

Marcelo Carmo

List of Publications by Year in descending order

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73
papers

7,369
citations

126907

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docs citations

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times ranked

7866
citing authors

#	ARTICLE	IF	CITATIONS
1	Development of Various Photovoltaic-Driven Water Electrolysis Technologies for Green Solar Hydrogen Generation. <i>Solar Rrl</i> , 2022, 6, 2100479.	5.8	21
2	Composite Graphite-Epoxy Electrodes for In Situ Electrochemistry Coupling with High Resolution NMR. <i>ACS Omega</i> , 2022, 7, 4991-5000.	3.5	7
3	The Effect of Cell Compression and Cathode Pressure on Hydrogen Crossover in PEM Water Electrolysis. <i>Journal of the Electrochemical Society</i> , 2022, 169, 014502.	2.9	19
4	Challenges and important considerations when benchmarking single-cell alkaline electrolyzers. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 4294-4303.	7.1	14
5	Cation-Exchange Method Enables Uniform Iridium Oxide Nanospheres for Oxygen Evolution Reaction. <i>ACS Applied Nano Materials</i> , 2022, 5, 4062-4071.	5.0	7
6	The Role of Electrocatalysts in the Development of Gigawatt-Scale PEM Electrolyzers. <i>ACS Catalysis</i> , 2022, 12, 6159-6171.	11.2	26
7	Fabrication of High Performing and Durable Nickel-Based Catalyst Coated Diaphragms for Alkaline Water Electrolyzers. <i>Journal of the Electrochemical Society</i> , 2022, 169, 054502.	2.9	6
8	Long-Term Operation of Nb-Coated Stainless Steel Bipolar Plates for Proton Exchange Membrane Water Electrolyzers. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	5.8	8
9	Multi-Scale Multi-Technique Characterization Approach for Analysis of PEM Electrolyzer Catalyst Layer Degradation. <i>Journal of the Electrochemical Society</i> , 2022, 169, 064502.	2.9	18
10	Temperature optimization for improving polymer electrolyte membrane-water electrolysis system efficiency. <i>Applied Energy</i> , 2021, 283, 116270.	10.1	55
11	In-situ and in-operando analysis of voltage losses using sense wires for proton exchange membrane water electrolyzers. <i>Journal of Power Sources</i> , 2021, 481, 229012.	7.8	29
12	Exploring the Interface of Skin-Layered Titanium Fibers for Electrochemical Water Splitting. <i>Advanced Energy Materials</i> , 2021, 11, 2002926.	19.5	48
13	Nickel Structures as a Template Strategy to Create Shaped Iridium Electrocatalysts for Electrochemical Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 13576-13585.	8.0	7
14	Constructing a Multifunctional Interface between Membrane and Porous Transport Layer for Water Electrolyzers. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 16182-16196.	8.0	38
15	Effect of the oxidation state and morphology of SnOx-based electrocatalysts on the CO2 reduction reaction. <i>Journal of Materials Research</i> , 2021, 36, 4240-4248.	2.6	5
16	Review-Challenges and Opportunities for Increased Current Density in Alkaline Electrolysis by Increasing the Operating Temperature. <i>Journal of the Electrochemical Society</i> , 2021, 168, 114501.	2.9	34
17	Reusability of decal substrates for the fabrication of catalyst coated membranes. <i>International Journal of Adhesion and Adhesives</i> , 2020, 98, 102473.	2.9	4
18	Impact of porous transport layer compression on hydrogen permeation in PEM water electrolysis. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 4008-4014.	7.1	32

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19	CuO Decoration Controls Nb ₂ O ₅ Photocatalyst Selectivity in CO ₂ Reduction. ACS Applied Energy Materials, 2020, 3, 7629-7636.	5.1	37
20	Communicationâ€”Layered Double Hydroxide as Intermediate-Temperature Electrolyte for Efficient Water Splitting. Journal of the Electrochemical Society, 2020, 167, 084512.	2.9	3
21	In-situ MRI velocimetry of the magnetohydrodynamic effect in electrochemical cells. Journal of Magnetic Resonance, 2020, 312, 106692.	2.1	12
22	Improving the Efficiency of PEM Electrolyzers through Membrane-Specific Pressure Optimization. Energies, 2020, 13, 612.	3.1	61
23	Fuel Cell Electrode Characterization Using Neutron Scattering. Materials, 2020, 13, 1474.	2.9	8
24	Non-destructive in-operando investigation of catalyst layer degradation for water electrolyzers using synchrotron radiography. Materials Today Energy, 2020, 16, 100394.	4.7	5
25	Ion-solvating membranes as a new approach towards high rate alkaline electrolyzers. Energy and Environmental Science, 2019, 12, 3313-3318.	30.8	150
26	Sustainable Electrocoupling of the Biogenic Valeric Acid under in Situ Low-Field Nuclear Magnetic Resonance Conditions. ACS Sustainable Chemistry and Engineering, 2019, 7, 18288-18296.	6.7	14
27	Electrochemical NMR spectroscopy: Electrode construction and magnetic sample stirring. Microchemical Journal, 2019, 146, 658-663.	4.5	20
28	Using neutron methods SANS and PGAA to study evolution of structure and composition of alkali-doped polybenzimidazole membranes. Journal of Membrane Science, 2019, 577, 12-19.	8.2	22
29	Perspectives on Low-Temperature Electrolysis and Potential for Renewable Hydrogen at Scale. Annual Review of Chemical and Biomolecular Engineering, 2019, 10, 219-239.	6.8	223
30	Steering and in situ monitoring of drying phenomena during film fabrication. Journal of Coatings Technology Research, 2019, 16, 1213-1221.	2.5	9
31	Why nonconventional materials are answers for sustainable agriculture. MRS Energy & Sustainability, 2019, 6, 1.	3.0	20
32	Elucidating the Effect of Mass Transport Resistances on Hydrogen Crossover and Cell Performance in PEM Water Electrolyzers by Varying the Cathode Ionomer Content. Journal of the Electrochemical Society, 2019, 166, F465-F471.	2.9	54
33	Water management in membrane electrolysis and options for advanced plants. International Journal of Hydrogen Energy, 2019, 44, 10147-10155.	7.1	25
34	Initial approaches in benchmarking and round robin testing for proton exchange membrane water electrolyzers. International Journal of Hydrogen Energy, 2019, 44, 9174-9187.	7.1	80
35	A completely slot die coated membrane electrode assembly. International Journal of Hydrogen Energy, 2019, 44, 7053-7058.	7.1	43
36	Characteristics of a New Polymer Electrolyte Electrolysis Technique with Only Cathodic Media Supply Coupled to a Photovoltaic Panel. Energies, 2019, 12, 4150.	3.1	9

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37	Iridium nanoparticles for the oxygen evolution reaction: Correlation of structure and activity of benchmark catalyst systems. <i>Electrochimica Acta</i> , 2019, 302, 472-477.	5.2	25
38	Energy Storage Using Hydrogen Produced From Excess Renewable Electricity. , 2019, , 165-199.		21
39	PEM water electrolysis: Innovative approaches towards catalyst separation, recovery and recycling. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 3450-3455.	7.1	54
40	The stability challenge on the pathway to high-current-density polymer electrolyte membrane water electrolyzers. <i>Electrochimica Acta</i> , 2018, 278, 324-331.	5.2	74
41	Layer Formation from Polymer Carbon-Black Dispersions. <i>Coatings</i> , 2018, 8, 450.	2.6	11
42	Performance enhancement of PEM electrolyzers through iridium-coated titanium porous transport layers. <i>Electrochemistry Communications</i> , 2018, 97, 96-99.	4.7	123
43	A new setup for the quantitative analysis of drying by the use of gas-phase FTIR-spectroscopy. <i>Review of Scientific Instruments</i> , 2018, 89, 083102.	1.3	3
44	Homogeneity analysis of square meter-sized electrodes for PEM electrolysis and PEM fuel cells. <i>Journal of Coatings Technology Research</i> , 2018, 15, 1423-1432.	2.5	18
45	Polymer electrolyte membrane water electrolysis: Restraining degradation in the presence of fluctuating power. <i>Journal of Power Sources</i> , 2017, 342, 38-47.	7.8	147
46	On the mobility of carbon-supported platinum nanoparticles towards unveiling cathode degradation in water electrolysis. <i>Journal of Power Sources</i> , 2017, 365, 53-60.	7.8	41
47	Enabling High Throughput Screening of Polymer Electrolyte Membrane (PEM) Water Electrolysis Components via Miniature Test Cells. <i>Journal of the Electrochemical Society</i> , 2016, 163, F3153-F3157.	2.9	6
48	Acidic or Alkaline? Towards a New Perspective on the Efficiency of Water Electrolysis. <i>Journal of the Electrochemical Society</i> , 2016, 163, F3197-F3208.	2.9	232
49	An analysis of degradation phenomena in polymer electrolyte membrane water electrolysis. <i>Journal of Power Sources</i> , 2016, 326, 120-128.	7.8	200
50	Guided Evolution of Bulk Metallic Glass Nanostructures: A Platform for Designing 3D Electrocatalytic Surfaces. <i>Advanced Materials</i> , 2016, 28, 1940-1949.	21.0	71
51	Electrocatalysts: Guided Evolution of Bulk Metallic Glass Nanostructures: A Platform for Designing 3D Electrocatalytic Surfaces (Adv. Mater. 10/2016). <i>Advanced Materials</i> , 2016, 28, 1902-1902.	21.0	0
52	Gas Permeation through Nafion. Part 1: Measurements. <i>Journal of Physical Chemistry C</i> , 2015, 119, 25145-25155.	3.1	144
53	Silver palladium core-shell electrocatalyst supported on MWNTs for ORR in alkaline media. <i>Applied Catalysis B: Environmental</i> , 2013, 138-139, 285-293.	20.2	90
54	Pressurized PEM water electrolysis: Efficiency and gas crossover. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 14921-14933.	7.1	233

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55	Bulk Metallic Glass Micro Fuel Cell. <i>Small</i> , 2013, 9, 2081-2085.	10.0	85
56	Development and electrochemical studies of membrane electrode assemblies for polymer electrolyte alkaline fuel cells using FAA membrane and ionomer. <i>Journal of Power Sources</i> , 2013, 230, 169-175.	7.8	89
57	Pd-Ni-Cu-P metallic glass nanowires for methanol and ethanol oxidation in alkaline media. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 11248-11255.	7.1	75
58	A comprehensive review on PEM water electrolysis. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 4901-4934.	7.1	3,509
59	Metallic-Glass Nanostructures: Tunable Hierarchical Metallic-Glass Nanostructures (<i>Adv. Funct. Mater.</i>)	14.9	52
60	Fuel Cells: Bulk Metallic Glass Micro Fuel Cell (<i>Small</i> 12/2013). <i>Small</i> , 2013, 9, 2026-2026.	10.0	1
61	Tunable Hierarchical Metallic-Glass Nanostructures. <i>Advanced Functional Materials</i> , 2013, 23, 2708-2713.	14.9	52
62	Scalable Fabrication of Multifunctional Freestanding Carbon Nanotube/Polymer Composite Thin Films for Energy Conversion. <i>ACS Nano</i> , 2012, 6, 1347-1356.	14.6	84
63	Palladium nanostructures from multi-component metallic glass. <i>Electrochimica Acta</i> , 2012, 74, 145-150.	5.2	47
64	Bulk Metallic Glass Nanowire Architecture for Electrochemical Applications. <i>ACS Nano</i> , 2011, 5, 2979-2983.	14.6	201
65	Enhanced activity observed for sulfuric acid and chlorosulfuric acid functionalized carbon black as PtRu and PtSn electrocatalyst support for DMFC and DEFC applications. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 14659-14667.	7.1	34
66	The use of a dynamic hydrogen electrode as an electrochemical tool to evaluate plasma activated carbon as electrocatalyst support for direct methanol fuel cell. <i>Materials Research Bulletin</i> , 2009, 44, 51-56.	5.2	13
67	A novel electrocatalyst support with proton conductive properties for polymer electrolyte membrane fuel cell applications. <i>Journal of Power Sources</i> , 2009, 191, 330-337.	7.8	24
68	Characterization of nitric acid functionalized carbon black and its evaluation as electrocatalyst support for direct methanol fuel cell applications. <i>Applied Catalysis A: General</i> , 2009, 355, 132-138.	4.3	78
69	Electrochemical and impedance spectroscopy studies in H ₂ /O ₂ and methanol/O ₂ proton exchange membrane fuel cells. <i>Ionics</i> , 2008, 14, 43-51.	2.4	5
70	H ₂ O ₂ treated carbon black as electrocatalyst support for polymer electrolyte membrane fuel cell applications. <i>International Journal of Hydrogen Energy</i> , 2008, 33, 6289-6297.	7.1	48
71	Physical and electrochemical evaluation of commercial carbon black as electrocatalysts supports for DMFC applications. <i>Journal of Power Sources</i> , 2007, 173, 860-866.	7.8	109
72	Alternative supports for catalysts preparation for low-temperature fuel cells using the alcohol reduction method. <i>Studies in Surface Science and Catalysis</i> , 2006, , 1009-1016.	1.5	0

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73	Alternative supports for the preparation of catalysts for low-temperature fuel cells: the use of carbon nanotubes. <i>Journal of Power Sources</i> , 2005, 142, 169-176.	7.8	243