Carlo Santoro

List of Publications by Year
in descending order

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Version: 2024-02-01

109 papers	6,160 citations	57631 44 h-index	74018 75 g-index
113 all docs	113 docs citations	113 times ranked	4363 citing authors

#	Article	IF	Citations
1	Microbial fuel cells: From fundamentals to applications. A review. Journal of Power Sources, 2017, 356, 225-244.	4.0	1,264
2	Effect of pH on the Activity of Platinum Group Metal-Free Catalysts in Oxygen Reduction Reaction. ACS Catalysis, 2018, 8, 3041-3053.	5.5	158
3	Iron based catalysts from novel low-cost organic precursors for enhanced oxygen reduction reaction in neutral media microbial fuel cells. Energy and Environmental Science, 2016, 9, 2346-2353.	15.6	147
4	A family of Fe-N-C oxygen reduction electrocatalysts for microbial fuel cell (MFC) application: Relationships between surface chemistry and performances. Applied Catalysis B: Environmental, 2017, 205, 24-33.	10.8	135
5	Air Breathing Cathodes for Microbial Fuel Cell using Mn-, Fe-, Co- and Ni-containing Platinum Group Metal-free Catalysts. Electrochimica Acta, 2017, 231, 115-124.	2.6	131
6	The effects of carbon electrode surface properties on bacteria attachment and start up time of microbial fuel cells. Carbon, 2014, 67, 128-139.	5.4	122
7	Self-powered supercapacitive microbial fuel cell: The ultimate way of boosting and harvesting power. Biosensors and Bioelectronics, 2016, 78, 229-235.	5.3	112
8	Power generation from wastewater using single chamber microbial fuel cells (MFCs) with platinum-free cathodes and pre-colonized anodes. Biochemical Engineering Journal, 2012, 62, 8-16.	1.8	111
9	Three-dimensional graphene nanosheets as cathode catalysts in standard and supercapacitive microbial fuel cell. Journal of Power Sources, 2017, 356, 371-380.	4.0	108
10	Parameters characterization and optimization of activated carbon (AC) cathodes for microbial fuel cell application. Bioresource Technology, 2014, 163, 54-63.	4.8	102
11	Transition metal-nitrogen-carbon catalysts for oxygen reduction reaction in neutral electrolyte. Electrochemistry Communications, 2017, 75, 38-42.	2.3	97
12	Surface Modification of Microbial Fuel Cells Anodes: Approaches to Practical Design. Electrochimica Acta, 2014, 134, 116-126.	2.6	89
13	Influence of anode surface chemistry on microbial fuel cell operation. Bioelectrochemistry, 2015, 106, 141-149.	2.4	88
14	Power generation in microbial fuel cells using platinum group metal-free cathode catalyst: Effect of the catalyst loading on performance and costs. Journal of Power Sources, 2018, 378, 169-175.	4.0	85
15	Activated carbon nanofibers (ACNF) as cathode for single chamber microbial fuel cells (SCMFCs). Journal of Power Sources, 2013, 243, 499-507.	4.0	83
16	High catalytic activity and pollutants resistivity using Fe-AAPyr cathode catalyst for microbial fuel cell application. Scientific Reports, 2015, 5, 16596.	1.6	82
17	Miniaturized supercapacitors: key materials and structures towards autonomous and sustainable devices and systems. Journal of Power Sources, 2016, 326, 717-725.	4.0	82
18	Enhancement of microbial fuel cell performance by introducing a nano-composite cathode catalyst. Electrochimica Acta, 2018, 265, 56-64.	2.6	79

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19	Evaluation of Electrode and Solution Area-Based Resistances Enables Quantitative Comparisons of Factors Impacting Microbial Fuel Cell Performance. Environmental Science & Technology, 2019, 53, 3977-3986.	4.6	79
20	Power generation and contaminant removal in single chamber microbial fuel cells (SCMFCs) treating human urine. International Journal of Hydrogen Energy, 2013, 38, 11543-11551.	3.8	78
21	What is Next in Anionâ€Exchange Membrane Water Electrolyzers? Bottlenecks, Benefits, and Future. ChemSusChem, 2022, 15, .	3.6	77
22	Effects of gas diffusion layer (GDL) and micro porous layer (MPL) on cathode performance in microbial fuel cells (MFCs). International Journal of Hydrogen Energy, 2011, 36, 13096-13104.	3.8	76
23	Doubleâ€Chamber Microbial Fuel Cell with a Nonâ€Platinumâ€Group Metal Feâ€“Nâ€“C Cathode Catalyst. ChemSusChem, 2015, 8, 828-834.	3.6	75
24	Improved power and long term performance of microbial fuel cell with Fe-N-C catalyst in air-breathing cathode. Energy, 2018, 144, 1073-1079.	4.5	71
25	Supercapacitive microbial fuel cell: Characterization and analysis for improved charge storage/delivery performance. Bioresource Technology, 2016, 218, 552-560.	4.8	67
26	Design of Iron(II) Phthalocyanineâ€Derived Oxygen Reduction Electrocatalysts for Highâ€Powerâ€Density Microbial Fuel Cells. ChemSusChem, 2017, 10, 3243-3251.	3.6	67
27	Carbon Nanodots in Electrochemical Sensors and Biosensors: A Review. ChemElectroChem, 2021, 8, 15-35.	1.7	64
28	Current generation in membraneless single chamber microbial fuel cells (MFCs) treating urine. Journal of Power Sources, 2013, 238, 190-196.	4.0	63
29	Performance evaluation of activated carbon-based electrodes with novel power management system for long-term benthic microbial fuel cells. International Journal of Hydrogen Energy, 2014, 39, 21847-21856.	3.8	63
30	Three-dimensional X-ray microcomputed tomography of carbonates and biofilm on operated cathode in single chamber microbial fuel cell. Biointerphases, 2015, 10, 031009.	0.6	62
31	Bimetallic platinum group metal-free catalysts for high power generating microbial fuel cells. Journal of Power Sources, 2017, 366, 18-26.	4.0	62
32	Influence of platinum group metal-free catalyst synthesis on microbial fuel cell performance. Journal of Power Sources, 2018, 375, 11-20.	4.0	62
33	Water formation at the cathode and sodium recovery using Microbial Fuel Cells (MFCs). Sustainable Energy Technologies and Assessments, 2014, 7, 187-194.	1.7	60
34	Power generation of microbial fuel cells (MFCs) with low cathodic platinum loading. International Journal of Hydrogen Energy, 2013, 38, 692-700.	3.8	59
35	Self-feeding paper based biofuel cell/self-powered hybrid Î¼-supercapacitor integrated system. Biosensors and Bioelectronics, 2016, 86, 459-465.	5.3	59
36	Carbon-Based Air-Breathing Cathodes for Microbial Fuel Cells. Catalysts, 2016, 6, 127.	1.6	58

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37	Surface Modification for Enhanced Biofilm Formation and Electron Transport in Shewanella Anodes. Journal of the Electrochemical Society, 2015, 162, H597-H603.	1.3	57
38	Ceramic Microbial Fuel Cells Stack: power generation in standard and supercapacitive mode. Scientific Reports, 2018, 8, 3281.	1.6	55
39	Combination of bioelectrochemical systems and electrochemical capacitors: Principles, analysis and opportunities. Biotechnology Advances, 2020, 39, 107456.	6.0	55
40	Cathode materials for ceramic based microbial fuel cells (MFCs). International Journal of Hydrogen Energy, 2015, 40, 14706-14715.	3.8	53
41	Oxygen reduction reaction electrocatalysis in neutral media for bioelectrochemical systems. Nature Catalysis, 2022, 5, 473-484.	16.1	53
42	Bilirubin oxidase based enzymatic air-breathing cathode: Operation under pristine and contaminated conditions. Bioelectrochemistry, 2016, 108, 1-7.	2.4	50
43	Increased power output from micro porous layer (MPL) cathode microbial fuel cells (MFC). International Journal of Hydrogen Energy, 2013, 38, 11552-11558.	3.8	48
44	Electrochemical Behavior of Stainless Steel Anodes in Membraneless Microbial Fuel Cells. Journal of the Electrochemical Society, 2014, 161, H62-H67.	1.3	46
45	High Performance Platinum Group Metal-Free Cathode Catalysts for Microbial Fuel Cell (MFC). Journal of the Electrochemical Society, 2017, 164, H3041-H3046.	1.3	45
46	High Power Generation by a Membraneless Single Chamber Microbial Fuel Cell (SCMFC) Using Enzymatic Bilirubin Oxidase (BOx) Air-Breathing Cathode. Journal of the Electrochemical Society, 2013, 160, H720-H726.	1.3	44
47	Cobalt porphyrin-based material as methanol tolerant cathode in single chamber microbial fuel cells (SCMFCs). Journal of Power Sources, 2014, 257, 246-253.	4.0	44
48	Correlations between Synthesis and Performance of Fe-Based PGM-Free Catalysts in Acidic and Alkaline Media: Evolution of Surface Chemistry and Morphology. ACS Applied Energy Materials, 2019, 2, 5406-5418.	2.5	44
49	Supercapacitive microbial desalination cells: New class of power generating devices for reduction of salinity content. Applied Energy, 2017, 208, 25-36.	5.1	43
50	Urine in Bioelectrochemical Systems: An Overall Review. ChemElectroChem, 2020, 7, 1312-1331.	1.7	43
51	Relationship between surface chemistry, biofilm structure, and electron transfer in Shewanella anodes. Biointerphases, 2015, 10, 019013.	0.6	42
52	Electro-osmotic-based catholyte production by Microbial Fuel Cells for carbon capture. Water Research, 2015, 86, 108-115.	5.3	42
53	Increased power generation in supercapacitive microbial fuel cell stack using Fe N C cathode catalyst. Journal of Power Sources, 2019, 412, 416-424.	4.0	42
54	Micro-porous layer (MPL)-based anode for microbial fuel cells. International Journal of Hydrogen Energy, 2014, 39, 21811-21818.	3.8	40

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55	Microbial Desalination Cells with Efficient Platinumâ€Groupâ€Metalâ€Free Cathode Catalysts. ChemElectroChem, 2017, 4, 3322-3330.	1.7	40
56	Self-stratifying microbial fuel cell: The importance of the cathode electrode immersion height. International Journal of Hydrogen Energy, 2019, 44, 4524-4532.	3.8	40
57	Low methanol crossover and high efficiency direct methanol fuel cell: The influence of diffusion layers. Journal of Power Sources, 2011, 196, 2669-2675.	4.0	39
58	Self-stratified and self-powered micro-supercapacitor integrated into a microbial fuel cell operating in human urine. Electrochimica Acta, 2019, 307, 241-252.	2.6	38
59	Engineered biochar derived from pyrolyzed waste tea as a carbon support for Fe-N-C electrocatalysts for the oxygen reduction reaction. Electrochimica Acta, 2022, 412, 140128.	2.6	33
60	Supercapacitive operational mode in microbial fuel cell. Current Opinion in Electrochemistry, 2020, 22, 1-8.	2.5	32
61	Co-generation of hydrogen and power/current pulses from supercapacitive MFCs using novel HER iron-based catalysts. Electrochimica Acta, 2016, 220, 672-682.	2.6	31
62	Microbial desalination cell with sulfonated sodium poly(ether ether ketone) as cation exchange membranes for enhancing power generation and salt reduction. Bioelectrochemistry, 2018, 121, 176-184.	2.4	31
63	Scalability and stacking of self-stratifying microbial fuel cells treating urine. Bioelectrochemistry, 2020, 133, 107491.	2.4	31
64	Recent trends and advances in microbial electrochemical sensing technologies: An overview. Current Opinion in Electrochemistry, 2021, 30, 100762.	2.5	31
65	Investigation of patterned and non-patterned poly(2,6-dimethyl 1,4-phenylene) oxide based anion exchange membranes for enhanced desalination and power generation in a microbial desalination cell. Solid State Ionics, 2018, 314, 141-148.	1.3	30
66	Water transport and flooding in DMFC: Experimental and modeling analyses. Journal of Power Sources, 2012, 217, 381-391.	4.0	29
67	Oxygen Reduction Reaction Electrocatalysts Derived from Iron Salt and Benzimidazole and Aminobenzimidazole Precursors and Their Application in Microbial Fuel Cell Cathodes. ACS Applied Energy Materials, 2018, 1, 5755-5765.	2.5	29
68	Iron-streptomycin derived catalyst for efficient oxygen reduction reaction in ceramic microbial fuel cells operating with urine. Journal of Power Sources, 2019, 425, 50-59.	4.0	29
69	Iron(II) phthalocyanine (FePc) over carbon support for oxygen reduction reaction electrocatalysts operating in alkaline electrolyte. Journal of Solid State Electrochemistry, 2021, 25, 93-104.	1.2	29
70	The effects of wastewater types on power generation and phosphorus removal of microbial fuel cells (MFCs) with activated carbon (AC) cathodes. International Journal of Hydrogen Energy, 2014, 39, 21796-21802.	3.8	28
71	Iron-Nicarbazin derived platinum group metal-free electrocatalyst in scalable-size air-breathing cathodes for microbial fuel cells. Electrochimica Acta, 2018, 277, 127-135.	2.6	27
72	Evaluation of Water Transport and Oxygen Presence in Single Chamber Microbial Fuel Cells with Carbon-Based Cathodes. Journal of the Electrochemical Society, 2013, 160, G3128-G3134.	1.3	26

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73	Waste Face Surgical Mask Transformation into Crude Oil and Nanostructured Electrocatalysts for Fuel Cells and Electrolyzers. ChemSusChem, 2022, 15, .	3.6	26
74	Supercapacitive paper based microbial fuel cell: High current/power production within a low cost design. Bioresource Technology Reports, 2019, 7, 100297.	1.5	24
75	Platinum group metal-free oxygen reduction electrocatalysts used in neutral electrolytes for bioelectrochemical reactor applications. Current Opinion in Electrochemistry, 2020, 23, 106-113.	2.5	24
76	Recent Advances in Waste Plastic Transformation into Valuable Platinumâ€Group Metalâ€Free Electrocatalysts for Oxygen Reduction Reaction. ChemSusChem, 2021, 14, 3785-3800.	3.6	24
77	Scalability of self-stratifying microbial fuel cell: Towards height miniaturisation. Bioelectrochemistry, 2019, 127, 68-75.	2.4	22
78	Valorization of biodigestor plant waste in electrodes for supercapacitors and microbial fuel cells. Electrochimica Acta, 2021, 391, 138960.	2.6	22
79	Multiâ€functional microbial fuel cells for power, treatment and electroâ€osmotic purification of urine. Journal of Chemical Technology and Biotechnology, 2019, 94, 2098-2106.	1.6	21
80	A new method for urine electrofiltration and long term power enhancement using surface modified anodes with activated carbon in ceramic microbial fuel cells. Electrochimica Acta, 2020, 353, 136388.	2.6	20
81	Valorization of the inedible pistachio shells into nanoscale transition metal and nitrogen codoped carbon-based electrocatalysts for hydrogen evolution reaction and oxygen reduction reaction. Materials for Renewable and Sustainable Energy, 2022, 11, 131-141.	1.5	20
82	Effect of Active Site Poisoning on Ironâ^'Nitrogenâ^'Carbon Platinumâ€Groupâ€Metalâ€Free Oxygen Reduction Reaction Catalysts Operating in Neutral Media: A Rotating Disk Electrode Study. ChemElectroChem, 2020, 7, 3044-3055.	1.7	19
83	Inhibition of Surface Chemical Moieties by Tris(hydroxymethyl)aminomethane: A Key to Understanding Oxygen Reduction on Ironâ€“Nitrogenâ€“Carbon Catalysts. ACS Applied Energy Materials, 2018, 1, 1942-1949.	2.5	18
84	Enzymatic Oxygen Microsensor Based on Bilirubin Oxidase Applied to Microbial Fuel Cells Analysis. Electroanalysis, 2015, 27, 327-335.	1.5	17
85	A novel microbial - Bioelectrochemical sensor for the detection of n-cyclohexyl-2-pyrrolidone in wastewater. Electrochimica Acta, 2019, 317, 604-611.	2.6	17
86	Platinum group metal-free Fe-based (Fe N C) oxygen reduction electrocatalysts for direct alcohol fuel cells. Current Opinion in Electrochemistry, 2021, 29, 100756.	2.5	17
87	Anodic biofilms as the interphase for electroactive bacterial growth on carbon veil. Biointerphases, 2016, 11, 031013.	0.6	16
88	Microbial Fuel Cell-driven caustic potash production from wastewater for carbon sequestration. Bioresource Technology, 2016, 215, 285-289.	4.8	16
89	Sub-toxic concentrations of volatile organic compounds inhibit extracellular respiration of Escherichia coli cells grown in anodic bioelectrochemical systems. Bioelectrochemistry, 2016, 112, 173-177.	2.4	16
90	Boosting Microbial Fuel Cell Performance by Combining with an External Supercapacitor: An Electrochemical Study. ChemElectroChem, 2020, 7, 893-903.	1.7	16

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91	How Comparable are Microbial Electrochemical Systems around the Globe? An Electrochemical and Microbiological Crossâ€Laboratory Study. ChemSusChem, 2021, 14, 2313-2330.	3.6	13
92	Scaling up self-stratifying supercapacitive microbial fuel cell. International Journal of Hydrogen Energy, 2020, 45, 25240-25248.	3.8	12
93	Influence of Electrode Characteristics on Coulombic Efficiency (CE) in Microbial Fuel Cells (MFCs) Treating Wastewater. Journal of the Electrochemical Society, 2013, 160, G3117-G3122.	1.3	10
94	Air-breathing cathode self-powered supercapacitive microbial fuel cell with human urine as electrolyte. Electrochimica Acta, 2020, 353, 136530.	2.6	10
95	Practical demonstration of applicability and efficiency of platinum group metal-free based catalysts in microbial fuel cells for wastewater treatment. Journal of Power Sources, 2021, 491, 229582.	4.0	9
96	The Correlation of the Anodic and Cathodic Open Circuit Potential (OCP) and Power Generation in Microbial Fuel Cells (MFCs). ECS Transactions, 2012, 41, 45-53.	0.3	8
97	Integration of Platinum Group Metalâ€Free Catalysts and Bilirubin Oxidase into a Hybrid Material for Oxygen Reduction: Interplay of Chemistry and Morphology. ChemSusChem, 2017, 10, 1534-1542.	3.6	8
98	Effects of Anode and Cathode Areas on Organic Compounds Removal and Power Generation in Membraneless Microbial Fuel Cell (MFC). ECS Transactions, 2012, 41, 57-63.	0.3	7
99	Sensing nitrite by iron-nitrogen-carbon oxygen reduction electrocatalyst. Electrochimica Acta, 2022, 402, 139514.	2.6	7
100	Synthesis of 2D anatase TiO₂ with highly reactive facets by fluorine-free topochemical conversion of 1T-TiS₂ nanosheets. Journal of Materials Chemistry A, 2022, 10, 13884-13894.	5.2	7
101	Morphological Characterization of ALD and Doping Effects on Mesoporous SnO₂ Aerogels by XPS and Quantitative SEM Image Analysis. ACS Applied Materials & Interfaces, 2016, 8, 9849-9854.	4.0	6
102	Boosting Microbial Fuel Cell Performance by Combining with an External Supercapacitor: An Electrochemical Study. ChemElectroChem, 2020, 7, 877-877.	1.7	3
103	Acetaminophen and caffeine removal by MnO_{x(s)} and GAC media in column experiments. Environmental Science: Water Research and Technology, 2021, 7, 134-143.	1.2	2
104	How Comparable are Microbial Electrochemical Systems around the Globe? An Electrochemical and Microbiological Crossâ€Laboratory Study. ChemSusChem, 2021, 14, 2267.	3.6	2
105	Novel Fe-N-C Catalysts from Organic Precursors for Neutral Media and Microbial Fuel Cell Application. ECS Meeting Abstracts, 2016, , .	0.0	1
106	Bioelectrochemistryâ€“An Electrifying Experience Over 70â€...Years. ChemElectroChem, 2019, 6, 5356-5357.	1.7	0
107	10. Supercapacitors in bioelectrochemical systems. , 2019, , 189-212.		0
108	Microbial Fuel Cells, Concept, and Applications. , 2022, , 875-909.		0

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109	Microbial Fuel Cells, Concept, and Applications. , 2020, , 1-35.		0