Rainer U Meckenstock

List of Publications by Year
in descending order

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76
papers

5,014
citations

87888
38
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91884
69
g-index

79
all docs

79
docs citations

79
times ranked

4507
citing authors

#	Article	IF	Citations
1	Remediation of zinc-contaminated groundwater by iron oxide in situ adsorption barriers â€“ From lab to the field. Science of the Total Environment, 2022, 807, 151066.	8.0	18
2	Inhibition of sulfate-reducing bacteria with formate. FEMS Microbiology Ecology, 2022, 98, .	2.7	4
3	In Situ Remediation of Arsenic-Contaminated Groundwater by Injecting an Iron Oxide Nanoparticle-Based Adsorption Barrier. Water (Switzerland), 2022, 14, 1998.	2.7	3
4	Field-scale demonstration of in situ immobilization of heavy metals by injecting iron oxide nanoparticle adsorption barriers in groundwater. Journal of Contaminant Hydrology, 2021, 237, 103741.	3.3	22
5	Ammonium Removal in Aquaponics Indicates Participation of Comammox Nitrospira. Current Microbiology, 2021, 78, 894-903.	2.2	12
6	Marine sediments harbor diverse archaea and bacteria with the potential for anaerobic hydrocarbon degradation via fumarate addition. FEMS Microbiology Ecology, 2021, 97, .	2.7	13
7	Determinants for Substrate Recognition in the Glycyl Radical Enzyme Benzylsuccinate Synthase Revealed by Targeted Mutagenesis. ACS Catalysis, 2021, 11, 3361-3370.	11.2	10
8	Microbial Hotspots in Lithic Microhabitats Inferred from DNA Fractionation and Metagenomics in the Atacama Desert. Microorganisms, 2021, 9, 1038.	3.6	19
9	Microbial Degradation Rates of Natural Bitumen. Environmental Science & Technology, 2021, 55, 8700-8708.	10.0	3
10	Organic Matter from Redoximorphic Soils Accelerates and Sustains Microbial Fe(III) Reduction. Environmental Science & Technology, 2021, 55, 10821-10831.	10.0	22
11	Aryl Coenzyme A Ligases, a Subfamily of the Adenylate-Forming Enzyme Superfamily. Applied and Environmental Microbiology, 2021, 87, e0069021.	3.1	5
12	OUP accepted manuscript. FEMS Microbiology Ecology, 2021, , .	2.7	7
13	Groundwater cable bacteria conserve energy by sulfur disproportionation. ISME Journal, 2020, 14, 623-634.	9.8	64
14	Densely Populated Water Droplets in Heavy-Oil Seeps. Applied and Environmental Microbiology, 2020, 86, .	3.1	12
15	A Large-Scale 3D Study on Transport of Humic Acid-Coated Goethite Nanoparticles for Aquifer Remediation. Water (Switzerland), 2020, 12, 1207.	2.7	20
16	Adaptation of Carbon Source Utilization Patterns of Geobacter metallireducens During Sessile Growth. Frontiers in Microbiology, 2020, 11, 1271.	3.5	3
17	Cable bacteria reduce methane emissions from rice-vegetated soils. Nature Communications, 2020, 11, 1878.	12.8	44
18	The 5,6,7,8-Tetrahydro-2-Naphthoyl-Coenzyme A Reductase Reaction in the Anaerobic Degradation of Naphthalene and Identification of Downstream Metabolites. Applied and Environmental Microbiology, 2020, 86, .	3.1	8

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19	Mass Transfer Limitation during Slow Anaerobic Biodegradation of 2-Methylnaphthalene. Environmental Science & Technology, 2019, 53, 9481-9490.	10.0	18
20	Quantification of microbial degradation activities in biological activated carbon filters by reverse stable isotope labelling. AMB Express, 2019, 9, 109.	3.0	9
21	Metabolic reconstruction of the genome of candidate <i>Desulfatiglans</i> TRIP_1 and identification of key candidate enzymes for anaerobic phenanthrene degradation. Environmental Microbiology, 2019, 21, 1267-1286.	3.8	31
22	The rhizosphere of aquatic plants is a habitat for cable bacteria. FEMS Microbiology Ecology, 2019, 95, .	2.7	33
23	Identification of naphthalene carboxylase subunits of the sulfate-reducing culture N47. Biodegradation, 2019, 30, 147-160.	3.0	17
24	Applying reverse stable isotope labeling analysis by mid-infrared laser spectroscopy to monitor BDOC in recycled wastewater. Science of the Total Environment, 2019, 665, 1064-1072.	8.0	7
25	Oil reservoirs, an exceptional habitat for microorganisms. New Biotechnology, 2019, 49, 1-9.	4.4	134
26	Biological effects of four iron-containing nanoremediation materials on the green alga Chlamydomonas sp.. Ecotoxicology and Environmental Safety, 2018, 154, 36-44.	6.0	23
27	Efficient removal of arsenate from oxic contaminated water by colloidal humic acid-coated goethite: Batch and column experiments. Journal of Cleaner Production, 2018, 189, 510-518.	9.3	32
28	Anaerobic degradation of 1-methylnaphthalene by a member of the Thermoanaerobacteraceae contained in an iron-reducing enrichment culture. Biodegradation, 2018, 29, 23-39.	3.0	35
29	Fermentative Spirochaetes mediate necromass recycling in anoxic hydrocarbon-contaminated habitats. ISME Journal, 2018, 12, 2039-2050.	9.8	74
30	Anaerobic degradation of phenanthrene by a sulfateâ€reducing enrichment culture. Environmental Microbiology, 2018, 20, 3589-3600.	3.8	45
31	Reconstructing metabolic pathways of a member of the genus <i>Pelotomaculum</i> suggesting its potential to oxidize benzene to carbon dioxide with direct reduction of sulfate. FEMS Microbiology Ecology, 2017, 93, fiw254.	2.7	13
32	Monitoring Microbial Mineralization Using Reverse Stable Isotope Labeling Analysis by Mid-Infrared Laser Spectroscopy. Environmental Science & Technology, 2017, 51, 11876-11883.	10.0	16
33	Rectinema cohabitans gen. nov., sp. nov., a rod-shaped spirochaete isolated from an anaerobic naphthalene-degrading enrichment culture. International Journal of Systematic and Evolutionary Microbiology, 2017, 67, 1288-1295.	1.7	35
34	Conversion of <i>cis</i>â€2â€carboxycyclohexylacetylâ€CoA in the downstream pathway of anaerobic naphthalene degradation. Environmental Microbiology, 2017, 19, 2819-2830.	3.8	16
35	Long-distance electron transfer by cable bacteria in aquifer sediments. ISME Journal, 2016, 10, 2010-2019.	9.8	107
36	Anaerobic Degradation of Benzene and Polycyclic Aromatic Hydrocarbons. Journal of Molecular Microbiology and Biotechnology, 2016, 26, 92-118.	1.0	218

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37	Biodegradation: Updating the Concepts of Control for Microbial Cleanup in Contaminated Aquifers. Environmental Science & Technology, 2015, 49, 7073-7081.	10.0	211
38	Exploring the Potential of Stable Isotope (Resonance) Raman Microspectroscopy and Surface-Enhanced Raman Scattering for the Analysis of Microorganisms at Single Cell Level. Analytical Chemistry, 2015, 87, 6622-6630.	6.5	59
39	Selective elimination of bacterial faecal indicators in the Schmutzdecke of slow sand filtration columns. Applied Microbiology and Biotechnology, 2015, 99, 10323-10332.	3.6	24
40	Size- and Composition-Dependent Toxicity of Synthetic and Soil-Derived Fe Oxide Colloids for the Nematode<i>Caenorhabditis elegans</i>. Environmental Science & Technology, 2015, 49, 544-552.	10.0	36
41	Model selection for microbial nutrient uptake using a cost-benefit approach. Mathematical Biosciences, 2014, 255, 52-70.	1.9	2
42	Water droplets in oil are microhabitats for microbial life. Science, 2014, 345, 673-676.	12.6	118
43	Physiology of Geobacter metallireducens under excess and limitation of electron donors. Part I. Batch cultivation with excess of carbon sources. Systematic and Applied Microbiology, 2014, 37, 277-286.	2.8	19
44	Physiology of Geobacter metallireducens under excess and limitation of electron donors. Part II. Mimicking environmental conditions during cultivation in retentostats. Systematic and Applied Microbiology, 2014, 37, 287-295.	2.8	24
45	Citrate influences microbial Fe hydroxide reduction via a dissolutionâ€“disaggregation mechanism. Geochimica Et Cosmochimica Acta, 2014, 139, 434-446.	3.9	19
46	Iron oxide nanoparticles in geomicrobiology: from biogeochemistry to bioremediation. New Biotechnology, 2013, 30, 793-802.	4.4	104
47	Identification and characterization of 2â€naphthoylâ€coenzyme A reductase, the prototype of a novel class of dearomatizing reductases. Molecular Microbiology, 2013, 88, 1032-1039.	2.5	52
48	<scp>ATP</scp>â€dependent/â€independent enzymatic ring reductions involved in the anaerobic catabolism of naphthalene. Environmental Microbiology, 2013, 15, 1832-1841.	3.8	35
49	Reevaluation of colorimetric iron determination methods commonly used in geomicrobiology. Journal of Microbiological Methods, 2012, 89, 41-48.	1.6	70
50	Fast microbial reduction of ferrihydrite colloids from a soil effluent. Geochimica Et Cosmochimica Acta, 2012, 77, 444-456.	3.9	27
51	Transport of Ferrihydrite Nanoparticles in Saturated Porous Media: Role of Ionic Strength and Flow Rate. Environmental Science & Technology, 2012, 46, 4008-4015.	10.0	114
52	Identification of naphthalene carboxylase as a prototype for the anaerobic activation of nonâ€substituted aromatic hydrocarbons. Environmental Microbiology, 2012, 14, 2770-2774.	3.8	79
53	Dual (C, H) Isotope Fractionation in Anaerobic Low Molecular Weight (Poly)aromatic Hydrocarbon (PAH) Degradation: Potential for Field Studies and Mechanistic Implications. Environmental Science & Technology, 2011, 45, 6947-6953.	10.0	46
54	Genomic insights into the metabolic potential of the polycyclic aromatic hydrocarbon degrading sulfateâ€reducing <i>Deltaproteobacterium</i> N47. Environmental Microbiology, 2011, 13, 1125-1137.	3.8	66

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55	Anaerobic naphthalene degradation by Gram-positive, iron-reducing bacteria. FEMS Microbiology Ecology, 2011, 78, 488-496.	2.7	55
56	Identification of new enzymes potentially involved in anaerobic naphthalene degradation by the sulfate-reducing enrichment culture N47. Archives of Microbiology, 2011, 193, 241-250.	2.2	71
57	Anaerobic degradation of non-substituted aromatic hydrocarbons. Current Opinion in Biotechnology, 2011, 22, 406-414.	6.6	175
58	DNA-SIP identifies sulfate-reducing <i>Clostridia</i> as important toluene degraders in tar-oil-contaminated aquifer sediment. ISME Journal, 2010, 4, 1314-1325.	9.8	101
59	Identification of enzymes involved in anaerobic benzene degradation by a strictly anaerobic ironâ€reducing enrichment culture. Environmental Microbiology, 2010, 12, 2783-2796.	3.8	152
60	Desulfitobacterium aromaticivorans sp. nov. and Geobacter toluenoxydans sp. nov., iron-reducing bacteria capable of anaerobic degradation of monoaromatic hydrocarbons. International Journal of Systematic and Evolutionary Microbiology, 2010, 60, 686-695.	1.7	113
61	Combined Genomic and Proteomic Approaches Identify Gene Clusters Involved in Anaerobic 2-Methylnaphthalene Degradation in the Sulfate-Reducing Enrichment Culture N47. Journal of Bacteriology, 2010, 192, 295-306.	2.2	101
62	Nanosized Ferrihydrite Colloids Facilitate Microbial Iron Reduction under Flow Conditions. Geomicrobiology Journal, 2010, 27, 123-129.	2.0	23
63	Nanosized Iron Oxide Colloids Strongly Enhance Microbial Iron Reduction. Applied and Environmental Microbiology, 2010, 76, 184-189.	3.1	96
64	Anaerobic degradation of the aromatic hydrocarbon biphenyl by a sulfate-reducing enrichment culture. FEMS Microbiology Ecology, 2009, 68, 86-93.	2.7	40
65	Anaerobic benzene degradation by Gram-positive sulfate-reducing bacteria. FEMS Microbiology Ecology, 2009, 68, 300-311.	2.7	94
66	Effects of Humic Substances and Quinones at Low Concentrations on Ferrihydrite Reduction by <i>Geobacter metallireducens</i>. Environmental Science & Technology, 2009, 43, 5679-5685.	10.0	180
67	Depth-Resolved Quantification of Anaerobic Toluene Degraders and Aquifer Microbial Community Patterns in Distinct Redox Zones of a Tar Oil Contaminant Plume. Applied and Environmental Microbiology, 2008, 74, 792-801.	3.1	183
68	The use of stable isotope probing to identify key iron-reducing microorganisms involved in anaerobic benzene degradation. ISME Journal, 2007, 1, 643-653.	9.8	184
69	Enzymatic reactions in anaerobic 2-methylnaphthalene degradation by the sulphate-reducing enrichment culture N 47. FEMS Microbiology Letters, 2004, 240, 99-104.	1.8	38
70	Degradation of o -xylene and m -xylene by a novel sulfate-reducer belonging to the genus Desulfotomaculum. Archives of Microbiology, 2004, 181, 407-417.	2.2	119
71	Compound-specific stable isotope analysis of organic contaminants in natural environments: a critical review of the state of the art, prospects, and future challenges. Analytical and Bioanalytical Chemistry, 2004, 378, 283-300.	3.7	319
72	Anaerobic degradation of polycyclic aromatic hydrocarbons. FEMS Microbiology Ecology, 2004, 49, 27-36.	2.7	170

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73	Identical Ring Cleavage Products during Anaerobic Degradation of Naphthalene, 2-Methylnaphthalene, and Tetralin Indicate a New Metabolic Pathway. Applied and Environmental Microbiology, 2002, 68, 852-858.	3.1	134
74	The use of a solid adsorber resin for enrichment of bacteria with toxic substrates and to identify metabolites: degradation of naphthalene, o-, and m-xylene by sulfate-reducing bacteria. Journal of Microbiological Methods, 2001, 44, 183-191.	1.6	45
75	Anaerobic Naphthalene Degradation by a Sulfate-Reducing Enrichment Culture. Applied and Environmental Microbiology, 2000, 66, 2743-2747.	3.1	223
76	Anaerobic Degradation of 2-Methylnaphthalene by a Sulfate-Reducing Enrichment Culture. Applied and Environmental Microbiology, 2000, 66, 5329-5333.	3.1	140