Carlo Santoro

List of Publications by Year
in descending order

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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, Concept, and Applications. , 2022, , 875-909.		0
2	Sensing nitrite by iron-nitrogen-carbon oxygen reduction electrocatalyst. Electrochimica Acta, 2022, 402, 139514.	2.6	7
3	What is Next in Anionâ€Exchange Membrane Water Electrolyzers? Bottlenecks, Benefits, and Future. ChemSusChem, 2022, 15, .	3.6	77
4	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
5	Waste Face Surgical Mask Transformation into Crude Oil and Nanostructured Electrocatalysts for Fuel Cells and Electrolyzers. ChemSusChem, 2022, 15, .	3.6	26
6	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
7	Oxygen reduction reaction electrocatalysis in neutral media for bioelectrochemical systems. Nature Catalysis, 2022, 5, 473-484.	16.1	53
8	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
9	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
10	Carbon Nanodots in Electrochemical Sensors and Biosensors: A Review. ChemElectroChem, 2021, 8, 15-35.	1.7	64
11	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
12	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
13	How Comparable are Microbial Electrochemical Systems around the Globe? An Electrochemical and Microbiological Crossâ€Laboratory Study. ChemSusChem, 2021, 14, 2267.	3.6	2
14	Recent trends and advances in microbial electrochemical sensing technologies: An overview. Current Opinion in Electrochemistry, 2021, 30, 100762.	2.5	31
15	How Comparable are Microbial Electrochemical Systems around the Globe? An Electrochemical and Microbiological Crossâ€Laboratory Study. ChemSusChem, 2021, 14, 2313-2330.	3.6	13
16	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
17	Valorization of biodigestor plant waste in electrodes for supercapacitors and microbial fuel cells. Electrochimica Acta, 2021, 391, 138960.	2.6	22
18	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

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19	Combination of bioelectrochemical systems and electrochemical capacitors: Principles, analysis and opportunities. Biotechnology Advances, 2020, 39, 107456.	6.0	55
20	Boosting Microbial Fuel Cell Performance by Combining with an External Supercapacitor: An Electrochemical Study. ChemElectroChem, 2020, 7, 893-903.	1.7	16
21	Scaling up self-stratifying supercapacitive microbial fuel cell. International Journal of Hydrogen Energy, 2020, 45, 25240-25248.	3.8	12
22	Air-breathing cathode self-powered supercapacitive microbial fuel cell with human urine as electrolyte. Electrochimica Acta, 2020, 353, 136530.	2.6	10
23	Scalability and stacking of self-stratifying microbial fuel cells treating urine. Bioelectrochemistry, 2020, 133, 107491.	2.4	31
24	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
25	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
26	Urine in Bioelectrochemical Systems: An Overall Review. ChemElectroChem, 2020, 7, 1312-1331.	1.7	43
27	Boosting Microbial Fuel Cell Performance by Combining with an External Supercapacitor: An Electrochemical Study. ChemElectroChem, 2020, 7, 877-877.	1.7	3
28	Supercapacitive operational mode in microbial fuel cell. Current Opinion in Electrochemistry, 2020, 22, 1-8.	2.5	32
29	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
30	Microbial Fuel Cells, Concept, and Applications. , 2020, , 1-35.		0
31	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
32	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
33	Supercapacitive paper based microbial fuel cell: High current/power production within a low cost design. Bioresource Technology Reports, 2019, 7, 100297.	1.5	24
34	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
35	Scalability of self-stratifying microbial fuel cell: Towards height miniaturisation. Bioelectrochemistry, 2019, 127, 68-75.	2.4	22
36	Bioelectrochemistryâ€"An Electrifying Experience Over 70â€...Years. ChemElectroChem, 2019, 6, 5356-5357.	1.7	0

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37	A novel microbial - Bioelectrochemical sensor for the detection of n-cyclohexyl-2-pyrrolidone in wastewater. Electrochimica Acta, 2019, 317, 604-611.	2.6	17
38	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
39	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
40	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
41	10. Supercapacitors in bioelectrochemical systems. , 2019, , 189-212.		0
42	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
43	Ceramic Microbial Fuel Cells Stack: power generation in standard and supercapacitive mode. Scientific Reports, 2018, 8, 3281.	1.6	55
44	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
45	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
46	Enhancement of microbial fuel cell performance by introducing a nano-composite cathode catalyst. Electrochimica Acta, 2018, 265, 56-64.	2.6	79
47	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
48	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
49	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
50	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
51	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
52	Influence of platinum group metal-free catalyst synthesis on microbial fuel cell performance. Journal of Power Sources, 2018, 375, 11-20.	4.0	62
53	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
54	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

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55	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
56	Microbial fuel cells: From fundamentals to applications. A review. Journal of Power Sources, 2017, 356, 225-244.	4.0	1,264
57	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
58	Design of Iron(II) Phthalocyanineâ€Derived Oxygen Reduction Electrocatalysts for Highâ€Powerâ€Density Microbial Fuel Cells. ChemSusChem, 2017, 10, 3243-3251.	3.6	67
59	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
60	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
61	Transition metal-nitrogen-carbon catalysts for oxygen reduction reaction in neutral electrolyte. Electrochemistry Communications, 2017, 75, 38-42.	2.3	97
62	Supercapacitive microbial desalination cells: New class of power generating devices for reduction of salinity content. Applied Energy, 2017, 208, 25-36.	5.1	43
63	Microbial Desalination Cells with Efficient Platinumâ€Groupâ€Metalâ€Free Cathode Catalysts. ChemElectroChem, 2017, 4, 3322-3330.	1.7	40
64	Bimetallic platinum group metal-free catalysts for high power generating microbial fuel cells. Journal of Power Sources, 2017, 366, 18-26.	4.0	62
65	Carbon-Based Air-Breathing Cathodes for Microbial Fuel Cells. Catalysts, 2016, 6, 127.	1.6	58
66	Supercapacitive microbial fuel cell: Characterization and analysis for improved charge storage/delivery performance. Bioresource Technology, 2016, 218, 552-560.	4.8	67
67	Self-feeding paper based biofuel cell/self-powered hybrid Î¼-supercapacitor integrated system. Biosensors and Bioelectronics, 2016, 86, 459-465.	5.3	59
68	Anodic biofilms as the interphase for electroactive bacterial growth on carbon veil. Biointerphases, 2016, 11, 031013.	0.6	16
69	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
70	Microbial Fuel Cell-driven caustic potash production from wastewater for carbon sequestration. Bioresource Technology, 2016, 215, 285-289.	4.8	16
71	Miniaturized supercapacitors: key materials and structures towards autonomous and sustainable devices and systems. Journal of Power Sources, 2016, 326, 717-725.	4.0	82
72	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

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73	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
74	Self-powered supercapacitive microbial fuel cell: The ultimate way of boosting and harvesting power. Biosensors and Bioelectronics, 2016, 78, 229-235.	5.3	112
75	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
76	Bilirubin oxidase based enzymatic air-breathing cathode: Operation under pristine and contaminated conditions. Bioelectrochemistry, 2016, 108, 1-7.	2.4	50
77	Novel Fe-N-C Catalysts from Organic Precursors for Neutral Media and Microbial Fuel Cell Application. ECS Meeting Abstracts, 2016, , .	0.0	1
78	High catalytic activity and pollutants resistivity using Fe-AAPyr cathode catalyst for microbial fuel cell application. Scientific Reports, 2015, 5, 16596.	1.6	82
79	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
80	Doubleâ€Chamber Microbial Fuel Cell with a Nonâ€Platinumâ€Group Metal Feâ€“Nâ€“C Cathode Catalyst. ChemSusChem, 2015, 8, 828-834.	3.6	75
81	Relationship between surface chemistry, biofilm structure, and electron transfer in Shewanella anodes. Biointerphases, 2015, 10, 019013.	0.6	42
82	Cathode materials for ceramic based microbial fuel cells (MFCs). International Journal of Hydrogen Energy, 2015, 40, 14706-14715.	3.8	53
83	Surface Modification for Enhanced Biofilm Formation and Electron Transport in Shewanella Anodes. Journal of the Electrochemical Society, 2015, 162, H597-H603.	1.3	57
84	Influence of anode surface chemistry on microbial fuel cell operation. Bioelectrochemistry, 2015, 106, 141-149.	2.4	88
85	Enzymatic Oxygen Microsensor Based on Bilirubin Oxidase Applied to Microbial Fuel Cells Analysis. Electroanalysis, 2015, 27, 327-335.	1.5	17
86	Electro-osmotic-based catholyte production by Microbial Fuel Cells for carbon capture. Water Research, 2015, 86, 108-115.	5.3	42
87	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
88	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
89	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
90	Electrochemical Behavior of Stainless Steel Anodes in Membraneless Microbial Fuel Cells. Journal of the Electrochemical Society, 2014, 161, H62-H67.	1.3	46

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91	Micro-porous layer (MPL)-based anode for microbial fuel cells. International Journal of Hydrogen Energy, 2014, 39, 21811-21818.	3.8	40
92	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
93	Surface Modification of Microbial Fuel Cells Anodes: Approaches to Practical Design. Electrochimica Acta, 2014, 134, 116-126.	2.6	89
94	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
95	Parameters characterization and optimization of activated carbon (AC) cathodes for microbial fuel cell application. Bioresource Technology, 2014, 163, 54-63.	4.8	102
96	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
97	Activated carbon nanofibers (ACNF) as cathode for single chamber microbial fuel cells (SCMFCs). Journal of Power Sources, 2013, 243, 499-507.	4.0	83
98	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
99	Current generation in membraneless single chamber microbial fuel cells (MFCs) treating urine. Journal of Power Sources, 2013, 238, 190-196.	4.0	63
100	Power generation of microbial fuel cells (MFCs) with low cathodic platinum loading. International Journal of Hydrogen Energy, 2013, 38, 692-700.	3.8	59
101	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
102	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
103	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
104	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
105	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
106	Water transport and flooding in DMFC: Experimental and modeling analyses. Journal of Power Sources, 2012, 217, 381-391.	4.0	29
107	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
108	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

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109	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