Jeremy D Semrau

List of Publications by Year
in descending order

91 papers	4,669 citations	81743 39 h-index	102304 66 g-index
96 all docs	96 docs citations	96 times ranked	3062 citing authors

#	Article	IF	Citations
1	Methanotrophs and copper. FEMS Microbiology Reviews, 2010, 34, 496-531.	3.9	617
2	Methylocapsa acidiphila gen. nov., sp. nov., a novel methane-oxidizing and dinitrogen-fixing acidophilic bacterium from Sphagnum bog.. International Journal of Systematic and Evolutionary Microbiology, 2002, 52, 251-261.	0.8	240
3	The Membrane-Associated Methane Monooxygenase (pMMO) and pMMO-NADH:Quinone Oxidoreductase Complex from Methylococcus capsulatus Bath. Journal of Bacteriology, 2003, 185, 5755-5764.	1.0	196
4	Methane and Trichloroethylene Degradation by Methylosinus trichosporium OB3b Expressing Particulate Methane Monooxygenase. Applied and Environmental Microbiology, 1998, 64, 1106-1114.	1.4	144
5	Methanobactin and the Link between Copper and Bacterial Methane Oxidation. Microbiology and Molecular Biology Reviews, 2016, 80, 387-409.	2.9	118
6	Metals and Methanotrophy. Applied and Environmental Microbiology, 2018, 84, .	1.4	112
7	Methanobactin and <scp>MmoD</scp> work in concert to act as the â€˜copperâ€switchâ€™ in methanotrophs. Environmental Microbiology, 2013, 15, 3077-3086.	1.8	108
8	Spectral and thermodynamic properties of Ag(I), Au(III), Cd(II), Co(II), Fe(III), Hg(II), Mn(II), Ni(II), Pb(II), U(IV), and Zn(II) binding by methanobactin from Methylosinus trichosporium OB3b. Journal of Inorganic Biochemistry, 2006, 100, 2150-2161.	1.5	106
9	MÃ¶ssbauer Studies of the Membrane-Associated Methane Monooxygenase from Methylococcus capsulatus Bath:â€‰ Evidence for a Diiron Center. Journal of the American Chemical Society, 2007, 129, 15783-15785.	6.6	106
10	Spectral, Kinetic, and Thermodynamic Properties of Cu(I) and Cu(II) Binding by Methanobactin fromMethylosinus trichosporiumOB3bâ€. Biochemistry, 2006, 45, 1442-1453.	1.2	105
11	An X-ray absorption spectroscopy study of the structure and reversibility of copper adsorbed to montmorillonite clay. Geochimica Et Cosmochimica Acta, 2001, 65, 2709-2722.	1.6	102
12	Genome Sequence of the Obligate Methanotroph Methylosinus trichosporium Strain OB3b. Journal of Bacteriology, 2010, 192, 6497-6498.	1.0	98
13	Facultative methanotrophy: false leads, true results, and suggestions for future research. FEMS Microbiology Letters, 2011, 323, 1-12.	0.7	95
14	A Comparison of Methanobactins from Methylosinus trichosporium OB3b and Methylocystis Strain SB2 Predicts Methanobactins Are Synthesized from Diverse Peptide Precursors Modified To Create a Common Core for Binding and Reducing Copper Ions. Biochemistry, 2010, 49, 10117-10130.	1.2	91
15	Mixed Pollutant Degradation by Methylosinus trichosporium OB3b Expressing either Soluble or Particulate Methane Monooxygenase: Can the Tortoise Beat the Hare?. Applied and Environmental Microbiology, 2006, 72, 7503-7509.	1.4	90
16	Characterization of a novel facultative Methylocystis species capable of growth on methane, acetate and ethanol. Environmental Microbiology Reports, 2011, 3, 174-181.	1.0	85
17	Evidence for a copper-dependent iron transport system in the marine, magnetotactic bacterium strain MV-1. Microbiology (United Kingdom), 2004, 150, 2931-2945.	0.7	81
18	Cerium Regulates Expression of Alternative Methanol Dehydrogenases in Methylosinus trichosporium OB3b. Applied and Environmental Microbiology, 2015, 81, 7546-7552.	1.4	78

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19	Methylmercury uptake and degradation by methanotrophs. Science Advances, 2017, 3, e1700041.	4.7	78
20	Genome Sequence of the Haloalkaliphilic Methanotrophic Bacterium Methylomicrobium alcaliphilum 20Z. Journal of Bacteriology, 2012, 194, 551-552.	1.0	72
21	Bioremediation via Methanotrophy: Overview of Recent Findings and Suggestions for Future Research. Frontiers in Microbiology, 2011, 2, 209.	1.5	71
22	Effect of methanobactin on the activity and electron paramagnetic resonance spectra of the membrane-associated methane monooxygenase in Methylococcus capsulatus Bath. Microbiology (United Kingdom), 2005, 151, 3417-3426.	0.7	69
23	Characterization of methanotrophic bacteria on the basis of intact phospholipid profiles. FEMS Microbiology Letters, 2000, 189, 67-72.	0.7	68
24	The role of copper in the pMMO of Methylococcus capsulatus Bath: A structural vs. catalytic function. Journal of Inorganic Biochemistry, 1995, 58, 235-244.	1.5	66
25	Copper and cerium-regulated gene expression in Methylosinus trichosporium OB3b. Applied Microbiology and Biotechnology, 2017, 101, 8499-8516.	1.7	65
26	Current knowledge of microbial community structures in landfills and its cover soils. Applied Microbiology and Biotechnology, 2011, 89, 961-969.	1.7	64
27	Genomic and Transcriptomic Analyses of the Facultative Methanotroph Methylocystis sp. Strain SB2 Grown on Methane or Ethanol. Applied and Environmental Microbiology, 2014, 80, 3044-3052.	1.4	62
28	Oxidase, superoxide dismutase, and hydrogen peroxide reductase activities of methanobactin from types I and II methanotrophs. Journal of Inorganic Biochemistry, 2008, 102, 1571-1580.	1.5	56
29	Genome Sequence of the Methanotrophic Alphaproteobacterium Methylocystis sp. Strain Rockwell (ATCC 49242). Journal of Bacteriology, 2011, 193, 2668-2669.	1.0	55
30	Effect of nutrient and selective inhibitor amendments on methane oxidation, nitrous oxide production, and key gene presence and expression in landfill cover soils: characterization of the role of methanotrophs, nitrifiers, and denitrifiers. Applied Microbiology and Biotechnology, 2009, 85, 389-403.	1.7	52
31	A High-Calorie Diet Aggravates Mitochondrial Dysfunction and Triggers Severe Liver Damage in Wilson Disease Rats. Cellular and Molecular Gastroenterology and Hepatology, 2019, 7, 571-596.	2.3	50
32	Life in the extreme: thermoacidophilic methanotrophy. Trends in Microbiology, 2008, 16, 190-193.	3.5	49
33	Feasibility of atmospheric methane removal using methanotrophic biotrickling filters. Applied Microbiology and Biotechnology, 2009, 83, 949-956.	1.7	49
34	Spectral and thermodynamic properties of methanobactin from Î³-proteobacterial methane oxidizing bacteria: A case for copper competition on a molecular level. Journal of Inorganic Biochemistry, 2010, 104, 1240-1247.	1.5	46
35	Differential inhibitionin vivoof ammonia monooxygenase, soluble methane monooxygenase and membrane-associated methane monooxygenase by phenylacetylene. Environmental Microbiology, 2000, 2, 485-494.	1.8	45
36	Detoxification of Mercury by Methanobactin from Methylosinus trichosporium OB3b. Applied and Environmental Microbiology, 2013, 79, 5918-5926.	1.4	45

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37	Quantification of gene expression in methanotrophs by competitive reverse transcription-polymerase chain reaction. Environmental Microbiology, 2004, 6, 388-399.	1.8	43
38	An assay for screening microbial cultures for chalkophore production. Environmental Microbiology Reports, 2010, 2, 295-303.	1.0	43
39	Draft Genome Sequence of the Volcano-Inhabiting Thermoacidophilic Methanotroph Methylacidiphilum fumariolicum Strain SolV. Journal of Bacteriology, 2012, 194, 3729-3730.	1.0	43
40	A TonB-Dependent Transporter Is Responsible for Methanobactin Uptake by Methylosinus trichosporium OB3b. Applied and Environmental Microbiology, 2016, 82, 1917-1923.	1.4	43
41	Uptake and effect of rare earth elements on gene expression inMethylosinus trichosporiumOB3b. FEMS Microbiology Letters, 2016, 363, fnw129.	0.7	40
42	Spectral and copper binding properties of methanobactin from the facultative methanotroph Methylocystis strain SB2. Journal of Inorganic Biochemistry, 2012, 110, 72-82.	1.5	39
43	Pollutant degradation by a Methylocystis strain SB2 grown on ethanol: bioremediation via facultative methanotrophy. FEMS Microbiology Letters, 2011, 318, 137-142.	0.7	37
44	Draft Genome Sequence of Methylomicrobium buryatense Strain 5G, a Haloalkaline-Tolerant Methanotrophic Bacterium. Genome Announcements, 2013, 1, .	0.8	36
45	Methanobactin from Methylosinus trichosporium OB3b inhibits N2O reduction in denitrifiers. ISME Journal, 2018, 12, 2086-2089.	4.4	35
46	Effect of Copper Speciation on Whole-Cell Soluble Methane Monooxygenase Activity in Methylosinus trichosporium OB3b. Applied and Environmental Microbiology, 2000, 66, 1730-1733.	1.4	34
47	Isolation of Methanobactin from the Spent Media of Methane-Oxidizing Bacteria. Methods in Enzymology, 2011, 495, 259-269.	0.4	34
48	Mercury binding by methanobactin from Methylocystis strain SB2. Journal of Inorganic Biochemistry, 2014, 141, 161-169.	1.5	32
49	Identification of intermediates of in vivo trichloroethylene oxidation by the membrane-associated methane monooxygenase. FEMS Microbiology Letters, 2000, 186, 109-113.	0.7	30
50	Constitutive expression of pMMO by Methylocystis strain SB2 when grown on multiâ€carbon substrates: implications for biodegradation of chlorinated ethenes. Environmental Microbiology Reports, 2011, 3, 182-188.	1.0	29
51	Chloromethane stimulates growth ofMethylomicrobium albumBG8 on methanol. FEMS Microbiology Letters, 2000, 187, 77-81.	0.7	25
52	Monte Carlo Analysis of Uncertainty Attached to Microbial Pollutant Degradation Rates. Environmental Science & Technology, 2001, 35, 3924-3930.	4.6	25
53	Methanobactin from Methylocystis sp. Strain SB2 Affects Gene Expression and Methane Monooxygenase Activity in Methylosinus trichosporium OB3b. Applied and Environmental Microbiology, 2015, 81, 2466-2473.	1.4	25
54	Dichloromethane and trichloroethylene inhibition of methane oxidation by the membrane-associated methane monooxygenase of Methylosinus trichosporium OB3b. Archives of Microbiology, 1999, 171, 301-308.	1.0	24

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55	Transformation of ortho -substituted biphenyls by Methylosinus trichosporium OB3b: substituent effects on oxidation kinetics and product formation. Archives of Microbiology, 2000, 174, 35-41.	1.0	24
56	Bioavailability of Chelated and Soil-Adsorbed Copper toMethylosinus trichosporiumOB3b. Environmental Science & Technology, 2000, 34, 4917-4922.	4.6	24
57	Competition between Metals for Binding to Methanobactin Enables Expression of Soluble Methane Monooxygenase in the Presence of Copper. Applied and Environmental Microbiology, 2015, 81, 1024-1031.	1.4	24
58	Marker Exchange Mutagenesis of mxaF , Encoding the Large Subunit of the Mxa Methanol Dehydrogenase, in Methylosinus trichosporium OB3b. Applied and Environmental Microbiology, 2016, 82, 1549-1555.	1.4	24
59	Draft Genome Sequences of Gammaproteobacterial Methanotrophs Isolated from Marine Ecosystems. Genome Announcements, 2016, 4, .	0.8	23
60	An Aminotransferase Is Responsible for the Deamination of the N-Terminal Leucine and Required for Formation of Oxazolone Ring A in Methanobactin of Methylosinus trichosporium OB3b. Applied and Environmental Microbiology, 2017, 83, .	1.4	23
61	Methanobactin from methanotrophs: genetics, structure, function and potential applications. FEMS Microbiology Letters, 2020, 367, .	0.7	23
62	Field application of nitrogen and phenylacetylene to mitigate greenhouse gas emissions from landfill cover soils: effects on microbial community structure. Applied Microbiology and Biotechnology, 2011, 89, 189-200.	1.7	19
63	Evidence for methanobactin â€œTheftâ€•and novel chalkophore production in methanotrophs: impact on methanotrophic-mediated methylmercury degradation. ISME Journal, 2022, 16, 211-220.	4.4	18
64	Measurement and modeling of multiple substrate oxidation by methanotrophs at 20Ã¢Â€Âƒ Ã‚Â°C. FEMS Microbiology Letters, 2008, 287, 156-162.	0.7	17
65	Carbon source regulation of gene expression in Methylosinus trichosporium OB3b. Applied Microbiology and Biotechnology, 2017, 101, 3871-3879.	1.7	16
66	A Simple Assay for Screening Microorganisms for Chalkophore Production. Methods in Enzymology, 2011, 495, 247-258.	0.4	14
67	The origin of aerobic methanotrophy within the Proteobacteria. FEMS Microbiology Letters, 2019, 366, .	0.7	14
68	Human Health Benefits from Fish Consumption vs. Risks from Inhalation Exposures Associated with Contaminated Sediment Remediation: Dredging of the Hudson River. Environmental Health Perspectives, 2019, 127, 127004.	2.8	13
69	Synergistic Effects of a Chalkophore, Methanobactin, on Microbial Methylation of Mercury. Applied and Environmental Microbiology, 2020, 86, .	1.4	12
70	Enhancement of Nitrous Oxide Emissions in Soil Microbial Consortia via Copper Competition between Proteobacterial Methanotrophs and Denitrifiers. Applied and Environmental Microbiology, 2021, 87, e0230120.	1.4	12
71	Characterization of the role of copCD in copper uptake and the â€˜copper-switchâ€™ in Methylosinus trichosporium OB3b. FEMS Microbiology Letters, 2017, 364, .	0.7	11
72	Characterization of a Mixed Methanotrophic Culture Capable of Chloroethylene Degradation. Environmental Engineering Science, 2005, 22, 177-186.	0.8	10

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73	Priority pollutant degradation by the facultative methanotroph, Methylocystis strain SB2. Applied Microbiology and Biotechnology, 2013, 97, 5089-5096.	1.7	10
74	Dredging Contaminated Sediments: Is it Worth the Risks?. Environmental Toxicology and Chemistry, 2020, 39, 515-515.	2.2	10
75	QUANTITATIVE STRUCTUREâ€“BIODEGRADATION RELATIONSHIPS FOR ORTHO-SUBSTITUTED BIPHENYL COMPOUNDS OXIDIZED BY METHYLOSINUS TRICHOSPORIUM OB3b. Environmental Toxicology and Chemistry, 2003, 22, 2251.	2.2	9
76	A field trial of nutrient stimulation of methanotrophs to reduce greenhouse gas emissions from landfill cover soils. Journal of the Air and Waste Management Association, 2013, 63, 300-309.	0.9	9
77	Oxygen Generation via Water Splitting by a Novel Biogenic Metal Ion-Binding Compound. Applied and Environmental Microbiology, 2021, 87, e0028621.	1.4	8
78	Draft Genome Sequences of Two Gammaproteobacterial Methanotrophs Isolated from Rice Ecosystems. Genome Announcements, 2017, 5, .	0.8	8
79	Substituent effects on the oxidation of substituted biphenyl congeners by type II methanotroph strain CSC1. Archives of Microbiology, 2005, 183, 266-276.	1.0	7
80	Graham Scholars Program: sustainability education through an interdisciplinary international case study. Sustainability Science, 2009, 4, 29-36.	2.5	7
81	Two TonB-Dependent Transporters in Methylosinus trichosporium OB3b Are Responsible for Uptake of Different Forms of Methanobactin and Are Involved in the Canonical â€œCopper Switchâ€• Applied and Environmental Microbiology, 2022, 88, AEM0179321.	1.4	7
82	MbnC Is Not Required for the Formation of the N-Terminal Oxazolone in the Methanobactin from Methylosinus trichosporium OB3b. Applied and Environmental Microbiology, 2022, 88, AEM0184121.	1.4	5
83	Variable Inhibition of Nitrous Oxide Reduction in Denitrifying Bacteria by Different Forms of Methanobactin. Applied and Environmental Microbiology, 2022, , e0234621.	1.4	3
84	Diffusion of <scp>H₂S</scp> from anaerobic thiolated ligand biodegradation rapidly generates bioavailable mercury. Environmental Microbiology, 2022, 24, 3212-3228.	1.8	3
85	Microbial Fouling of a Reverse Osmosis Municipal Water Treatment System. Water Environment Research, 2008, 80, 703-707.	1.3	2
86	Spectroscopic and computational investigations of organometallic complexation of group 12 transition metals by methanobactins from Methylocystis sp. SB2. Journal of Inorganic Biochemistry, 2021, 223, 111496.	1.5	2
87	Methanotrophy - Environmental, Industrial and Medical Applications. Current Issues in Molecular Biology, 2019, 33, 1-22.	1.0	2
88	Quantitative Community Analysis: Capillary Electrophoresis Techniques. Methods in Enzymology, 2005, 397, 329-337.	0.4	1
89	Complete Genome Sequences of Two Gammaproteobacterial Methanotrophs Isolated from a Mercury-Contaminated Stream. Microbiology Resource Announcements, 2021, 10, .	0.3	1
90	Methanobactin: A Novel Copper-Binding Compound Produced by Methanotrophs. Microbiology Monographs, 2019, , 205-229.	0.3	1

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91	Updated Genome Sequence of the Facultative Methanotroph Methylocystis sp. Strain SB2. Microbiology Resource Announcements, 2022, , e0018822.	0.3	0