Jennifer Pett-Ridge

List of Publications by Year
in descending order

120 papers	9,511 citations	38742 50 h-index	46799 89 g-index
162 all docs	162 docs citations	162 times ranked	10432 citing authors

#	Article	IF	Citations
1	Mineral protection of soil carbon counteracted by root exudates. Nature Climate Change, 2015, 5, 588-595.	18.8	694
2	A genomic catalog of Earthâ€™s microbiomes. Nature Biotechnology, 2021, 39, 499-509.	17.5	457
3	A Bacterium That Can Grow by Using Arsenic Instead of Phosphorus. Science, 2011, 332, 1163-1166.	12.6	422
4	An arbuscular mycorrhizal fungus significantly modifies the soil bacterial community and nitrogen cycling during litter decomposition. Environmental Microbiology, 2013, 15, 1870-1881.	3.8	288
5	Life and death in the soil microbiome: how ecological processes influence biogeochemistry. Nature Reviews Microbiology, 2022, 20, 415-430.	28.6	282
6	A trade-off between plant and soil carbon storage under elevated CO2. Nature, 2021, 591, 599-603.	27.8	268
7	Successional Trajectories of Rhizosphere Bacterial Communities over Consecutive Seasons. MBio, 2015, 6, e00746.	4.1	232
8	Linking Microbial Phylogeny to Metabolic Activity at the Single-Cell Level by Using Enhanced Element Labeling-Catalyzed Reporter Deposition Fluorescence In Situ Hybridization (EL-FISH) and NanoSIMS. Applied and Environmental Microbiology, 2008, 74, 3143-3150.	3.1	223
9	Redox Fluctuation Structures Microbial Communities in a Wet Tropical Soil. Applied and Environmental Microbiology, 2005, 71, 6998-7007.	3.1	216
10	Integrating microbial ecology into ecosystem models: challenges and priorities. Biogeochemistry, 2012, 109, 7-18.	3.5	206
11	Global metagenomic survey reveals a new bacterial candidate phylum in geothermal springs. Nature Communications, 2016, 7, 10476.	12.8	189
12	Nano-scale secondary ion mass spectrometry â€” A new analytical tool in biogeochemistry and soil ecology: A review article. Soil Biology and Biochemistry, 2007, 39, 1835-1850.	8.8	178
13	Long-term litter decomposition controlled by manganese redox cycling. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5253-60.	7.1	168
14	Metatranscriptomic reconstruction reveals RNA viruses with the potential to shape carbon cycling in soil. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 25900-25908.	7.1	165
15	Fixation and fate of C and N in the cyanobacterium <i>Trichodesmium</i> using nanometer-scale secondary ion mass spectrometry. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 6345-6350.	7.1	156
16	Redox Fluctuations Frame Microbial Community Impacts on N-cycling Rates in a Humid Tropical Forest Soil. Biogeochemistry, 2006, 81, 95-110.	3.5	152
17	Carbon and nitrogen fixation and metabolite exchange in and between individual cells of <i>Anabaena oscillarioides</i>. ISME Journal, 2007, 1, 354-360.	9.8	148
18	PLANT AND MICROBIAL CONTROLS ON NITROGEN RETENTION AND LOSS IN A HUMID TROPICAL FOREST. Ecology, 2008, 89, 3030-3040.	3.2	146

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19	Subcellular metal imaging identifies dynamic sites of Cu accumulation in Chlamydomonas. Nature Chemical Biology, 2014, 10, 1034-1042.	8.0	143
20	Evidence for foliar endophytic nitrogen fixation in a widely distributed subalpine conifer. New Phytologist, 2016, 210, 657-668.	7.3	135
21	Niche differentiation is spatially and temporally regulated in the rhizosphere. ISME Journal, 2020, 14, 999-1014.	9.8	135
22	Twelve testable hypotheses on the geobiology of weathering. Geobiology, 2011, 9, 140-165.	2.4	133
23	Evaluating the source of streamwater nitrate using ?15N and ?18O in nitrate in two watersheds in New Hampshire, USA. Hydrological Processes, 2004, 18, 2699-2712.	2.6	122
24	Tracking microbial interactions with NanoSIMS. Current Opinion in Biotechnology, 2016, 41, 114-121.	6.6	117
25	Climate and edaphic controllers influence rhizosphere community assembly for a wild annual grass. Ecology, 2016, 97, 1307-1318.	3.2	111
26	Ecological and Genomic Attributes of Novel Bacterial Taxa That Thrive in Subsurface Soil Horizons. MBio, 2019, 10, .	4.1	108
27	Nano-scale investigation of the association of microbial nitrogen residues with iron (hydr)oxides in a forest soil O-horizon. Geochimica Et Cosmochimica Acta, 2012, 95, 213-226.	3.9	107
28	Cyanobacterial reuse of extracellular organic carbon in microbial mats. ISME Journal, 2016, 10, 1240-1251.	9.8	103
29	Redox Fluctuations Control the Coupled Cycling of Iron and Carbon in Tropical Forest Soils. Environmental Science & Technology, 2018, 52, 14129-14139.	10.0	96
30	Using stable isotopes to explore root-microbe-mineral interactions in soil. Rhizosphere, 2017, 3, 244-253.	3.0	93
31	NanoSIP: NanoSIMS Applications for Microbial Biology. Methods in Molecular Biology, 2012, 881, 375-408.	0.9	90
32	EcoFABs: advancing microbiome science through standardized fabricated ecosystems. Nature Methods, 2019, 16, 567-571.	19.0	90
33	Estimating taxonâ€specific population dynamics in diverse microbial communities. Ecosphere, 2018, 9, e02090.	2.2	85
34	Phylogenetically conserved resource partitioning in the coastal microbial loop. ISME Journal, 2017, 11, 2781-2792.	9.8	82
35	Compartmentalized microbial composition, oxygen gradients and nitrogen fixation in the gut of <i>Odontotaenius disjunctus</i>. ISME Journal, 2014, 8, 6-18.	9.8	80
36	Microbial community assembly differs across minerals in a rhizosphere microcosm. Environmental Microbiology, 2018, 20, 4444-4460.	3.8	77

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37	Evolutionary history constrains microbial traits across environmental variation. Nature Ecology and Evolution, 2019, 3, 1064-1069.	7.8	76
38	Shotgun metagenome data of a defined mock community using Oxford Nanopore, PacBio and Illumina technologies. Scientific Data, 2019, 6, 285.	5.3	75
39	NanoSIP: NanoSIMS Applications for Microbial Biology. Methods in Molecular Biology, 2022, 2349, 91-136.	0.9	75
40	High-throughput isotopic analysis of RNA microarrays to quantify microbial resource use. ISME Journal, 2012, 6, 1210-1221.	9.8	70
41	Advances in the Analysis of Biogeochemical Interfaces. Advances in Agronomy, 2013, , 1-46.	5.2	69
42	Revisiting N2 fixation in Guerrero Negro intertidal microbial mats with a functional single-cell approach. ISME Journal, 2015, 9, 485-496.	9.8	69
43	Microbial extracellular polysaccharide production and aggregate stability controlled by switchgrass (Panicum virgatum) root biomass and soil water potential. Soil Biology and Biochemistry, 2020, 143, 107742.	8.8	69
44	Gut anatomical properties and microbial functional assembly promote lignocellulose deconstruction and colony subsistence of a wood-feeding beetle. Nature Microbiology, 2019, 4, 864-875.	13.3	68
45	Hyphae move matter and microbes to mineral microsites: Integrating the hyphosphere into conceptual models of soil organic matter stabilization. Global Change Biology, 2022, 28, 2527-2540.	9.5	68
46	Routes to roots: direct evidence of water transport by arbuscular mycorrhizal fungi to host plants. New Phytologist, 2022, 236, 210-221.	7.3	68
47	Taxon-specific microbial growth and mortality patterns reveal distinct temporal population responses to rewetting in a California grassland soil. ISME Journal, 2020, 14, 1520-1532.	9.8	67
48	Identification of a novel cyanobacterial group as active diazotrophs in a coastal microbial mat using NanoSIMS analysis. ISME Journal, 2012, 6, 1427-1439.	9.8	66
49	Predictive genomic traits for bacterial growth in culture versus actual growth in soil. ISME Journal, 2019, 13, 2162-2172.	9.8	66
50	The temperature sensitivity of soil: microbial biodiversity, growth, and carbon mineralization. ISME Journal, 2021, 15, 2738-2747.	9.8	65
51	Influence of oxic/anoxic fluctuations on ammonia oxidizers and nitrification potential in a wet tropical soil. FEMS Microbiology Ecology, 2013, 85, 179-194.	2.7	62
52	Fermentation couples Chloroflexi and sulfate-reducing bacteria to Cyanobacteria in hypersaline microbial mats. Frontiers in Microbiology, 2014, 5, 61.	3.5	61
53	Anoxic carbon flux in photosynthetic microbial mats as revealed by metatranscriptomics. ISME Journal, 2013, 7, 817-829.	9.8	57
54	From pools to flow: The PROMISE framework for new insights on soil carbon cycling in a changing world. Global Change Biology, 2020, 26, 6631-6643.	9.5	57

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55	Deep-C storage: Biological, chemical and physical strategies to enhance carbon stocks in agricultural subsoils. Soil Biology and Biochemistry, 2022, 170, 108697.	8.8	57
56	Attachment between heterotrophic bacteria and microalgae influences symbiotic microscale interactions. Environmental Microbiology, 2018, 20, 4385-4400.	3.8	55
57	Protist diversity and community complexity in the rhizosphere of switchgrass are dynamic as plants develop. Microbiome, 2021, 9, 96.	11.1	54
58	Manganese co-localizes with calcium and phosphorus in Chlamydomonas acidocalcisomes and is mobilized in manganese-deficient conditions. Journal of Biological Chemistry, 2019, 294, 17626-17641.	3.4	53
59	Minnesota peat viromes reveal terrestrial and aquatic niche partitioning for local and global viral populations. Microbiome, 2021, 9, 233.	11.1	53
60	Global distribution, formation and fate of mineralâ€associated soil organic matter under a changing climate: A traitâ€based perspective. Functional Ecology, 2022, 36, 1411-1429.	3.6	53
61	Phylogenetic Patterns in the Microbial Response to Resource Availability: Amino Acid Incorporation in San Francisco Bay. PLoS ONE, 2014, 9, e95842.	2.5	52
62	Active virus-host interactions at sub-freezing temperatures in Arctic peat soil. Microbiome, 2021, 9, 208.	11.1	52
63	Ensuring planetary survival: the centrality of organic carbon in balancing the multifunctional nature of soils. Critical Reviews in Environmental Science and Technology, 2022, 52, 4308-4324.	12.8	52
64	Nutrients cause consolidation of soil carbon flux to small proportion of bacterial community. Nature Communications, 2021, 12, 3381.	12.8	51
65	Hydrogen production in photosynthetic microbial mats in the Elkhorn Slough estuary, Monterey Bay. ISME Journal, 2012, 6, 863-874.	9.8	48
66	The Functional Significance of Bacterial Predators. MBio, 2021, 12, .	4.1	48
67	Molybdenum-Based Diazotrophy in a Sphagnum Peatland in Northern Minnesota. Applied and Environmental Microbiology, 2017, 83, .	3.1	46
68	Natural abundance 15N in soil and litter across a nitrate-output gradient in New Hampshire. Forest Ecology and Management, 2007, 251, 217-230.	3.2	44
69	Proteomic Stable Isotope Probing Reveals Taxonomically Distinct Patterns in Amino Acid Assimilation by Coastal Marine Bacterioplankton. MSystems, 2016, 1, .	3.8	43
70	Correlated SEM, FIB-SEM, TEM, and NanoSIMS Imaging of Microbes from the Hindgut of a Lower Termite: Methods for<i>In Situ</i>Functional and Ecological Studies of Uncultivable Microbes. Microscopy and Microanalysis, 2013, 19, 1490-1501.	0.4	38
71	Characterizing Chemoautotrophy and Heterotrophy in Marine Archaea and Bacteria With Single-Cell Multi-isotope NanoSIP. Frontiers in Microbiology, 2019, 10, 2682.	3.5	37
72	Plant roots alter microbial functional genes supporting root litter decomposition. Soil Biology and Biochemistry, 2018, 127, 90-99.	8.8	35

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73	Stable-Isotope-Informed, Genome-Resolved Metagenomics Uncovers Potential Cross-Kingdom Interactions in Rhizosphere Soil. MSphere, 2021, 6, e0008521.	2.9	34
74	Rhizosphere Carbon Turnover from Cradle to Grave: The Role of Microbeâ€“Plant Interactions. Rhizosphere Biology, 2021, , 51-73.	0.6	33
75	Continental-scale patterns of extracellular enzyme activity in the subsoil: an overlooked reservoir of microbial activity. Environmental Research Letters, 2020, 15, 1040a1.	5.2	32
76	Fungal-Bacterial Cooccurrence Patterns Differ between Arbuscular Mycorrhizal Fungi and Nonmycorrhizal Fungi across Soil Niches. MBio, 2021, 12, .	4.1	31
77	Syntrophic metabolism of a co-culture containing Clostridium cellulolyticum and Rhodopseudomonas palustris for hydrogen production. International Journal of Hydrogen Energy, 2012, 37, 11719-11726.	7.1	30
78	Identification of <i><scp>D</scp>esulfobacterales</i> as primary hydrogenotrophs in a complex microbial mat community. Geobiology, 2014, 12, 221-230.	2.4	30
79	Phosphorus Fractionation Responds to Dynamic Redox Conditions in a Humid Tropical Forest Soil. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 3016-3027.	3.0	30
80	The Switchgrass Microbiome: A Review of Structure, Function, and Taxonomic Distribution. Phytobiomes Journal, 2021, 5, 14-28.	2.7	29
81	Rock weathering controls the potential for soil carbon storage at a continental scale. Biogeochemistry, 2022, 157, 1-13.	3.5	29
82	Taxon-specific C/N relative use efficiency for amino acids in an estuarine community. FEMS Microbiology Ecology, 2013, 83, 402-412.	2.7	28
83	Multimodal LA-ICP-MS and nanoSIMS imaging enables copper mapping within photoreceptor megamitochondria in a zebrafish model of Menkes disease. Metallomics, 2018, 10, 474-485.	2.4	27
84	The role of soil redox conditions in microbial phosphorus cycling in humid tropical forests. Ecology, 2020, 101, e02928.	3.2	26
85	Quantifying the effects of switchgrass (<i>Panicum virgatum</i>) on deep organic C stocks using natural abundance ¹⁴C in three marginal soils. GCB Bioenergy, 2020, 12, 834-847.	5.6	26
86	VirION2: a short- and long-read sequencing and informatics workflow to study the genomic diversity of viruses in nature. PeerJ, 2021, 9, e11088.	2.0	25
87	Belowground allocation and dynamics of recently fixed plant carbon in a California annual grassland. Soil Biology and Biochemistry, 2022, 165, 108519.	8.8	25
88	Response to Comments on â€œA Bacterium That Can Grow Using Arsenic Instead of Phosphorusâ€ Science, 2011, 332, 1149-1149.	12.6	23
89	Experimental testing of hypotheses for temperatureâ€and <scp>pH</scp>â€based niche specialization of ammonia oxidizing archaea and bacteria. Environmental Microbiology, 2020, 22, 4032-4045.	3.8	21
90	Measurement Error and Resolution in Quantitative Stable Isotope Probing: Implications for Experimental Design. MSystems, 2020, 5, .	3.8	20

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91	Survival, Growth, and Ecosystem Dynamics of Displaced Bromeliads in a Montane Tropical Forest1. Biotropica, 2002, 34, 211-224.	1.6	19
92	Light Regimes Shape Utilization of Extracellular Organic C and N in a Cyanobacterial Biofilm. MBio, 2016, 7, .	4.1	18
93	System-level analysis of metabolic trade-offs during anaerobic photoheterotrophic growth in Rhodopseudomonas palustris. BMC Bioinformatics, 2019, 20, 233.	2.6	18
94	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
95	Decreased growth of wild soil microbes after 15Âyears of transplantâ€induced warming in a montane meadow. Global Change Biology, 2022, 28, 128-139.	9.5	16
96	An essential role for tungsten in the ecology and evolution of a previously uncultivated lineage of anaerobic, thermophilic Archaea. Nature Communications, 2022, 13, .	12.8	16
97	Differential effects of redox conditions on the decomposition of litter and soil organic matter. Biogeochemistry, 2021, 154, 1-15.	3.5	14
98	Label-Free Multiphoton Imaging of Microbes in Root, Mineral, and Soil Matrices with Time-Gated Coherent Raman and Fluorescence Lifetime Imaging. Environmental Science & Technology, 2022, 56, 1994-2008.	10.0	14
99	Root Carbon Interaction with Soil Minerals Is Dynamic, Leaving a Legacy of Microbially Derived Residues. Environmental Science & Technology, 2021, 55, 13345-13355.	10.0	13
100	Active microbial biomass decreases, but microbial growth potential remains similar across soil depth profiles under deeply-vs. shallow-rooted plants. Soil Biology and Biochemistry, 2021, 162, 108401.	8.8	13
101	iVirus 2.0: Cyberinfrastructure-supported tools and data to power DNA virus ecology. ISME Communications, 2021, 1, .	4.2	13
102	Plants and mycorrhizal symbionts acquire substantial soil nitrogen from gaseous ammonia transport. New Phytologist, 2021, 231, 1746-1757.	7.3	12
103	Soil Oxygen Limits Microbial Phosphorus Utilization in Humid Tropical Forest Soils. Soil Systems, 2018, 2, 65.	2.6	11
104	Potential for Iron Reduction Increases with Rainfall in Montane Basaltic Soils of Hawaii. Soil Science Society of America Journal, 2018, 82, 176-185.	2.2	10
105	Chip-SIP: Stable Isotope Probing Analyzed with rRNA-Targeted Microarrays and NanoSIMS. Methods in Molecular Biology, 2019, 2046, 71-87.	0.9	9
106	Managing Plant Microbiomes for Sustainable Biofuel Production. Phytobiomes Journal, 2021, 5, 3-13.	2.7	8
107	Community RNA-Seq: multi-kingdom responses to living versus decaying roots in soil. ISME Communications, 2021, 1, .	4.2	8
108	Nitrogen Mineralization and Assimilation at Millimeter Scales. Methods in Enzymology, 2011, 496, 91-114.	1.0	7

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109	Metagenome Sequencing of a Coastal Marine Microbial Community from Monterey Bay, California. Genome Announcements, 2015, 3, .	0.8	6
110	Draft Genome Sequence of an Oscillatorian Cyanobacterium, Strain ESFC-1. Genome Announcements, 2013, 1, .	0.8	5
111	Metagenomic analysis of intertidal hypersaline microbial mats from Elkhorn Slough, California, grown with and without molybdate. Standards in Genomic Sciences, 2017, 12, 67.	1.5	5
112	Metagenomics reveals niche partitioning within the phototrophic zone of a microbial mat. PLoS ONE, 2018, 13, e0202792.	2.5	5
113	Hydraulic redistribution by deeply rooted grasses and its ecohydrologic implications in the southern <scp>Great Plains</scp> of <scp>North America</scp>. Hydrological Processes, 2021, 35, e14366.	2.6	5
114	Permanent draft genome of strain ESFC-1: ecological genomics of a newly discovered lineage of filamentous diazotrophic cyanobacteria. Standards in Genomic Sciences, 2016, 11, 53.	1.5	4
115	Conversion of marginal land into switchgrass conditionally accrues soil carbon but reduces methane consumption. ISME Journal, 2022, 16, 10-25.	9.8	4
116	Fast redox switches lead to rapid transformation of goethite in humid tropical soils: A MÃ¶ssbauer spectroscopy study. Soil Science Society of America Journal, 2022, 86, 264-274.	2.2	4
117	Measuring Cyanobacterial Metabolism in Biofilms with NanoSIMS Isotope Imaging and Scanning Electron Microscopy (SEM). Bio-protocol, 2017, 7, e2263.	0.4	2
118	Carbon Sink Strength of Subsurface Horizons in Brazilian Oxisols. Soil Science Society of America Journal, 2018, 82, 76-86.	2.2	1
119	Response to â€˜Stochastic and deterministic interpretation of pool modelsâ€™. Global Change Biology, 2021, 27, e11-e12.	9.5	1
120	Response to â€œConnectivity and pore accessibility in models of soil carbon cyclingâ€. Global Change Biology, 2021, 27, e15-e16.	9.5	0