Alain Bergel

List of Publications by Year
in descending order

114 papers	4,860 citations	76196 40 h-index	106150 65 g-index
114 all docs	114 docs citations	114 times ranked	3343 citing authors

#	Article	IF	Citations
1	The electrochemical potential is a key parameter for cell adhesion and proliferation on carbon surface. Bioelectrochemistry, 2022, 144, 108045.	2.4	4
2	Oxygen-reducing microbial cathodes in hypersaline electrolyte. Bioresource Technology, 2021, 319, 124165.	4.8	2
3	Oxygen-reducing bidirectional microbial electrodes: A mini-review. Electrochemistry Communications, 2021, 123, 106930.	2.3	3
4	Industrially scalable surface treatments to enhance the current density output from graphite bioanodes fueled by real domestic wastewater. IScience, 2021, 24, 102162.	1.9	8
5	Oxygen-reducing bidirectional microbial electrodes designed in real domestic wastewater. Bioresource Technology, 2021, 326, 124663.	4.8	6
6	How Comparable are Microbial Electrochemical Systems around the Globe? An Electrochemical and Microbiological Crossâ€Laboratory Study. ChemSusChem, 2021, 14, 2313-2330.	3.6	13
7	Catalysis of the electrochemical oxygen reduction reaction (ORR) by animal and human cells. PLoS ONE, 2021, 16, e0251273.	1.1	3
8	Theoretical analysis of the electrochemical systems used for the application of direct current/voltage stimuli on cell cultures. Bioelectrochemistry, 2021, 139, 107737.	2.4	15
9	Design of 3D microbial anodes for microbial electrolysis cells (MEC) fuelled by domestic wastewater. Part I: Multiphysics modelling. Journal of Environmental Chemical Engineering, 2021, 9, 105476.	3.3	8
10	Oxygen supply management to intensify wastewater treatment by a microbial electrochemical snorkel. Electrochimica Acta, 2021, 394, 139103.	2.6	1
11	Hypersaline microbial fuel cell equipped with an oxygen-reducing microbial cathode. Bioresource Technology, 2021, 337, 125448.	4.8	7
12	How bacteria use electric fields to reach surfaces. Biofilm, 2021, 3, 100048.	1.5	10
13	Microbial electrolysis cell (MEC): Strengths, weaknesses and research needs from electrochemical engineering standpoint. Applied Energy, 2020, 257, 113938.	5.1	150
14	Microbial electrolysis cell (MEC): A step ahead towards hydrogen-evolving cathode operated at high current density. Bioresource Technology Reports, 2020, 9, 100399.	1.5	17
15	Microbial electrochemical snorkels (MESs): A budding technology for multiple applications. A mini review. Electrochemistry Communications, 2019, 104, 106473.	2.3	38
16	Effect of pore size on the current produced by 3-dimensional porous microbial anodes: A critical review. Bioresource Technology, 2019, 289, 121641.	4.8	67
17	Effect of surface roughness, porosity and roughened micro-pillar structures on the early formation of microbial anodes. Bioelectrochemistry, 2019, 128, 17-29.	2.4	24
18	Benchmarking of Industrial Synthetic Graphite Grades, Carbon Felt, and Carbon Cloth as Cost-Efficient Bioanode Materials for Domestic Wastewater Fed Microbial Electrolysis Cells. Frontiers in Energy Research, 2019, 7, .	1.2	12

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19	Microbial anodes: What actually occurs inside pores?. International Journal of Hydrogen Energy, 2019, 44, 4484-4495.	3.8	17
20	Effect of surface nano/micro-structuring on the early formation of microbial anodes with Geobacter sulfurreducens: Experimental and theoretical approaches. Bioelectrochemistry, 2018, 121, 191-200.	2.4	28
21	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
22	Coupled iron-microbial catalysis for CO2 hydrogenation with multispecies microbial communities. Chemical Engineering Journal, 2018, 346, 307-316.	6.6	7
23	Impact of electrode micro- and nano-scale topography on the formation and performance of microbial electrodes. Biosensors and Bioelectronics, 2018, 118, 231-246.	5.3	54
24	Different methods used to form oxygen reducing biocathodes lead to different biomass quantities, bacterial communities, and electrochemical kinetics. Bioelectrochemistry, 2017, 116, 24-32.	2.4	22
25	Influence of the electrode size on microbial anode performance. Chemical Engineering Journal, 2017, 327, 218-227.	6.6	32
26	Increasing the temperature is a relevant strategy to form microbial anodes intended to work at room temperature. Electrochimica Acta, 2017, 258, 134-142.	2.6	12
27	Microbial fuel cells connected in series in a common electrolyte underperform: Understanding why and in what context such a set-up can be applied. Electrochimica Acta, 2017, 246, 879-889.	2.6	29
28	Halotolerant bioanodes: The applied potential modulates the electrochemical characteristics, the biofilm structure and the ratio of the two dominant genera. Bioelectrochemistry, 2016, 112, 24-32.	2.4	32
29	Biocathodes reducing oxygen at high potential select biofilms dominated by Ectothiorhodospiraceae populations harboring a specific association of genes. Bioresource Technology, 2016, 214, 55-62.	4.8	19
30	Discerning different and opposite effects of hydrogenase on the corrosion of mild steel in the presence of phosphate species. Bioelectrochemistry, 2016, 111, 31-40.	2.4	8
31	Removable air-cathode to overcome cathode biofouling in microbial fuel cells. Bioresource Technology, 2016, 221, 691-696.	4.8	28
32	Ion transport in microbial fuel cells: Key roles, theory and critical review. Applied Energy, 2016, 183, 1682-1704.	5.1	139
33	How could chemical engineering help in deciphering electromicrobial mechanisms?. BIO Web of Conferences, 2016, 6, 02005.	0.1	3
34	Multiple electron transfer systems in oxygen reducing biocathodes revealed by different conditions of aeration/agitation. Bioelectrochemistry, 2016, 110, 46-51.	2.4	16
35	Two-dimensional carbon cloth and three-dimensional carbon felt perform similarly to form bioanode fed with food waste. Electrochemistry Communications, 2016, 66, 38-41.	2.3	58
36	Multi-system Nernstâ€“Michaelisâ€“Menten model applied to bioanodes formed from sewage sludge. Bioresource Technology, 2015, 195, 162-169.	4.8	25

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37	Electrochemical characterization of microbial bioanodes formed on a collector/electrode system in a highly saline electrolyte. Bioelectrochemistry, 2015, 106, 97-104.	2.4	16
38	Oxygen-reducing biocathodes designed with pure cultures ofÂmicrobial strains isolated from seawater biofilms. International Biodeterioration and Biodegradation, 2015, 103, 16-22.	1.9	53
39	Comparison of synthetic medium and wastewater used as dilution medium to design scalable microbial anodes: Application to food waste treatment. Bioresource Technology, 2015, 185, 106-115.	4.8	51
40	Importance of the hydrogen route in up-scaling electrosynthesis for microbial CO₂reduction. Energy and Environmental Science, 2015, 8, 3731-3744.	15.6	183
41	The current provided by oxygen-reducing microbial cathodes is related to the composition of their bacterial community. Bioelectrochemistry, 2015, 102, 42-49.	2.4	40
42	Correlation of the Electrochemical Kinetics of Highâ€Salinityâ€Tolerant Bioanodes with the Structure and Microbial Composition of the Biofilm. ChemElectroChem, 2014, 1, 1966-1975.	1.7	33
43	Forming microbial anodes with acetate addition decreases their capability to treat raw paper mill effluent. Bioresource Technology, 2014, 164, 285-291.	4.8	10
44	Stainless steel foam increases the current produced by microbial bioanodes in bioelectrochemical systems. Energy and Environmental Science, 2014, 7, 1633-1637.	15.6	121
45	Electroanalysis of microbial anodes for bioelectrochemical systems: basics, progress and perspectives. Physical Chemistry Chemical Physics, 2014, 16, 16349-16366.	1.3	76
46	Modelling potential/current distribution in microbial electrochemical systems shows how the optimal bioanode architecture depends on electrolyte conductivity. Physical Chemistry Chemical Physics, 2014, 16, 22892-22902.	1.3	41
47	Protons accumulation during anodic phase turned to advantage for oxygen reduction during cathodic phase in reversible bioelectrodes. Bioresource Technology, 2014, 173, 224-230.	4.8	46
48	A theoretical model of transient cyclic voltammetry for electroactive biofilms. Energy and Environmental Science, 2014, 7, 1079.	15.6	23
49	Microbial bioanodes with high salinity tolerance for microbial fuel cells and microbial electrolysis cells. Electrochemistry Communications, 2013, 33, 1-4.	2.3	85
50	Sampling location of the inoculum is crucial in designing anodes for microbial fuel cells. Biochemical Engineering Journal, 2013, 73, 12-16.	1.8	24
51	Experimental and theoretical characterization of microbial bioanodes formed in pulp and paper mill effluent in electrochemically controlled conditions. Bioresource Technology, 2013, 149, 117-125.	4.8	22
52	The open circuit potential of Geobacter sulfurreducens bioanodes depends on the electrochemical adaptation of the strain. Electrochemistry Communications, 2013, 33, 35-38.	2.3	15
53	Garden compost inoculum leads to microbial bioanodes with potential-independent characteristics. Bioresource Technology, 2013, 134, 276-284.	4.8	57
54	Electrochemical reduction of CO2 catalysed by Geobacter sulfurreducens grown on polarized stainless steel cathodes. Electrochemistry Communications, 2013, 28, 27-30.	2.3	79

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55	Lowering the applied potential during successive scratching/re-inoculation improves the performance of microbial anodes for microbial fuel cells. Bioresource Technology, 2013, 127, 448-455.	4.8	43
56	Towards an engineering-oriented strategy for building microbial anodes for microbial fuel cells. Physical Chemistry Chemical Physics, 2012, 14, 13332.	1.3	44
57	Ultra microelectrodes increase the current density provided by electroactive biofilms by improving their electron transport ability. Energy and Environmental Science, 2012, 5, 5287-5296.	15.6	55
58	Stainless steel is a promising electrode material for anodes of microbial fuel cells. Energy and Environmental Science, 2012, 5, 9645.	15.6	161
59	Microbial Catalysis of the Oxygen Reduction Reaction for Microbial Fuel Cells: A Review. ChemSusChem, 2012, 5, 975-987.	3.6	181
60	Forming microbial anodes under delayed polarisation modifies the electron transfer network and decreases the polarisation time required. Bioresource Technology, 2012, 114, 334-341.	4.8	27
61	Harvesting Electricity with Geobacter bremensis Isolated from Compost. PLoS ONE, 2012, 7, e34216.	1.1	28
62	From microbial fuel cell (MFC) to microbial electrochemical snorkel (MES): maximizing chemical oxygen demand (COD) removal from wastewater. Biofouling, 2011, 27, 319-326.	0.8	91
63	Catalysis of the electrochemical reduction of oxygen by bacteria isolated from electro-active biofilms formed in seawater. Bioresource Technology, 2011, 102, 304-311.	4.8	39
64	Electrochemical micro-structuring of graphite felt electrodes for accelerated formation of electroactive biofilms on microbial anodes. Electrochemistry Communications, 2011, 13, 440-443.	2.3	53
65	Effect of the semi-conductive properties of the passive layer on the current provided by stainless steel microbial cathodes. Electrochimica Acta, 2011, 56, 2682-2688.	2.6	23
66	Electroactivity of Phototrophic River Biofilms and Constitutive Cultivable Bacteria. Applied and Environmental Microbiology, 2011, 77, 5394-5401.	1.4	28
67	Electrochemical reduction of oxygen catalyzed by Pseudomonas aeruginosa. Electrochimica Acta, 2010, 55, 4902-4908.	2.6	59
68	Editorial. Bioelectrochemistry, 2010, 78, 1.	2.4	2
69	Treatment of dairy wastes with a microbial anode formed from garden compost. Journal of Applied Electrochemistry, 2010, 40, 225-232.	1.5	39
70	Marine aerobic biofilm as biocathode catalyst. Bioelectrochemistry, 2010, 78, 51-56.	2.4	113
71	Hydrogen production by electrolysis of a phosphate solution on a stainless steel cathode. International Journal of Hydrogen Energy, 2010, 35, 8561-8568.	3.8	89
72	Electrochemical reduction of oxygen catalyzed by a wide range of bacteria including Gram-positive. Electrochemistry Communications, 2010, 12, 505-508.	2.3	115

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73	Geobacter sulfurreducens can protect 304L stainless steel against pitting in conditions of low electron acceptor concentrations. Electrochemistry Communications, 2010, 12, 724-728.	2.3	14
74	Testing various food-industry wastes for electricity production in microbial fuel cell. Bioresource Technology, 2010, 101, 2748-2754.	4.8	141
75	Combining phosphate species and stainless steel cathode to enhance hydrogen evolution in microbial electrolysis cell (MEC). Electrochemistry Communications, 2010, 12, 183-186.	2.3	61
76	Role of direct microbial electron transfer in corrosion of steels. Electrochemistry Communications, 2009, 11, 568-571.	2.3	53
77	Increased power from a two-chamber microbial fuel cell with a low-pH air-cathode compartment. Electrochemistry Communications, 2009, 11, 619-622.	2.3	95
78	Geobacter species enhances pit depth on 304L stainless steel in a medium lacking with electron donor. Electrochemistry Communications, 2009, 11, 1476-1481.	2.3	15
79	First air-tolerant effective stainless steel microbial anode obtained from a natural marine biofilm. Bioresource Technology, 2009, 100, 3302-3307.	4.8	54
80	Effect of Geobacter sulfurreducens on the microbial corrosion of mild steel, ferritic and austenitic stainless steels. Corrosion Science, 2009, 51, 2596-2604.	3.0	48
81	Sampling Natural Biofilms: A New Route to Build Efficient Microbial Anodes. Environmental Science & Technology, 2009, 43, 3194-3199.	4.6	47
82	New hypotheses for hydrogenase implication in the corrosion of mild steel. Electrochimica Acta, 2008, 54, 140-147.	2.6	24
83	DSA to grow electrochemically active biofilms of Geobacter sulfurreducens. Electrochimica Acta, 2008, 53, 3200-3209.	2.6	60
84	Electrochemical activity of Geobacter sulfurreducens biofilms on stainless steel anodes. Electrochimica Acta, 2008, 53, 5235-5241.	2.6	140
85	Checking graphite and stainless anodes with an experimental model of marine microbial fuel cell. Bioresource Technology, 2008, 99, 8887-8894.	4.8	84
86	Forming electrochemically active biofilms from garden compost under chronoamperometry. Bioresource Technology, 2008, 99, 4809-4816.	4.8	67
87	Microbial electrocatalysis with Geobacter sulfurreducens biofilm on stainless steel cathodes. Electrochimica Acta, 2008, 53, 2494-2500.	2.6	148
88	Acetate to enhance electrochemical activity of biofilms from garden compost. Electrochimica Acta, 2008, 53, 2737-2742.	2.6	32
89	Local analysis of oxygen reduction catalysis by scanning vibrating electrode technique: A new approach to the study of biocorrosion. Electrochimica Acta, 2008, 54, 60-65.	2.6	28
90	Role of the reversible electrochemical deprotonation of phosphate species in anaerobic biocorrosion of steels. Corrosion Science, 2007, 49, 3988-4004.	3.0	19

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91	Simple design of cast myoglobin/polyethyleneimine modified electrodes. Journal of Applied Electrochemistry, 2006, 36, 835-842.	1.5	4
92	Electroactive biofilms: new means for electrochemistry. Journal of Applied Electrochemistry, 2006, 37, 173-179.	1.5	60
93	Electroactive cytochrome cast polyion films on graphite electrodes. Electrochimica Acta, 2006, 52, 979-987.	2.6	7
94	Catalysis of oxygen reduction in PEM fuel cell by seawater biofilm. Electrochemistry Communications, 2005, 7, 900-904.	2.3	240
95	Electrochemically enhanced biosynthesis of gluconic acid. AICHE Journal, 2005, 51, 989-997.	1.8	8
96	Hydrogenase-catalysed deposition of vivianite on mild steel. Electrochimica Acta, 2004, 49, 2097-2103.	2.6	8
97	Electroenzymatic Processes: A Clean Technology Alternative for Highly Selective Synthesis?. Journal of Chemical Technology and Biotechnology, 1997, 68, 389-396.	1.6	16
98	Permeability enhancement of electropolymerized thin organic films. Journal of Electroanalytical Chemistry, 1997, 437, 125-134.	1.9	20
99	Modeling mass transfer with enzymatic reaction in electrochemical multilayer microreactors. AICHE Journal, 1996, 42, 2967-2976.	1.8	12
100	Coupling of the electroenzymatic reduction of NAD+ with a synthesis reaction. Enzyme and Microbial Technology, 1996, 18, 72-79.	1.6	33
101	Direct electrochemistry of Rhodococcus opacus hydrogenase for the catalysis of NAD+ reduction. Journal of Electroanalytical Chemistry, 1996, 405, 189-195.	1.9	12
102	Mass transfer with chemical reaction in thin-layer electrochemical reactors. AICHE Journal, 1995, 41, 1944-1954.	1.8	10
103	Improved model of a polypyrrole glucose oxidase modified electrode. Journal of Electroanalytical Chemistry, 1995, 386, 65-73.	1.9	51
104	Horseradish peroxidaseâ€"catalyzed hydroxylation of phenol: I. Thermodynamic analysis. Enzyme and Microbial Technology, 1995, 17, 1087-1093.	1.6	17
105	Horseradish peroxidase catalyzed hydroxylation of phenol: II. Kinetic model. Enzyme and Microbial Technology, 1995, 17, 1094-1100.	1.6	13
106	Bioelectrocatalysis of NAD+ reduction. Journal of Electroanalytical Chemistry, 1992, 342, 475-486.	1.9	5
107	Reduction of NAD(P)+ by electrochemically driven FADH2 and FMNH2. Journal of Electroanalytical Chemistry, 1992, 342, 495-500.	1.9	0
108	Bioelectrocatalysis of NAD+ reduction. Bioelectrochemistry, 1992, 27, 475-486.	1.0	18

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109	Reduction of NAD(P)+ by electrochemically driven FADH2 and FMNH2. Bioelectrochemistry, 1992, 27, 495-500.	1.0	15
110	Kinetics of the catalysis by the Alcaligenes eutrophus H16 hydrogenase of the electrochemical reduction of NAD+. Journal of Molecular Catalysis, 1992, 73, 371-380.	1.2	29
111	Thin-layer spectroelectrochemical study of the reversible reaction between nicotinamide adenine dinucleotide and flavin adenine dinucleotide. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1991, 302, 219-231.	0.3	28
112	Elements for optimal processing of thin-layer spectroelectrochemical data. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1990, 285, 11-23.	0.3	3
113	Spectroelectrochemical measurement of gaseous oxygen. Analytical Chemistry, 1990, 62, 1502-1506.	3.2	2
114	Tentatives de rÃ©gÃ©nÃ©ration du coenzyme NaDh par rÃ©duction Ã©lectrochimique et hydrogÃ©nation catalytique. Journal De Chimie Physique Et De Physico-Chimie Biologique, 1987, 84, 593-598.	0.2	10