# Peter R Girguis

List of Publications by Year
in descending order



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|---|---|---|---|
| 106 papers | 6,224 citations | 53751 45 h-index | 76872 74 g-index |
| 112 all docs | 112 docs citations | 112 times ranked | 7197 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Identification of Methyl Coenzyme M Reductase A ( mcrA ) Genes Associated with Methane-Oxidizing Archaea. Applied and Environmental Microbiology, 2003, 69, 5483-5491. | 1.4 | 353 |
| 2 | Oxygen, ecology, and the Cambrian radiation of animals. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13446-13451. | 3.3 | 277 |
| 3 | Microbial fuel cell energy from an ocean cold seep. Geobiology, 2006, 4, 123-136. | 1.1 | 255 |
| 4 | Hydrogen is an energy source for hydrothermal vent symbioses. Nature, 2011, 476, 176-180. | 13.7 | 251 |
| 5 | Metabolic and practical considerations on microbial electrosynthesis. Current Opinion in Biotechnology, 2011, 22, 371-377. | 3.3 | 207 |
| 6 | Baleen whales host a unique gut microbiome with similarities to both carnivores and herbivores. Nature Communications, 2015, 6, 8285. | 5.8 | 184 |
| 7 | 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. | 1.5 | 173 |
| 8 | Growth and Population Dynamics of Anaerobic Methane-Oxidizing Archaea and Sulfate-Reducing Bacteria in a Continuous-Flow Bioreactor. Applied and Environmental Microbiology, 2005, 71, 3725-3733. | 1.4 | 168 |
| 9 | Niche partitioning of diverse sulfur-oxidizing bacteria at hydrothermal vents. ISME Journal, 2017, 11, 1545-1558. | 4.4 | 168 |
| 10 | Patterns of sulfur isotope fractionation during microbial sulfate reduction. Geobiology, 2016, 14, 91-101. | 1.1 | 136 |
| 11 | Growth and Methane Oxidation Rates of Anaerobic Methanotrophic Archaea in a Continuous-Flow Bioreactor. Applied and Environmental Microbiology, 2003, 69, 5472-5482. | 1.4 | 133 |
| 12 | Respiration control of multicellularity in <i>Bacillus subtilis</i> by a complex of the cytochrome chain with a membrane-embedded histidine kinase. Genes and Development, 2013, 27, 887-899. | 2.7 | 124 |
| 13 | 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, 13408-13413. | 3.3 | 120 |
| 14 | Roadmap for naming uncultivated Archaea and Bacteria. Nature Microbiology, 2020, 5, 987-994. | 5.9 | 115 |
| 15 | NC10 bacteria in marine oxygen minimum zones. ISME Journal, 2016, 10, 2067-2071. | 4.4 | 112 |
| 16 | The Ecological Physiology of Earth's Second Oxygen Revolution. Annual Review of Ecology, Evolution, and Systematics, 2015, 46, 215-235. | 3.8 | 106 |
| 17 | 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, 367-372. | 4.8 | 105 |
| 18 | Sulfate-reducing bacteria influence the nucleation and growth of mackinawite and greigite. Geochimica Et Cosmochimica Acta, 2018, 220, 367-384. | 1.6 | 104 |

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|---|---|---|---|
| 19 | Influence of subsurface biosphere on geochemical fluxes from diffuse hydrothermal fluids. Nature Geoscience, 2011, 4, 461-468. | 5.4 | 100 |
| 20 | Benthic Microbial Fuel Cell as Direct Power Source for an Acoustic Modem and Seawater Oxygen/Temperature Sensor System. Environmental Science & Technology, 2011, 45, 5047-5053. | 4.6 | 98 |
| 21 | Anaerobic methane oxidation in metalliferous hydrothermal sediments: influence on carbon flux and decoupling from sulfate reduction. Environmental Microbiology, 2012, 14, 2726-2740. | 1.8 | 98 |
| 22 | Thermal Preference and Tolerance of Alvinellids. Science, 2006, 312, 231-231. | 6.0 | 97 |
| 23 | Genetic tool development in marine protists: emerging model organisms for experimental cell biology. Nature Methods, 2020, 17, 481-494. | 9.0 | 97 |
| 24 | 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. | 3.3 | 94 |
| 25 | The metabolic demands of endosymbiotic chemoautotrophic metabolism on host physiological capacities. Journal of Experimental Biology, 2011, 214, 312-325. | 0.8 | 91 |
| 26 | 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, 3516-3528. | 0.8 | 80 |
| 27 | Metatranscriptomics reveal differences in <i>in situ</i> energy and nitrogen metabolism among hydrothermal vent snail symbionts. ISME Journal, 2013, 7, 1556-1567. | 4.4 | 73 |
| 28 | Characterizing the distribution and rates of microbial sulfate reduction at Middle Valley hydrothermal vents. ISME Journal, 2013, 7, 1391-1401. | 4.4 | 72 |
| 29 | Microbial decomposition of marine dissolved organic matter in cool oceanic crust. Nature Geoscience, 2018, 11, 334-339. | 5.4 | 71 |
| 30 | Synergistic substrate cofeeding stimulates reductive metabolism. Nature Metabolism, 2019, 1, 643-651. | 5.1 | 71 |
| 31 | Sustainable energy from deep ocean cold seeps. Energy and Environmental Science, 2008, 1, 584. | 15.6 | 70 |
| 32 | Fate of Nitrate Acquired by the Tubeworm Riftia pachyptila. Applied and Environmental Microbiology, 2000, 66, 2783-2790. | 1.4 | 68 |
| 33 | Substrate Degradation Kinetics, Microbial Diversity, and Current Efficiency of Microbial Fuel Cells Supplied with Marine Plankton. Applied and Environmental Microbiology, 2007, 73, 7029-7040. | 1.4 | 67 |
| 34 | Heterotrophic <i>Proteobacteria</i> in the vicinity of diffuse hydrothermal venting. Environmental Microbiology, 2016, 18, 4348-4368. | 1.8 | 63 |
| 35 | 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. | 1.6 | 62 |
| 36 | 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, 3347-3356. | 1.2 | 61 |

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| 37 | 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. | 0.6 | 60 |
| 38 | Quantitative population dynamics of microbial communities in plankton-fed microbial fuel cells. ISME Journal, 2009, 3, 635-646. | 4.4 | 56 |
| 39 | Carbon fixation by basalt-hosted microbial communities. Frontiers in Microbiology, 2015, 6, 904. | 1.5 | 55 |
| 40 | Influence of Substrate on Electron Transfer Mechanisms in Chambered Benthic Microbial Fuel Cells. Environmental Science & Technology, 2009, 43, 8671-8677. | 4.6 | 52 |
| 41 | Methane-Linked Mechanisms of Electron Uptake from Cathodes by Methanosarcina barkeri. MBio, 2019, 10, . | 1.8 | 52 |
| 42 | What Do We Really Know about the Role of Microorganisms in Iron Sulfide Mineral Formation?. Frontiers in Earth Science, 2016, 4, . | 0.8 | 51 |
| 43 | Duty Cycling Influences Current Generation in Multi-Anode Environmental Microbial Fuel Cells. Environmental Science & Technology, 2012, 46, 5222-5229. | 4.6 | 50 |
| 44 | Nitrogen Cycling of Active Bacteria within Oligotrophic Sediment of the Mid-Atlantic Ridge Flank. Geomicrobiology Journal, 2018, 35, 468-483. | 1.0 | 50 |
| 45 | Redox effects on the microbial degradation of refractory organic matter in marine sediments. Geochimica Et Cosmochimica Acta, 2013, 121, 582-598. | 1.6 | 49 |
| 46 | Comparative genomics of vesicomyid clam (Bivalvia: Mollusca) chemosynthetic symbionts. BMC Genomics, 2008, 9, 585. | 1.2 | 47 |
| 47 | 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, 9339-9346. | 4.6 | 47 |
| 48 | <i>In situ</i> chemistry and microbial community compositions in five deepâ€sea hydrothermal fluid samples from <scp>I</scp>rina <scp>II</scp> in the <scp>L</scp>ogatchev field. Environmental Microbiology, 2013, 15, 1551-1560. | 1.8 | 47 |
| 49 | Low Temperature Geomicrobiology Follows Host Rock Composition Along a Geochemical Gradient in Lau Basin. Frontiers in Microbiology, 2013, 4, 61. | 1.5 | 45 |
| 50 | Anaerobic oxidation of short-chain alkanes in hydrothermal sediments: potential influences on sulfur cycling and microbial diversity. Frontiers in Microbiology, 2013, 4, 110. | 1.5 | 44 |
| 51 | Characterizing the Distribution of Methane Sources and Cycling in the Deep Sea via in Situ Stable Isotope Analysis. Environmental Science & Technology, 2013, 47, 1478-1486. | 4.6 | 43 |
| 52 | 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. | 1.2 | 41 |
| 53 | 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, evw298. | 1.1 | 39 |
| 54 | Sulfide Oxidation across Diffuse Flow Zones of Hydrothermal Vents. Aquatic Geochemistry, 2011, 17, 583-601. | 1.5 | 37 |

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| 55 | Biological capacitance studies of anodes in microbial fuel cells using electrochemical impedance spectroscopy. Bioprocess and Biosystems Engineering, 2015, 38, 1325-1333. | 1.7 | 35 |
| 56 | Ubiquitous Presence and Novel Diversity of Anaerobic Alkane Degraders in Cold Marine Sediments. Frontiers in Microbiology, 2015, 6, 1414. | 1.5 | 30 |
| 57 | Physiological Functioning of Carbonic Anhydrase in the Hydrothermal Vent Tubeworm Riftia Pachyptila. Biological Bulletin, 1999, 196, 257-264. | 0.7 | 29 |
| 58 | Harnessing energy from marine productivity using bioelectrochemical systems. Current Opinion in Biotechnology, 2010, 21, 252-258. | 3.3 | 29 |
| 59 | Geomicrobiological linkages between short-chain alkane consumption and sulfate reduction rates in seep sediments. Frontiers in Microbiology, 2013, 4, 386. | 1.5 | 29 |
| 60 | Nanoporous microscale microbial incubators. Lab on A Chip, 2016, 16, 480-488. | 3.1 | 29 |
| 61 | 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. | 0.5 | 28 |
| 62 | Authigenic metastable iron sulfide minerals preserve microbial organic carbon in anoxic environments. Chemical Geology, 2019, 530, 119343. | 1.4 | 28 |
| 63 | Characterizing Microbial Community and Geochemical Dynamics at Hydrothermal Vents Using Osmotically Driven Continuous Fluid Samplers. Environmental Science & Technology, 2013, 47, 4399-4407. | 4.6 | 27 |
| 64 | Hydrothermal Energy Transfer and Organic Carbon Production at the Deep Seafloor. Frontiers in Marine Science, 2019, 5, . | 1.2 | 27 |
| 65 | Co-registered Geochemistry and Metatranscriptomics Reveal Unexpected Distributions of Microbial Activity within a Hydrothermal Vent Field. Frontiers in Microbiology, 2017, 8, 1042. | 1.5 | 26 |
| 66 | Linking Hydrothermal Geochemistry to Organismal Physiology: Physiological Versatility in Riftia pachyptila from Sedimented and Basalt-hosted Vents. PLoS ONE, 2011, 6, e21692. | 1.1 | 26 |
| 67 | Intracellular <scp>O</scp>ceanospirillales inhabit the gills of the hydrothermal vent snail <scp><i>A</i></scp><i>lviniconcha</i> with chemosynthetic, Î³â€<scp>P</scp>roteobacterial symbionts. Environmental Microbiology Reports, 2014, 6, 656-664. | 1.0 | 25 |
| 68 | Links from Mantle to Microbe at the Lau Integrated Study Site: Insights from a Back-Arc Spreading Center. Oceanography, 2012, 25, 62-77. | 0.5 | 24 |
| 69 | Coupling Metabolite Flux to Transcriptomics: Insights Into the Molecular Mechanisms Underlying Primary Productivity by the Hydrothermal Vent Tubeworm<i>Ridgeia piscesae</i>. Biological Bulletin, 2008, 214, 255-265. | 0.7 | 23 |
| 70 | Assessing the influence of physical, geochemical and biological factors on anaerobic microbial primary productivity within hydrothermal vent chimneys. Geobiology, 2013, 11, 279-293. | 1.1 | 23 |
| 71 | Evidence for Horizontal and Vertical Transmission of Mtr-Mediated Extracellular Electron Transfer among the <i>Bacteria</i>. MBio, 2022, 13, e0290421. | 1.8 | 23 |
| 72 | 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. | 1.5 | 21 |

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| 73 | Characterizing the plasticity of nitrogen metabolism by the host and symbionts of the hydrothermal vent chemoautotrophic symbioses <i><scp>R</scp>idgeia piscesae</i>. Molecular Ecology, 2014, 23, 1544-1557. | 2.0 | 20 |
| 74 | Key Factors Influencing Rates of Heterotrophic Sulfate Reduction in Active Seafloor Hydrothermal Massive Sulfide Deposits. Frontiers in Microbiology, 2015, 6, 1449. | 1.5 | 20 |
| 75 | 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. | 1.1 | 19 |
| 76 | Microbial response to oil enrichment in Gulf of Mexico sediment measured using a novel long-term benthic lander system. Elementa, 2017, 5, . | 1.1 | 19 |
| 77 | Thiotaurine and hypotaurine contents in hydrothermalâ€vent polychaetes without thiotrophic endosymbionts: correlation With sulfide exposure. Journal of Experimental Zoology, 2009, 311A, 439-447. | 1.2 | 18 |
| 78 | 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. | 3.3 | 17 |
| 79 | In situ carbon isotopic exploration of an active submarine volcano. Deep-Sea Research Part II: Topical Studies in Oceanography, 2018, 150, 57-66. | 0.6 | 17 |
| 80 | Physiological dynamics of chemosynthetic symbionts in hydrothermal vent snails. ISME Journal, 2020, 14, 2568-2579. | 4.4 | 17 |
| 81 | On the Potential for Bioenergy and Biofuels from Hydrothermal Vent Microbes. Oceanography, 2012, 25, 213-217. | 0.5 | 15 |
| 82 | Benthic microbial fuel cells: long-term power sources for wireless marine sensor networks. Proceedings of SPIE, 2010, , . | 0.8 | 14 |
| 83 | Geochemically distinct carbon isotope distributions in <i>Allochromatium vinosum </i><scp>DSM</scp> 180<sup>T</sup> grown photoautotrophically and photoheterotrophically. Geobiology, 2017, 15, 324-339. | 1.1 | 14 |
| 84 | Multiple carbon incorporation strategies support microbial survival in cold subseafloor crustal fluids. Science Advances, 2021, 7, . | 4.7 | 14 |
| 85 | Vortex fluidics-mediated DNA rescue from formalin-fixed museum specimens. PLoS ONE, 2020, 15, e0225807. | 1.1 | 12 |
| 86 | Metatranscriptional Response of Chemoautotrophic Ifremeria nautilei Endosymbionts to Differing Sulfur Regimes. Frontiers in Microbiology, 2016, 7, 1074. | 1.5 | 11 |
| 87 | Toward establishing model organisms for marine protists: Successful transfection protocols for Parabodo caudatus (Kinetoplastida: Excavata). Environmental Microbiology, 2017, 19, 3487-3499. | 1.8 | 11 |
| 88 | Novel Insights on Obligate Symbiont Lifestyle and Adaptation to Chemosynthetic Environment as Revealed by the Giant Tubeworm Genome. Molecular Biology and Evolution, 2022, 39, . | 3.5 | 11 |
| 89 | The Grayness of the Origin of Life. Life, 2021, 11, 498. | 1.1 | 10 |
| 90 | Microbial ecology: Here, there and everywhere. Nature Microbiology, 2016, 1, 16123. | 5.9 | 9 |

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| 91 | Sulfur bacteria promote dissolution of authigenic carbonates at marine methane seeps. ISME Journal, 2021, 15, 2043-2056. | 4.4 | 9 |
| 92 | A Proteomic Snapshot of Life at a Vent. Science, 2007, 315, 198-199. | 6.0 | 8 |
| 93 | 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, . | 1.4 | 8 |
| 94 | Carbonate-hosted microbial communities are prolific and pervasive methane oxidizers at geologically diverse marine methane seep sites. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 8 |
| 95 | Spatially resolved correlative microscopy and microbial identification reveal dynamic depthâ€•and mineralâ€dependent anabolic activity in salt marsh sediment. Environmental Microbiology, 2021, 23, 4756-4777. | 1.8 | 8 |
| 96 | Measuring Isotope Fractionation by Autotrophic Microorganisms and Enzymes. Methods in Enzymology, 2011, 494, 281-299. | 0.4 | 7 |
| 97 | Interactions Between Iron Sulfide Minerals and Organic Carbon: Implications for Biosignature Preservation and Detection. Astrobiology, 2021, 21, 587-604. | 1.5 | 5 |
| 98 | Iron Sulfide Formation on Iron Substrates by Electrochemical Reaction in Anoxic Conditions. Crystal Growth and Design, 2017, 17, 6332-6340. | 1.4 | 4 |
| 99 | Harnessing a methaneâ€fueled, sedimentâ€free mixed microbial community for utilization of distributed sources of natural gas. Biotechnology and Bioengineering, 2018, 115, 1450-1464. | 1.7 | 4 |
| 100 | Cooccurring Activities of Two Autotrophic Pathways in Symbionts of the Hydrothermal Vent Tubeworm Riftia pachyptila. Applied and Environmental Microbiology, 2021, 87, e0079421. | 1.4 | 3 |
| 101 | Differentiated Evolutionary Strategies of Genetic Diversification in Atlantic and Pacific Thaumarchaeal Populations. MSystems, 2022, 7, . | 1.7 | 3 |
| 102 | <scp>CRISPR</scp>/Cas9â€induced disruption of <i>Bodo saltans</i> paraflagellar rodâ€2 gene reveals its importance for cell survival. Environmental Microbiology, 2022, 24, 3051-3062. | 1.8 | 2 |
| 103 | On the edge of a deep biosphere: Real animals in extreme environments. Geophysical Monograph Series, 2004, , 41-49. | 0.1 | 1 |
| 104 | Advancing a Deep Sea Near-Infrared Laser Spectrometer for Dual Isotope Measurements. , 2015, , . | | 1 |
| 105 | Vortex fluidics-mediated DNA rescue from formalin-fixed museum specimens. , 2020, 15, e0225807. | | 0 |
| 106 | Vortex fluidics-mediated DNA rescue from formalin-fixed museum specimens. , 2020, 15, e0225807. | | 0 |