Peter R Girguis

List of Publications by Citations

100 papers	4,531 citations	38 h-index	65 g-index
112 ext. papers	5,630 ext. citations	8.3 avg, IF	5.53 L-index

#	Paper	IF	Citations
100	Identification of methyl coenzyme M reductase A (mcrA) genes associated with methane-oxidizing archaea. *Applied and Environmental Microbiology*, **2003**, 69, 5483-91	4.8	287
99	Microbial fuel cell energy from an ocean cold seep. *Geobiology*, **2006**, 4, 123-136	4.3	229
98	Oxygen, ecology, and the Cambrian radiation of animals. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 13446-51	11.5	217
97	Hydrogen is an energy source for hydrothermal vent symbioses. *Nature*, **2011**, 476, 176-80	50.4	175
96	Metabolic and practical considerations on microbial electrosynthesis. *Current Opinion in Biotechnology*, **2011**, 22, 371-7	11.4	166
95	Growth and population dynamics of anaerobic methane-oxidizing archaea and sulfate-reducing bacteria in a continuous-flow bioreactor. *Applied and Environmental Microbiology*, **2005**, 71, 3725-33	4.8	148
94	Thermodynamics and kinetics of sulfide oxidation by oxygen: a look at inorganically controlled reactions and biologically mediated processes in the environment. *Frontiers in Microbiology*, **2011**, 2, 62	5.7	135
93	Baleen whales host a unique gut microbiome with similarities to both carnivores and herbivores. *Nature Communications*, **2015**, 6, 8285	17.4	124
92	Growth and methane oxidation rates of anaerobic methanotrophic archaea in a continuous-flow bioreactor. *Applied and Environmental Microbiology*, **2003**, 69, 5472-82	4.8	112
91	A paradox resolved: sulfide acquisition by roots of seep tubeworms sustains net chemoautotrophy. *Proceedings of the National Academy of Sciences of the United States of America*, **2001**, 98, 13408-13	11.5	105
90	Patterns of sulfur isotope fractionation during microbial sulfate reduction. *Geobiology*, **2016**, 14, 91-101	4.3	96
89	Respiration control of multicellularity in Bacillus subtilis by a complex of the cytochrome chain with a membrane-embedded histidine kinase. *Genes and Development*, **2013**, 27, 887-99	12.6	95
88	Enhancing the response of microbial fuel cell based toxicity sensors to Cu(II) with the applying of flow-through electrodes and controlled anode potentials. *Bioresource Technology*, **2015**, 190, 367-72	11	92
87	Benthic microbial fuel cell as direct power source for an acoustic modem and seawater oxygen/temperature sensor system. *Environmental Science & Technology*, **2011**, 45, 5047-53	10.3	84
86	Anaerobic methane oxidation in metalliferous hydrothermal sediments: influence on carbon flux and decoupling from sulfate reduction. *Environmental Microbiology*, **2012**, 14, 2726-40	5.2	82
85	Niche partitioning of diverse sulfur-oxidizing bacteria at hydrothermal vents. *ISME Journal*, **2017**, 11, 1545-1558	11.9	81
84	NC10 bacteria in marine oxygen minimum zones. *ISME Journal*, **2016**, 10, 2067-71	11.9	77

83	Influence of subsurface biosphere on geochemical fluxes from diffuse hydrothermal fluids. *Nature Geoscience*, **2011**, 4, 461-468	18.3	77
82	The Ecological Physiology of Earth̄s Second Oxygen Revolution. *Annual Review of Ecology, Evolution, and Systematics*, **2015**, 46, 215-235	13.5	76
81	Thermal preference and tolerance of alvinellids. *Science*, **2006**, 312, 231	33.3	76
80	Evidence for the role of endosymbionts in regional-scale habitat partitioning by hydrothermal vent symbioses. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E3241-50	11.5	70
79	Sulfate-reducing bacteria influence the nucleation and growth of mackinawite and greigite. *Geochimica Et Cosmochimica Acta*, **2018**, 220, 367-384	5.5	69
78	Metabolite uptake, stoichiometry and chemoautotrophic function of the hydrothermal vent tubeworm Riftia pachyptila: responses to environmental variations in substrate concentrations and temperature. *Journal of Experimental Biology*, **2006**, 209, 3516-28	3	67
77	Roadmap for naming uncultivated Archaea and Bacteria. *Nature Microbiology*, **2020**, 5, 987-994	26.6	64
76	The metabolic demands of endosymbiotic chemoautotrophic metabolism on host physiological capacities. *Journal of Experimental Biology*, **2011**, 214, 312-25	3	64
75	Sustainable energy from deep ocean cold seeps. *Energy and Environmental Science*, **2008**, 1, 584	35.4	63
74	Substrate degradation kinetics, microbial diversity, and current efficiency of microbial fuel cells supplied with marine plankton. *Applied and Environmental Microbiology*, **2007**, 73, 7029-40	4.8	60
73	Characterizing the distribution and rates of microbial sulfate reduction at Middle Valley hydrothermal vents. *ISME Journal*, **2013**, 7, 1391-401	11.9	55
72	Fate of nitrate acquired by the tubeworm Riftia pachyptila. *Applied and Environmental Microbiology*, **2000**, 66, 2783-90	4.8	54
71	Metatranscriptomics reveal differences in in situ energy and nitrogen metabolism among hydrothermal vent snail symbionts. *ISME Journal*, **2013**, 7, 1556-67	11.9	53
70	Microbial decomposition of marine dissolved organic matter in cool oceanic crust. *Nature Geoscience*, **2018**, 11, 334-339	18.3	49
69	Exploring the limit of metazoan thermal tolerance via comparative proteomics: thermally induced changes in protein abundance by two hydrothermal vent polychaetes. *Proceedings of the Royal Society B: Biological Sciences*, **2012**, 279, 3347-56	4.4	49
68	New constraints on methane fluxes and rates of anaerobic methane oxidation in a Gulf of Mexico brine pool via in situ mass spectrometry. *Deep-Sea Research Part II: Topical Studies in Oceanography*, **2010**, 57, 2022-2029	2.3	48
67	Quantitative population dynamics of microbial communities in plankton-fed microbial fuel cells. *ISME Journal*, **2009**, 3, 635-46	11.9	48
66	Influence of substrate on electron transfer mechanisms in chambered benthic microbial fuel cells. *Environmental Science & Technology*, **2009**, 43, 8671-7	10.3	48

65	A distinct and active bacterial community in cold oxygenated fluids circulating beneath the western flank of the Mid-Atlantic ridge. *Scientific Reports*, **2016**, 6, 22541	4.9	46
64	Duty cycling influences current generation in multi-anode environmental microbial fuel cells. *Environmental Science & Technology*, **2012**, 46, 5222-9	10.3	43
63	Genetic tool development in marine protists: emerging model organisms for experimental cell biology. *Nature Methods*, **2020**, 17, 481-494	21.6	39
62	In situ chemistry and microbial community compositions in five deep-sea hydrothermal fluid samples from Irina II in the Logatchev field. *Environmental Microbiology*, **2013**, 15, 1551-60	5.2	36
61	What Do We Really Know about the Role of Microorganisms in Iron Sulfide Mineral Formation?. *Frontiers in Earth Science*, **2016**, 4,	3.5	36
60	Synergistic substrate cofeeding stimulates reductive metabolism. *Nature Metabolism*, **2019**, 1, 643-651	14.6	35
59	Redox effects on the microbial degradation of refractory organic matter in marine sediments. *Geochimica Et Cosmochimica Acta*, **2013**, 121, 582-598	5.5	35
58	Anaerobic oxidation of short-chain alkanes in hydrothermal sediments: potential influences on sulfur cycling and microbial diversity. *Frontiers in Microbiology*, **2013**, 4, 110	5.7	33
57	Methane-Linked Mechanisms of Electron Uptake from Cathodes by Methanosarcina barkeri. *MBio*, **2019**, 10,	7.8	32
56	Low temperature geomicrobiology follows host rock composition along a geochemical gradient in lau basin. *Frontiers in Microbiology*, **2013**, 4, 61	5.7	32
55	Autonomous application of quantitative PCR in the deep sea: in situ surveys of aerobic methanotrophs using the deep-sea environmental sample processor. *Environmental Science & Technology*, **2013**, 47, 9339-46	10.3	31
54	Comparative genomics of vesicomyid clam (Bivalvia: Mollusca) chemosynthetic symbionts. *BMC Genomics*, **2008**, 9, 585	4.5	31
53	Sulfide Oxidation across Diffuse Flow Zones of Hydrothermal Vents. *Aquatic Geochemistry*, **2011**, 17, 583-601	1.7	30
52	Carbon fixation by basalt-hosted microbial communities. *Frontiers in Microbiology*, **2015**, 6, 904	5.7	29
51	Characterizing the distribution of methane sources and cycling in the deep sea via in situ stable isotope analysis. *Environmental Science & Technology*, **2013**, 47, 1478-86	10.3	29
50	Proteome Evolution of Deep-Sea Hydrothermal Vent Alvinellid Polychaetes Supports the Ancestry of Thermophily and Subsequent Adaptation to Cold in Some Lineages. *Genome Biology and Evolution*, **2017**, 9, 279-296	3.9	26
49	Heterotrophic Proteobacteria in the vicinity of diffuse hydrothermal venting. *Environmental Microbiology*, **2016**, 18, 4348-4368	5.2	26
48	Ubiquitous Presence and Novel Diversity of Anaerobic Alkane Degraders in Cold Marine Sediments. *Frontiers in Microbiology*, **2015**, 6, 1414	5.7	26

47	The uptake and excretion of partially oxidized sulfur expands the repertoire of energy resources metabolized by hydrothermal vent symbioses. *Proceedings of the Royal Society B: Biological Sciences* , **2015**, 282, 20142811	4.4	26
46	Biological capacitance studies of anodes in microbial fuel cells using electrochemical impedance spectroscopy. *Bioprocess and Biosystems Engineering*, **2015**, 38, 1325-33	3.7	24
45	Harnessing energy from marine productivity using bioelectrochemical systems. *Current Opinion in Biotechnology*, **2010**, 21, 252-8	11.4	24
44	Characterizing microbial community and geochemical dynamics at hydrothermal vents using osmotically driven continuous fluid samplers. *Environmental Science & Technology*, **2013**, 47, 4399-407	10.3	23
43	Links from Mantle to Microbe at the Lau Integrated Study Site: Insights from a Back-Arc Spreading Center. *Oceanography*, **2012**, 25, 62-77	2.3	23
42	Geomicrobiological linkages between short-chain alkane consumption and sulfate reduction rates in seep sediments. *Frontiers in Microbiology*, **2013**, 4, 386	5.7	23
41	Linking hydrothermal geochemistry to organismal physiology: physiological versatility in Riftia pachyptila from sedimented and basalt-hosted vents. *PLoS ONE*, **2011**, 6, e21692	3.7	23
40	Physiological Functioning of Carbonic Anhydrase in the Hydrothermal Vent Tubeworm Riftia Pachyptila. *Biological Bulletin*, **1999**, 196, 257-264	1.5	22
39	Nanoporous microscale microbial incubators. *Lab on A Chip*, **2016**, 16, 480-8	7.2	21
38	Coupling metabolite flux to transcriptomics: insights into the molecular mechanisms underlying primary productivity by the hydrothermal vent tubeworm Ridgeia piscesae. *Biological Bulletin*, **2008** , 214, 255-65	1.5	21
37	Independent Benthic Microbial Fuel Cells Powering Sensors and Acoustic Communications with the MARS Underwater Observatory. *Journal of Atmospheric and Oceanic Technology*, **2016**, 33, 607-617	2	21
36	Intracellular Oceanospirillales inhabit the gills of the hydrothermal vent snail Alviniconcha with chemosynthetic, Proteobacterial symbionts. *Environmental Microbiology Reports*, **2014**, 6, 656-64	3.7	20
35	Nitrogen Cycling of Active Bacteria within Oligotrophic Sediment of the Mid-Atlantic Ridge Flank. *Geomicrobiology Journal*, **2018**, 35, 468-483	2.5	19
34	Thiotaurine and hypotaurine contents in hydrothermal-vent polychaetes without thiotrophic endosymbionts: correlation With sulfide exposure. *Journal of Experimental Zoology*, **2009**, 311, 439-47		16
33	Co-registered Geochemistry and Metatranscriptomics Reveal Unexpected Distributions of Microbial Activity within a Hydrothermal Vent Field. *Frontiers in Microbiology*, **2017**, 8, 1042	5.7	15
32	Assessing the influence of physical, geochemical and biological factors on anaerobic microbial primary productivity within hydrothermal vent chimneys. *Geobiology*, **2013**, 11, 279-93	4.3	15
31	Authigenic metastable iron sulfide minerals preserve microbial organic carbon in anoxic environments. *Chemical Geology*, **2019**, 530, 119343	4.2	14
30	Characterizing the plasticity of nitrogen metabolism by the host and symbionts of the hydrothermal vent chemoautotrophic symbioses Ridgeia piscesae. *Molecular Ecology*, **2014**, 23, 1544-57	5.7	14

29	Expression and putative function of innate immunity genes under in situ conditions in the symbiotic hydrothermal vent tubeworm Ridgeia piscesae. *PLoS ONE*, **2012**, 7, e38267	3.7	14
28	On the Potential for Bioenergy and Biofuels from Hydrothermal Vent Microbes. *Oceanography*, **2012**, 25, 213-217	2.3	13
27	Hydrothermal Energy Transfer and Organic Carbon Production at the Deep Seafloor. *Frontiers in Marine Science*, **2019**, 5,	4.5	13
26	Key Factors Influencing Rates of Heterotrophic Sulfate Reduction in Active Seafloor Hydrothermal Massive Sulfide Deposits. *Frontiers in Microbiology*, **2015**, 6, 1449	5.7	12
25	Microbial response to oil enrichment in Gulf of Mexico sediment measured using a novel long-term benthic lander system. *Elementa*, **2017**, 5,	3.6	10
24	The Bacterial Symbionts of Closely Related Hydrothermal Vent Snails With Distinct Geochemical Habitats Show Broad Similarity in Chemoautotrophic Gene Content. *Frontiers in Microbiology*, **2019**, 10, 1818	5.7	10
23	Geochemically distinct carbon isotope distributions in Allochromatium vinosum DSM 180 grown photoautotrophically and photoheterotrophically. *Geobiology*, **2017**, 15, 324-339	4.3	9
22	In situ carbon isotopic exploration of an active submarine volcano. *Deep-Sea Research Part II: Topical Studies in Oceanography*, **2018**, 150, 57-66	2.3	9
21	Benthic microbial fuel cells: long-term power sources for wireless marine sensor networks **2010**,		9
20	Microbial ecology: Here, there and everywhere. *Nature Microbiology*, **2016**, 1, 16123	26.6	8
19	Toward establishing model organisms for marine protists: Successful transfection protocols for Parabodo caudatus (Kinetoplastida: Excavata). *Environmental Microbiology*, **2017**, 19, 3487-3499	5.2	8
18	Physiological dynamics of chemosynthetic symbionts in hydrothermal vent snails. *ISME Journal*, **2020**, 14, 2568-2579	11.9	8
17	Opinion: Telepresence is a potentially transformative tool for field science. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 4841-4844	11.5	7
16	Metatranscriptional Response of Chemoautotrophic Ifremeria nautilei Endosymbionts to Differing Sulfur Regimes. *Frontiers in Microbiology*, **2016**, 7, 1074	5.7	7
15	Microbiology. A proteomic snapshot of life at a vent. *Science*, **2007**, 315, 198-9	33.3	6
14	Multiple carbon incorporation strategies support microbial survival in cold subseafloor crustal fluids. *Science Advances*, **2021**, 7,	14.3	6
13	Vortex fluidics-mediated DNA rescue from formalin-fixed museum specimens. *PLoS ONE*, **2020**, 15, e0225807	3.7	5
12	Hydrogen Does Not Appear To Be a Major Electron Donor for Symbiosis with the Deep-Sea Hydrothermal Vent Tubeworm Riftia pachyptila. *Applied and Environmental Microbiology*, **2019**, 86,	4.8	4

List of Publications

11	Harnessing a methane-fueled, sediment-free mixed microbial community for utilization of distributed sources of natural gas. *Biotechnology and Bioengineering*, **2018**, 115, 1450-1464	4.9	3
10	Measuring isotope fractionation by autotrophic microorganisms and enzymes. *Methods in Enzymology*, **2011**, 494, 281-99	1.7	3
9	Iron Sulfide Formation on Iron Substrates by Electrochemical Reaction in Anoxic Conditions. *Crystal Growth and Design*, **2017**, 17, 6332-6340	3.5	2
8	Evidence for Horizontal and Vertical Transmission of Mtr-Mediated Extracellular Electron Transfer among the .. *MBio*, **2022**, e0290421	7.8	2
7	Interactions Between Iron Sulfide Minerals and Organic Carbon: Implications for Biosignature Preservation and Detection. *Astrobiology*, **2021**, 21, 587-604	3.7	2
6	On the Edge of a Deep Biosphere: Real Animals in Extreme Environments. *Geophysical Monograph Series*, **2004**, 41-49	1.1	1
5	Sulfur bacteria promote dissolution of authigenic carbonates at marine methane seeps. *ISME Journal*, **2021**, 15, 2043-2056	11.9	1
4	Spatially resolved correlative microscopy and microbial identification reveal dynamic depth- and mineral-dependent anabolic activity in salt marsh sediment. *Environmental Microbiology*, **2021**, 23, 4756-4777	5.2	1
3	Cooccurring Activities of Two Autotrophic Pathways in Symbionts of the Hydrothermal Vent Tubeworm. *Applied and Environmental Microbiology*, **2021**, 87, e0079421	4.8	0
2	Vortex fluidics-mediated DNA rescue from formalin-fixed museum specimens **2020**, 15, e0225807		
1	Vortex fluidics-mediated DNA rescue from formalin-fixed museum specimens **2020**, 15, e0225807		