Marcus Elvert

List of Publications by Year
in descending order

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90 papers	7,727 citations	66343 42 h-index	54911 84 g-index
99 all docs	99 docs citations	99 times ranked	5701 citing authors

#	Article	IF	Citations
1	Heterotrophic Archaea dominate sedimentary subsurface ecosystems off Peru. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 3846-3851.	7.1	654
2	Novel microbial communities of the Haakon Mosby mud volcano and their role as a methane sink. Nature, 2006, 443, 854-858.	27.8	570
3	Intact polar membrane lipids in prokaryotes and sediments deciphered by high-performance liquid chromatography/electrospray ionization multistage mass spectrometryâ€"new biomarkers for biogeochemistry and microbial ecology. Rapid Communications in Mass Spectrometry, 2004, 18, 617-628.	1.5	466
4	Exploring deep microbial life in coal-bearing sediment down to ~2.5 km below the ocean floor. Science, 2015, 349, 420-424.	12.6	376
5	In vitro cell growth of marine archaeal-bacterial consortia during anaerobic oxidation of methane with sulfate. Environmental Microbiology, 2007, 9, 187-196.	3.8	294
6	Characterization of Specific Membrane Fatty Acids as Chemotaxonomic Markers for Sulfate-Reducing Bacteria Involved in Anaerobic Oxidation of Methane. Geomicrobiology Journal, 2003, 20, 403-419.	2.0	222
7	Anaerobic methane oxidation associated with marine gas hydrates: superlight C-isotopes from saturated and unsaturated C 20 and C 25 irregular isoprenoids. Die Naturwissenschaften, 1999, 86, 295-300.	1.6	212
8	Evidence for Microbial Carbon and Sulfur Cycling in Deeply Buried Ridge Flank Basalt. Science, 2013, 339, 1305-1308.	12.6	210
9	Molecular biogeochemistry of sulfate reduction, methanogenesis and the anaerobic oxidation of methane at Gulf of Mexico cold seeps. Geochimica Et Cosmochimica Acta, 2005, 69, 4267-4281.	3.9	204
10	Archaea mediating anaerobic methane oxidation in deep-sea sediments at cold seeps of the eastern Aleutian subduction zone. Organic Geochemistry, 2000, 31, 1175-1187.	1.8	197
11	Molecular characterization of dissolved organic matter in pore water of continental shelf sediments. Geochimica Et Cosmochimica Acta, 2009, 73, 3337-3358.	3.9	184
12	Microbial methane turnover at mud volcanoes of the Gulf of Cadiz. Geochimica Et Cosmochimica Acta, 2006, 70, 5336-5355.	3.9	173
13	Diagnostic lipid biomarker and stable carbon isotope signatures of microbial communities mediating the anaerobic oxidation of methane with sulphate. Organic Geochemistry, 2008, 39, 1668-1677.	1.8	164
14	The stable carbon isotope biogeochemistry of acetate and other dissolved carbon species in deep subseafloor sediments at the northern Cascadia Margin. Geochimica Et Cosmochimica Acta, 2009, 73, 3323-3336.	3.9	161
15	Carbon isotope equilibration during sulphate-limited anaerobic oxidation of methane. Nature Geoscience, 2014, 7, 190-194.	12.9	147
16	Assimilation of methane and inorganic carbon by microbial communities mediating the anaerobic oxidation of methane. Environmental Microbiology, 2008, 10, 2287-2298.	3.8	136
17	Autotrophy as a predominant mode of carbon fixation in anaerobic methane-oxidizing microbial communities. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19321-19326.	7.1	131
18	Methane emission and consumption at a North Sea gas seep (Tommeliten area). Biogeosciences, 2005, 2, 335-351.	3.3	129

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19	Microbiological investigation of methane- and hydrocarbon-discharging mud volcanoes in the Carpathian Mountains, Romania. Environmental Microbiology, 2006, 8, 574-590.	3.8	129
20	Spatial variations of methanotrophic consortia at cold methane seeps: implications from a high-resolution molecular and isotopic approach. Geobiology, 2005, 3, 195-209.	2.4	121
21	Intact polar lipids of anaerobic methanotrophic archaea and associated bacteria. Organic Geochemistry, 2008, 39, 992-999.	1.8	118
22	Metabolic variability in seafloor brines revealed by carbon and sulphur dynamics. Nature Geoscience, 2009, 2, 349-354.	12.9	111
23	Factors controlling the distribution of anaerobic methanotrophic communities in marine environments: Evidence from intact polar membrane lipids. Geochimica Et Cosmochimica Acta, 2011, 75, 164-184.	3.9	111
24	Diagenetic Transformation of Dissolved Organic Nitrogen Compounds under Contrasting Sedimentary Redox Conditions in the Black Sea. Environmental Science & Technology, 2011, 45, 5223-5229.	10.0	106
25	Unraveling signatures of biogeochemical processes and the depositional setting in the molecular composition of pore water DOM across different marine environments. Geochimica Et Cosmochimica Acta, 2017, 207, 57-80.	3.9	103
26	Patterns of carbonate authigenesis at the Kouilou pockmarks on the Congo deep-sea fan. Marine Geology, 2010, 268, 129-136.	2.1	100
27	Iron-Coupled Anaerobic Oxidation of Methane Performed by a Mixed Bacterial-Archaeal Community Based on Poorly Reactive Minerals. Environmental Science & Technology, 2017, 51, 12293-12301.	10.0	100
28	Lipid biomarker patterns of methane-seep microbialites from the Mesozoic convergent margin of California. Organic Geochemistry, 2006, 37, 1289-1302.	1.8	98
29	Online Î´¹³C analysis of volatile fatty acids in sediment/porewater systems by liquid chromatography-isotope ratio mass spectrometry. Limnology and Oceanography: Methods, 2006, 4, 346-357.	2.0	92
30	Intact phospholipidsâ€"microbial â€œlife markersâ€• in marine deep subsurface sediments. Organic Geochemistry, 2003, 34, 755-769.	1.8	88
31	Stromatolitic fabric of authigenic carbonate crusts: result of anaerobic methane oxidation at cold seeps in 4,850Âm water depth. International Journal of Earth Sciences, 2002, 91, 698-711.	1.8	87
32	Sources, transport, and partitioning of organic matter at a highly dynamic continental margin. Marine Chemistry, 2010, 118, 37-55.	2.3	86
33	Carbon flow from volcanic CO2 into soil microbial communities of a wetland mofette. ISME Journal, 2015, 9, 746-759.	9.8	77
34	Relative importance of methylotrophic methanogenesis in sediments of the Western Mediterranean Sea. Geochimica Et Cosmochimica Acta, 2018, 224, 171-186.	3.9	71
35	13C-depleted biphytanic diacids as tracers of past anaerobic oxidation of methane. Organic Geochemistry, 2008, 39, 152-156.	1.8	66
36	Experimental studies on the stable carbon isotope biogeochemistry of acetate in lake sediments. Organic Geochemistry, 2010, 41, 22-30.	1.8	60

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37	Occurrence of unusual steroids and hopanoids derived from aerobic methanotrophs at an active marine mud volcano. Organic Geochemistry, 2008, 39, 167-177.	1.8	59
38	Reconstruction of past methane availability in an Arctic Alaska wetland indicates climate influenced methane release during the past ~12,000Âyears. Journal of Paleolimnology, 2012, 48, 27-42.	1.6	59
39	Rates and Microbial Players of Iron-Driven Anaerobic Oxidation of Methane in Methanic Marine Sediments. Frontiers in Microbiology, 2019, 10, 3041.	3.5	51
40	The microbial community structure of different permeable sandy sediments characterized by the investigation of bacterial fatty acids and fluorescence in situ hybridization. Environmental Microbiology, 2005, 7, 281-293.	3.8	48
41	Stable carbon isotopic compositions of intact polar lipids reveal complex carbon flow patterns among hydrocarbon degrading microbial communities at the Chapopote asphalt volcano. Geochimica Et Cosmochimica Acta, 2011, 75, 4399-4415.	3.9	48
42	Marine Transform Faults and Fracture Zones: A Joint Perspective Integrating Seismicity, Fluid Flow and Life. Frontiers in Earth Science, 2019, 7, .	1.8	46
43	Ultra-high-resolution paleoenvironmental records via direct laser-based analysis of lipid biomarkers in sediment core samples. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15669-15674.	7.1	45
44	Soothsaying DOM: A Current Perspective on the Future of Oceanic Dissolved Organic Carbon. Frontiers in Marine Science, 2020, 7, .	2.5	44
45	Petroleum degradation and associated microbial signatures at the Chapopote asphalt volcano, Southern Gulf of Mexico. Geochimica Et Cosmochimica Acta, 2011, 75, 4377-4398.	3.9	41
46	Tracking activity and function of microorganisms by stable isotope probing of membrane lipids. Current Opinion in Biotechnology, 2016, 41, 43-52.	6.6	41
47	Toxic effects of labâ€grade butyl rubber stoppers on aerobic methane oxidation. Limnology and Oceanography: Methods, 2015, 13, 40-52.	2.0	39
48	Extended hydroxyarchaeol, a novel lipid biomarker for anaerobic methanotrophy in cold seepage habitats. Organic Geochemistry, 2008, 39, 1007-1014.	1.8	37
49	Assessing production of the ubiquitous archaeal diglycosyl tetraether lipids in marine subsurface sediment using intramolecular stable isotope probing. Environmental Microbiology, 2013, 15, 1634-1646.	3.8	37
50	Clostridium bornimense sp. nov., isolated from a mesophilic, two-phase, laboratory-scale biogas reactor. International Journal of Systematic and Evolutionary Microbiology, 2014, 64, 2792-2797.	1.7	37
51	Distribution and isotopic composition of trimethylamine, dimethylsulfide and dimethylsulfoniopropionate in marine sediments. Marine Chemistry, 2017, 196, 35-46.	2.3	35
52	Symbiontâ€“host relationships in chemosynthetic mussels: A comprehensive lipid biomarker study. Organic Geochemistry, 2012, 43, 112-124.	1.8	32
53	Gas chromatographic analysis of methanol and ethanol in marine sediment pore waters: Validation and implementation of three pretreatment techniques. Marine Chemistry, 2014, 160, 82-90.	2.3	32
54	Identification and significance of unsaturated archaeal tetraether lipids in marine sediments. Rapid Communications in Mass Spectrometry, 2014, 28, 1144-1152.	1.5	31

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55	Possible roles of uncultured archaea in carbon cycling in methane-seep sediments. Geochimica Et Cosmochimica Acta, 2015, 164, 35-52.	3.9	31
56	Diploptene in varved sediments of Saanich Inlet: indicator of increasing bacterial activity under anaerobic conditions during the Holocene. Marine Geology, 2001, 174, 371-383.	2.1	29
57	Lipid analysis of CO2-rich subsurface aquifers suggests an autotrophy-based deep biosphere with lysolipids enriched in CPR bacteria. ISME Journal, 2020, 14, 1547-1560.	9.8	29
58	Vertical stratification patterns of methanotrophs and their genetic controllers in water columns of oxygen-stratified boreal lakes. FEMS Microbiology Ecology, 2021, 97, .	2.7	29
59	Intramolecular stable carbon isotopic analysis of archaeal glycosyl tetraether lipids. Rapid Communications in Mass Spectrometry, 2010, 24, 2817-2826.	1.5	28
60	Relative Importance of Chemoautotrophy for Primary Production in a Light Exposed Marine Shallow Hydrothermal System. Frontiers in Microbiology, 2017, 8, 702.	3.5	26
61	Lipid biosynthesis of Nitrosopumilus maritimus dissected by lipid specific radioisotope probing (lipid-RIP) under contrasting ammonium supply. Geochimica Et Cosmochimica Acta, 2018, 242, 51-63.	3.9	26
62	CO2 conversion to methane and biomass in obligate methylotrophic methanogens in marine sediments. ISME Journal, 2019, 13, 2107-2119.	9.8	26
63	Carbon Isotopes of Biomarkers Derived from Methane-Oxidizing Microbes at Hydrate Ridge, Cascadia Convergent Margin. Geophysical Monograph Series, 0, , 115-129.	0.1	25
64	Crystalline iron oxides stimulate methanogenic benzoate degradation in marine sediment-derived enrichment cultures. ISME Journal, 2021, 15, 965-980.	9.8	25
65	Methane turnover and environmental change from Holocene lipid biomarker records in a thermokarst lake in Arctic Alaska. Holocene, 2016, 26, 1766-1777.	1.7	24
66	BisnorgammaceraneÂtraces predatoryÂpressureÂand the persistent rise of algal ecosystems after Snowball Earth. Nature Communications, 2019, 10, 476.	12.8	24
67	Subgroup level differences of physiological activities in marine Lokiarchaeota. ISME Journal, 2021, 15, 848-861.	9.8	23
68	Novel Cardiolipins from Uncultured Methane-Metabolizing Archaea. Archaea, 2012, 2012, 1-9.	2.3	21
69	Isoprenoid Quinones Resolve the Stratification of Redox Processes in a Biogeochemical Continuum from the Photic Zone to Deep Anoxic Sediments of the Black Sea. Applied and Environmental Microbiology, 2018, 84, .	3.1	19
70	An annually resolved record of Western European vegetation response to Younger Dryas cooling. Quaternary Science Reviews, 2020, 231, 106198.	3.0	19
71	Towards multiproxy, ultra-high resolution molecular stratigraphy: Enabling laser-induced mass spectrometry imaging of diverse molecular biomarkers in sediments. Organic Geochemistry, 2019, 127, 136-145.	1.8	17
72	Sulfate-dependent reversibility of intracellular reactions explains the opposing isotope effects in the anaerobic oxidation of methane. Science Advances, 2021, 7, .	10.3	16

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73	IODP Expedition 337: Deep Coalbed Biosphere off Shimokita â€“ Microbial processes and hydrocarbon system associated with deeply buried coalbed in the ocean. Scientific Drilling, 0, 21, 17-28.	0.6	15
74	Organic geochemistry of Saanich Inlet, BC, during the Holocene as revealed by Ocean Drilling Program Leg 169S. Marine Geology, 2001, 174, 249-271.	2.1	14
75	Carbon and nitrogen turnover in the Arctic deep sea: in situ benthic community response to diatom and coccolithophorid phytodetritus. Biogeosciences, 2018, 15, 6537-6557.	3.3	13
76	Respiration by â€œmarine snowâ€•at high hydrostatic pressure: Insights from continuous oxygen measurements in a rotating pressure tank. Limnology and Oceanography, 2021, 66, 2797-2809.	3.1	13
77	Catabolic protein degradation in marine sediments confined to distinct archaea. ISME Journal, 2022, 16, 1617-1626.	9.8	12
78	Substrate characteristic bacterial fatty acid production based on amino acid assimilation and transformation in marine sediments. FEMS Microbiology Ecology, 2019, 95, .	2.7	11
79	Assessing the carbon assimilation and production of benthic archaeal lipid biomarkers using lipid-RIP. Geochimica Et Cosmochimica Acta, 2019, 265, 431-442.	3.9	11
80	Evidence for preferential protein depolymerization in wetland soils in response to external nitrogen availability provided by a novel FTIR routine. Biogeosciences, 2020, 17, 499-514.	3.3	11
81	Substrateâ€dependent incorporation of carbon and hydrogen for lipid biosynthesis by Methanosarcina barkeri. Environmental Microbiology Reports, 2020, 12, 555-567.	2.4	9
82	Macroalgae degradation promotes microbial iron reduction via electron shuttling in coastal Antarctic sediments. Environment International, 2021, 156, 106602.	10.0	9
83	Direct Analysis of Lignin Phenols in Freshwater Dissolved Organic Matter. Analytical Chemistry, 2017, 89, 13449-13457.	6.5	8
84	Formation of tubular carbonate conduits at Athina mud volcano, eastern Mediterranean Sea. Marine and Petroleum Geology, 2019, 107, 20-31.	3.3	8
85	Impact of hot fluid advection on hydrocarbon gas production and seepage in mud volcano sediments of thick Cenozoic deltas. Earth and Planetary Science Letters, 2012, 341-344, 139-157.	4.4	6
86	Pacific Proving Grounds radioisotope imprint in the Philippine Sea sediments. Journal of Environmental Radioactivity, 2018, 186, 131-141.	1.7	6
87	Stable carbon isotopic compositions of archaeal lipids constrain terrestrial, planktonic, and benthic sources in marine sediments. Geochimica Et Cosmochimica Acta, 2021, 307, 319-337.	3.9	6
88	Long-term incubations provide insight into the mechanisms of anaerobic oxidation of methane in methanogenic lake sediments. Biogeosciences, 2022, 19, 2313-2331.	3.3	6
89	Disrupted Coherence Between Upwelling Strength and Redox Conditions Reflects Source Water Change in Santa Barbara Basin During the 20th Century. Paleoceanography and Paleoclimatology, 2021, 36, .	2.9	3
90	Activity of Ancillary Heterotrophic Community Members in Anaerobic Methane-Oxidizing Cultures. Frontiers in Microbiology, 2022, 13, .	3.5	3