Luigi Osmieri

List of Publications by Year
in descending order

44 papers	1,531 citations	331670 21 h-index	454955 30 g-index
45 all docs	45 docs citations	45 times ranked	1904 citing authors

#	Article	IF	Citations
1	Recent advances in integrating platinum group metal-free catalysts in proton exchange membrane fuel cells. Current Opinion in Electrochemistry, 2022, 31, 100847.	4.8	15
2	Standardized protocols for evaluating platinum group metal-free oxygen reduction reaction electrocatalysts in polymer electrolyte fuel cells. Nature Catalysis, 2022, 5, 455-462.	34.4	47
3	Grooved Electrodes to Enhance Mass Transport in Thick Platinum Group Metal-Free Fuel Cell Cathodes. ECS Meeting Abstracts, 2022, MA2022-01, 1459-1459.	0.0	0
4	(Invited, Digital Presentation) La-Sr-Co Oxide Catalysts for Oxygen Evolution Reaction in Anion Exchange Membrane Water Electrolyzers: The Role of Electrode Fabrication on Performance and Durability. ECS Meeting Abstracts, 2022, MA2022-01, 1718-1718.	0.0	0
5	Status and challenges for the application of platinum group metal-free catalysts in proton-exchange membrane fuel cells. Current Opinion in Electrochemistry, 2021, 25, 100627.	4.8	54
6	Impact of Fabrication and Testing Parameters on the Performance of a Polymer Electrolyte Fuel Cell with Platinum Group Metal (PGM)-Free Cathode Catalyst. Journal of the Electrochemical Society, 2021, 168, 014503.	2.9	16
7	Stability of Atomically Dispersed Feâ€“Nâ€“C ORR Catalyst in Polymer Electrolyte Fuel Cell Environment. Journal of the Electrochemical Society, 2021, 168, 024513.	2.9	10
8	Standardized Protocols for Platinum Group Metal-Free Fuel Cell Catalysts for Oxygen Reduction Reaction. ECS Meeting Abstracts, 2021, MA2021-02, 1149-1149.	0.0	0
9	(Invited) Linking Ionomer/Electrocatalyst Interactions to Membrane Electrode Assembly Performance and Durability in Proton Exchange Membrane Fuel Cells. ECS Meeting Abstracts, 2021, MA2021-02, 1047-1047.	0.0	0
10	Durability evaluation of a Feâ€“Nâ€“C catalyst in polymer electrolyte fuel cell environment via accelerated stress tests. Nano Energy, 2020, 78, 105209.	16.0	54
11	Electron and proton conductivity of Fe-N-C cathodes for PEM fuel cells: A model-based electrochemical impedance spectroscopy measurement. Electrochemistry Communications, 2020, 118, 106795.	4.7	19
12	Utilizing ink composition to tune bulk-electrode gas transport, performance, and operational robustness for a Feâ€“Nâ€“C catalyst in polymer electrolyte fuel cell. Nano Energy, 2020, 75, 104943.	16.0	60
13	Elucidating the Role of Ionomer in the Performance of Platinum Group Metal-free Catalyst Layer via in situ Electrochemical Diagnostics. Journal of the Electrochemical Society, 2020, 167, 044519.	2.9	19
14	Use of a segmented cell for the combinatorial development of platinum group metal-free electrodes for polymer electrolyte fuel cells. Journal of Power Sources, 2020, 452, 227829.	7.8	21
15	The Effect of Dispersion-Medium Composition and Ionomer Concentration on the Microstructure and Rheology of Fe-N-C Platinum Group Metal-Free Catalyst Inks for Polymer Electrolyte Membrane Fuel Cells. ECS Meeting Abstracts, 2020, MA2020-02, 2217-2217.	0.0	0
16	Binary interaction parameters from reacting mixture data. Supercritical biodiesel process with CO2 as cosolvent. Journal of Supercritical Fluids, 2019, 143, 107-119.	3.2	8
17	Elucidation of Fe-N-C electrocatalyst active site functionality via in-situ X-ray absorption and operando determination of oxygen reduction reaction kinetics in a PEFC. Applied Catalysis B: Environmental, 2019, 257, 117929.	20.2	61
18	Transition Metalâ€“Nitrogenâ€“Carbon (Mâ€“Nâ€“C) Catalysts for Oxygen Reduction Reaction. Insights on Synthesis and Performance in Polymer Electrolyte Fuel Cells. ChemEngineering, 2019, 3, 16.	2.4	75

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19	(Invited) Activity and Stability of Atomically Dispersed (AD) Fe-C-N ORR Catalyst in Polymer Electrolyte Fuel Cell Environment. ECS Meeting Abstracts, 2019, , .	0.0	0
20	PGM-Free Electrode Development and Optimization Using H2 Limiting Current. ECS Meeting Abstracts, 2019, , .	0.0	0
21	Use of a Segmented Cell for the Development of PGM-Free Cathode Catalyst Layers for Polymer Electrolyte Fuel Cells. ECS Meeting Abstracts, 2019, , .	0.0	0
22	Engineering PGM-Free Electrodes to Facilitate Improved Performance for the Oxygen Reduction Reaction in Polymer Electrolyte Fuel Cells. ECS Meeting Abstracts, 2019, , .	0.0	0
23	Electron Microscopy Study of Degradation Mechanisms in Platinum Group Metal-Free Catalysts. ECS Meeting Abstracts, 2019, , .	0.0	0
24	Electrode Layer Development and in Situ Diagnostic Characterization in Low Temperature Fuel Cells. ECS Meeting Abstracts, 2019, , .	0.0	0
25	(Invited) PEFC Electrode Layer Development Via Complementary in Situ Diagnostics and Ex Situ Characterization. ECS Meeting Abstracts, 2019, , .	0.0	0
26	Polypyrroleâ€Derived Feâˆ’Coâˆ’Nâˆ’C Catalyst for the Oxygen Reduction Reaction: Performance in Alkaline Hydrogen and Ethanol Fuel Cells. ChemElectroChem, 2018, 5, 1954-1965.	3.4	49
27	Effects of using two transition metals in the synthesis of non-noble electrocatalysts for oxygen reduction reaction in direct methanol fuelÂcell. Electrochimica Acta, 2018, 266, 220-232.	5.2	37
28	Morphology and dispersion of nanostructured manganeseâ€“cobalt spinel on various carbon supports: the effect on the oxygen reduction reaction in alkaline media. Catalysis Science and Technology, 2018, 8, 642-655.	4.1	28
29	Application of a non-noble Fe-N-C catalyst for oxygen reduction reaction in an alkaline direct ethanol fuel cell. Renewable Energy, 2018, 115, 226-237.	8.9	54
30	Recent trends on the application of PGM-free catalysts at the cathode of anion exchange membrane fuel cells. Current Opinion in Electrochemistry, 2018, 9, 240-256.	4.8	75
31	Operando Determination of Oxygen Reduction Reaction Kinetics on PGM-Free Electrocatalysts in a PEFC. ECS Meeting Abstracts, 2018, , .	0.0	0
32	Continuous biodiesel production in supercritical two-step process: phase equilibrium and process design. Journal of Supercritical Fluids, 2017, 124, 57-71.	3.2	11
33	Fe-N/C catalysts for oxygen reduction reaction supported on different carbonaceous materials. Performance in acidic and alkaline direct alcohol fuel cells. Applied Catalysis B: Environmental, 2017, 205, 637-653.	20.2	115
34	Kinetics of Oxygen Electroreduction on Meâ€“Nâ€“C (Me = Fe, Co, Cu) Catalysts in Acidic Medium: Insights on the Effect of the Transition Metal. Journal of Physical Chemistry C, 2017, 121, 17796-17817.	3.1	128
35	Performance of a Fe-N-C catalyst for the oxygen reduction reaction in direct methanol fuel cell: Cathode formulation optimization and short-term durability. Applied Catalysis B: Environmental, 2017, 201, 253-265.	20.2	152
36	H 2 -rich syngas production through mixed residual biomass and HDPE waste via integrated catalytic gasification and tar cracking plus bio-char upgrading. Chemical Engineering Journal, 2017, 308, 578-587.	12.7	78

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37	Non-noble Metal (NNM) Catalysts for Fuel Cells: Tuning the Activity by a Rational Step-by-Step Single Variable Evolution. , 2016, , 69-101.		8
38	The use of different types of reduced graphene oxide in the preparation of Fe-N-C electrocatalysts: capacitive behavior and oxygen reduction reaction activity in alkaline medium. Journal of Solid State Electrochemistry, 2016, 20, 3507-3523.	2.5	34
39	Influence of different transition metals on the properties of Meâ€“Nâ€“C (MeÂ=ÂFe, Co, Cu, Zn) catalysts synthesized using SBA-15 as tubular nano-silica reactor for oxygen reduction reaction. International Journal of Hydrogen Energy, 2016, 41, 22570-22588.	7.1	67
40	Optimization of a Feâ€“Nâ€“C electrocatalyst supported on mesoporous carbon functionalized with polypyrrole for oxygenÂreduction reaction under both alkaline and acidicÂconditions. International Journal of Hydrogen Energy, 2016, 41, 19610-19628.	7.1	34
41	Performance analysis of Feâ€“Nâ€“C catalyst for DMFC cathodes: Effect of water saturation in the cathodic catalyst layer. International Journal of Hydrogen Energy, 2016, 41, 22605-22618.	7.1	42
42	The Use of C-MnO2 as Hybrid Precursor Support for a Pt/C-MnxO1+x Catalyst with Enhanced Activity for the Methanol Oxidation Reaction (MOR). Catalysts, 2015, 5, 1399-1416.	3.5	23
43	Activity of Coâ€“N multi walled carbon nanotubes electrocatalysts for oxygen reduction reaction in acid conditions. Journal of Power Sources, 2015, 278, 296-307.	7.8	73
44	Varying the morphology of Fe-N-C electrocatalysts by templating Iron Phthalocyanine precursor with different porous SiO 2 to promote the Oxygen Reduction Reaction. Electrochimica Acta, 2015, 177, 43-50.	5.2	51