Stefano Freguia

List of Publications by Year
in descending order

81 papers	10,523 citations	134610 34 h-index	71088 80 g-index
85 all docs	85 docs citations	85 times ranked	7720 citing authors

#	Article	IF	Citations
1	Microbial Fuel Cells:Â Methodology and Technologyâ€. Environmental Science & Technology, 2006, 40, 5181-5192.	4.6	4,962
2	The anode potential regulates bacterial activity in microbial fuel cells. Applied Microbiology and Biotechnology, 2008, 78, 409-418.	1.7	350
3	Modeling of CO2 capture by aqueous monoethanolamine. AIChE Journal, 2003, 49, 1676-1686.	1.8	302
4	Effects of Surface Charge and Hydrophobicity on Anodic Biofilm Formation, Community Composition, and Current Generation in Bioelectrochemical Systems. Environmental Science & Technology, 2013, 47, 7563-7570.	4.6	294
5	Cathodic oxygen reduction catalyzed by bacteria in microbial fuel cells. ISME Journal, 2008, 2, 519-527.	4.4	268
6	Non-catalyzed cathodic oxygen reduction at graphite granules in microbial fuel cells. Electrochimica Acta, 2007, 53, 598-603.	2.6	250
7	High Acetic Acid Production Rate Obtained by Microbial Electrosynthesis from Carbon Dioxide. Environmental Science & Technology, 2015, 49, 13566-13574.	4.6	241
8	A novel carbon nanotube modified scaffold as an efficient biocathode material for improved microbial electrosynthesis. Journal of Materials Chemistry A, 2014, 2, 13093-13102.	5.2	236
9	Electron and Carbon Balances in Microbial Fuel Cells Reveal Temporary Bacterial Storage Behavior During Electricity Generation. Environmental Science & Technology, 2007, 41, 2915-2921.	4.6	231
10	A Basic Tutorial on Cyclic Voltammetry for the Investigation of Electroactive Microbial Biofilms. Chemistry - an Asian Journal, 2012, 7, 466-475.	1.7	189
11	Microbial fuel cells operating on mixed fatty acids. Bioresource Technology, 2010, 101, 1233-1238.	4.8	188
12	Syntrophic Processes Drive the Conversion of Glucose in Microbial Fuel Cell Anodes. Environmental Science & Technology, 2008, 42, 7937-7943.	4.6	186
13	Sequential anodeâ€"cathode configuration improves cathodic oxygen reduction and effluent quality of microbial fuel cells. Water Research, 2008, 42, 1387-1396.	5.3	181
14	Microbial Electrosynthesis of Isobutyric, Butyric, Caproic Acids, and Corresponding Alcohols from Carbon Dioxide. ACS Sustainable Chemistry and Engineering, 2018, 6, 8485-8493.	3.2	174
15	Source-separated urine opens golden opportunities for microbial electrochemical technologies. Trends in Biotechnology, 2015, 33, 214-220.	4.9	156
16	Electron transfer pathways in microbial oxygen biocathodes. Electrochimica Acta, 2010, 55, 813-818.	2.6	151
17	Lactococcus lactis catalyses electricity generation at microbial fuel cell anodes via excretion of a soluble quinone. Bioelectrochemistry, 2009, 76, 14-18.	2.4	144
18	Bringing High-Rate, CO₂-Based Microbial Electrosynthesis Closer to Practical Implementation through Improved Electrode Design and Operating Conditions. Environmental Science & Technology, 2016, 50, 1982-1989.	4.6	141

#	ARTICLE	IF	CITATIONS
19	Flame Oxidation of Stainless Steel Felt Enhances Anodic Biofilm Formation and Current Output in Bioelectrochemical Systems. Environmental Science & Technology, 2014, 48, 7151-7156.	4.6	131
20	Biologically Induced Hydrogen Production Drives High Rate/High Efficiency Microbial Electrosynthesis of Acetate from Carbon Dioxide. ChemElectroChem, 2016, 3, 581-591.	1.7	122
21	Recovering Nitrogen as a Solid without Chemical Dosing: Bio-Electroconcentration for Recovery of Nutrients from Urine. Environmental Science and Technology Letters, 2017, 4, 119-124.	3.9	96
22	Flavins contained in yeast extract are exploited for anodic electron transfer by Lactococcus lactis. Bioelectrochemistry, 2010, 78, 173-175.	2.4	87
23	Carbon and Electron Fluxes during the Electricity Driven 1,3-Propanediol Biosynthesis from Glycerol. Environmental Science & Technology, 2013, 47, 11199-11205.	4.6	86
24	Electrochemical Abatement of Hydrogen Sulfide from Waste Streams. Critical Reviews in Environmental Science and Technology, 2015, 45, 1555-1578.	6.6	75
25	Autotrophic hydrogen-producing biofilm growth sustained by a cathode as the sole electron and energy source. Bioelectrochemistry, 2015, 102, 56-63.	2.4	71
26	A novel bioelectrochemical system for chemical-free permanent treatment of acid mine drainage. Water Research, 2017, 126, 411-420.	5.3	60
27	Microbial electrosynthesis system with dual biocathode arrangement for simultaneous acetogenesis, solventogenesis and carbon chain elongation. Chemical Communications, 2019, 55, 4351-4354.	2.2	60
28	Wastewater fertigation in agriculture: Issues and opportunities for improved water management and circular economy. Environmental Pollution, 2022, 296, 118755.	3.7	58
29	Bioelectrochemical systems: Microbial versus enzymatic catalysis. Electrochimica Acta, 2012, 82, 165-174.	2.6	57
30	Microbial nanowires â€" Electron transport and the role of synthetic analogues. Acta Biomaterialia, 2018, 69, 1-30.	4.1	51
31	Oxidised stainless steel: a very effective electrode material for microbial fuel cell bioanodes but at high risk of corrosion. Electrochimica Acta, 2015, 158, 356-360.	2.6	47
32	Surfactant treatment of carbon felt enhances anodic microbial electrocatalysis in bioelectrochemical systems. Electrochemistry Communications, 2014, 39, 1-4.	2.3	46
33	Spontaneous modification of carbon surface with neutral red from its diazonium salts for bioelectrochemical systems. Biosensors and Bioelectronics, 2013, 47, 184-189.	5.3	37
34	Self-Powered Bioelectrochemical Nutrient Recovery for Fertilizer Generation from Human Urine. Sustainability, 2019, 11, 5490.	1.6	36
35	Electro-fermentation: Sustainable bioproductions steered by electricity. Biotechnology Advances, 2022, 59, 107950.	6.0	36
36	Enhancing Toxic Metal Removal from Acidified Sludge with Nitrite Addition. Environmental Science & Technology, 2015, 49, 6257-6263.	4.6	35

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37	<i>Methanobacterium</i> enables high rate electricity-driven autotrophic sulfate reduction. RSC Advances, 2015, 5, 89368-89374.	1.7	35
38	Development of bioelectrocatalytic activity stimulates mixedâ€culture reduction of glycerol in a bioelectrochemical system. Microbial Biotechnology, 2015, 8, 483-489.	2.0	34
39	Effects of oxygen on Shewanella decolorationis NTOU1 electron transfer to carbon-felt electrodes. Biosensors and Bioelectronics, 2010, 25, 2651-2656.	5.3	33
40	Urine Treatment on the International Space Station: Current Practice and Novel Approaches. Membranes, 2020, 10, 327.	1.4	33
41	Dynamically Adaptive Control System for Bioanodes in Serially Stacked Bioelectrochemical Systems. Environmental Science & Technology, 2013, 47, 5488-5494.	4.6	31
42	Impact of source-separation of urine on effluent quality, energy consumption and greenhouse gas emissions of a decentralized wastewater treatment plant. Chemical Engineering Research and Design, 2021, 150, 298-304.	2.7	31
43	Nutrient Recovery by Bio-Electroconcentration is Limited by Wastewater Conductivity. ACS Omega, 2019, 4, 2152-2159.	1.6	29
44	Modelling recovery of ammonium from urine by electro-concentration in a 3-chamber cell. Water Research, 2017, 124, 210-218.	5.3	28
45	Electrochemical oxidation processes for PFAS removal from contaminated water and wastewater: fundamentals, gaps and opportunities towards practical implementation. Journal of Hazardous Materials, 2022, 434, 128886.	6.5	28
46	Cathodic biofilm activates electrode surface and achieves efficient autotrophic sulfate reduction. Electrochimica Acta, 2016, 213, 66-74.	2.6	27
47	Dissimilatory nitrate reduction to ammonium as an electron sink during cathodic denitrification. RSC Advances, 2015, 5, 86572-86577.	1.7	25
48	Electro-concentration for chemical-free nitrogen capture as solid ammonium bicarbonate. Separation and Purification Technology, 2018, 203, 48-55.	3.9	24
49	Selective cathodic microbial biofilm retention allows a high current-to-sulfide efficiency in sulfate-reducing microbial electrolysis cells. Bioelectrochemistry, 2017, 118, 62-69.	2.4	22
50	Optimising nitrogen recovery from reject water in a 3-chamber bioelectroconcentration cell. Separation and Purification Technology, 2021, 264, 118428.	3.9	22
51	Recovery of elemental sulfur with a novel integrated bioelectrochemical system with an electrochemical cell. Science of the Total Environment, 2019, 677, 175-183.	3.9	20
52	Electrochemical biofilm control by reconstructing microbial community in agricultural water distribution systems. Journal of Hazardous Materials, 2021, 403, 123616.	6.5	20
53	Biomimetic Peptide Nanowires Designed for Conductivity. ACS Omega, 2019, 4, 1748-1756.	1.6	19
54	Staged electrochemical treatment guided by modelling allows for targeted recovery of metals and rare earth elements from acid mine drainage. Journal of Environmental Management, 2020, 275, 111266.	3.8	19

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55	Efficient nitrogen removal and recovery from real digested sewage sludge reject water through electroconcentration. Journal of Environmental Chemical Engineering, 2021, 9, 106286.	3.3	19
56	Oxygen Suppresses Light-Driven Anodic Current Generation by a Mixed Phototrophic Culture. Environmental Science & Technology, 2014, 48, 14000-14006.	4.6	17
57	Energy recovery through reverse electrodialysis: Harnessing the salinity gradient from the flushing of human urine. Water Research, 2020, 186, 116320.	5.3	17
58	Fertiliser recovery from source-separated urine via membrane bioreactor and heat localized solar evaporation. Water Research, 2021, 207, 117810.	5.3	16
59	Marine phototrophic consortia transfer electrons to electrodes in response to reductive stress. Photosynthesis Research, 2016, 127, 347-354.	1.6	15
60	Redox-Polymers Enable Uninterrupted Day/Night Photo-Driven Electricity Generation in Biophotovoltaic Devices. Journal of the Electrochemical Society, 2017, 164, H3037-H3040.	1.3	13
61	Fully reversible current driven by a dual marine photosynthetic microbial community. Bioresource Technology, 2015, 195, 248-253.	4.8	12
62	Bioelectrochemical Denitrification for the Treatment of Saltwater Recirculating Aquaculture Streams. ACS Omega, 2018, 3, 4252-4261.	1.6	12
63	Anodic Reactivity of Ferrous Sulfide Precipitates Changing over Time due to Particulate Speciation. Environmental Science & Technology, 2013, 47, 12366-12373.	4.6	9
64	Impact of source-separation of urine on treatment capacity, process design, and capital expenditure of a decentralised wastewater treatment plant. Chemosphere, 2022, 300, 134489.	4.2	9
65	Selective Extraction of Medium-Chain Carboxylic Acids by Electrodialysis and Phase Separation. ACS Omega, 2021, 6, 7841-7850.	1.6	8
66	Optimised operational parameters for improved nutrient recovery from hydrolysed urine by bio-electroconcentration. Separation and Purification Technology, 2021, 279, 119793.	3.9	8
67	Implementation of a Sulfideâ€“Air Fuel Cell Coupled to a Sulfate-Reducing Biocathode for Elemental Sulfur Recovery. International Journal of Environmental Research and Public Health, 2021, 18, 5571.	1.2	7
68	A modelling approach to assess the long-term stability of a novel microbial/electrochemical system for the treatment of acid mine drainage. RSC Advances, 2018, 8, 18682-18689.	1.7	6
69	Nitrite addition to acidified sludge significantly improves digestibility, toxic metal removal, dewaterability and pathogen reduction. Scientific Reports, 2016, 6, 39795.	1.6	5
70	Webcasts promote in-class active participation and learning in an engineering elective course. European Journal of Engineering Education, 2017, 42, 482-492.	1.5	5
71	Electroactive microorganisms and microbial consortia. Bioelectrochemistry, 2018, 120, 110-111.	2.4	5
72	A review of microscopic cell imaging and neural network recognition for synergistic cyanobacteria identification and enumeration. Analytical Sciences, 2022, 38, 261-279.	0.8	5

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73	Electroactive haloalkaliphiles exhibit exceptional tolerance to free ammonia. FEMS Microbiology Letters, 2018, 365, .	0.7	4
74	Extracellular electron transfer by Microcystis aeruginosa is solely driven by high pH. Bioelectrochemistry, 2021, 137, 107637.	2.4	3
75	Electrochemical system for selective oxidation of organics over ammonia in urine. Environmental Science: Water Research and Technology, 2021, 7, 942-955.	1.2	3
76	Fate of pharmaceuticals and PFASs during the electrochemical generation of a nitrogen-rich nutrient product from real reject water. Journal of Environmental Chemical Engineering, 2022, 10, 107284.	3.3	3
77	Electro-concentration of urine designed for separation of sodium from nitrogen. Separation and Purification Technology, 2021, 276, 119275.	3.9	2
78	Synechococcus and Other Bloomâ€Forming Cyanobacteria Exhibit Unique Redox Signatures. ChemElectroChem, 2021, 8, 360-364.	1.7	1
79	Wastewater Treatment (Microbial Bioelectrochemical) and Production of Value-Added By-Products. , 2014, , 2111-2117.		1
80	Coke-oven wastewater treatment in a dual-chamber microbial fuel cell with thiocyanate-degrading biofilm enriched at the air cathode. Water Science and Technology, 0, , .	1.2	1
81	Fundamentals of Microbial Electrochemical Systems. , 2017, , 51-75.		0