

# Kenneth H Neelson

## List of Publications by Year in descending order

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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	The Sorcerer II Global Ocean Sampling Expedition: Northwest Atlantic through Eastern Tropical Pacific. <i>PLoS Biology</i> , 2007, 5, e77.	5.6	1,757
2	Electrically conductive bacterial nanowires produced by <i>Shewanella oneidensis</i> strain MR-1 and other microorganisms. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 11358-11363.	7.1	1,629
3	Cellular Control of the Synthesis and Activity of the Bacterial Luminescent System. <i>Journal of Bacteriology</i> , 1970, 104, 313-322.	2.2	1,032
4	Iron and Manganese in Anaerobic Respiration: Environmental Significance, Physiology, and Regulation. <i>Annual Review of Microbiology</i> , 1994, 48, 311-343.	7.3	845
5	Towards environmental systems biology of <i>Shewanella</i> . <i>Nature Reviews Microbiology</i> , 2008, 6, 592-603.	28.6	829
6	Polyphasic taxonomy of the genus <i>Shewanella</i> and description of <i>Shewanella oneidensis</i> sp. nov.. <i>International Journal of Systematic and Evolutionary Microbiology</i> , 1999, 49, 705-724.	1.7	574
7	Electrical transport along bacterial nanowires from <i>Shewanella oneidensis</i> MR-1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 18127-18131.	7.1	566
8	Current Production and Metal Oxide Reduction by <i>Shewanella oneidensis</i> MR-1 Wild Type and Mutants. <i>Applied and Environmental Microbiology</i> , 2007, 73, 7003-7012.	3.1	513
9	Microbial ecology meets electrochemistry: electricity-driven and driving communities. <i>ISME Journal</i> , 2007, 1, 9-18.	9.8	433
10	Rate enhancement of bacterial extracellular electron transport involves bound flavin semiquinones. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 7856-7861.	7.1	402
11	SEDIMENT BACTERIA: Who's There, What Are They Doing, and What's New?. <i>Annual Review of Earth and Planetary Sciences</i> , 1997, 25, 403-434.	11.0	372
12	Iron Isotope Biosignatures. <i>Science</i> , 1999, 285, 1889-1892.	12.6	357
13	Geochemical and microbiological evidence for a hydrogen-based, hyperthermophilic subsurface lithoautotrophic microbial ecosystem (HyperSLiME) beneath an active deep-sea hydrothermal field. <i>Extremophiles</i> , 2004, 8, 269-282.	2.3	285
14	Autoinduction of bacterial luciferase. <i>Archives of Microbiology</i> , 1977, 112, 73-79.	2.2	284
15	Genomic and functional adaptation in surface ocean planktonic prokaryotes. <i>Nature</i> , 2010, 468, 60-66.	27.8	280
16	Microbial reduction of manganese oxides: Interactions with iron and sulfur. <i>Geochimica Et Cosmochimica Acta</i> , 1988, 52, 2727-2732.	3.9	260
17	Chemical and microbiological studies of sulfide-mediated manganese reduction <sup>1</sup> . <i>Geomicrobiology Journal</i> , 1986, 4, 361-387.	2.0	248
18	Bacterial and archaeal populations associated with freshwater ferromanganous micronodules and sediments. <i>Environmental Microbiology</i> , 2001, 3, 10-18.	3.8	216

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19	FeGenie: A Comprehensive Tool for the Identification of Iron Genes and Iron Gene Neighborhoods in Genome and Metagenome Assemblies. <i>Frontiers in Microbiology</i> , 2020, 11, 37.	3.5	195
20	Reproduction and metabolism at - 10oC of bacteria isolated from Siberian permafrost. <i>Environmental Microbiology</i> , 2003, 5, 321-326.	3.8	193
21	Hydrogen-driven subsurface lithoautotrophic microbial ecosystems (SLiMEs): do they exist and why should we care?. <i>Trends in Microbiology</i> , 2005, 13, 405-410.	7.7	186
22	Breathing metals as a way of life: geobiology in action. <i>Antonie Van Leeuwenhoek</i> , 2002, 81, 215-222.	1.7	185
23	The impact of structural Fe(III) reduction by bacteria on the surface chemistry of smectite clay minerals. <i>Geochimica Et Cosmochimica Acta</i> , 1999, 63, 3705-3713.	3.9	181
24	Uptake of self-secreted flavins as bound cofactors for extracellular electron transfer in <i>Geobacter</i> species. <i>Energy and Environmental Science</i> , 2014, 7, 1357-1361.	30.8	176
25	Silver nanoparticles boost charge-extraction efficiency in <i>Shewanella</i> microbial fuel cells. <i>Science</i> , 2021, 373, 1336-1340.	12.6	171
26	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. <i>Applied and Environmental Microbiology</i> , 2002, 68, 881-892.	3.1	170
27	A novel metatranscriptomic approach to identify gene expression dynamics during extracellular electron transfer. <i>Nature Communications</i> , 2013, 4, 1601.	12.8	162
28	BIOGEOCHEMISTRY:Life in Ice-Covered Oceans. <i>Science</i> , 1999, 284, 1631-1633.	12.6	160
29	Multi-heme cytochromes provide a pathway for survival in energy-limited environments. <i>Science Advances</i> , 2018, 4, eaao5682.	10.3	155
30	Subfreezing Activity of Microorganisms and the Potential Habitability of Mars' Polar Regions. <i>Astrobiology</i> , 2003, 3, 343-350.	3.0	143
31	Cell-secreted Flavins Bound to Membrane Cytochromes Dictate Electron Transfer Reactions to Surfaces with Diverse Charge and pH. <i>Scientific Reports</i> , 2014, 4, 5628.	3.3	141
32	Microbial population and functional dynamics associated with surface potential and carbon metabolism. <i>ISME Journal</i> , 2014, 8, 963-978.	9.8	140
33	Geochemistry and geobiology of a present-day serpentinization site in California: The Cedars. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 109, 222-240.	3.9	136
34	Microbial mediation of Mn(II) and Co(II) precipitation at the O <sub>2</sub> /H <sub>2</sub> S interfaces in two anoxic fjords. <i>Limnology and Oceanography</i> , 1984, 29, 1247-1258.	3.1	131
35	The Fine Structure of the Echinoderm Cuticle and the Subcuticular Bacteria of Echinoderms. <i>Acta Zoologica</i> , 1978, 59, 169-185.	0.8	124
36	Quantification of Electron Transfer Rates to a Solid Phase Electron Acceptor through the Stages of Biofilm Formation from Single Cells to Multicellular Communities. <i>Environmental Science &amp; Technology</i> , 2010, 44, 2721-2727.	10.0	122

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37	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
38	Microbially mediated manganese oxidation in a freshwater lake <sup>1</sup> . Limnology and Oceanography, 1982, 27, 1004-1014.	3.1	116
39	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
40	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
41	Physiological and genomic features of highly alkaliphilic hydrogen-utilizing Betaproteobacteria from a continental serpentinizing site. Nature Communications, 2014, 5, 3900.	12.8	111
42	<i>Shewanella loihica</i> 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
43	The influence of acidity on microbial fuel cells containing <i>Shewanella oneidensis</i> . Biosensors and Bioelectronics, 2008, 24, 900-905.	10.1	108
44	The Molecular Density of States in Bacterial Nanowires. Biophysical Journal, 2008, 95, L10-L12.	0.5	106
45	Effects of manganese oxide mineralogy on microbial and chemical manganese reduction. Geomicrobiology Journal, 1992, 10, 27-48.	2.0	104
46	Ecophysiology of the Genus <i>Shewanella</i> . , 2006, , 1133-1151.		98
47	Functionally Stable and Phylogenetically Diverse Microbial Enrichments from Microbial Fuel Cells during Wastewater Treatment. PLoS ONE, 2012, 7, e30495.	2.5	96
48	Unusual metabolic diversity of hyperalkaliphilic microbial communities associated with subterranean serpentinization at The Cedars. ISME Journal, 2017, 11, 2584-2598.	9.8	95
49	<i>Marinobacter alkaliphilus</i> sp. nov., a novel alkaliphilic bacterium isolated from subseafloor alkaline serpentine mud from Ocean Drilling Program Site 1200 <sub>2</sub> at South Chamorro Seamount, Mariana Forearc. Extremophiles, 2005, 9, 17-27.	2.3	87
50	Surface enhancement of bacterial manganese oxidation: Implications for aquatic environments. Geomicrobiology Journal, 1980, 2, 21-37.	2.0	86
51	Marine sediments microbes capable of electrode oxidation as a surrogate for lithotrophic insoluble substrate metabolism. Frontiers in Microbiology, 2014, 5, 784.	3.5	86
52	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
53	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
54	Electromicrobiology: realities, grand challenges, goals and predictions. Microbial Biotechnology, 2016, 9, 595-600.	4.2	79

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55	Characterization of electrochemically active bacteria utilizing a high-throughput voltage-based screening assay. <i>Biotechnology and Bioengineering</i> , 2009, 102, 436-444.	3.3	74
56	Ultramafics-Hydrothermalism-Hydrogenesis-HyperSLiME (UltraH <sup>3</sup> ) linkage: a key insight into early microbial ecosystem in the Archean deep-sea hydrothermal systems. <i>Paleontological Research</i> , 2006, 10, 269-282.	1.0	73
57	Relationship of Critical Temperature to Macromolecular Synthesis and Growth Yield in <i>Psychrobacter cryopegella</i> . <i>Journal of Bacteriology</i> , 2004, 186, 2340-2345.	2.2	69
58	Integrating niche-based process and spatial process in biogeography of magnetotactic bacteria. <i>Scientific Reports</i> , 2013, 3, 1643.	3.3	68
59	Comparative metatranscriptomics reveals extracellular electron transfer pathways conferring microbial adaptivity to surface redox potential changes. <i>ISME Journal</i> , 2018, 12, 2844-2863.	9.8	68
60	Autoinduction of bacterial bioluminescence in a carbon limited chemostat. <i>Archives of Microbiology</i> , 1981, 129, 299-304.	2.2	66
61	Calcium and magnesium-limited dolomite precipitation at Deep Springs Lake, California. <i>Sedimentology</i> , 2011, 58, 1810-1830.	3.1	64
62	Evaluation of microbial fuel cell <i>Shewanella</i> biocathodes for treatment of chromate contamination. <i>RSC Advances</i> , 2012, 2, 5844.	3.6	60
63	GEOCHEMISTRY: Follow the Nitrogen. <i>Science</i> , 2006, 312, 708-709.	12.6	59
64	<i>In situ</i> electrochemical enrichment and isolation of a magnetite-reducing bacterium from a high pH serpentinizing spring. <i>Environmental Microbiology</i> , 2017, 19, 2272-2285.	3.8	59
65	Kinetics of Fe(III) and Mn(IV) reduction by the Black Sea strain of <i>Shewanella putrefaciens</i> using <i>in situ</i> solid state voltammetric Au/Hg electrodes. <i>Marine Chemistry</i> , 2000, 70, 171-180.	2.3	52
66	Metagenomics and the global ocean survey: what's in it for us, and why should we care?. <i>ISME Journal</i> , 2007, 1, 185-187.	9.8	51
67	The impact of bacterial strain on the products of dissimilatory iron reduction. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 574-583.	3.9	47
68	Nanoelectronic Investigation Reveals the Electrochemical Basis of Electrical Conductivity in <i>Shewanella</i> and <i>Geobacter</i> . <i>ACS Nano</i> , 2016, 10, 9919-9926.	14.6	46
69	High-resolution X-ray spectroscopy of rare events: a different look at local structure and chemistry. <i>Journal of Synchrotron Radiation</i> , 2001, 8, 199-203.	2.4	45
70	Electron flow and biofilms. <i>MRS Bulletin</i> , 2011, 36, 380-384.	3.5	44
71	Microbial metabolic networks in a complex electrogenic biofilm recovered from a stimulus-induced metatranscriptomics approach. <i>Scientific Reports</i> , 2015, 5, 14840.	3.3	44
72	Syntrophic interspecies electron transfer drives carbon fixation and growth by <i>Rhodospseudomonas palustris</i> under dark, anoxic conditions. <i>Science Advances</i> , 2021, 7, .	10.3	44

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73	Breathing Manganese and Iron: Solid-State Respiration. <i>Advances in Applied Microbiology</i> , 1997, , 213-239.	2.4	43
74	Mutant Analysis and Enzyme Subunit Complementation in Bacterial Bioluminescence in <i>Photobacterium fischeri</i> . <i>Journal of Bacteriology</i> , 1970, 104, 300-312.	2.2	43
75	Light-driven carbon dioxide reduction to methane by <i>Methanosarcina barkeri</i> in an electric syntrophic coculture. <i>ISME Journal</i> , 2022, 16, 370-377.	9.8	40
76	Phenotypic characterization of <i>Photobacterium logei</i> (sp. nov.), a species related to <i>P. fischeri</i> . <i>Current Microbiology</i> , 1978, 1, 285-288.	2.2	38
77	Microbial metal-ion reduction and Mars: extraterrestrial expectations?. <i>Current Opinion in Microbiology</i> , 2002, 5, 296-300.	5.1	35
78	Exploring the metabolic potential of microbial communities in ultra-basic, reducing springs at The Cedars, CA, USA: Experimental evidence of microbial methanogenesis and heterotrophic acetogenesis. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2016, 121, 1203-1220.	3.0	35
79	Bioelectricity (electromicrobiology) and sustainability. <i>Microbial Biotechnology</i> , 2017, 10, 1114-1119.	4.2	35
80	Contribution by symbiotically luminous fishes to the occurrence and bioluminescence of luminous bacteria in seawater. <i>Microbial Ecology</i> , 1984, 10, 69-77.	2.8	34
81	Biogeochemical Cycling of Manganese in Oneida Lake, New York: Whole Lake Studies of Manganese. <i>Journal of Great Lakes Research</i> , 1998, 24, 93-104.	1.9	32
82	In Situ Spectroelectrochemical Characterization Reveals Cytochrome-Mediated Electric Syntrophy in <i>Geobacter</i> Coculture. <i>Environmental Science &amp; Technology</i> , 2021, 55, 10142-10151.	10.0	28
83	Community Structure Comparison Using FAME Analysis of Desert Varnish and Soil, Mojave Desert, California. <i>Geomicrobiology Journal</i> , 2005, 22, 353-360.	2.0	27
84	Hydrogen and energy flow as "sensed" by molecular genetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 3889-3890.	7.1	26
85	Outer membrane cytochromes/flavin interactions in <i>Shewanella</i> spp. A molecular perspective. <i>Biointerphases</i> , 2017, 12, 021004.	1.6	24
86	Differences in Applied Redox Potential on Cathodes Enrich for Diverse Electrochemically Active Microbial Isolates From a Marine Sediment. <i>Frontiers in Microbiology</i> , 2019, 10, 1979.	3.5	24
87	<i>Thioclava electrotropha</i> sp. nov., a versatile electrode and sulfur-oxidizing bacterium from marine sediments. <i>International Journal of Systematic and Evolutionary Microbiology</i> , 2018, 68, 1652-1658.	1.7	23
88	Manganese Reduction in Oneida Lake, New York: Estimates of Spatial and Temporal Manganese Flux. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 1994, 51, 185-196.	1.4	20
89	Sediment reactions defy dogma. <i>Nature</i> , 2010, 463, 1033-1034.	27.8	20
90	<i>Serpentinimonas</i> gen. nov., <i>Serpentinimonas raichei</i> sp. nov., <i>Serpentinimonas barnesii</i> sp. nov. and <i>Serpentinimonas maccroryi</i> sp. nov., hyperalkaliphilic and facultative autotrophic bacteria isolated from terrestrial serpentinizing springs. <i>International Journal of Systematic and Evolutionary Microbiology</i> , 2021, 71, .	1.7	20

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91	A study of the flavin response by <i>Shewanella</i> cultures in carbon-limited environments. <i>RSC Advances</i> , 2012, 2, 10020.	3.6	18
92	Variation in electrode redox potential selects for different microorganisms under cathodic current flow from electrodes in marine sediments. <i>Environmental Microbiology</i> , 2018, 20, 2270-2287.	3.8	17
93	Dissecting the Structural and Conductive Functions of Nanowires in <i>Geobacter sulfurreducens</i> Electroactive Biofilms. <i>MBio</i> , 2022, 13, e0382221.	4.1	17
94	Enriching distinctive microbial communities from marine sediments via an electrochemical-sulfide-oxidizing process on carbon electrodes. <i>Frontiers in Microbiology</i> , 2015, 6, 111.	3.5	16
95	Quantifying Microorganisms at Low Concentrations Using Digital Holographic Microscopy (DHM). <i>Journal of Visualized Experiments</i> , 2017, , .	0.3	16
96	Extracellular electron transfer of <i>Shewanella oneidensis</i> MR-1 for cathodic hydrogen evolution reaction. <i>Electrochimica Acta</i> , 2019, 305, 528-533.	5.2	15
97	A metabolic-activity-detecting approach to life detection: Restoring a chemostat from stop-feeding using a rapid bioactivity assay. <i>Bioelectrochemistry</i> , 2017, 118, 147-153.	4.6	9
98	A Geochemical Comparison of Three Terrestrial Sites of Serpentinization: The Tablelands, the Cedars, and Aqua de Ney. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2021JG006316.	3.0	7
99	Au(III)-induced extracellular electron transfer by <i>Burkholderia contaminans</i> ZCC for the bio-recovery of gold nanoparticles. <i>Environmental Research</i> , 2022, 210, 112910.	7.5	6
100	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). <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2019JG005542.	3.0	5
101	Metagenomic Insights Into the Microbial Iron Cycle of Subseafloor Habitats. <i>Frontiers in Microbiology</i> , 2021, 12, 667944.	3.5	4
102	On the 50th Anniversary of the discovery of autoinduction and the ensuing birth of quorum sensing. <i>Environmental Microbiology</i> , 2020, 22, 801-807.	3.8	2
103	Magnetotactic bacteria: concepts, conundrums, and insights from a novel <i>in situ</i> approach using digital holographic microscopy (DHM). <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2022, 208, 107-124.	1.6	2
104	Taking the Concept to the Limit: Uncultivable Bacteria and Astrobiology. <i>Microbiology Monographs</i> , 2009, , 237-240.	0.6	1
105	Breathing Metals as a Way of Life: Geobiology in Action. <i>ChemInform</i> , 2003, 34, no.	0.0	0
106	Sediment Habitats, Including Watery. , 2019, , .		0
107	Taking the Concept to the Limit: Uncultivable Bacteria and Astrobiology. <i>Microbiology Monographs</i> , 2009, , 195-204.	0.6	0