

Zbigniew Lewandowski

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

6,630
citations

147566

31
h-index

223531

46
g-index

60
all docs

60
docs citations

60
times ranked

5535
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of biofilm structures on oxygen distribution and mass transport. <i>Biotechnology and Bioengineering</i> , 1994, 43, 1131-1138.	1.7	687
2	Quorum Sensing: A New Biofouling Control Paradigm in a Membrane Bioreactor for Advanced Wastewater Treatment. <i>Environmental Science & Technology</i> , 2009, 43, 380-385.	4.6	406
3	Compromised Host Defense on <i>Pseudomonas aeruginosa</i> Biofilms: Characterization of Neutrophil and Biofilm Interactions. <i>Journal of Immunology</i> , 2003, 171, 4329-4339.	0.4	339
4	Liquid Flow in Biofilm Systems. <i>Applied and Environmental Microbiology</i> , 1994, 60, 2711-2716.	1.4	332
5	Structural deformation of bacterial biofilms caused by short-term fluctuations in fluid shear: An in situ investigation of biofilm rheology. , 1999, 65, 83-92.		317
6	Role of sulfate-reducing bacteria in corrosion of mild steel: A review. <i>Biofouling</i> , 1995, 8, 165-194.	0.8	316
7	Wireless Sensors Powered by Microbial Fuel Cells. <i>Environmental Science & Technology</i> , 2005, 39, 5037-5042.	4.6	290
8	Microbial Fuel Cell using Anaerobic Respiration as an Anodic Reaction and Biomineralized Manganese as a Cathodic Reactant. <i>Environmental Science & Technology</i> , 2005, 39, 4666-4671.	4.6	288
9	Liquid flow in heterogeneous biofilms. <i>Biotechnology and Bioengineering</i> , 1994, 44, 636-641.	1.7	243
10	Scaling up Microbial Fuel Cells. <i>Environmental Science & Technology</i> , 2008, 42, 7643-7648.	4.6	217
11	Measurement of local diffusion coefficients in biofilms by microinjection and confocal microscopy. , 1997, 53, 151-158.		203
12	Quantifying biofilm structure using image analysis. <i>Journal of Microbiological Methods</i> , 2000, 39, 109-119.	0.7	199
13	Three-dimensional biofilm structure quantification. <i>Journal of Microbiological Methods</i> , 2004, 59, 395-413.	0.7	190
14	Electrochemically active biofilms: facts and fiction. A review. <i>Biofouling</i> , 2012, 28, 789-812.	0.8	183
15	Procedure for Determining Maximum Sustainable Power Generated by Microbial Fuel Cells. <i>Environmental Science & Technology</i> , 2006, 40, 1062-1068.	4.6	162
16	Effect of Catalase on Hydrogen Peroxide Penetration into <i>Pseudomonas aeruginosa</i> Biofilms. <i>Applied and Environmental Microbiology</i> , 2000, 66, 836-838.	1.4	161
17	Energy Harvesting With Microbial Fuel Cell and Power Management System. <i>IEEE Transactions on Power Electronics</i> , 2011, 26, 176-181.	5.4	136
18	The formation of migratory ripples in a mixed species bacterial biofilm growing in turbulent flow. <i>Environmental Microbiology</i> , 1999, 1, 447-455.	1.8	131

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19	Liquid flow and mass transport in heterogeneous biofilms. <i>Water Research</i> , 1996, 30, 2761-2765.	5.3	126
20	Oscillation characteristics of biofilm streamers in turbulent flowing water as related to drag and pressure drop. , 1998, 57, 536-544.		116
21	Quantifying Biofilm Structure: Facts and Fiction. <i>Biofouling</i> , 2004, 20, 1-23.	0.8	112
22	Sediment microbial fuel cell powering a submersible ultrasonic receiver: New approach to remote monitoring. <i>Journal of Power Sources</i> , 2013, 233, 79-85.	4.0	110
23	Microelectrode measurements of local mass transport rates in heterogeneous biofilms. , 1998, 59, 302-309.		109
24	NMR and microelectrode studies of hydrodynamics and kinetics in biofilms. <i>Biotechnology Progress</i> , 1993, 9, 40-45.	1.3	99
25	Diffusivity of Cu ²⁺ in calcium alginate gel beads. <i>Biotechnology and Bioengineering</i> , 1993, 41, 755-760.	1.7	97
26	Intermittent Energy Harvesting Improves the Performance of Microbial Fuel Cells. <i>Environmental Science & Technology</i> , 2009, 43, 4600-4605.	4.6	87
27	Measurement of local mass transfer coefficient in biofilms. <i>Biotechnology and Bioengineering</i> , 1995, 48, 737-744.	1.7	84
28	Evaluation of biofilm image thresholding methods. <i>Water Research</i> , 2001, 35, 1149-1158.	5.3	84
29	Corrosion of mild steel underneath aerobic biofilms containing sulfate-reducing bacteria part II: At high dissolved oxygen concentration. <i>Biofouling</i> , 1993, 7, 217-239.	0.8	67
30	Corrosion of mild steel underneath aerobic biofilms containing sulfate-reducing bacteria part I: At low dissolved oxygen concentration. <i>Biofouling</i> , 1993, 7, 197-216.	0.8	63
31	Relationship between mass transfer coefficient and liquid flow velocity in heterogenous biofilms using microelectrodes and confocal microscopy. , 1997, 56, 681-688.		63
32	Iridium oxide pH microelectrode. <i>Biotechnology and Bioengineering</i> , 1992, 40, 601-608.	1.7	61
33	Electrochemical interactions of biofilms with metal surfaces. <i>Water Science and Technology</i> , 1997, 36, 295-302.	1.2	54
34	Corrosion of mild steel in an alternating oxic and anoxic biofilm system. <i>Biofouling</i> , 1993, 7, 267-284.	0.8	50
35	Growing reproducible biofilms with respect to structure and viable cell counts. <i>Journal of Microbiological Methods</i> , 2001, 47, 1-10.	0.7	47
36	The Biofilm Lifestyle. <i>Advances in Dental Research</i> , 1997, 11, 192-195.	3.6	40

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37	Dynamics of lead immobilization in sulfate reducing biofilms. <i>Water Research</i> , 2004, 38, 2726-2736.	5.3	34
38	Resistance of biofilms to the catalase inhibitor 3-amino-1,2,4-triazole. , 1998, 59, 156-162.		32
39	An electrochemical technique to measure local flow velocity in biofilms. <i>Water Research</i> , 1998, 32, 3631-3636.	5.3	28
40	Mass-transport dynamics, activity, and structure of sulfate-reducing biofilms. <i>AIChE Journal</i> , 2001, 47, 1689-1697.	1.8	28
41	Development of an artificial biofilm to study the effects of a single microcolony on mass transport. <i>Journal of Microbiological Methods</i> , 1996, 26, 161-169.	0.7	25
42	Physiological and chemical gradients in a <i>Pseudomonas putida</i> 54G biofilm degrading toluene in a flat plate vapor phase bioreactor. , 1997, 56, 361-371.		23
43	Biofilm image reconstruction for assessing structural parameters. <i>Biotechnology and Bioengineering</i> , 2011, 108, 1383-1394.	1.7	23
44	Determining the optimal transmembrane gas pressure for nitrification in membrane-aerated biofilm reactors based on oxygen profile analysis. <i>Applied Microbiology and Biotechnology</i> , 2016, 100, 7699-7711.	1.7	22
45	Resistance of biofilms containing alginate-producing bacteria to disintegration by an alginate degrading enzyme (AlgI). <i>Biofouling</i> , 2001, 17, 203-210.	0.8	18
46	Quantifying selected growth parameters of <i>Leptothrix discophora</i> SP-6 in biofilms from oxygen concentration profiles. <i>Chemical Engineering Science</i> , 2003, 58, 4557-4566.	1.9	18
47	The influence of environmental factors on the rate and extent of stainless steel ennoblement mediated by manganese-oxidizing biofilms. <i>Biofouling</i> , 2001, 17, 241-251.	0.8	17
48	The accuracy of oxygen flux measurements using microelectrodes. <i>Water Research</i> , 1998, 32, 3747-3755.	5.3	15
49	Fiber-optic microsensors to measure backscattered light intensity in biofilms. <i>Applied Optics</i> , 2000, 39, 3408.	2.1	15
50	Multiple Substrate Growth Kinetics of <i>Leptothrix discophora</i> SP-6. <i>Biotechnology Progress</i> , 2002, 18, 994-1002.	1.3	13
51	Two-step startup improves pollutant removal in membrane-aerated biofilm reactors treating high-strength nitrogenous wastewater. <i>Environmental Science: Water Research and Technology</i> , 2019, 5, 39-50.	1.2	13
52	Resistance of biofilms to the catalase inhibitor 3-amino-1,2,4-triazole. , 1998, 60, 135-135.		11
53	[23] Limiting-current-type microelectrodes for quantifying mass transport dynamics in biofilmst. <i>Methods in Enzymology</i> , 2001, 337, 339-359.	0.4	8
54	Energy harvest with microbial fuel cell and power management system. , 2009, , .		7

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55	New microbial fuel cell power system for efficiency improvement. , 2011, , .		3
56	Structural deformation of bacterial biofilms caused by short-term fluctuations in fluid shear: An in situ investigation of biofilm rheology. , 1999, 65, 83.		3
57	Structural deformation of bacterial biofilms caused by short-term fluctuations in fluid shear: An in situ investigation of biofilm rheology. , 1999, 65, 83.		2
58	Characterizing temporal development of biofilm porosity using artificial neural networks. Water Science and Technology, 2008, 57, 1867-1872.	1.2	1
59	Relationship between mass transfer coefficient and liquid flow velocity in heterogenous biofilms using microelectrodes and confocal microscopy. , 1997, 56, 681.		1
60	Structural deformation of bacterial biofilms caused by short-term fluctuations in fluid shear: An in situ investigation of biofilm rheology. , 1999, 65, 83.		1