Boris Tartakovsky

List of Publications by Year
in descending order

83 papers	3,154 citations	126858 33 h-index	161767 54 g-index
83 all docs	83 docs citations	83 times ranked	2525 citing authors

#	Article	IF	Citations
1	Carbon dioxide conversion to acetate and methane in a microbial electrosynthesis cell employing an electrically-conductive polymer cathode modified by nickel-based coatings. International Journal of Hydrogen Energy, 2022, 47, 203-215.	3.8	15
2	Mathematical model of a microbial electrosynthesis cell for the conversion of carbon dioxide into methane and acetate. Journal of CO2 Utilization, 2022, 59, 101956.	3.3	11
3	A comparative analysis of biopolymer production by microbial and bioelectrochemical technologies. RSC Advances, 2022, 12, 16105-16118.	1.7	7
4	Microbial fuel cell soft sensor for real-time toxicity detection and monitoring. Environmental Science and Pollution Research, 2021, 28, 12792-12802.	2.7	15
5	On-line monitoring of water quality with a floating microbial fuel cell biosensor: field test results. Ecotoxicology, 2021, 30, 851-862.	1.1	6
6	Selenite and selenate removal in a permeable flow-through bioelectrochemical barrier. Journal of Hazardous Materials, 2021, 408, 124431.	6.5	8
7	A comparison of microbial and bioelectrochemical approaches for biogas upgrade through carbon dioxide conversion to methane. Sustainable Energy Technologies and Assessments, 2021, 45, 101158.	1.7	4
8	Carbon dioxide conversion to C1 - C2 compounds in a microbial electrosynthesis cell with in situ electrodeposition of nickel and iron. Electrochimica Acta, 2021, 383, 138349.	2.6	19
9	Feasibility assessment of oil sands process water treatment in a flowâ€through microbial electrolysis cell. Environmental Challenges, 2021, 5, 100311.	2.0	3
10	Online monitoring of heavy metalâ€“related toxicity using flow-through and floating microbial fuel cell biosensors. Environmental Monitoring and Assessment, 2020, 192, 52.	1.3	14
11	In-situ Electrodeposition of Nickel on a Biocathode to Enhance Methane Production from Carbon Dioxide in a Microbial Electrosynthesis System. ECS Transactions, 2020, 97, 565-572.	0.3	8
12	A simple power management circuit for microbial fuel cell operation with intermittent electrical load connection. Canadian Journal of Chemical Engineering, 2019, 97, 93-98.	0.9	4
13	Combined energy storage and methane bioelectrosynthesis from carbon dioxide in a microbial electrosynthesis system. Bioresource Technology Reports, 2019, 8, 100302.	1.5	21
14	Removal of heavy metals in a flowâ€through vertical microbial electrolysis cell. Canadian Journal of Chemical Engineering, 2019, 97, 2608-2616.	0.9	11
15	Harvesting Energy from Multiple Microbial Fuel Cells with a High-Conversion Efficiency Power Management System. ACS Omega, 2019, 4, 18978-18986.	1.6	31
16	Real-Time Performance Optimization and Diagnostics during Long-Term Operation of a Solid Anolyte Microbial Fuel Cell Biobattery. Batteries, 2019, 5, 9.	2.1	8
17	On-line monitoring of heavy metals-related toxicity with a microbial fuel cell biosensor. Biosensors and Bioelectronics, 2019, 132, 382-390.	5.3	63
18	A comparison of microbial fuel cell and microbial electrolysis cell biosensors for real-time environmental monitoring. Bioelectrochemistry, 2019, 126, 105-112.	2.4	48

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19	Fluorescenceâ€based real time monitoring and diagnostics of recombinant Pichia pastoris cultivations in a bioreactor. Biotechnology Progress, 2019, 35, e2761.	1.3	2
20	Real-time monitoring of a microbial electrolysis cell using an electrical equivalent circuit model. Bioprocess and Biosystems Engineering, 2018, 41, 543-553.	1.7	8
21	Bioelectrochemical anaerobic sewage treatment technology for Arctic communities. Environmental Science and Pollution Research, 2018, 25, 32844-32850.	2.7	14
22	Dynamic model of a municipal wastewater stabilization pond in the arctic. Water Research, 2018, 144, 444-453.	5.3	11
23	Long-term performance of a microbial electrolysis cell operated with periodic disconnection of power supply. RSC Advances, 2018, 8, 16842-16849.	1.7	11
24	Carbon source and energy harvesting optimization in solid anolyte microbial fuel cells. Journal of Power Sources, 2017, 356, 324-330.	4.0	25
25	Removal of organic carbon and nitrogen in a membraneless flow-through microbial electrolysis cell. Enzyme and Microbial Technology, 2017, 102, 41-48.	1.6	26
26	Wastewater Treatment and Online Chemical Oxygen Demand Estimation in a Cascade of Microbial Fuel Cells. Industrial & Engineering Chemistry Research, 2017, 56, 12471-12478.	1.8	14
27	Maximizing the productivity of the microalgae Scenedesmus AMDD cultivated in a continuous photobioreactor using an online flow rate control. Bioprocess and Biosystems Engineering, 2017, 40, 63-71.	1.7	9
28	A comparison of simultaneous organic carbon and nitrogen removal in microbial fuel cells and microbial electrolysis cells. Journal of Environmental Management, 2016, 173, 23-33.	3.8	41
29	Staged Microbial Fuel Cells with Periodic Connection of External Resistance. IFAC-PapersOnLine, 2016, 49, 91-96.	0.5	6
30	Combined bioelectrochemicalâ€“electrical model of a microbial fuel cell. Bioprocess and Biosystems Engineering, 2016, 39, 267-276.	1.7	18
31	Modeling, optimization and control of bioelectrochemical systems. Chemical Engineering Journal, 2016, 289, 180-190.	6.6	85
32	Effect of C/N ratio and salinity on power generation in compost microbial fuel cells. Waste Management, 2016, 48, 135-142.	3.7	54
33	Real-time monitoring, diagnosis, and time-course analysis of microalgae Scenedesmus AMDD cultivation using dual excitation wavelength fluorometry. Journal of Applied Phycology, 2015, 27, 1823-1832.	1.5	8
34	On-line monitoring of microbial fuel cells operated with pulse-width modulated electrical load. Journal of Process Control, 2015, 35, 59-64.	1.7	18
35	Electrolysisâ€enhanced coâ€digestion of switchgrass and cow manure. Journal of Chemical Technology and Biotechnology, 2014, 89, 1501-1506.	1.6	12
36	Electricity production from synthesis gas inÂaÂmultiâ€electrode microbial fuel cell. Journal of Chemical Technology and Biotechnology, 2014, 89, 499-507.	1.6	5

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37	Parameter estimation of a microbial fuel cell process control-oriented model. , 2014, , .		3
38	Electrochemical characterization of anodic biofilm development in a microbial fuel cell. Journal of Applied Electrochemistry, 2013, 43, 533-540.	1.5	43
39	Pulse-width modulated external resistance increases the microbial fuel cell power output. Bioresource Technology, 2013, 147, 65-70.	4.8	35
40	Methane production from the microalga Scenedesmus sp. AMDD in a continuous anaerobic reactor. Algal Research, 2013, 2, 394-400.	2.4	20
41	Microbial electrolysis cell scale-up for combined wastewater treatment and hydrogen production. Bioresource Technology, 2013, 130, 584-591.	4.8	102
42	Optimizing energy productivity of microbial electrochemical cells. Journal of Process Control, 2012, 22, 1079-1086.	1.7	40
43	Microbial fuel cell operation with intermittent connection of the electrical load. Journal of Power Sources, 2012, 208, 18-23.	4.0	56
44	Multi-Population Model of a Microbial Electrolysis Cell. Environmental Science & Technology, 2011, 45, 5039-5046.	4.6	84
45	The effect of real-time external resistance optimization on microbial fuel cell performance. Water Research, 2011, 45, 1571-1578.	5.3	124
46	A UNIFIED MODEL FOR ELECTRICITY AND HYDROGEN PRODUCTION IN MICROBIAL ELECTROCHEMICAL CELLS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 5046-5051.	0.4	10
47	Cathode materials evaluation in microbial fuel cells: A comparison of carbon, Mn2O3, Fe2O3 and platinum materials. Electrochimica Acta, 2011, 58, 58-66.	2.6	110
48	Maximizing hydrogen production in a microbial electrolysis cell by real-time optimization of applied voltage. International Journal of Hydrogen Energy, 2011, 36, 10557-10564.	3.8	61
49	Optimizing the electrode size and arrangement in a microbial electrolysis cell. Bioresource Technology, 2011, 102, 9593-9598.	4.8	37
50	Electrolysis-enhanced anaerobic digestion of wastewater. Bioresource Technology, 2011, 102, 5685-5691.	4.8	111
51	PERFORMANCE ANALYSES OF MICROBIAL FUEL CELLS OPERATED IN SERIES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 547-552.	0.4	4
52	The influence of operational conditions on the performance of a microbial fuel cell seeded with mesophilic anaerobic sludge. Biochemical Engineering Journal, 2010, 51, 132-139.	1.8	125
53	Hydrogen production in a microbial electrolysis cell with nickel-based gas diffusion cathodes. Journal of Power Sources, 2010, 195, 5514-5519.	4.0	82
54	Comparison of realâ€time methods for maximizing power output in microbial fuel cells. AICHE Journal, 2010, 56, 2742-2750.	1.8	74

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55	Electrodeposition of nickel particles on a gas diffusion cathode for hydrogen production in a microbial electrolysis cell. International Journal of Hydrogen Energy, 2010, 35, 7313-7320.	3.8	65
56	A two-population bio-electrochemical model of a microbial fuel cell. Bioresource Technology, 2010, 101, 5256-5265.	4.8	224
57	Electricity generation from carbon monoxide in a single chamber microbial fuel cell. Enzyme and Microbial Technology, 2010, 46, 450-455.	1.6	28
58	Optimizing Treatment Performance of Microbial Fuel Cells by Reactor Staging. Industrial & Engineering Chemistry Research, 2010, 49, 9222-9229.	1.8	26
59	Maximizing power production in a stack of microbial fuel cells using multiunit optimization method. Biotechnology Progress, 2009, 25, 676-682.	1.3	54
60	High rate membrane-less microbial electrolysis cell for continuous hydrogen production. International Journal of Hydrogen Energy, 2009, 34, 672-677.	3.8	204
61	Hydrogen Production from Glycerol in a Membraneless Microbial Electrolysis Cell. Energy & Fuels, 2009, 23, 4612-4618.	2.5	89
62	Methane production in an UASB reactor operated under periodic mesophilicâ€“thermophilic conditions. Biotechnology and Bioengineering, 2008, 100, 1115-1121.	1.7	13
63	Biocatalyzed hydrogen production in a continuous flow microbial fuel cell with a gas phase cathode. Journal of Power Sources, 2008, 182, 291-297.	4.0	112
64	Anaerobic digestion model no. 1-based distributed parameter model of an anaerobic reactor: I. Model development. Bioresource Technology, 2008, 99, 3665-3675.	4.8	34
65	Anaerobic digestion model No. 1-based distributed parameter model of an anaerobic reactor: II. Model validation. Bioresource Technology, 2008, 99, 3676-3684.	4.8	40
66	Evaluation of Multiwavelength Culture Fluorescence for Monitoring the Aroma Compound 4-Hydroxy-2(or 5)-ethyl-5(or 2)-methyl-3(2H)-furanone (HEMF) Production. Biotechnology Progress, 2008, 20, 361-367.	1.3	18
67	CONTROL OF AN ANAEROBIC MESOPHILIC REACTOR USING PERIODIC TEMPERATURE VARIATIONS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 61-66.	0.4	0
68	Temperature-Based Control of an Anaerobic Reactor Using a Multi-Model Observer-Based Estimator. Environmental Science & Technology, 2007, 41, 978-983.	4.6	3
69	Fluorescence-based monitoring of tracer and substrate distribution in an UASB reactor. Chemosphere, 2006, 65, 1212-1220.	4.2	14
70	On-line estimation of kinetic parameters in anaerobic digestion using observer-based estimators and multiwavelength fluorometry. Water Science and Technology, 2006, 53, 77-83.	1.2	7
71	Design of a multi-model observer-based estimator for anaerobic reactor monitoring. Computers and Chemical Engineering, 2006, 31, 78-85.	2.0	11
72	A Comparison of Air and Hydrogen Peroxide Oxygenated Microbial Fuel Cell Reactors. Biotechnology Progress, 2006, 22, 241-246.	1.3	96

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73	Hydraulic modeling and axial dispersion analysis of UASB reactor. Biochemical Engineering Journal, 2005, 25, 113-123.	1.8	36
74	Degradation of trichloroethylene in a coupled anaerobicâ€“aerobic bioreactor: Modeling and experiment. Biochemical Engineering Journal, 2005, 26, 72-81.	1.8	46
75	Application of multi-wavelength fluorometry for on-line monitoring of an anaerobic digestion process. Water Research, 2004, 38, 3287-3296.	5.3	40
76	Trichloroethylene Degradation in a Coupled Anaerobic/Aerobic Reactor Oxygenated Using Hydrogen Peroxide. Environmental Science & Technology, 2003, 37, 5823-5828.	4.6	21
77	Modeling and Analysis of Co-immobilized Aerobic/Anaerobic Mixed Cultures. Biotechnology Progress, 1998, 14, 672-679.	1.3	6
78	Modelling of E.coli fermentations: comparison of multicompartment and variable structure models. Bioprocess and Biosystems Engineering, 1997, 16, 323-329.	0.5	11
79	Modeling and analysis of layered stationary anaerobic granular biofilms. , 1997, 54, 122-130.		24
80	The nature of interaction between immobilized nitrification and denitrification bacteria. Journal of Biotechnology, 1996, 51, 251-258.	1.9	21
81	Application of multi-wavelength fluorometry for monitoring wastewater treatment process dynamics. Water Research, 1996, 30, 2941-2948.	5.3	40
82	Application of Scanning Fluorometry for Monitoring of a Fermentation Process. Biotechnology Progress, 1996, 12, 126-131.	1.3	69
83	Optimal control of fed-batch fermentation with autoinduction of metabolite production. Biotechnology Progress, 1995, 11, 80-87.	1.3	18