Kenneth H Nealson

List of Publications by Year
in descending order

107 papers	17,284 citations	22153 59 h-index	29157 104 g-index
110 all docs	110 docs citations	110 times ranked	14049 citing authors

#	Article	IF	Citations
1	Light-driven carbon dioxide reduction to methane by <i>Methanosarcina barkeri</i> in an electric syntrophic coculture. ISME Journal, 2022, 16, 370-377.	9.8	40
2	Au(III)-induced extracellular electron transfer by Burkholderia contaminans ZCC for the bio-recovery of gold nanoparticles. Environmental Research, 2022, 210, 112910.	7.5	6
3	Magnetotactic bacteria: concepts, conundrums, and insights from a novelÂin situÂapproach using digital holographic microscopy (DHM). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2022, 208, 107-124.	1.6	2
4	Dissecting the Structural and Conductive Functions of Nanowires in <i>Geobacter sulfurreducens</i> Electroactive Biofilms. MBio, 2022, 13, e0382221.	4.1	17
5	Assessing Geochemical Bioenergetics and Microbial Metabolisms at Three Terrestrial Sites of Serpentinization: The Tablelands (NL, CAN), The Cedars (CA, USA), and Aqua de Ney (CA, USA). Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2019JG005542.	3.0	5
6	Syntrophic interspecies electron transfer drives carbon fixation and growth by <i>Rhodopseudomonas palustris</i> under dark, anoxic conditions. Science Advances, 2021, 7, .	10.3	44
7	In Situ Spectroelectrochemical Characterization Reveals Cytochrome-Mediated Electric Syntrophy in <i>Geobacter</i> Coculture. Environmental Science & Technology, 2021, 55, 10142-10151.	10.0	28
8	Serpentinimonas gen. nov., Serpentinimonas raichei sp. nov., Serpentinimonas barnesii sp. nov. and Serpentinimonas maccroryi sp. nov., hyperalkaliphilic and facultative autotrophic bacteria isolated from terrestrial serpentinizing springs. International Journal of Systematic and Evolutionary Microbiology, 2021, 71, .	1.7	20
9	Metagenomic Insights Into the Microbial Iron Cycle of Subseafloor Habitats. Frontiers in Microbiology, 2021, 12, 667944.	3.5	4
10	Silver nanoparticles boost charge-extraction efficiency in <i>Shewanella</i> microbial fuel cells. Science, 2021, 373, 1336-1340.	12.6	171
11	A Geochemical Comparison of Three Terrestrial Sites of Serpentinization: The Tablelands, the Cedars, and Aqua de Ney. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2021JG006316.	3.0	7
12	On the 50th Anniversary of the discovery of autoinduction and the ensuing birth of quorum sensing. Environmental Microbiology, 2020, 22, 801-807.	3.8	2
13	FeGenie: A Comprehensive Tool for the Identification of Iron Genes and Iron Gene Neighborhoods in Genome and Metagenome Assemblies. Frontiers in Microbiology, 2020, 11, 37.	3.5	195
14	Differences in Applied Redox Potential on Cathodes Enrich for Diverse Electrochemically Active Microbial Isolates From a Marine Sediment. Frontiers in Microbiology, 2019, 10, 1979.	3.5	24
15	Extracellular electron transfer of Shewanella oneidensis MR-1 for cathodic hydrogen evolution reaction. Electrochimica Acta, 2019, 305, 528-533.	5.2	15
16	Sediment Habitats, Including Watery. , 2019, , .		0
17	Tracking Electron Uptake from a Cathode into <i>Shewanella</i> Cells: Implications for Energy Acquisition from Solid-Substrate Electron Donors. MBio, 2018, 9, .	4.1	115
18	Multi-heme cytochromes provide a pathway for survival in energy-limited environments. Science Advances, 2018, 4, eaao5682.	10.3	155

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19	Variation in electrode redox potential selects for different microorganisms under cathodic current flow from electrodes in marine sediments. Environmental Microbiology, 2018, 20, 2270-2287.	3.8	17
20	Comparative metatranscriptomics reveals extracellular electron transfer pathways conferring microbial adaptivity to surface redox potential changes. ISME Journal, 2018, 12, 2844-2863.	9.8	68
21	Thioclava electrotropha sp. nov., a versatile electrode and sulfur-oxidizing bacterium from marine sediments. International Journal of Systematic and Evolutionary Microbiology, 2018, 68, 1652-1658.	1.7	23
22	<i>In situ</i> electrochemical enrichment and isolation of a magnetiteâ€reducing bacterium from a high pH serpentinizing spring. Environmental Microbiology, 2017, 19, 2272-2285.	3.8	59
23	Outer membrane cytochromes/flavin interactions in <i>Shewanella</i> spp.â€"A molecular perspective. Biointerphases, 2017, 12, 021004.	1.6	24
24	A metabolic-activity-detecting approach to life detection: Restoring a chemostat from stop-feeding using a rapid bioactivity assay. Bioelectrochemistry, 2017, 118, 147-153.	4.6	9
25	Bioelectricity (electromicrobiology) and sustainability. Microbial Biotechnology, 2017, 10, 1114-1119.	4.2	35
26	Unusual metabolic diversity of hyperalkaliphilic microbial communities associated with subterranean serpentinization at The Cedars. ISME Journal, 2017, 11, 2584-2598.	9.8	95
27	Quantifying Microorganisms at Low Concentrations Using Digital Holographic Microscopy (DHM). Journal of Visualized Experiments, 2017, , .	0.3	16
28	Exploring the metabolic potential of microbial communities in ultraâ€basic, reducing springs at The Cedars, CA, USA: Experimental evidence of microbial methanogenesis and heterotrophic acetogenesis. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1203-1220.	3.0	35
29	Electromicrobiology: realities, grand challenges, goals and predictions. Microbial Biotechnology, 2016, 9, 595-600.	4.2	79
30	Nanoelectronic Investigation Reveals the Electrochemical Basis of Electrical Conductivity in <i>Shewanella</i> and <i>Geobacter</i>. ACS Nano, 2016, 10, 9919-9926.	14.6	46
31	Microbial metabolic networks in a complex electrogenic biofilm recovered from a stimulus-induced metatranscriptomics approach. Scientific Reports, 2015, 5, 14840.	3.3	44
32	Enriching distinctive microbial communities from marine sediments via an electrochemical-sulfide-oxidizing process on carbon electrodes. Frontiers in Microbiology, 2015, 6, 111.	3.5	16
33	Physiological and genomic features of highly alkaliphilic hydrogen-utilizing Betaproteobacteria from a continental serpentinizing site. Nature Communications, 2014, 5, 3900.	12.8	111
34	Flavin Redox Bifurcation as a Mechanism for Controlling the Direction of Electron Flow during Extracellular Electron Transfer. Angewandte Chemie - International Edition, 2014, 53, 10988-10991.	13.8	115
35	Uptake of self-secreted flavins as bound cofactors for extracellular electron transfer in <i>Geobacter</i> species. Energy and Environmental Science, 2014, 7, 1357-1361.	30.8	176
36	Microbial population and functional dynamics associated with surface potential and carbon metabolism. ISME Journal, 2014, 8, 963-978.	9.8	140

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37	Cell-secreted Flavins Bound to Membrane Cytochromes Dictate Electron Transfer Reactions to Surfaces with Diverse Charge and pH. Scientific Reports, 2014, 4, 5628.	3.3	141
38	Marine sediments microbes capable of electrode oxidation as a surrogate for lithotrophic insoluble substrate metabolism. Frontiers in Microbiology, 2014, 5, 784.	3.5	86
39	A novel metatranscriptomic approach to identify gene expression dynamics during extracellular electron transfer. Nature Communications, 2013, 4, 1601.	12.8	162
40	Geochemistry and geobiology of a present-day serpentinization site in California: The Cedars. Geochimica Et Cosmochimica Acta, 2013, 109, 222-240.	3.9	136
41	Integrating niche-based process and spatial process in biogeography of magnetotactic bacteria. Scientific Reports, 2013, 3, 1643.	3.3	68
42	Microbial diversity in The Cedars, an ultrabasic, ultrareducing, and low salinity serpentinizing ecosystem. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15336-15341.	7.1	119
43	Rate enhancement of bacterial extracellular electron transport involves bound flavin semiquinones. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7856-7861.	7.1	402
44	Evaluation of microbial fuel cell Shewanella biocathodes for treatment of chromate contamination. RSC Advances, 2012, 2, 5844.	3.6	60
45	A study of the flavin response by Shewanella cultures in carbon-limited environments. RSC Advances, 2012, 2, 10020.	3.6	18
46	Functionally Stable and Phylogenetically Diverse Microbial Enrichments from Microbial Fuel Cells during Wastewater Treatment. PLoS ONE, 2012, 7, e30495.	2.5	96
47	Current Production by Bacterial Communities in Microbial Fuel Cells Enriched from Wastewater Sludge with Different Electron Donors. Environmental Science & Technology, 2011, 45, 1139-1146.	10.0	85
48	Calcium and magnesiumâ€limited dolomite precipitation at Deep Springs Lake, California. Sedimentology, 2011, 58, 1810-1830.	3.1	64
49	Electron flow and biofilms. MRS Bulletin, 2011, 36, 380-384.	3.5	44
50	Genomic and functional adaptation in surface ocean planktonic prokaryotes. Nature, 2010, 468, 60-66.	27.8	280
51	Sediment reactions defy dogma. Nature, 2010, 463, 1033-1034.	27.8	20
52	Electrical transport along bacterial nanowires from <i>Shewanella oneidensis</i> MR-1. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 18127-18131.	7.1	566
53	The impact of bacterial strain on the products of dissimilatory iron reduction. Geochimica Et Cosmochimica Acta, 2010, 74, 574-583.	3.9	47
54	Quantification of Electron Transfer Rates to a Solid Phase Electron Acceptor through the Stages of Biofilm Formation from Single Cells to Multicellular Communities. Environmental Science & Technology, 2010, 44, 2721-2727.	10.0	122

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55	Characterization of electrochemically active bacteria utilizing a highâ€throughput voltageâ€based screening assay. Biotechnology and Bioengineering, 2009, 102, 436-444.	3.3	74
56	Taking the Concept to the Limit: Uncultivable Bacteria and Astrobiology. Microbiology Monographs, 2009, , 237-240.	0.6	1
57	Taking the Concept to the Limit: Uncultivable Bacteria and Astrobiology. Microbiology Monographs, 2009, , 195-204.	0.6	0
58	The influence of acidity on microbial fuel cells containing Shewanella oneidensis. Biosensors and Bioelectronics, 2008, 24, 900-905.	10.1	108
59	Towards environmental systems biology of Shewanella. Nature Reviews Microbiology, 2008, 6, 592-603.	28.6	829
60	The Molecular Density of States in Bacterial Nanowires. Biophysical Journal, 2008, 95, L10-L12.	0.5	106
61	Current Production and Metal Oxide Reduction by <i>Shewanella oneidensis</i> MR-1 Wild Type and Mutants. Applied and Environmental Microbiology, 2007, 73, 7003-7012.	3.1	513
62	The Sorcerer II Global Ocean Sampling Expedition: Northwest Atlantic through Eastern Tropical Pacific. PLoS Biology, 2007, 5, e77.	5.6	1,757
63	Microbial ecology meets electrochemistry: electricity-driven and driving communities. ISME Journal, 2007, 1, 9-18.	9.8	433
64	Metagenomics and the global ocean survey: what's in it for us, and why should we care?. ISME Journal, 2007, 1, 185-187.	9.8	51
65	Ecophysiology of the Genus Shewanella. , 2006, , 1133-1151.		98
66	Electrically conductive bacterial nanowires produced by Shewanella oneidensis strain MR-1 and other microorganisms. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 11358-11363.	7.1	1,629
67	GEOCHEMISTRY: Follow the Nitrogen. Science, 2006, 312, 708-709.	12.6	59
68	Shewanella loihica sp. nov., isolated from iron-rich microbial mats in the Pacific Ocean. International Journal of Systematic and Evolutionary Microbiology, 2006, 56, 1911-1916.	1.7	109
69	Ultramafics-Hydrothermalism-Hydrogenesis-HyperSLiME (UltraH³) linkage: a key insight into early microbial ecosystem in the Archean deep-sea hydrothermal systems. Paleontological Research, 2006, 10, 269-282.	1.0	73
70	Marinobacter alkaliphilus sp. nov., a novel alkaliphilic bacterium isolated from subseafloor alkaline serpentine mud from Ocean Drilling Program Site 1200ï¿½at South Chamorro Seamount, Mariana Forearc. Extremophiles, 2005, 9, 17-27.	2.3	87
71	Community Structure Comparison Using FAME Analysis of Desert Varnish and Soil, Mojave Desert, California. Geomicrobiology Journal, 2005, 22, 353-360.	2.0	27
72	Hydrogen and energy flow as "sensed" by molecular genetics. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3889-3890.	7.1	26

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73	Hydrogen-driven subsurface lithoautotrophic microbial ecosystems (SLiMEs): do they exist and why should we care?. Trends in Microbiology, 2005, 13, 405-410.	7.7	186
74	Relationship of Critical Temperature to Macromolecular Synthesis and Growth Yield in Psychrobacter cryopegella. Journal of Bacteriology, 2004, 186, 2340-2345.	2.2	69
75	Geochemical and microbiological evidence for a hydrogen-based, hyperthermophilic subsurface lithoautotrophic microbial ecosystem (HyperSLiME) beneath an active deep-sea hydrothermal field. Extremophiles, 2004, 8, 269-282.	2.3	285
76	Breathing Metals as a Way of Life: Geobiology in Action. ChemInform, 2003, 34, no.	0.0	0
77	Reproduction and metabolism at - 10oC of bacteria isolated from Siberian permafrost. Environmental Microbiology, 2003, 5, 321-326.	3.8	193
78	Subfreezing Activity of Microorganisms and the Potential Habitability of Mars' Polar Regions. Astrobiology, 2003, 3, 343-350.	3.0	143
79	Organization and Elemental Analysis of P-, S-, and Fe-rich Inclusions in a Population of Freshwater Magnetococci. Geomicrobiology Journal, 2002, 19, 387-406.	2.0	82
80	Transcriptional and Proteomic Analysis of a Ferric Uptake Regulator (Fur) Mutant of <i>Shewanella oneidensis</i> : Possible Involvement of Fur in Energy Metabolism, Transcriptional Regulation, and Oxidative Stress. Applied and Environmental Microbiology, 2002, 68, 881-892.	3.1	170
81	Microbial metal-ion reduction and Mars: extraterrestrial expectations?. Current Opinion in Microbiology, 2002, 5, 296-300.	5.1	35
82	Breathing metals as a way of life: geobiology in action. Antonie Van Leeuwenhoek, 2002, 81, 215-222.	1.7	185
83	Bacterial and archaeal populations associated with freshwater ferromanganous micronodules and sediments. Environmental Microbiology, 2001, 3, 10-18.	3.8	216
84	High-resolution X-ray spectroscopy of rare events: a different look at local structure and chemistry. Journal of Synchrotron Radiation, 2001, 8, 199-203.	2.4	45
85	Kinetics of Fe(III) and Mn(IV) reduction by the Black Sea strain of Shewanella putrefaciens using in situ solid state voltammetric Au/Hg electrodes. Marine Chemistry, 2000, 70, 171-180.	2.3	52
86	Polyphasic taxonomy of the genus Shewanella and description of Shewanella oneidensis sp. nov.. International Journal of Systematic and Evolutionary Microbiology, 1999, 49, 705-724.	1.7	574
87	BIOGEOCHEMISTRY:Life in Ice-Covered Oceans. Science, 1999, 284, 1631-1633.	12.6	160
88	Iron Isotope Biosignatures. Science, 1999, 285, 1889-1892.	12.6	357
89	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
90	Biogeochemical Cycling of Manganese in Oneida Lake, New York: Whole Lake Studies of Manganese. Journal of Great Lakes Research, 1998, 24, 93-104.	1.9	32

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91	Breathing Manganese and Iron: Solid-State Respiration. Advances in Applied Microbiology, 1997, , 213-239.	2.4	43
92	SEDIMENT BACTERIA: Who's There, What Are They Doing, and What's New?. Annual Review of Earth and Planetary Sciences, 1997, 25, 403-434.	11.0	372
93	Manganese Reduction in Oneida Lake, New York: Estimates of Spatial and Temporal Manganese Flux. Canadian Journal of Fisheries and Aquatic Sciences, 1994, 51, 185-196.	1.4	20
94	Iron and Manganese in Anaerobic Respiration: Environmental Significance, Physiology, and Regulation. Annual Review of Microbiology, 1994, 48, 311-343.	7.3	845
95	Effects of manganese oxide mineralogy on microbial and chemical manganese reduction. Geomicrobiology Journal, 1992, 10, 27-48.	2.0	104
96	Microbial reduction of manganese oxides: Interactions with iron and sulfur. Geochimica Et Cosmochimica Acta, 1988, 52, 2727-2732.	3.9	260
97	Chemical and microbiological studies of sulfideâ€mediated manganese reduction¹. Geomicrobiology Journal, 1986, 4, 361-387.	2.0	248
98	Contribution by symbiotically luminous fishes to the occurrence and bioluminescence of luminous bacteria in seawater. Microbial Ecology, 1984, 10, 69-77.	2.8	34
99	Microbial mediation of Mn(II) and Co(II) precipitation at the O₂/H₂S interfaces in two anoxic fjords1. Limnology and Oceanography, 1984, 29, 1247-1258.	3.1	131
100	Microbially mediated manganese oxidation in a freshwater lake1. Limnology and Oceanography, 1982, 27, 1004-1014.	3.1	116
101	Autoinduction of bacterial bioluminescence in a carbon limited chemostat. Archives of Microbiology, 1981, 129, 299-304.	2.2	66
102	Surface enhancement of bacterial manganese oxidation: Implications for aquatic environments. Geomicrobiology Journal, 1980, 2, 21-37.	2.0	86
103	Phenotypic characterization ofPhotobacterium logei (sp. nov.), a species related toP. fischeri. Current Microbiology, 1978, 1, 285-288.	2.2	38
104	The Fine Structure of the Echinoderm Cuticle and the Subcuticular Bacteria of Echinoderms. Acta Zoologica, 1978, 59, 169-185.	0.8	124
105	Autoinduction of bacterial luciferase. Archives of Microbiology, 1977, 112, 73-79.	2.2	284
106	Mutant Analysis and Enzyme Subunit Complementation in Bacterial Bioluminescence in <i>Photobacterium fischeri</i>. Journal of Bacteriology, 1970, 104, 300-312.	2.2	43
107	Cellular Control of the Synthesis and Activity of the Bacterial Luminescent System. Journal of Bacteriology, 1970, 104, 313-322.	2.2	1,032