Joshua P Schimel

List of Publications by Year in Descending Order

184 papers	27,238 citations	80 h-index	164 g-index
195 ext. papers	31,382 ext. citations	7.9 avg, IF	7.55 L-index

#	Paper	IF	Citations
184	Estimating microbial carbon use efficiency in soil: Isotope-based and enzyme-based methods measure fundamentally different aspects of microbial resource use. *Soil Biology and Biochemistry*, **2022**, 108677	7.5	1
183	Ecosystem metabolomics of dissolved organic matter from arctic soil pore water across seasonal transitions **2022**, 91-106		
182	Beyond bulk: Density fractions explain heterogeneity in global soil carbon abundance and persistence. *Global Change Biology*, **2021**,	11.4	3
181	Amino acids dominate diffusive nitrogen fluxes across soil depths in acidic tussock tundra. *New Phytologist*, **2021**, 231, 2162-2173	9.8	6
180	A holistic framework integrating plant-microbe-mineral regulation of soil bioavailable nitrogen. *Biogeochemistry*, **2021**, 154, 211-229	3.8	17
179	The Democracy of Dirt: Relating Micro-Scale Dynamics to Macro-Scale Ecosystem Function. *Advances in Environmental Microbiology*, **2021**, 89-102	1.3	2
178	High resolution measurements reveal abiotic and biotic mechanisms of elevated nitric oxide emission after wetting dry soil. *Soil Biology and Biochemistry*, **2021**, 160, 108316	7.5	1
177	Partitioning sources of CO2 emission after soil wetting using high-resolution observations and minimal models. *Soil Biology and Biochemistry*, **2020**, 143, 107753	7.5	10
176	Cellular and extracellular C contributions to respiration after wetting dry soil. *Biogeochemistry*, **2020**, 147, 307-324	3.8	21
175	Rainfall intensification increases the contribution of rewetting pulses to soil heterotrophic respiration. *Biogeosciences*, **2020**, 17, 4007-4023	4.6	11
174	An open-source database for the synthesis of soil radiocarbon data: International Soil Radiocarbon Database (ISRaD) version 1.0. *Earth System Science Data*, **2020**, 12, 61-76	10.5	18
173	Soybeans Grown with Carbonaceous Nanomaterials Maintain Nitrogen Stoichiometry by Assimilating Soil Nitrogen to Offset Impaired Dinitrogen Fixation. *ACS Nano*, **2020**, 14, 585-594	16.7	5
172	Persistence of soil organic carbon caused by functional complexity. *Nature Geoscience*, **2020**, 13, 529-534	18.3	131
171	Changing perspectives on terrestrial nitrogen cycling: The importance of weathering and evolved resource-use traits for understanding ecosystem responses to global change. *Functional Ecology*, **2019**, 33, 1818-1829	5.6	5
170	Limited effects of early snowmelt on plants, decomposers, and soil nutrients in Arctic tundra soils. *Ecology and Evolution*, **2019**, 9, 1820-1844	2.8	12
169	Effects of carbonaceous nanomaterials on soil-grown soybeans under combined heat and insect stresses. *Environmental Chemistry*, **2019**, 16, 482-493	3.2	5
168	Plant community regulates decomposer response to freezing more strongly than the rate or extent of the freezing regime. *Ecosphere*, **2019**, 10, e02608	3.1	1

167	Beyond clay: towards an improved set of variables for predicting soil organic matter content. *Biogeochemistry*, **2018**, 137, 297-306	3.8	236
166	The Millennial model: in search of measurable pools and transformations for modeling soil carbon in the new century. *Biogeochemistry*, **2018**, 137, 51-71	3.8	85
165	Carbonaceous Nanomaterials Have Higher Effects on Soybean Rhizosphere Prokaryotic Communities During the Reproductive Growth Phase than During Vegetative Growth. *Environmental Science & Technology*, **2018**, 52, 6636-6646	10.3	38
164	Improving understanding of soil organic matter dynamics by triangulating theories, measurements, and models. *Biogeochemistry*, **2018**, 140, 1-13	3.8	42
163	Effects of altered dry season length and plant inputs on soluble soil carbon. *Ecology*, **2018**, 99, 2348-2362	4.6	32
162	Biotic versus Abiotic Controls on Bioavailable Soil Organic Carbon. *Soil Systems*, **2018**, 2, 10	3.5	18
161	Environmental controls on extracellular polysaccharide accumulation in a California grassland soil. *Soil Biology and Biochemistry*, **2018**, 125, 86-92	7.5	12
160	Understanding how microbiomes influence the systems they inhabit. *Nature Microbiology*, **2018**, 3, 977-982	26.6	101
159	Life in Dry Soils: Effects of Drought on Soil Microbial Communities and Processes. *Annual Review of Ecology, Evolution, and Systematics*, **2018**, 49, 409-432	13.5	235
158	Minerals in the rhizosphere: overlooked mediators of soil nitrogen availability to plants and microbes. *Biogeochemistry*, **2018**, 139, 103-122	3.8	104
157	Cooperation of earthworm and arbuscular mycorrhizae enhanced plant N uptake by balancing absorption and supply of ammonia. *Soil Biology and Biochemistry*, **2018**, 116, 351-359	7.5	17
156	Multiple models and experiments underscore large uncertainty in soil carbon dynamics. *Biogeochemistry*, **2018**, 141, 109-123	3.8	95
155	Evaluating soil microbial carbon use efficiency explicitly as a function of cellular processes: implications for measurements and models. *Biogeochemistry*, **2018**, 140, 269-283	3.8	34
154	Shrub encroachment in Arctic tundra: Betula nana effects on above- and belowground litter decomposition. *Ecology*, **2017**, 98, 1361-1376	4.6	64
153	Shifting patterns of microbial N-metabolism across seasons in upland Alaskan tundra soils. *Soil Biology and Biochemistry*, **2017**, 105, 96-107	7.5	10
152	Agglomeration Determines Effects of Carbonaceous Nanomaterials on Soybean Nodulation, Dinitrogen Fixation Potential, and Growth in Soil. *ACS Nano*, **2017**, 11, 5753-5765	16.7	53
151	Global pattern and controls of soil microbial metabolic quotient. *Ecological Monographs*, **2017**, 87, 429-441	9	68
150	Nitrogen cycling and export in California chaparral: the role of climate in shaping ecosystem responses to fire. *Ecological Monographs*, **2017**, 87, 76-90	9	19

149	Damage assessment for soybean cultivated in soil with either CeO or ZnO manufactured nanomaterials. *Science of the Total Environment*, **2017**, 579, 1756-1768	10.2	69
148	Linking NO and N2O emission pulses with the mobilization of mineral and organic N upon rewetting dry soils. *Soil Biology and Biochemistry*, **2017**, 115, 461-466	7.5	51
147	The importance of anabolism in microbial control over soil carbon storage. *Nature Microbiology*, **2017**, 2, 17105	26.6	567
146	Soil carbon and nitrogen dynamics throughout the summer drought in a California annual grassland. *Soil Biology and Biochemistry*, **2017**, 115, 54-62	7.5	54
145	Estimating decay dynamics for enzyme activities in soils from different ecosystems. *Soil Biology and Biochemistry*, **2017**, 114, 5-11	7.5	71
144	Acidity and organic matter promote abiotic nitric oxide production in drying soils. *Global Change Biology*, **2017**, 23, 1735-1747	11.4	24
143	Water balance creates a threshold in soil pH at the global scale. *Nature*, **2016**, 540, 567-569	50.4	186
142	Microbial ecology: Linking omics to biogeochemistry. *Nature Microbiology*, **2016**, 1, 15028	26.6	25
141	Vegetation Leachate During Arctic Thaw Enhances Soil Microbial Phosphorus. *Ecosystems*, **2016**, 19, 477-489	3.9	10
140	Factors Regulating Nitrogen Retention During the Early Stages of Recovery from Fire in Coastal Chaparral Ecosystems. *Ecosystems*, **2016**, 19, 910-926	3.9	23
139	Modeling coupled enzymatic and solute transport controls on decomposition in drying soils. *Soil Biology and Biochemistry*, **2016**, 95, 275-287	7.5	58
138	Effects of substrate supply, pH, and char on net nitrogen mineralization and nitrification along a wildfire-structured age gradient in chaparral. *Soil Biology and Biochemistry*, **2016**, 95, 87-99	7.5	42
137	Frontiers in Ecosystem Ecology from a Community Perspective: The Future is Boundless and Bright. *Ecosystems*, **2016**, 19, 753-770	3.9	31
136	Long-Term Effects of Multiwalled Carbon Nanotubes and Graphene on Microbial Communities in Dry Soil. *Environmental Science & Technology*, **2016**, 50, 3965-74	10.3	68
135	Plant versus microbial controls on soil aggregate stability in a seasonally dry ecosystem. *Geoderma*, **2016**, 272, 39-50	6.7	72
134	Aridity and plant uptake interact to make dryland soils hotspots for nitric oxide (NO) emissions. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E2608-16	11.5	65
133	Linking microbial community structure and microbial processes: an empirical and conceptual overview. *FEMS Microbiology Ecology*, **2015**, 91,	4.3	100
132	Improving Nitrite Analysis in Soils: Drawbacks of the Conventional 2 M KCl Extraction. *Soil Science Society of America Journal*, **2015**, 79, 1237-1242	2.5	18

131	Controls on Methane Flux from Terrestrial Ecosystems. *ASA Special Publication*, **2015**, 167-182	1.1	8
130	A theoretical analysis of microbial eco-physiological and diffusion limitations to carbon cycling in drying soils. *Soil Biology and Biochemistry*, **2014**, 73, 69-83	7.5	162
129	Separating cellular metabolism from exoenzyme activity in soil organic matter decomposition. *Soil Biology and Biochemistry*, **2014**, 71, 68-75	7.5	69
128	Five reasons to use bacteria when assessing manufactured nanomaterial environmental hazards and fates. *Current Opinion in Biotechnology*, **2014**, 27, 73-8	11.4	70
127	Soybean plants modify metal oxide nanoparticle effects on soil bacterial communities. *Environmental Science & Technology*, **2014**, 48, 13489-96	10.3	77
126	Assessing Nitrogen-Saturation in a Seasonally Dry Chaparral Watershed: Limitations of Traditional Indicators of N-Saturation. *Ecosystems*, **2014**, 17, 1286-1305	3.9	42
125	Responses of a tundra system to warming using SCAMPS: a stoichiometrically coupled, acclimating microbe–plant–soil model. *Ecological Monographs*, **2014**, 84, 151-170	9	42
124	Soil heterogeneity and the distribution of native grasses in California: Can soil properties inform restoration plans?. *Ecosphere*, **2014**, 5, art46	3.1	4
123	Substrate and environmental controls on microbial assimilation of soil organic carbon: a framework for Earth system models. *Ecology Letters*, **2014**, 17, 547-55	10	110
122	Analysis of run-to-run variation of bar-coded pyrosequencing for evaluating bacterial community shifts and individual taxa dynamics. *PLoS ONE*, **2014**, 9, e99414	3.7	10
121	Terrestrial Ecosystems at Toolik Lake, Alaska **2014**, 90-142		23
120	Assessing interactions of hydrophilic nanoscale TiO2 with soil water. *Journal of Nanoparticle Research*, **2013**, 15, 1	2.3	23
119	Potential mechanisms and environmental controls of TiO2 nanoparticle effects on soil bacterial communities. *Environmental Science & Technology*, **2013**, 47, 14411-7	10.3	79
118	Soil-plant N processes in a High Arctic ecosystem, NW Greenland are altered by long-term experimental warming and higher rainfall. *Global Change Biology*, **2013**, 19, 3529-39	11.4	61
117	The impacts of climate change on ecosystem structure and function. *Frontiers in Ecology and the Environment*, **2013**, 11, 474-482	5.5	301
116	Ecological nanotoxicology: integrating nanomaterial hazard considerations across the subcellular, population, community, and ecosystems levels. *Accounts of Chemical Research*, **2013**, 46, 813-22	24.3	115
115	Cloud shading and fog drip influence the metabolism of a coastal pine ecosystem. *Global Change Biology*, **2013**, 19, 484-97	11.4	37
114	Static osmolyte concentrations in microbial biomass during seasonal drought in a California grassland. *Soil Biology and Biochemistry*, **2013**, 57, 356-361	7.5	51

113	Drivers of microbial respiration and net N mineralization at the continental scale. *Soil Biology and Biochemistry*, **2013**, 60, 65-76	7.5	114
112	Long-term warming restructures Arctic tundra without changing net soil carbon storage. *Nature*, **2013**, 497, 615-8	50.4	283
111	Seasonal patterns of microbial extracellular enzyme activities in an arctic tundra soil: Identifying direct and indirect effects of long-term summer warming. *Soil Biology and Biochemistry*, **2013**, 66, 119-129	7.5	73
110	What's in a name? The importance of soil taxonomy for ecology and biogeochemistry. *Frontiers in Ecology and the Environment*, **2013**, 11, 405-406	5.5	9
109	When structure means conservation: Effect of aggregate structure in controlling microbial responses to rewetting events. *Soil Biology and Biochemistry*, **2012**, 44, 1-8	7.5	97
108	Detecting microbial N-limitation in tussock tundra soil: Implications for Arctic soil organic carbon cycling. *Soil Biology and Biochemistry*, **2012**, 55, 78-84	7.5	98
107	Stoichiometric flexibility as a regulator of carbon and nutrient cycling in terrestrial ecosystems under change. *New Phytologist*, **2012**, 196, 68-78	9.8	175
106	Soybean susceptibility to manufactured nanomaterials with evidence for food quality and soil fertility interruption. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E2451-6	11.5	377
105	Sinks for nitrogen inputs in terrestrial ecosystems: a meta-analysis of 15N tracer field studies. *Ecology*, **2012**, 93, 1816-29	4.6	162
104	Grassland community composition drives small-scale spatial patterns in soil properties and processes. *Geoderma*, **2012**, 170, 269-279	6.7	15
103	Responses of soil microbial communities to water stress: results from a meta-analysis. *Ecology*, **2012**, 93, 930-8	4.6	585
102	Identification of soil bacteria susceptible to TiO2 and ZnO nanoparticles. *Applied and Environmental Microbiology*, **2012**, 78, 6749-58	4.8	195
101	Reply to Lombi et al.: Clear effects of manufactured nanomaterials to soybean. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E3337-E3337	11.5	1
100	Microbial control over carbon cycling in soil. *Frontiers in Microbiology*, **2012**, 3, 348	5.7	674
99	Evidence for negative effects of TiO2 and ZnO nanoparticles on soil bacterial communities. *Environmental Science & Technology*, **2011**, 45, 1659-64	10.3	357
98	Soil nitrogen availability and transformations differ between the summer and the growing season in a California grassland. *Applied Soil Ecology*, **2011**, 48, 185-192	5	100
97	Carbon and Nitrogen Cycling in Snow-Covered Environments. *Geography Compass*, **2011**, 5, 682-699	2.4	142
96	A cross-seasonal comparison of active and total bacterial community composition in Arctic tundra soil using bromodeoxyuridine labeling. *Soil Biology and Biochemistry*, **2011**, 43, 287-295	7.5	71

95	Drying/rewetting cycles mobilize old C from deep soils from a California annual grassland. *Soil Biology and Biochemistry*, **2011**, 43, 1101-1103	7.5	62
94	Seasonal and episodic moisture controls on plant and microbial contributions to soil respiration. *Oecologia*, **2011**, 167, 265-78	2.9	139
93	Marine Macrophyte Wrack Inputs and Dissolved Nutrients in Beach Sands. *Estuaries and Coasts*, **2011**, 34, 839-850	2.8	77
92	The ecological coherence of high bacterial taxonomic ranks. *Nature Reviews Microbiology*, **2010**, 8, 523-9	22.2	406
91	Invasive Grasses Increase Nitrogen Availability in California Grassland Soils. *Invasive Plant Science and Management*, **2010**, 3, 40-47	1	30
90	Pushing the limits for amplifying BrdU-labeled DNA encoding 16S rRNA: DNA polymerase as the determining factor. *Journal of Microbiological Methods*, **2010**, 83, 312-6	2.8	4
89	Adding an empirical factor to better represent the rewetting pulse mechanism in a soil biogeochemical model. *Geoderma*, **2010**, 159, 440-451	6.7	20
88	Understanding and eliminating iron interference in colorimetric nitrate and nitrite analysis. *Environmental Monitoring and Assessment*, **2010**, 165, 633-41	3.1	16
87	Slow turnover and production of fungal hyphae during a Californian dry season. *Soil Biology and Biochemistry*, **2010**, 42, 1657-1660	7.5	25
86	Seasonal variation in nitrogen uptake and turnover in two high-elevation soils: mineralization responses are site-dependent. *Biogeochemistry*, **2009**, 93, 253-270	3.8	31
85	Seasonal variation in enzyme activities and temperature sensitivities in Arctic tundra soils. *Global Change Biology*, **2009**, 15, 1631-1639	11.4	253
84	Does adding microbial mechanisms of decomposition improve soil organic matter models? A comparison of four models using data from a pulsed rewetting experiment. *Soil Biology and Biochemistry*, **2009**, 41, 1923-1934	7.5	148
83	Microbial growth in Arctic tundra soil at -2°C. *Environmental Microbiology Reports*, **2009**, 1, 162-6	3.7	44
82	Towards a predictive understanding of belowground process responses to climate change: have we moved any closer?. *Functional Ecology*, **2008**, 22, 937-940	5.6	27
81	Soil heterogeneity in lumped mineralization–immobilization models. *Soil Biology and Biochemistry*, **2008**, 40, 1137-1148	7.5	32
80	Drying and rewetting effects on C and N mineralization and microbial activity in surface and subsurface California grassland soils. *Soil Biology and Biochemistry*, **2008**, 40, 2281-2289	7.5	365
79	Abiotic nitrate incorporation, anaerobic microsites, and the ferrous wheel. *Biogeochemistry*, **2008**, 91, 223-227	3.8	31
78	Evaluation of hyperspectral data for pasture estimate in the Brazilian Amazon using field and imaging spectrometers. *Remote Sensing of Environment*, **2008**, 112, 1569-1583	13.2	67

77	Microbial stress-response physiology and its implications for ecosystem function. *Ecology*, **2007**, 88, 1386-94	4.9	1510
76	Characterization of pasture biophysical properties and the impact of grazing intensity using remotely sensed data. *Remote Sensing of Environment*, **2007**, 109, 314-327	13.2	99
75	Bacterial and fungal community structure in Arctic tundra tussock and shrub soils. *FEMS Microbiology Ecology*, **2007**, 59, 428-35	4.3	170
74	Nitrogen transfer between decomposing leaves of different N status. *Soil Biology and Biochemistry*, **2007**, 39, 1428-1436	7.5	167
73	Temporal nutrient variation in soil and vegetation of post-forest pastures as a function of soil order, pasture age, and management, Rondônia, Brazil. *Agriculture, Ecosystems and Environment*, **2007**, 118, 159-172	5.7	24
72	Abiotic nitrate incorporation in soil: is it real?. *Biogeochemistry*, **2007**, 84, 161-169	3.8	54
71	Mineralization responses at near-zero temperatures in three alpine soils. *Biogeochemistry*, **2007**, 84, 233-245	3.8	36
70	New Directions in Microbial Ecology1. *Ecology*, **2007**, 88, 1343-1344	4.6	43
69	Cold-season Production of CO2 in Arctic Soils: Can Laboratory and Field Estimates Be Reconciled through a Simple Modeling Approach?. *Arctic, Antarctic, and Alpine Research*, **2006**, 38, 249-256	1.8	45
68	Predicting the temperature dependence of microbial respiration in soil: A continental-scale analysis. *Global Biogeochemical Cycles*, **2006**, 20, n/a-n/a	5.9	164
67	Decadal-scale Dynamics of Water, Carbon and Nitrogen in a California Chaparral Ecosystem: DAYCENT Modeling Results. *Biogeochemistry*, **2006**, 77, 217-245	3.8	39
66	Winter Biological Processes Could Help Convert Arctic Tundra to Shrubland. *BioScience*, **2005**, 55, 17	5.7	473
65	Nitrogen Cycling and the Spread of Shrubs Control Changes in the Carbon Balance of Arctic Tundra Ecosystems. *BioScience*, **2005**, 55, 408	5.7	136
64	Role of land-surface changes in arctic summer warming. *Science*, **2005**, 310, 657-60	33.3	1028
63	Microbial community composition and soil nitrogen cycling: is there really a connection? **2005**, 171-188		33
62	Changing microbial substrate use in Arctic tundra soils through a freeze-thaw cycle. *Soil Biology and Biochemistry*, **2005**, 37, 1411-1418	7.5	153
61	Seasonal protein dynamics in Alaskan arctic tundra soils. *Soil Biology and Biochemistry*, **2005**, 37, 1469-1475	7.5	83
60	Episodic rewetting enhances carbon and nitrogen release from chaparral soils. *Soil Biology and Biochemistry*, **2005**, 37, 2195-2204	7.5	254

59	The seasonal dynamics of amino acids and other nutrients in Alaskan Arctic tundra soils. *Biogeochemistry*, **2005**, 73, 359-380	3.8	116
58	LITTER QUALITY AND THE TEMPERATURE SENSITIVITY OF DECOMPOSITION. *Ecology*, **2005**, 86, 320-326	4.6	479
57	Persulfate Digestion and Simultaneous Colorimetric Analysis of Carbon and Nitrogen in Soil Extracts. *Soil Science Society of America Journal*, **2004**, 68, 669-676	2.5	65
56	Playing scales in the methane cycle: from microbial ecology to the globe. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 12400-1	11.5	25
55	Increased snow depth affects microbial activity and nitrogen mineralization in two Arctic tundra communities. *Soil Biology and Biochemistry*, **2004**, 36, 217-227	7.5	464
54	NITROGEN MINERALIZATION: CHALLENGES OF A CHANGING PARADIGM. *Ecology*, **2004**, 85, 591-602	4.6	1572
53	Persulfate Digestion and Simultaneous Colorimetric Analysis of Carbon and Nitrogen in Soil Extracts **2004**, 68, 669		25
52	A Proposed Mechanism for the Pulse in Carbon Dioxide Production Commonly Observed Following the Rapid Rewetting of a Dry Soil. *Soil Science Society of America Journal*, **2003**, 67, 798-805	2.5	138
51	Mechanisms underlying export of N from high-elevation catchments during seasonal transitions. *Biogeochemistry*, **2003**, 64, 1-24	3.8	90
50	Influence of drying-rewetting frequency on soil bacterial community structure. *Microbial Ecology*, **2003**, 45, 63-71	4.4	491
49	Comparison of subsurface and surface soil bacterial communities in California grassland as assessed by terminal restriction fragment length polymorphisms of PCR-amplified 16S rRNA genes. *Microbial Ecology*, **2003**, 46, 216-27	4.4	73
48	Interactions between Carbon and Nitrogen Mineralization and Soil Organic Matter Chemistry in Arctic Tundra Soils. *Ecosystems*, **2003**, 6, 129-143	3.9	225
47	Variations in microbial community composition through two soil depth profiles. *Soil Biology and Biochemistry*, **2003**, 35, 167-176	7.5	1156
46	Controls on microbial CO2 production: a comparison of surface and subsurface soil horizons. *Global Change Biology*, **2003**, 9, 1322-1332	11.4	321
45	The implications of exoenzyme activity on microbial carbon and nitrogen limitation in soil: a theoretical model. *Soil Biology and Biochemistry*, **2003**, 35, 549-563	7.5	1018
44	A Proposed Mechanism for the Pulse in Carbon Dioxide Production Commonly Observed Following the Rapid Rewetting of a Dry Soil. *Soil Science Society of America Journal*, **2003**, 67, 798	2.5	434
43	Effects of drying□ewetting frequency on soil carbon and nitrogen transformations. *Soil Biology and Biochemistry*, **2002**, 34, 777-787	7.5	753
42	Temperature controls of microbial respiration in arctic tundra soils above and below freezing. *Soil Biology and Biochemistry*, **2002**, 34, 1785-1795	7.5	391

41	The Influence of Soil Biodiversity on Hydrological Pathways and the Transfer of Materials between Terrestrial and Aquatic Ecosystems. *Ecosystems*, **2001**, 4, 421-429	3.9	53
40	Respiration from coarse wood litter in central Amazon forests. *Biogeochemistry*, **2001**, 52, 115-131	3.8	130
39	Errors in Overestimation of gross N transformation rates in grassland soils*Soil Biology and Biochemistry*, **2001**, 33, 1433-1435	7.5	13
38	Influence of balsam poplar tannin fractions on carbon and nitrogen dynamics in Alaskan taiga floodplain soils. *Soil Biology and Biochemistry*, **2001**, 33, 1827-1839	7.5	220
37	Biogeochemical Models: Implicit versus Explicit Microbiology **2001**, 177-183		45
36	Controls over carbon storage and turnover in high-latitude soils.. *Global Change Biology*, **2000**, 6, 196-210	11.4	450
35	Decomposition and carbon cycling of dead trees in tropical forests of the central Amazon. *Oecologia*, **2000**, 122, 380-388	2.9	308
34	Controls on Soil Carbon Dioxide and Methane Fluxes in a Variety of Taiga Forest Stands in Interior Alaska. *Ecosystems*, **2000**, 3, 269-282	3.9	98
33	Moisture effects on microbial activity and community structure in decomposing birch litter in the Alaskan taiga. *Soil Biology and Biochemistry*, **1999**, 31, 831-838	7.5	260
32	The Role of Balsam Poplar Secondary Chemicals in Controlling Soil Nutrient Dynamics through Succession in the Alaskan Taiga. *Biogeochemistry*, **1998**, 42, 221-234	3.8	159
31	Ancient trees in Amazonia. *Nature*, **1998**, 391, 135-136	50.4	195
30	Microbial community structure and global trace gases. *Global Change Biology*, **1998**, 4, 745-758	11.4	210
29	Moisture control over atmospheric CH4 consumption and CO2 production in diverse Alaskan soils. *Soil Biology and Biochemistry*, **1998**, 30, 1127-1132	7.5	107
28	Effect of CH4-starvation on atmospheric CH4 oxidizers in Taiga and temperate forest soils. *Soil Biology and Biochemistry*, **1998**, 30, 1463-1467	7.5	8
27	Rivers and Soils: Parallels in Carbon and Nutrient ProcessingStream and soil ecologists can learn much by understanding each others' perspective. *BioScience*, **1998**, 48, 104-108	5.7	79
26	Dichromate Digestion and Simultaneous Colorimetry of Microbial Carbon and Nitrogen. *Soil Science Society of America Journal*, **1998**, 62, 937-941	2.5	4
25	Stratification of Soil Ecological Processes: A Study of the Birch Forest Floor in the Alaskan Taiga. *Oikos*, **1998**, 81, 63	4	29
24	Low-concentration kinetics of atmospheric CH4 oxidation in soil and mechanism of NH4+ inhibition. *Applied and Environmental Microbiology*, **1998**, 64, 4291-8	4.8	110

23	Different NH4+-inhibition patterns of soil CH4 consumption: A result of distinct CH4-oxidizer populations across sites?. *Soil Biology and Biochemistry*, **1997**, 29, 13-21	7.5	130
22	Assumptions and errors in the 15NH4+ pool dilution technique for measuring mineralization and immobilization. *Soil Biology and Biochemistry*, **1996**, 28, 827-828	7.5	22
21	Microbial response to freeze-thaw cycles in tundra and taiga soils. *Soil Biology and Biochemistry*, **1996**, 28, 1061-1066	7.5	366
20	Analysis of Kjeldahl digests by the salicylate method: Optimizing pH and buffering improves both sensitivity and precision. *Communications in Soil Science and Plant Analysis*, **1996**, 27, 2549-2560	1.5	3
19	Tundra Plant Uptake of Amino Acid and NH4+ Nitrogen in Situ: Plants Complete Well for Amino Acid N. *Ecology*, **1996**, 77, 2142-2147	4.6	238
18	Effects of balsam poplar (Populus balsamifera) tannins and low molecular weight phenolics on microbial activity in taiga floodplain soil: implications for changes in N cycling during succession. *Canadian Journal of Botany*, **1996**, 74, 84-90		168
17	Nitrogen turnover and availability during succession from alder to poplar in Alaskan taiga forests. *Soil Biology and Biochemistry*, **1995**, 27, 743-752	7.5	79
16	Microbial activity of tundra and taiga soils at sub-zero temperatures. *Soil Biology and Biochemistry*, **1995**, 27, 1231-1234	7.5	245
15	Plant transport and methane production as controls on methane flux from arctic wet meadow tundra. *Biogeochemistry*, **1995**, 28, 183-200	3.8	214
14	Reduction in microbial activity in Birch litter due to drying and rewetting event. *Soil Biology and Biochemistry*, **1994**, 26, 403-406	7.5	96
13	Decomposition and biomass incorporation of 14c-labeled glucose and phenolics in taiga forest floor: effect of substrate quality, successional state, and season. *Soil Biology and Biochemistry*, **1993**, 25, 1379-1389	7.5	75
12	Effects of starch additions on N turnover in Sitka spruce forest floor. *Plant and Soil*, **1992**, 139, 139-143	4.2	30
11	Mars after the viking missions: Is life still possible?. *Icarus*, **1991**, 91, 199-206	3.8	13
10	Ecophysiology of the soil microbial biomass and its relation to the soil microbial N pool. *Soil Use and Management*, **1990**, 6, 86-88	3.1	7
9	Inorganic N incorporation by coniferous forest floor material. *Soil Biology and Biochemistry*, **1989**, 21, 41-46	7.5	82
8	Spatial and temporal effects on plant-microbial competition for inorganic nitrogen in a california annual grassland. *Soil Biology and Biochemistry*, **1989**, 21, 1059-1066	7.5	237
7	Short-term partitioning of ammonium and nitrate between plants and microbes in an annual grassland. *Soil Biology and Biochemistry*, **1989**, 21, 409-415	7.5	307
6	Nitrogen Incorporation and Flow Through a Coniferous Forest Soil Profile. *Soil Science Society of America Journal*, **1989**, 53, 779-784	2.5	55

5	Changes in cytoplasmic carbon and nitrogen pools in a soil bacterium and a fungus in response to salt stress. *Applied and Environmental Microbiology*, **1989**, 55, 1635-7	4.8	40
4	Identification of heterotrophic nitrification in a sierran forest soil. *Applied and Environmental Microbiology*, **1984**, 48, 802-6	4.8	160
3	Facile new synthesis and purification of 5,10-methenyl-tetrahydrofolate from folic acid. *Analytical Biochemistry*, **1980**, 103, 255-7	3.1	10
2	Measuring soil microbial parameters relevant for soil carbon fluxes169-186		0
1	An open source database for the synthesis of soil radiocarbon data: ISRaD version 1.0		2