Steven D Allison

List of Publications by Year
in descending order

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128	26,206	13099	15732
papers	citations	68 h-index	125 g-index

137	137	137	22723
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A framework for soil microbial ecology in urban ecosystems. Ecosphere, 2022, 13, .	2.2	23
2	Microbes, memory and moisture: Predicting microbial moisture responses and their impact on carbon cycling. Functional Ecology, 2022, 36, 1430-1441.	3.6	15
3	Climate-Driven Legacies in Simulated Microbial Communities Alter Litter Decomposition Rates. Frontiers in Ecology and Evolution, 2022, 10, .	2.2	4
4	Microbial extracellular enzyme activity with simulated climate change. Elementa, 2022, 10, .	3.2	4
5	Trait relationships of fungal decomposers in response to drought using a dual field and laboratory approach. Ecosphere, 2022, 13, .	2.2	2
6	Bacterial community response to environmental change varies with depth in the surface soil. Soil Biology and Biochemistry, 2022, 172, 108761.	8.8	15
7	Testing microbial models with data from a 14C glucose tracer experiment. Soil Biology and Biochemistry, 2022, 172, 108781.	8.8	2
8	Carbon flux and forest dynamics: Increased deadwood decomposition in tropical rainforest treeâ€fall canopy gaps. Global Change Biology, 2021, 27, 1601-1613.	9.5	22
9	Microbial community response to a decade of simulated global changes depends on the plant community. Elementa, 2021, 9, .	3.2	10
10	Exploring Trait Trade-Offs for Fungal Decomposers in a Southern California Grassland. Frontiers in Microbiology, 2021, 12, 655987.	3.5	6
11	Drought legacies mediated by trait tradeâ€offs in soil microbiomes. Ecosphere, 2021, 12, e03562.	2.2	21
12	Phenotypic plasticity of fungal traits in response to moisture and temperature. ISME Communications, 2021, 1, .	4.2	6
13	Defining trait-based microbial strategies with consequences for soil carbon cycling under climate change. ISME Journal, 2020, 14, 1-9.	9.8	470
14	Carbon budgets for soil and plants respond to long-term warming in an Alaskan boreal forest. Biogeochemistry, 2020, 150, 345-353.	3.5	7
15	The age distribution of global soil carbon inferred from radiocarbon measurements. Nature Geoscience, 2020, 13, 555-559.	12.9	123
16	Embracing a new paradigm for temperature sensitivity of soil microbes. Global Change Biology, 2020, 26, 3221-3229.	9.5	54
17	Drought and plant litter chemistry alter microbial gene expression and metabolite production. ISME Journal, 2020, 14, 2236-2247.	9.8	79
18	A Bayesian approach to evaluation of soil biogeochemical models. Biogeosciences, 2020, 17, 4043-4057.	3.3	5

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19	Litter microbial respiration and enzymatic resistance to drought stress. Elementa, 2020, 8, .	3.2	1
20	Soil microbial communities with greater investment in resource acquisition have lower growth yield. Soil Biology and Biochemistry, 2019, 132, 36-39.	8.8	98
21	Traits track taxonomy. Nature Ecology and Evolution, 2019, 3, 1001-1002.	7.8	0
22	Emergent properties of organic matter decomposition by soil enzymes. Soil Biology and Biochemistry, 2019, 136, 107522.	8.8	33
23	Phylogenetic conservation of bacterial responses to soil nitrogen addition across continents. Nature Communications, 2019, 10, 2499.	12.8	48
24	Building bottomâ€up aggregateâ€based models (ABMs) in soil systems with a view of aggregates as biogeochemical reactors. Global Change Biology, 2019, 25, e6-e8.	9.5	10
25	Carbon Cycle Implications of Soil Microbial Interactions. Advances in Environmental Microbiology, 2019, , 1-29.	0.3	0
26	Bacterial Tradeoffs in Growth Rate and Extracellular Enzymes. Frontiers in Microbiology, 2019, 10, 2956.	3.5	89
27	Soil aggregates as biogeochemical reactors and implications for soilâ€“atmosphere exchange of greenhouse gasesâ€”A concept. Global Change Biology, 2019, 25, 373-385.	9.5	76
28	Reduced carbon use efficiency and increased microbial turnover with soil warming. Global Change Biology, 2019, 25, 900-910.	9.5	70
29	Greenhouse gas fluxes under drought and nitrogen addition in a Southern California grassland. Soil Biology and Biochemistry, 2019, 131, 19-27.	8.8	41
30	Crowther et al. reply. Nature, 2018, 554, E7-E8.	27.8	14
31	Microbial decomposers not constrained by climate history along a Mediterranean climate gradient in southern California. Ecology, 2018, 99, 1441-1452.	3.2	16
32	Temperature sensitivities of extracellular enzyme V_{max} and K_m across thermal environments. Global Change Biology, 2018, 24, 2884-2897.	9.5	72
33	Drought increases the frequencies of fungal functional genes related to carbon and nitrogen acquisition. PLoS ONE, 2018, 13, e0206441.	2.5	24
34	Decomposition responses to climate depend on microbial community composition. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11994-11999.	7.1	214
35	Growth response of environmental bacteria under exposure to nitramines from CO2-capture. International Journal of Greenhouse Gas Control, 2018, 79, 248-251.	4.6	0
36	Emergence of soil bacterial ecotypes along a climate gradient. Environmental Microbiology, 2018, 20, 4112-4126.	3.8	32

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37	Evaluating soil microbial carbon use efficiency explicitly as a function of cellular processes: implications for measurements and models. Biogeochemistry, 2018, 140, 269-283.	3.5	59
38	Nitrogen enrichment shifts functional genes related to nitrogen and carbon acquisition in the fungal community. Soil Biology and Biochemistry, 2018, 123, 87-96.	8.8	17
39	Temperature acclimation and adaptation of enzyme physiology in Neurospora discreta. Fungal Ecology, 2018, 35, 78-86.	1.6	17
40	The effects of increased snow depth on plant and microbial biomass and community composition along a precipitation gradient in temperate steppes. Soil Biology and Biochemistry, 2018, 124, 134-141.	8.8	27
41	Consequences of drought tolerance traits for microbial decomposition in the DEMENT model. Soil Biology and Biochemistry, 2017, 107, 104-113.	8.8	60
42	Building Predictive Models for Diverse Microbial Communities in Soil. , 2017, , 141-166.		12
43	Soil microbes and their response to experimental warming over time: A meta-analysis of field studies. Soil Biology and Biochemistry, 2017, 107, 32-40.	8.8	234
44	Extracellular enzyme kinetics and thermodynamics along a climate gradient in southern California. Soil Biology and Biochemistry, 2017, 114, 82-92.	8.8	37
45	Effects of Drought Manipulation on Soil Nitrogen Cycling: A Metaâ€Analysis. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 3260-3272.	3.0	124
46	Microbial legacies alter decomposition in response to simulated global change. ISME Journal, 2017, 11, 490-499.	9.8	112
47	Effects of dispersal and selection on stochastic assembly in microbial communities. ISME Journal, 2017, 11, 176-185.	9.8	256
48	Phylogenetic conservation of substrate use specialization in leaf litter bacteria. PLoS ONE, 2017, 12, e0174472.	2.5	14
49	Decomposition of recalcitrant carbon under experimental warming in boreal forest. PLoS ONE, 2017, 12, e0179674.	2.5	34
50	Agroforestry Practices Promote Biodiversity and Natural Resource Diversity in Atlantic Nicaragua. PLoS ONE, 2016, 11, e0162529.	2.5	49
51	Interactive effects of precipitation manipulation and nitrogen addition on soil properties in California grassland and shrubland. Applied Soil Ecology, 2016, 107, 144-153.	4.3	36
52	Quantifying global soil carbon losses in response to warming. Nature, 2016, 540, 104-108.	27.8	879
53	Challenges in microbial ecology: building predictive understanding of community function and dynamics. ISME Journal, 2016, 10, 2557-2568.	9.8	570
54	Modeling Soil Processes: Review, Key Challenges, and New Perspectives. Vadose Zone Journal, 2016, 15, 1-57.	2.2	445

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55	Radiocarbon constraints imply reduced carbon uptake by soils during the 21st century. Science, 2016, 353, 1419-1424.	12.6	149
56	Temperature response of soil respiration largely unaltered with experimental warming. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13797-13802.	7.1	308
57	Precipitation regime drives warming responses of microbial biomass and activity in temperate steppe soils. Biology and Fertility of Soils, 2016, 52, 469-477.	4.3	28
58	Toward more realistic projections of soil carbon dynamics by Earth system models. Global Biogeochemical Cycles, 2016, 30, 40-56.	4.9	343
59	Microbial response to simulated global change is phylogenetically conserved and linked with functional potential. ISME Journal, 2016, 10, 109-118.	9.8	123
60	Explicitly representing soil microbial processes in Earth system models. Global Biogeochemical Cycles, 2015, 29, 1782-1800.	4.9	286
61	Resource allocation by the marine cyanobacterium <scp>S</scp>ynechococcus<scp>WH</scp>8102 in response to different nutrient supply ratios. Limnology and Oceanography, 2015, 60, 1634-1641.	3.1	23
62	Ultraviolet photodegradation facilitates microbial litter decomposition in a Mediterranean climate. Ecology, 2015, 96, 1994-2003.	3.2	88
63	Drying and substrate concentrations interact to inhibit decomposition of carbon substrates added to combusted Inceptisols from a boreal forest. Biology and Fertility of Soils, 2015, 51, 525-533.	4.3	8
64	Temporal variation overshadows the response of leaf litter microbial communities to simulated global change. ISME Journal, 2015, 9, 2477-2489.	9.8	112
65	Quantum Dots Reveal Shifts in Organic Nitrogen Uptake by Fungi Exposed to Long-Term Nitrogen Enrichment. PLoS ONE, 2015, 10, e0138158.	2.5	7
66	Phosphate supply explains variation in nucleic acid allocation but not C : P stoichiometry in the western North Atlantic. Biogeosciences, 2014, 11, 1599-1611.	3.3	16
67	Extracellular enzyme production and cheating in Pseudomonas fluorescens depend on diffusion rates. Frontiers in Microbiology, 2014, 5, 169.	3.5	35
68	Changes in soil organic carbon storage predicted by Earth system models during the 21st century. Biogeosciences, 2014, 11, 2341-2356.	3.3	259
69	Cellulolytic potential under environmental changes in microbial communities from grassland litter. Frontiers in Microbiology, 2014, 5, 639.	3.5	61
70	Modeling adaptation of carbon use efficiency in microbial communities. Frontiers in Microbiology, 2014, 5, 571.	3.5	106
71	Phylogenetic constraints on elemental stoichiometry and resource allocation in heterotrophic marine bacteria. Environmental Microbiology, 2014, 16, 1398-1410.	3.8	69
72	Soil carbon sensitivity to temperature and carbon use efficiency compared across microbial-ecosystem models of varying complexity. Biogeochemistry, 2014, 119, 67-84.	3.5	89

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73	Substrate concentration constraints on microbial decomposition. Soil Biology and Biochemistry, 2014, 79, 43-49.	8.8	64
74	Accelerated microbial turnover but constant growth efficiency with warming in soil. Nature Climate Change, 2014, 4, 903-906.	18.8	266
75	Elemental stoichiometry of Fungi and Bacteria strains from grassland leaf litter. Soil Biology and Biochemistry, 2014, 76, 278-285.	8.8	133
76	Global soil carbon projections are improved by modelling microbial processes. Nature Climate Change, 2013, 3, 909-912.	18.8	772
77	Microbial abundance and composition influence litter decomposition response to environmental change. Ecology, 2013, 94, 714-725.	3.2	340
78	Measuring phenol oxidase and peroxidase activities with pyrogallol, l-DOPA, and ABTS: Effect of assay conditions and soil type. Soil Biology and Biochemistry, 2013, 67, 183-191.	8.8	182
79	Microdiversity of extracellular enzyme genes among sequenced prokaryotic genomes. ISME Journal, 2013, 7, 1187-1199.	9.8	188
80	Microbial enzymatic responses to drought and to nitrogen addition in a southern California grassland. Soil Biology and Biochemistry, 2013, 64, 68-79.	8.8	171
81	Environmental impacts on the diversity of methane-cycling microbes and their resultant function. Frontiers in Microbiology, 2013, 4, 225.	3.5	77
82	A model for variable phytoplankton stoichiometry based on cell protein regulation. Biogeosciences, 2013, 10, 4341-4356.	3.3	42
83	Ectomycorrhizal-Dominated Boreal and Tropical Forests Have Distinct Fungal Communities, but Analogous Spatial Patterns across Soil Horizons. PLoS ONE, 2013, 8, e68278.	2.5	69
84	Causes of variation in soil carbon simulations from CMIP5 Earth system models and comparison with observations. Biogeosciences, 2013, 10, 1717-1736.	3.3	593
85	Fine-Scale Temporal Variation in Marine Extracellular Enzymes of Coastal Southern California. Frontiers in Microbiology, 2012, 3, 301.	3.5	48
86	Fundamentals of Microbial Community Resistance and Resilience. Frontiers in Microbiology, 2012, 3, 417.	3.5	1,131
87	The <scp>M</scp>ichaelisâ€“<scp>M</scp>enten kinetics of soil extracellular enzymes in response to temperature: a crossâ€latitudinal study. Global Change Biology, 2012, 18, 1468-1479.	9.5	284
88	Meta-Analysis of Environmental Impacts on Nitrous Oxide Release in Response to N Amendment. Frontiers in Microbiology, 2012, 3, 272.	3.5	26
89	Cooperation, Competition, and Coalitions in Enzyme-Producing Microbes: Social Evolution and Nutrient Depolymerization Rates. Frontiers in Microbiology, 2012, 3, 338.	3.5	61
90	A framework for representing microbial decomposition in coupled climate models. Biogeochemistry, 2012, 109, 19-33.	3.5	184

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91	Temperature sensitivity of soil enzyme kinetics under<scp><scp>N</scp></scp>â€fertilization in two temperate forests. Global Change Biology, 2012, 18, 1173-1184.	9.5	215
92	Response to Steen and Ziervogel's comment on â€œOptimization of hydrolytic and oxidative enzyme methods to ecosystem studiesâ€•[Soil Biology & Biochemistry 43: 1387â€“1397]. Soil Biology and Biochemistry, 2012, 48, 198-199.	8.8	3
93	A traitâ€based approach for modelling microbial litter decomposition. Ecology Letters, 2012, 15, 1058-1070.	6.4	307
94	Drivers of bacterial Î²-diversity depend on spatial scale. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 7850-7854.	7.1	672
95	Climate change feedbacks to microbial decomposition in boreal soils. Fungal Ecology, 2011, 4, 362-374.	1.6	87
96	Substrate concentration and enzyme allocation can affect rates of microbial decomposition. Ecology, 2011, 92, 1471-1480.	3.2	133
97	Optimization of hydrolytic and oxidative enzyme methods for ecosystem studies. Soil Biology and Biochemistry, 2011, 43, 1387-1397.	8.8	794
98	Nitrogen alters carbon dynamics during early succession in boreal forest. Soil Biology and Biochemistry, 2010, 42, 1157-1164.	8.8	96
99	Resistance of microbial and soil properties to warming treatment seven years after boreal fire. Soil Biology and Biochemistry, 2010, 42, 1872-1878.	8.8	81
100	Soil-carbon response to warming dependent on microbial physiology. Nature Geoscience, 2010, 3, 336-340.	12.9	1,192
101	Functional diversity in resource use by fungi. Ecology, 2010, 91, 2324-2332.	3.2	133
102	Controls on the Temperature Sensitivity of Soil Enzymes: A Key Driver of In Situ Enzyme Activity Rates. Soil Biology, 2010, , 245-258.	0.8	63
103	Evolutionary-Economic Principles as Regulators of Soil Enzyme Production and Ecosystem Function. Soil Biology, 2010, , 229-243.	0.8	124
104	Functional Diversity in Resource Use By Fungi. Ecology, 2010, 91, 100319061621033.	3.2	1
105	Low levels of nitrogen addition stimulate decomposition by boreal forest fungi. Soil Biology and Biochemistry, 2009, 41, 293-302.	8.8	183
106	Plant traits and wood fates across the globe: rotted, burned, or consumed?. Global Change Biology, 2009, 15, 2431-2449.	9.5	318
107	Decreased mass specific respiration under experimental warming is robust to the microbial biomass method employed. Ecology Letters, 2009, 12, E15.	6.4	19
108	Fungal Taxa Target Different Carbon Sources in Forest Soil. Ecosystems, 2008, 11, 1157-1167.	3.4	174

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109	Plant species traits are the predominant control on litter decomposition rates within biomes worldwide. Ecology Letters, 2008, 11, 1065-1071.	6.4	1,913
110	Stoichiometry of soil enzyme activity at global scale. Ecology Letters, 2008, 11, 1252-1264.	6.4	1,684
111	Decomposers in disguise: mycorrhizal fungi as regulators of soil C dynamics in ecosystems under global change. Functional Ecology, 2008, 22, 955-963.	3.6	450
112	Microbial activity and soil respiration under nitrogen addition in Alaskan boreal forest. Global Change Biology, 2008, 14, 1156-1168.	9.5	330
113	Warming and drying suppress microbial activity and carbon cycling in boreal forest soils. Global Change Biology, 2008, 14, 2898-2909.	9.5	511
114	Uptake of an amino acid by ectomycorrhizal fungi in a boreal forest. Soil Biology and Biochemistry, 2008, 40, 1964-1966.	8.8	10
115	Resistance, resilience, and redundancy in microbial communities. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 11512-11519.	7.1	2,195
116	Nitrogen fertilization reduces diversity and alters community structure of active fungi in boreal ecosystems. Soil Biology and Biochemistry, 2007, 39, 1878-1887.	8.8	255
117	Brown Ground: A Soil Carbon Analogue for the Green World Hypothesis?. American Naturalist, 2006, 167, 619-627.	2.1	92
118	Soil minerals and humic acids alter enzyme stability: implications for ecosystem processes. Biogeochemistry, 2006, 81, 361-373.	3.5	232
119	Elevated enzyme activities in soils under the invasive nitrogen-fixing tree Falcataria moluccana. Soil Biology and Biochemistry, 2006, 38, 1537-1544.	8.8	111
120	Activities of extracellular enzymes in physically isolated fractions of restored grassland soils. Soil Biology and Biochemistry, 2006, 38, 3245-3256.	8.8	325
121	Cheaters, diffusion and nutrients constrain decomposition by microbial enzymes in spatially structured environments. Ecology Letters, 2005, 8, 626-635.	6.4	440
122	Responses of extracellular enzymes to simple and complex nutrient inputs. Soil Biology and Biochemistry, 2005, 37, 937-944.	8.8	881
123	BIOCHEMICAL RESPONSES OF CHESTNUT OAK TO A GALLING CYNIPID. Journal of Chemical Ecology, 2005, 31, 151-166.	1.8	86
124	Extracellular Enzyme Activities and Carbon Chemistry as Drivers of Tropical Plant Litter Decomposition. Biotropica, 2004, 36, 285-296.	1.6	110
125	Physical Damage in Relation to Carbon Allocation Strategies of Tropical Forest Tree Saplings. Biotropica, 2004, 36, 410-413.	1.6	4
126	Differential Activity of Peroxidase Isozymes in Response to Wounding, Gypsy Moth, and Plant Hormones in Northern Red Oak (Quercus rubra L.). Journal of Chemical Ecology, 2004, 30, 1363-1379.	1.8	76

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127	Rapid nutrient cycling in leaf litter from invasive plants in Hawai?i. Oecologia, 2004, 141, 612-619.	2.0	312
128	Erosion and the Rejuvenation of Weathering-derived Nutrient Supply in an Old Tropical Landscape. Ecosystems, 2003, 6, 762-772.	3.4	122