs. , 2017, , .		2
52	Micro/nano manufacturing of novel multifunctional layers for hydrogen production from water splitting. , 2017, , .		2
53	Additive manufactured micro-sensor from silver nanoparticles for measuring shear stress and pressure. , 2017, , .		1
54	(Invited) In-Situ investigation of Triple-Phase Boundary Electrochemical Reactions in PEM Electrolyzer Cells. ECS Meeting Abstracts, 2017, , .	0.0	0

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55	Novel Liquid/Gas Diffusion Layers with Micro/Nano Surface Modifications for High-Efficiency Water Electrolysis. ECS Meeting Abstracts, 2017, , .	0.0	0
56	3D Printed Bipolar Plate for Water Electrolysis. ECS Meeting Abstracts, 2017, , .	0.0	0
57	Thin liquid/gas diffusion layers for high-efficiency hydrogen production from water splitting. Applied Energy, 2016, 177, 817-822.	5.1	101
58	Discovery of true electrochemical reactions for ultrahigh catalyst mass activity in water splitting. Science Advances, 2016, 2, e1600690.	4.7	161
59	Effects of membrane electrode assembly properties on two-phase transport and performance in proton exchange membrane electrolyzer cells. Electrochimica Acta, 2016, 188, 317-326.	2.6	85
60	Additive manufacturing of liquid/gas diffusion layers for low-cost and high-efficiency hydrogen production. International Journal of Hydrogen Energy, 2016, 41, 3128-3135.	3.8	79
61	High-speed and micro-scale measurements of flow and reaction dynamics for sustainable energy storage. , 2015, , .		8
62	Investigation of titanium felt transport parameters for energy storage and hydrogen/oxygen production. , 2015, , .		8
63	Electrochemical performance modeling of a proton exchange membrane electrolyzer cell for hydrogen energy. International Journal of Hydrogen Energy, 2015, 40, 7006-7016.	3.8	165
64	Electrochemical investigation of stainless steel corrosion in a proton exchange membrane electrolyzer cell. International Journal of Hydrogen Energy, 2015, 40, 12506-12511.	3.8	54
65	Evaluation of nitrided titanium separator plates for proton exchange membrane electrolyzer cells. Journal of Power Sources, 2014, 272, 954-960.	4.0	51
66	Advanced High Resolution Characterization Techniques for Degradation Studies in Fuel Cells. , 2012, , 365-421.		1
67	Quantitative characterization of catalyst layer degradation in PEM fuel cells by X-ray photoelectron spectroscopy. Electrochimica Acta, 2009, 54, 4025-4030.	2.6	79
68	Performance of a metallic gas diffusion layer for PEM fuel cells. Journal of Power Sources, 2008, 176, 293-298.	4.0	88
69	In Situ Characterization of the Catalyst Layer in a Polymer Electrolyte Membrane Fuel Cell. Journal of the Electrochemical Society, 2007, 154, B1152.	1.3	45
70	Investigation of a copper etching technique to fabricate metallic gas diffusion media. Journal of Micromechanics and Microengineering, 2006, 16, N23-N27.	1.5	32
71	Experimental Study of Key Issues on Pulse Detonation Engine Development. Transactions of the Japan Society for Aeronautical and Space Sciences, 2003, 45, 243-248.	0.4	6
72	Diode-laser tomography for arcjet plume reconstruction. Applied Optics, 2001, 40, 957.	2.1	31

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73	An absorption sensor system for arcjet multi-parameter measurements. Measurement Science and Technology, 2000, 11, N95-N99.	1.4	2
74	Determination of Parameters in Arcjet Plume by Tomographic Reconstruction. Transactions of the Japan Society for Aeronautical and Space Sciences, 2000, 43, 77-87.	0.4	2
75	Diagnostics of an argon arcjet plume with a diode laser. Applied Optics, 1999, 38, 1814.	2.1	25