Vanessa Bailey

List of Publications by Year
in descending order

63 papers	4,853 citations	186265 28 h-index	114465 63 g-index
66 all docs	66 docs citations	66 times ranked	6855 citing authors

#	Article	IF	Citations
1	Mechanisms controlling soil carbon turnover and their potential application for enhancing carbon sequestration. Climatic Change, 2007, 80, 5-23.	3.6	567
2	Fungal-to-bacterial ratios in soils investigated for enhanced C sequestration. Soil Biology and Biochemistry, 2002, 34, 997-1007.	8.8	474
3	The effect of young biochar on soil respiration. Soil Biology and Biochemistry, 2010, 42, 2345-2347.	8.8	444
4	Globally rising soil heterotrophic respiration over recent decades. Nature, 2018, 560, 80-83.	27.8	360
5	Reconciling apparent variability in effects of biochar amendment on soil enzyme activities by assay optimization. Soil Biology and Biochemistry, 2011, 43, 296-301.	8.8	351
6	c-Type Cytochrome-Dependent Formation of U(IV) Nanoparticles by Shewanella oneidensis. PLoS Biology, 2006, 4, e268.	5.6	310
7	Relationships between soil microbial biomass determined by chloroform fumigationâ€“extraction, substrate-induced respiration, and phospholipid fatty acid analysis. Soil Biology and Biochemistry, 2002, 34, 1385-1389.	8.8	205
8	Novelty and Uniqueness Patterns of Rare Members of the Soil Biosphere. Applied and Environmental Microbiology, 2008, 74, 5422-5428.	3.1	189
9	Representing the function and sensitivity of coastal interfaces in Earth system models. Nature Communications, 2020, 11, 2458.	12.8	153
10	Enhancement of Carbon Sequestration in US Soils. BioScience, 2004, 54, 895.	4.9	138
11	A moisture function of soil heterotrophic respiration that incorporates microscale processes. Nature Communications, 2018, 9, 2562.	12.8	124
12	Linking microbial community structure to Î²-glucosidic function in soil aggregates. ISME Journal, 2013, 7, 2044-2053.	9.8	110
13	Differences in soluble organic carbon chemistry in pore waters sampled from different pore size domains. Soil Biology and Biochemistry, 2017, 107, 133-143.	8.8	107
14	What do we know about soil carbon destabilization?. Environmental Research Letters, 2019, 14, 083004.	5.2	106
15	Shifts in pore connectivity from precipitation versus groundwater rewetting increases soil carbon loss after drought. Nature Communications, 2017, 8, 1335.	12.8	88
16	Intra-annual changes in biomass, carbon, and nitrogen dynamics at 4-year old switchgrass field trials in west Tennessee, USAâ˜†. Agriculture, Ecosystems and Environment, 2010, 136, 177-184.	5.3	72
17	Novel antibiotics as inhibitors for the selective respiratory inhibition method of measuring fungal:bacterial ratios in soil. Biology and Fertility of Soils, 2003, 38, 154-160.	4.3	68
18	Modeling Microbial Dynamics in Heterogeneous Environments: Growth on Soil Carbon Sources. Microbial Ecology, 2012, 63, 883-897.	2.8	66

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19	Soil carbon cycling proxies: Understanding their critical role in predicting climate change feedbacks. Global Change Biology, 2018, 24, 895-905.	9.5	61
20	Soil Respiration and Bacterial Structure and Function after 17 Years of a Reciprocal Soil Transplant Experiment. PLoS ONE, 2016, 11, e0150599.	2.5	60
21	Distribution of two C cycle enzymes in soil aggregates of a prairie chronosequence. Biology and Fertility of Soils, 2005, 42, 17-23.	4.3	55
22	Micrometer-scale physical structure and microbial composition of soil macroaggregates. Soil Biology and Biochemistry, 2013, 65, 60-68.	8.8	54
23	Pore-scale investigation on the response of heterotrophic respiration to moisture conditions in heterogeneous soils. Biogeochemistry, 2016, 131, 121-134.	3.5	54
24	Measurements of microbial community activities in individual soil macroaggregates. Soil Biology and Biochemistry, 2012, 48, 192-195.	8.8	43
25	Response of â€œAlamoâ€• switchgrass tissue chemistry and biomass to nitrogen fertilization in West Tennessee, USA. Agriculture, Ecosystems and Environment, 2011, 140, 289-297.	5.3	42
26	Soil texture and environmental conditions influence the biogeochemical responses of soils to drought and flooding. Communications Earth & Environment, 2021, 2, .	6.8	35
27	Spatial distribution of prokaryotic communities in hypersaline soils. Scientific Reports, 2019, 9, 1769.	3.3	33
28	Soil carbon dynamics during drying vs. rewetting: Importance of antecedent moisture conditions. Soil Biology and Biochemistry, 2021, 156, 108165.	8.8	30
29	Soil pore network response to freeze-thaw cycles in permafrost aggregates. Geoderma, 2022, 411, 115674.	5.1	30
30	The initial rate of C substrate utilization and longer-term soil C storage. Biology and Fertility of Soils, 2007, 44, 315-320.	4.3	27
31	Multiscale Investigation on Biofilm Distribution and Its Impact on Macroscopic Biogeochemical Reaction Rates. Water Resources Research, 2017, 53, 8698-8714.	4.2	26
32	Historically inconsistent productivity and respiration fluxes in the global terrestrial carbon cycle. Nature Communications, 2022, 13, 1733.	12.8	25
33	A Unified Multiscale Model for Pore-ScaleFlow Simulations in Soils. Soil Science Society of America Journal, 2014, 78, 108-118.	2.2	23
34	Temperature and moisture effects on greenhouse gas emissions from deep active-layer boreal soils. Biogeosciences, 2016, 13, 6669-6681.	3.3	22
35	Constrained tree growth and gas exchange of seawaterâ€exposed forests in the Pacific Northwest, USA. Journal of Ecology, 2019, 107, 2541-2552.	4.0	21
36	Micro on a macroscale: relating microbial-scale soil processes to global ecosystem function. FEMS Microbiology Ecology, 2021, 97, .	2.7	21

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37	Biotic and Abiotic Reduction and Solubilization of Pu(IV)O2â€¢xH2O(am) as Affected by Anthraquinone-2,6-disulfonate (AQDS) and Ethylenediaminetetraacetate (EDTA). Environmental Science & Technology, 2012, 46, 2132-2140.	10.0	20
38	Spatial gradients in the characteristics of soil-carbon fractions are associated with abiotic features but not microbial communities. Biogeosciences, 2019, 16, 3911-3928.	3.3	19
39	A practical method for assessing cadmium levels in soil using the DTPA extraction technique with graphite furnace analysis. Communications in Soil Science and Plant Analysis, 1995, 26, 961-968.	1.4	17
40	Moderate forest disturbance as a stringent test for gap and big-leaf models. Biogeosciences, 2015, 12, 513-526.	3.3	16
41	Longitudinal Gradients in Tree Stem Greenhouse Gas Concentrations Across Six Pacific Northwest Coastal Forests. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 1401-1412.	3.0	16
42	On the use of air temperature and precipitation as surrogate predictors in soil respiration modelling. European Journal of Soil Science, 2022, 73, .	3.9	14
43	Temporal dynamics of CO2 and CH4 loss potentials in response to rapid hydrological shifts in tidal freshwater wetland soils. Ecological Engineering, 2018, 114, 104-114.	3.6	13
44	Microscale water distribution and its effects on organic carbon decomposition in unsaturated soils. Science of the Total Environment, 2018, 644, 1036-1043.	8.0	12
45	The influence of increasing atmospheric <scp>CO₂</scp>, temperature, and vapor pressure deficit on seawaterâ€induced tree mortality. New Phytologist, 2022, 235, 1767-1779.	7.3	12
46	Simulations of ecosystem hydrological processes using a unified multi-scale model. Ecological Modelling, 2015, 296, 93-101.	2.5	10
47	Declining carbohydrate content of Sitka-spruce treesdying from seawater exposure. Plant Physiology, 2021, 185, 1682-1696.	4.8	10
48	Seawater exposure causes hydraulic damage in dying Sitka-spruce trees. Plant Physiology, 2021, 187, 873-885.	4.8	10
49	Phospholipid fatty acid biomarkers in a freshwater periphyton community exposed to uranium: discovery by non-linear statistical learning. Journal of Environmental Radioactivity, 2011, 102, 64-71.	1.7	9
50	Changes in carbon and nitrogen metabolism during seawater-induced mortality of Picea sitchensis trees. Tree Physiology, 2021, 41, 2326-2340.	3.1	8
51	Spectral signatures for the classification of microbial species using Raman spectra. Analytical and Bioanalytical Chemistry, 2012, 404, 563-572.	3.7	7
52	Tree growth, transpiration, and water-use efficiency between shoreline and upland red maple (Acer) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	4.8	7
53	Antecedent conditions determine the biogeochemical response of coastal soils to seawater exposure. Soil Biology and Biochemistry, 2021, 153, 108104.	8.8	7
54	Spatial access and resource limitations control carbon mineralization in soils. Soil Biology and Biochemistry, 2021, 162, 108427.	8.8	7

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55	The Impact of Freezeâ€Thaw History on Soil Carbon Response to Experimental Freezeâ€Thaw Cycles. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	3.0	7
56	Revisiting diffusion-based moisture functions: why do they fail?. Soil Biology and Biochemistry, 2022, 165, 108525.	8.8	6
57	Disturbance legacies regulate coastal forest soil stability to changing salinity and inundation: A soil transplant experiment. Soil Biology and Biochemistry, 2022, 169, 108675.	8.8	6
58	MetFish: a Metabolomics Pipeline for Studying Microbial Communities in Chemically Extreme Environments. MSystems, 2021, 6, e0105820.	3.8	5
59	Direct detection of soil mRNAs using targeted microarrays for genes associated with lignin degradation. Soil Biology and Biochemistry, 2010, 42, 1793-1799.	8.8	4
60	Management of Soil Biota and Their Processes. , 2015, , 539-572.		4
61	Severe declines in hydraulic capacity and associated carbon starvation drive mortality in seawater exposed Sitka-spruce (Picea sitchensis) trees. Environmental Research Communications, 2022, 4, 035005.	2.3	4
62	14C Cycling in lignocellulose-amended soils: predicting long-term C fate from short-term indicators. Biology and Fertility of Soils, 2006, 42, 198-206.	4.3	3
63	Waterâ€dispersible nanocolloids and higher temperatures promote the release of carbon from riparian soil. Vadose Zone Journal, 2020, 19, e20077.	2.2	2