Joel E Kostka

List of Publications by Year in descending order

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23567 31849 11,045 126 58 101 citations h-index g-index papers 141 141 141 11142 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	Hydrocarbon-Degrading Bacteria and the Bacterial Community Response in Gulf of Mexico Beach Sands Impacted by the Deepwater Horizon Oil Spill. Applied and Environmental Microbiology, 2011, 77, 7962-7974.	3.1	779
2	Partitioning and speciation of solid phase iron in saltmarsh sediments. Geochimica Et Cosmochimica Acta, 1994, 58, 1701-1710.	3.9	536
3	Sulfate-Reducing Bacteria Methylate Mercury at Variable Rates in Pure Culture and in Marine Sediments. Applied and Environmental Microbiology, 2000, 66, 2430-2437.	3.1	317
4	Benthic Exchange and Biogeochemical Cycling in Permeable Sediments. Annual Review of Marine Science, 2014, 6, 23-51.	11.6	283
5	Change in Bacterial Community Structure during In Situ Biostimulation of Subsurface Sediment Cocontaminated with Uranium and Nitrate. Applied and Environmental Microbiology, 2004, 70, 4911-4920.	3.1	260
6	Dissolution and Reduction of Magnetite by Bacteria. Environmental Science & En	10.0	245
7	Meeting Report: The Terabase Metagenomics Workshop and the Vision of an Earth Microbiome Project. Standards in Genomic Sciences, 2010, 3, 243-248.	1.5	228
8	Seasonal iron cycling in the salt-marsh sedimentary environment: the importance of ligand complexes with Fe(II) and Fe(III) in the dissolution of Fe(III) minerals and pyrite, respectively. Marine Chemistry, 1992, 40, 81-103.	2.3	227
9	Enumeration and Characterization of Iron(III)-ReducingMicrobial Communities from Acidic Subsurface Sediments ContaminatedwithUranium(VI). Applied and Environmental Microbiology, 2003, 69, 7467-7479.	3.1	217
10	Reduction of Structural Fe(III) in Smectite by a Pure Culture of Shewanella Putrefaciens Strain MR-1. Clays and Clay Minerals, 1996, 44, 522-529.	1.3	211
11	Growth of Iron(III)-Reducing Bacteria on Clay Minerals as the Sole Electron Acceptor and Comparison of Growth Yields on a Variety of Oxidized Iron Forms. Applied and Environmental Microbiology, 2002, 68, 6256-6262.	3.1	201
12	Respiration and Dissolution of Iron(III)-Containing Clay Minerals by Bacteria. Environmental Science & Environmental &	10.0	200
13	Aerobic denitrification in permeable Wadden Sea sediments. ISME Journal, 2010, 4, 417-426.	9.8	189
14	Chemical and biological reduction of Mn (III)-pyrophosphate complexes: Potential importance of dissolved Mn (III) as an environmental oxidant. Geochimica Et Cosmochimica Acta, 1995, 59, 885-894.	3.9	187
15	Denitrifying Bacteria from the Genus Rhodanobacter Dominate Bacterial Communities in the Highly Contaminated Subsurface of a Nuclear Legacy Waste Site. Applied and Environmental Microbiology, 2012, 78, 1039-1047.	3.1	184
16	The impact of structural Fe(III) reduction by bacteria on the surface chemistry of smectite clay minerals. Geochimica Et Cosmochimica Acta, 1999, 63, 3705-3713.	3.9	181
17	A Quantitative Relationship that Demonstrates Mercury Methylation Rates in Marine Sediments Are Based on the Community Composition and Activity of Sulfate-Reducing Bacteria. Environmental Science &	10.0	172
18	The rates and pathways of carbon oxidation in bioturbated saltmarsh sediments. Limnology and Oceanography, 2002, 47, 230-240.	3.1	170

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19	Organic matter transformation in the peat column at Marcell Experimental Forest: Humification and vertical stratification. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 661-675.	3.0	170
20	Microbial community successional patterns in beach sands impacted by the Deepwater Horizon oil spill. ISME Journal, 2015, 9, 1928-1940.	9.8	155
21	Metabolically active microbial communities in uranium-contaminated subsurface sediments. FEMS Microbiology Ecology, 2007, 59, 95-107.	2.7	150
22	Title is missing!. Biogeochemistry, 2002, 60, 49-76.	3.5	146
23	Microbial Dynamics Following the Macondo Oil Well Blowout across Gulf of Mexico Environments. BioScience, 2014, 64, 766-777.	4.9	142
24	Growth and Phylogenetic Properties of Novel Bacteria Belonging to the Epsilon Subdivision of the Proteobacteria Enriched from Alvinella pompejana and Deep-Sea Hydrothermal Vents. Applied and Environmental Microbiology, 2001, 67, 4566-4572.	3.1	137
25	Quantification of Ammonia-Oxidizing Bacteria and Factors Controlling Nitrification in Salt Marsh Sediments. Applied and Environmental Microbiology, 2005, 71, 240-246.	3.1	137
26	Denitrifying Bacteria Isolated from Terrestrial Subsurface Sediments Exposed to Mixed-Waste Contamination. Applied and Environmental Microbiology, 2010, 76, 3244-3254.	3.1	136
27	Rhodanobacter denitrificans sp. nov., isolated from nitrate-rich zones of a contaminated aquifer. International Journal of Systematic and Evolutionary Microbiology, 2012, 62, 2457-2462.	1.7	135
28	Targeted Petroleomics: Analytical Investigation of Macondo Well Oil Oxidation Products from Pensacola Beach. Energy & En	5.1	130
29	Microbial Community Diversity Associated with Carbon and Nitrogen Cycling in Permeable Shelf Sediments. Applied and Environmental Microbiology, 2006, 72, 5689-5701.	3.1	126
30	Sedimentation Pulse in the NE Gulf of Mexico following the 2010 DWH Blowout. PLoS ONE, 2015, 10, e0132341.	2.5	126
31	Seasonal cycling of Fe in saltmarsh sediments. Biogeochemistry, 1995, 29, 159-181.	3.5	125
32	The <i>Sphagnum</i> microbiome: new insights from an ancient plant lineage. New Phytologist, 2016, 211, 57-64.	7.3	123
33	Microbial Community Stratification Linked to Utilization of Carbohydrates and Phosphorus Limitation in a Boreal Peatland at Marcell Experimental Forest, Minnesota, USA. Applied and Environmental Microbiology, 2014, 80, 3518-3530.	3.1	114
34	Microbial reduction of iron in smectite. Comptes Rendus - Geoscience, 2006, 338, 468-475.	1.2	113
35	A Limited Microbial Consortium Is Responsible for Extended Bioreduction of Uranium in a Contaminated Aquifer. Applied and Environmental Microbiology, 2011, 77, 5955-5965.	3.1	108
36	Microscopic Evidence for Microbial Dissolution of Smectite. Clays and Clay Minerals, 2003, 51, 502-512.	1.3	107

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37	Lateral Gene Transfer in a Heavy Metal-Contaminated-Groundwater Microbial Community. MBio, 2016, 7, e02234-15.	4.1	105
38	Microbial Metabolic Potential for Carbon Degradation and Nutrient (Nitrogen and Phosphorus) Acquisition in an Ombrotrophic Peatland. Applied and Environmental Microbiology, 2014, 80, 3531-3540.	3.1	102
39	Effects of Nitrate on the Stability of Uranium in a Bioreduced Region of the Subsurface. Environmental Science & Environmental	10.0	100
40	Functional Diversity and Electron Donor Dependence of Microbial Populations Capable of U(VI) Reduction in Radionuclide-Contaminated Subsurface Sediments. Applied and Environmental Microbiology, 2008, 74, 3159-3170.	3.1	97
41	Characterization of Nitrifying, Denitrifying, and Overall Bacterial Communities in Permeable Marine Sediments of the Northeastern Gulf of Mexico. Applied and Environmental Microbiology, 2008, 74, 4440-4453.	3.1	92
42	Geobacter daltonii sp. nov., an Fe(III)- and uranium(VI)-reducing bacterium isolated from a shallow subsurface exposed to mixed heavy metal and hydrocarbon contamination. International Journal of Systematic and Evolutionary Microbiology, 2010, 60, 546-553.	1.7	91
43	Experimental warming alters the community composition, diversity, and N ₂ fixation activity of peat moss (<i>Sphagnum fallax</i>) microbiomes. Global Change Biology, 2019, 25, 2993-3004.	9.5	89
44	Salt marsh pore water geochemistry does not correlate with microbial community structure. Estuarine, Coastal and Shelf Science, 2005, 62, 233-251.	2.1	88
45	Temporal and spatial variability of reduced sulfur species (FeS2, S2O3 2â^') and porewater parameters in salt marsh sediments. Biogeochemistry, 1991, 14, 57-88.	3.5	87
46	Microbial cultivation and the role of microbial resource centers in the omics era. Applied Microbiology and Biotechnology, 2013, 97, 51-62.	3 . 6	85
47	Temperature response of denitrification and anaerobic ammonium oxidation rates and microbial community structure in <scp>A</scp> rctic fjord sediments. Environmental Microbiology, 2014, 16, 3331-3344.	3.8	84
48	Pyritization: a palaeoenvironmental and redox proxy reevaluated. Estuarine, Coastal and Shelf Science, 2003, 57, 1183-1193.	2.1	82
49	Comparisons of structural iron reduction in smectites by bacteria and dithionite: II. A variable-temperature $M ilde{A}_1$ ssbauer spectroscopic study of Garfield nontronite. Pure and Applied Chemistry, 2009, 81, 1499-1509.	1.9	79
50	Alpha- and Gammaproteobacterial Methanotrophs Codominate the Active Methane-Oxidizing Communities in an Acidic Boreal Peat Bog. Applied and Environmental Microbiology, 2016, 82, 2363-2371.	3.1	78
51	Diazotroph Community Characterization via a High-Throughput <i>nifH</i> Amplicon Sequencing and Analysis Pipeline. Applied and Environmental Microbiology, 2018, 84, .	3.1	78
52	Massive peatland carbon banks vulnerable to rising temperatures. Nature Communications, 2020, 11, 2373.	12.8	76
53	Intensive and extensive nitrogen loss from intertidal permeable sediments of the Wadden Sea. Limnology and Oceanography, 2012, 57, 185-198.	3.1	73
54	Metabolic potential of fatty acid oxidation and anaerobic respiration by abundant members of Thaumarchaeota and Thermoplasmata in deep anoxic peat. ISME Journal, 2015, 9, 2740-2744.	9.8	69

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55	lodine chemistry in the water column of the Chesapeake Bay: Evidence for organic iodine forms. Estuarine, Coastal and Shelf Science, 1991, 32, 267-279.	2.1	66
56	Rapid organic matter mineralization coupled to iron cycling in intertidal mud flats of the Han River estuary, Yellow Sea. Biogeochemistry, 2009, 92, 231-245.	3.5	66
57	Comparisons of structural Fe reduction in smectites by bacteria and dithionite: an infrared spectroscopic study. Clays and Clay Minerals, 2006, 54, 195-208.	1.3	63
58	Microbial Links between Sulfate Reduction and Metal Retention in Uranium- and Heavy Metal-Contaminated Soil. Applied and Environmental Microbiology, 2010, 76, 3143-3152.	3.1	63
59	Genome Sequences for Six Rhodanobacter Strains, Isolated from Soils and the Terrestrial Subsurface, with Variable Denitrification Capabilities. Journal of Bacteriology, 2012, 194, 4461-4462.	2.2	62
60	Relative contributions of sulfate- and iron(III) reduction to organic matter mineralization and process controls in contrasting habitats of the Georgia saltmarsh. Applied Geochemistry, 2007, 22, 2637-2651.	3.0	60
61	pH Gradient-Induced Heterogeneity of Fe(III)-Reducing Microorganisms in Coal Mining-Associated Lake Sediments. Applied and Environmental Microbiology, 2008, 74, 1019-1029.	3.1	60
62	Responses of Microbial Communities to Hydrocarbon Exposures. Oceanography, 2016, 29, 136-149.	1.0	59
63	Hydrogenation of organic matter as a terminal electron sink sustains high CO2:CH4 production ratios during anaerobic decomposition. Organic Geochemistry, 2017, 112, 22-32.	1.8	59
64	The role of anaerobic respiration in the immobilization of uranium through biomineralization of phosphate minerals. Geochimica Et Cosmochimica Acta, 2013, 106, 344-363.	3.9	57
65	Effects of in situ biostimulation on iron mineral speciation in a sub-surface soil. Geochimica Et Cosmochimica Acta, 2007, 71, 835-843.	3.9	54
66	Plants, microorganisms, and soil temperatures contribute to a decrease in methane fluxes on a drained Arctic floodplain. Global Change Biology, 2017, 23, 2396-2412.	9.5	54
67	The Sphagnome Project: enabling ecological and evolutionary insights through a genusâ€level sequencing project. New Phytologist, 2018, 217, 16-25.	7. 3	54
68	Soil metabolome response to whole-ecosystem warming at the Spruce and Peatland Responses under Changing Environments experiment. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	54
69	Minnesota peat viromes reveal terrestrial and aquatic niche partitioning for local and global viral populations. Microbiome, 2021, 9, 233.	11.1	53
70	Identification of phytodetritusâ€degrading microbial communities in sublittoral Gulf of Mexico sands. Limnology and Oceanography, 2009, 54, 1073-1083.	3.1	50
71	Impact of Biostimulated Redox Processes on Metal Dynamics in an Iron-Rich Creek Soil of a Former Uranium Mining Area. Environmental Science & Technology, 2010, 44, 177-183.	10.0	49
72	Hydrocarbon-Degrading Bacteria Exhibit a Species-Specific Response to Dispersed Oil while Moderating Ecotoxicity. Applied and Environmental Microbiology, 2016, 82, 518-527.	3.1	48

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73	Desulfurivibrio spp. mediate sulfur-oxidation coupled to Sb(V) reduction, a novel biogeochemical process. ISME Journal, 2022, 16, 1547-1556.	9.8	48
74	Molybdenum-Based Diazotrophy in a Sphagnum Peatland in Northern Minnesota. Applied and Environmental Microbiology, 2017, 83, .	3.1	46
75	" <i>Candidatus</i> Macondimonas diazotrophicaâ€; a novel gammaproteobacterial genus dominating crude-oil-contaminated coastal sediments. ISME Journal, 2019, 13, 2129-2134.	9.8	46
76	Fate of atrazine and alachlor in redoxâ€treated ferruginous smectite. Environmental Toxicology and Chemistry, 2001, 20, 2717-2724.	4.3	45
77	Natural-abundance radiocarbon as a tracer of assimilation of petroleum carbon by bacteria in salt marsh sediments. Geochimica Et Cosmochimica Acta, 2006, 70, 1761-1771.	3.9	45
78	Impact of Warming on Greenhouse Gas Production and Microbial Diversity in Anoxic Peat From a Sphagnum-Dominated Bog (Grand Rapids, Minnesota, United States). Frontiers in Microbiology, 2019, 10, 870.	3.5	43
79	Kinetics of microbially mediated reactions: dissimilatory sulfate reduction in saltmarsh sediments (Sapelo Island, Georgia, USA). Estuarine, Coastal and Shelf Science, 2003, 56, 1001-1010.	2.1	41
80	Vertical Stratification of Peat Pore Water Dissolved Organic Matter Composition in a Peat Bog in Northern Minnesota. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 479-494.	3.0	41
81	Degradation of Deepwater Horizon oil buried in a Florida beach influenced by tidal pumping. Marine Pollution Bulletin, 2018, 126, 488-500.	5.0	40
82	Microbial Community Changes in Response to Ethanol or Methanol Amendments for U(VI) Reduction. Applied and Environmental Microbiology, 2010, 76, 5728-5735.	3.1	38
83	Identification of sulfate-reducing bacteria in methylmercury-contaminated mine tailings by analysis of SSU rRNA genes. FEMS Microbiology Ecology, 2009, 68, 94-107.	2.7	37
84	Isolation and physiological characterization of psychrophilic denitrifying bacteria from permanently cold <scp>A</scp> rctic fjord sediments (<scp>S</scp> valbard, <scp>N</scp> orway). Environmental Microbiology, 2013, 15, 1606-1618.	3.8	36
85	Electron flow in acidic subsurface sediments co-contaminated with nitrate and uranium. Geochimica Et Cosmochimica Acta, 2007, 71, 643-654.	3.9	35
86	The metabolic pathways and environmental controls of hydrocarbon biodegradation in marine ecosystems. Frontiers in Microbiology, 2014, 5, 471.	3.5	35
87	Decomposition of sediment-oil-agglomerates in a Gulf of Mexico sandy beach. Scientific Reports, 2019, 9, 10071.	3.3	35
88	Decomposition of planktonâ€derived dissolved organic matter in permeable coastal sediments. Limnology and Oceanography, 2010, 55, 857-871.	3.1	32
89	Anaerobic degradation of hexadecane and phenanthrene coupled to sulfate reduction by enriched consortia from northern Gulf of Mexico seafloor sediment. Scientific Reports, 2019, 9, 1239.	3.3	31

Direct determination of nitrogen cycling rates and pathways in Arctic fjord sediments (Svalbard,) Tj ETQq0 0 0 rgBT₃/Overlock 10 Tf 50 6

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91	Decomposition of plankton-derived dissolved organic matter in permeable coastal sediments. Limnology and Oceanography, 2010, 55, 857-871.	3.1	28
92	Dehydrochlorination of 1,1,1â€trichloroethane and pentachloroethane by microbially reduced ferruginous smectite. Environmental Toxicology and Chemistry, 2003, 22, 1046-1050.	4.3	27
93	Quantification of macrobenthic effects on diagenesis using a multicomponent inversemodel in salt marsh sediments. Limnology and Oceanography, 2004, 49, 2058-2072.	3.1	27
94	Direct determination of nitrogen cycling rates and pathways in Arctic fjord sediments (Svalbard,) Tj ETQq0 0 0 rg	BT_/Overlo	ock 10 Tf 50
95	Diversity of Active Viral Infections within the Sphagnum Microbiome. Applied and Environmental Microbiology, 2018, 84, .	3.1	27
96	Succession of microbial populations and nitrogen-fixation associated with the biodegradation of sediment-oil-agglomerates buried in a Florida sandy beach. Scientific Reports, 2019, 9, 19401.	3.3	27
97	Temperature sensitivity of extracellular enzymes differs with peat depth but not with season in an ombrotrophic bog. Soil Biology and Biochemistry, 2018, 125, 244-250.	8.8	25
98	Influence of pressure and dispersant on oil biodegradation by a newly isolated Rhodococcus strain from deep-sea sediments of the gulf of Mexico. Marine Pollution Bulletin, 2020, 150, 110683.	5.0	25
99	Hydrocarbon-Degrading Microbial Communities Are Site Specific, and Their Activity Is Limited by Synergies in Temperature and Nutrient Availability in Surface Ocean Waters. Applied and Environmental Microbiology, 2019, 85, .	3.1	23
100	The Bacterial Composition within the Sarracenia purpurea Model System: Local Scale Differences and the Relationship with the Other Members of the Food Web. PLoS ONE, 2012, 7, e50969.	2.5	22
101	The core root microbiome of Spartina alterniflora is predominated by sulfur-oxidizing and sulfate-reducing bacteria in Georgia salt marshes, USA. Microbiome, 2022, 10, 37.	11.1	22
102	Draft Genome Sequences for Oil-Degrading Bacterial Strains from Beach Sands Impacted by the Deepwater Horizon Oil Spill. Genome Announcements, 2013, 1 , .	0.8	21
103	Genome repository of oil systems: An interactive and searchable database that expands the catalogued diversity of crude oilâ€associated microbes. Environmental Microbiology, 2020, 22, 2094-2106.	3.8	21
104	Elucidation of the rhizosphere microbiome linked to Spartina alterniflora phenotype in a salt marsh on Skidaway Island, Georgia, USA. FEMS Microbiology Ecology, 2020, 96, .	2.7	21
105	Linking Specific Heterotrophic Bacterial Populations to Bioreduction of Uranium and Nitrate in Contaminated Subsurface Sediments by Using Stable Isotope Probing. Applied and Environmental Microbiology, 2011, 77, 8197-8200.	3.1	19
106	Defining the <i>Sphagnum</i> Core Microbiome across the North American Continent Reveals a Central Role for Diazotrophic Methanotrophs in the Nitrogen and Carbon Cycles of Boreal Peatland Ecosystems. MBio, 2022, 13, .	4.1	18
107	Microbial Community Structure Associated with Biogeochemical Processes in the Sulfate–Methane Transition Zone (SMTZ) of Gas-hydrate-bearing Sediment of the Ulleung Basin, East Sea. Geomicrobiology Journal, 2017, 34, 207-219.	2.0	17
108	Watershed-Scale Fungal Community Characterization along a pH Gradient in a Subsurface Environment Cocontaminated with Uranium and Nitrate. Applied and Environmental Microbiology, 2014, 80, 1810-1820.	3.1	15

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109	Nitrogen and phosphorus cycling in an ombrotrophic peatland: a benchmark for assessing change. Plant and Soil, 2021, 466, 649-674.	3.7	15
110	Gene Expression Correlates with Process Rates Quantified for Sulfate- and Fe(III)-Reducing Bacteria in U(VI)-Contaminated Sediments. Frontiers in Microbiology, 2012, 3, 280.	3.5	13
111	Dispersant Enhances Hydrocarbon Degradation and Alters the Structure of Metabolically Active Microbial Communities in Shallow Seawater From the Northeastern Gulf of Mexico. Frontiers in Microbiology, 2019, 10, 2387.	3.5	12
112	Stress-related ecophysiology of members of the genus Rhodanobacter isolated from a mixed waste contaminated subsurface. Frontiers of Environmental Science and Engineering, 2021, 15, 1.	6.0	12
113	The core seafloor microbiome in the Gulf of Mexico is remarkably consistent and shows evidence of recovery from disturbance caused by major oil spills. Environmental Microbiology, 2019, 21, 4316-4329.	3.8	11
114	Integrated Omics Elucidate the Mechanisms Driving the Rapid Biodegradation of Deepwater Horizon Oil in Intertidal Sediments Undergoing Oxic–Anoxic Cycles. Environmental Science & Dechnology, 2020, 54, 10088-10099.	10.0	11
115	Biodegradation of Petroleum Hydrocarbons in theÂDeep Sea. , 2020, , 107-124.		10
116	Genomic characterization and computational phenotyping of nitrogen-fixing bacteria isolated from Colombian sugarcane fields. Scientific Reports, 2021, 11, 9187.	3.3	10
117	GoMRI Insights into Microbial Genomics and Hydrocarbon Bioremediation Response in Marine Ecosystems. Oceanography, 2021, 34, 124-135.	1.0	9
118	A novel, divergent alkane monooxygenase (<scp><i>alkB</i></scp>) clade involved in crude oil biodegradation. Environmental Microbiology Reports, 2021, 13, 830-840.	2.4	9
119	Radiocarbon Analyses Quantify Peat Carbon Losses With Increasing Temperature in a Whole Ecosystem Warming Experiment. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2021JG006511.	3.0	7
120	Compositional stability of peat in ecosystem-scale warming mesocosms. PLoS ONE, 2022, 17, e0263994.	2.5	5
121	Beach sand oil spills select for generalist microbial populations. ISME Journal, 2021, 15, 3418-3422.	9.8	3
122	FATE OF ATRAZINE AND ALACHLOR IN REDOX-TREATED FERRUGINOUS SMECTITE. Environmental Toxicology and Chemistry, 2001, 20, 2717.	4.3	3
123	Genome Sequences of 15 Klebsiella sp. Isolates from Sugarcane Fields in Colombia's Cauca Valley. Genome Announcements, 2018, 6, .	0.8	2
124	Microscopic Evidence for Microbial Dissolution of Smectite. Clays and Clay Minerals, 2003, 51, 502-512.	1.3	2
125	pH Gradient-Induced Heterogeneity of Fe(III)-Reducing Microorganisms in Coal Mining-Associated Lake Sediments. Applied and Environmental Microbiology, 2008, 74, 7100-7100.	3.1	0
126	Genomics Tools and Microbiota: Applications to Response in Coastal Ecosystems. International Oil Spill Conference Proceedings, 2021, 2021, .	0.1	0