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List of Publications by Year
in descending order

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91 papers	10,653 citations	53660 45 h-index	46693 89 g-index
100 all docs	100 docs citations	100 times ranked	12142 citing authors

#	Article	IF	Citations
1	Whole-Ecosystem Warming Increases Plant-Available Nitrogen and Phosphorus in an Ombrotrophic Bog. Ecosystems, 2023, 26, 86-113.	1.6	13
2	Forest stand and canopy development unaltered by 12Âyears of CO2 enrichment*. Tree Physiology, 2022, 42, 428-440.	1.4	12
3	Deciphering the shifting role of intrinsic and extrinsic drivers on moss decomposition in peatlands over a 5â€year period. Oikos, 2022, 2022, .	1.2	0
4	Assessing dynamic vegetation model parameter uncertainty across Alaskan arctic tundra plant communities. Ecological Applications, 2022, 32, e02499.	1.8	3
5	Evaluating alternative ebullition models for predicting peatland methane emission and its pathways via dataâ€“model fusion. Biogeosciences, 2022, 19, 2245-2262.	1.3	5
6	Root traits as drivers of plant and ecosystem functioning: current understanding, pitfalls and future research needs. New Phytologist, 2021, 232, 1123-1158.	3.5	277
7	Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO₂. New Phytologist, 2021, 229, 2413-2445.	3.5	286
8	Highâ€resolution minirhizotrons advance our understanding of rootâ€fungal dynamics in an experimentally warmed peatland. Plants People Planet, 2021, 3, 640-652.	1.6	20
9	Global root traits (GRooT) database. Global Ecology and Biogeography, 2021, 30, 25-37.	2.7	90
10	Untargeted Exometabolomics Provides a Powerful Approach to Investigate Biogeochemical Hotspots with Vegetation and Polygon Type in Arctic Tundra Soils. Soil Systems, 2021, 5, 10.	1.0	1
11	Topographical Controls on Hillslopeâ€Scale Hydrology Drive Shrub Distributions on the Seward Peninsula, Alaska. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005823.	1.3	13
12	Integrating Arctic Plant Functional Types in a Land Surface Model Using Aboveâ€and Belowground Field Observations. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002396.	1.3	27
13	Root traits explain plant species distributions along climatic gradients yet challenge the nature of ecological trade-offs. Nature Ecology and Evolution, 2021, 5, 1123-1134.	3.4	62
14	Nitrogen and phosphorus cycling in an ombrotrophic peatland: a benchmark for assessing change. Plant and Soil, 2021, 466, 649-674.	1.8	15
15	An integrated framework of plant form and function: the belowground perspective. New Phytologist, 2021, 232, 42-59.	3.5	153
16	Filling gaps in our understanding of belowground plant traits across the world: an introduction to a Virtual Issue. New Phytologist, 2021, 231, 2097-2103.	3.5	14
17	A starting guide to root ecology: strengthening ecological concepts and standardising root classification, sampling, processing and trait measurements. New Phytologist, 2021, 232, 973-1122.	3.5	216
18	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	4.2	1,038

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19	Local-scale Arctic tundra heterogeneity affects regional-scale carbon dynamics. Nature Communications, 2020, 11, 4925.	5.8	25
20	Peatland warming strongly increases fine-root growth. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17627-17634.	3.3	95
21	Rapid Net Carbon Loss From a Wholeâ€Ecosystem Warmed Peatland. AGU Advances, 2020, 1, e2020AV000163.	2.3	69
22	Fineâ€root dynamics vary with soil depth and precipitation in a lowâ€nutrient tropical forest in the Central Amazonia. Plant-Environment Interactions, 2020, 1, 3-16.	0.7	34
23	Assessing Impacts of Plant Stoichiometric Traits on Terrestrial Ecosystem Carbon Accumulation Using the E3SM Land Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001841.	1.3	14
24	Global plant trait relationships extend to the climatic extremes of the tundra biome. Nature Communications, 2020, 11, 1351.	5.8	52
25	The fungal collaboration gradient dominates the root economics space in plants. Science Advances, 2020, 6, .	4.7	377
26	Open Science principles for accelerating trait-based science across the Tree of Life. Nature Ecology and Evolution, 2020, 4, 294-303.	3.4	144
27	Alder Distribution and Expansion Across a Tundra Hillslope: Implications for Local N Cycling. Frontiers in Plant Science, 2019, 10, 1099.	1.7	37
28	Physical and Functional Constraints on Viable Belowground Acquisition Strategies. Frontiers in Plant Science, 2019, 10, 1215.	1.7	115
29	The landscape of soil carbon data: Emerging questions, synergies and databases. Progress in Physical Geography, 2019, 43, 707-719.	1.4	27
30	Arctic Vegetation Mapping Using Unsupervised Training Datasets and Convolutional Neural Networks. Remote Sensing, 2019, 11, 69.	1.8	35
31	Experimental warming alters the community composition, diversity, and N₂ fixation activity of peat moss (<i>Sphagnum fallax</i>) microbiomes. Global Change Biology, 2019, 25, 2993-3004.	4.2	89
32	Decadal biomass increment in early secondary succession woody ecosystems is increased by CO2 enrichment. Nature Communications, 2019, 10, 454.	5.8	68
33	Traditional plant functional groups explain variation in economic but not sizeâ€related traits across the tundra biome. Global Ecology and Biogeography, 2019, 28, 78-95.	2.7	49
34	Controls on Fine-Scale Spatial and Temporal Variability of Plant-Available Inorganic Nitrogen in a Polygonal Tundra Landscape. Ecosystems, 2019, 22, 528-543.	1.6	21
35	Fine-root growth in a forested bog is seasonally dynamic, but shallowly distributed in nutrient-poor peat. Plant and Soil, 2018, 424, 123-143.	1.8	58
36	Tundra Trait Team: A database of plant traits spanning the tundra biome. Global Ecology and Biogeography, 2018, 27, 1402-1411.	2.7	57

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37	Plant functional trait change across a warming tundra biome. Nature, 2018, 562, 57-62.	13.7	451
38	Local Spatial Heterogeneity of Holocene Carbon Accumulation throughout the Peat Profile of an Ombrotrophic Northern Minnesota Bog. Radiocarbon, 2018, 60, 941-962.	0.8	15
39	Better Plant Data at the Root of Ecosystem Models. Eos, 2018, 99, .	0.1	3
40	The Fate of Root Carbon in Soil: Data and Model Gaps. Eos, 2018, 99, .	0.1	3
41	Building a Virtual Ecosystem Dynamic Model for Root Research. Environmental Modelling and Software, 2017, 89, 97-105.	1.9	3
42	A global Fineâ€Root Ecology Database to address belowâ€ground challenges in plant ecology. New Phytologist, 2017, 215, 15-26.	3.5	250
43	Climate, soil and plant functional types as drivers of global fineâ€root trait variation. Journal of Ecology, 2017, 105, 1182-1196.	1.9	234
44	Introduction to a <i>Virtual Issue</i> on root traits. New Phytologist, 2017, 215, 5-8.	3.5	3
45	Building a better foundation: improving rootâ€trait measurements to understand and model plant and ecosystem processes. New Phytologist, 2017, 215, 27-37.	3.5	159
46	Significant inconsistency of vegetation carbon density in CMIP5 Earth system models against observational data. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2282-2297.	1.3	17
47	Temporal and Spatial Variation in Peatland Carbon Cycling and Implications for Interpreting Responses of an Ecosystemâ€Scale Warming Experiment. Soil Science Society of America Journal, 2017, 81, 1668-1688.	1.2	34
48	Long-term carbon and nitrogen dynamics at SPRUCE revealed through stable isotopes in peat profiles. Biogeosciences, 2017, 14, 2481-2494.	1.3	32
49	Evaluating the Community Land Model in a pine stand with shading manipulations and ¹³CO₂ labeling. Biogeosciences, 2016, 13, 641-657.	1.3	18
50	The Alaska Arctic Vegetation Archive (AVA-AK). Phytocoenologia, 2016, 46, 221-229.	1.2	14
51	Modeling the spatiotemporal variability in subsurface thermal regimes across a low-relief polygonal tundra landscape. Cryosphere, 2016, 10, 2241-2274.	1.5	29
52	Mapping Arctic Plant Functional Type Distributions in the Barrow Environmental Observatory Using WorldView-2 and LiDAR Datasets. Remote Sensing, 2016, 8, 733.	1.8	34
53	Root traits explain observed tundra vegetation nitrogen uptake patterns: Implications for traitâ€based land models. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 3101-3112.	1.3	52
54	Moving forward with fineâ€root definitions and research. New Phytologist, 2016, 212, 313-313.	3.5	3

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55	Potential carbon emissions dominated by carbon dioxide from thawed permafrost soils. Nature Climate Change, 2016, 6, 950-953.	8.1	288
56	Expanding Use of Plant Trait Observation in Earth System Models. Eos, 2016, 97, .	0.1	4
57	A panâ€Arctic synthesis of CH₄ and CO₂ production from anoxic soil incubations. Global Change Biology, 2015, 21, 2787-2803.	4.2	138
58	Forest soil carbon oxidation state and oxidative ratio responses to elevated CO 2. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1797-1811.	1.3	19
59	Isotopic identification of soil and permafrost nitrate sources in an Arctic tundra ecosystem. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1000-1017.	1.3	22
60	Using ecosystem experiments to improve vegetation models. Nature Climate Change, 2015, 5, 528-534.	8.1	249
61	A Scientific Function Test Framework for Modular Environmental Model Development: Application to the Community Land Model. , 2015, , .		9
62	The unseen iceberg: plant roots in arctic tundra. New Phytologist, 2015, 205, 34-58.	3.5	260
63	Redefining fine roots improves understanding of belowâ€ground contributions to terrestrial biosphere processes. New Phytologist, 2015, 207, 505-518.	3.5	906
64	Genomics in a changing arctic: critical questions await the molecular ecologist. Molecular Ecology, 2015, 24, 2301-2309.	2.0	10
65	Root structural and functional dynamics in terrestrial biosphere models â€“ evaluation and recommendations. New Phytologist, 2015, 205, 59-78.	3.5	214
66	Where does the carbon go? A modelâ€“data intercomparison of vegetation carbon allocation and turnover processes at two temperate forest freeâ€air CO₂ enrichment sites. New Phytologist, 2014, 203, 883-899.	3.5	263
67	Evaluation of 11 terrestrial carbonâ€“nitrogen cycle models against observations from two temperate <scp>F</scp>reeâ€<scp>A</scp>ir <scp>CO</scp>₂<scp> E</scp>nrichment studies. New Phytologist, 2014, 202, 803-822.	3.5	378
68	Using root form to improve our understanding of root function. New Phytologist, 2014, 203, 707-709.	3.5	48
69	Organic matter transformation in the peat column at Marcell Experimental Forest: Humification and vertical stratification. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 661-675.	1.3	170
70	Plant functional types in Earth system models: past experiences and future directions for application of dynamic vegetation models in high-latitude ecosystems. Annals of Botany, 2014, 114, 1-16.	1.4	240
71	Comprehensive ecosystem modelâ€data synthesis using multiple data sets at two temperate forest freeâ€air CO₂ enrichment experiments: Model performance at ambient CO₂ concentration. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 937-964.	1.3	95
72	Terrestrial Plant Productivity and Carbon Allocation in a Changing Climate. , 2014, , 297-316.		4

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73	Stored carbon partly fuels fineâ€root respiration but is not used for production of new fine roots. New Phytologist, 2013, 199, 420-430.	3.5	69
74	Timing and magnitude of C partitioning through a young loblolly pine (Pinus taeda L.) stand using 13C labeling and shade treatments. Tree Physiology, 2012, 32, 799-813.	1.4	38
75	Plant root distributions and nitrogen uptake predicted by a hypothesis of optimal root foraging. Ecology and Evolution, 2012, 2, 1235-1250.	0.8	59
76	Soil carbon and nitrogen cycling and storage throughout the soil profile in a sweetgum plantation after 11Âyears of CO₂â€enrichment. Global Change Biology, 2012, 18, 1684-1697.	4.2	74
77	Advancing the use of minirhizotrons in wetlands. Plant and Soil, 2012, 352, 23-39.	1.8	57
78	Net mineralization of N at deeper soil depths as a potential mechanism for sustained forest production under elevated [CO₂]. Global Change Biology, 2011, 17, 1130-1139.	4.2	48
79	Litterfall¹⁵N abundance indicates declining soil nitrogen availability in a free-air CO₂enrichment experiment. Ecology, 2011, 92, 133-139.	1.5	55
80	Digging deeper: fineâ€root responses to rising atmospheric CO₂ concentration in forested ecosystems. New Phytologist, 2010, 186, 346-357.	3.5	231
81	CO ₂ enhancement of forest productivity constrained by limited nitrogen availability. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 19368-19373.	3.3	814
82	Organized Oral Session 3. Missing Links in the Rootâ€“Soil Organic Matter Continuum. Bulletin of the Ecological Society of America, 2010, 91, 54-64.	0.2	2
83	Scaling plant nitrogen use and uptake efficiencies in response to nutrient addition in peatlands. Ecology, 2010, 91, 693-707.	1.5	64
84	Forest fineâ€root production and nitrogen use under elevated CO₂: contrasting responses in evergreen and deciduous trees explained by a common principle. Global Change Biology, 2009, 15, 132-144.	4.2	72
85	CO₂ enrichment increases carbon and nitrogen input from fine roots in a deciduous forest. New Phytologist, 2008, 179, 837-847.	3.5	146
86	Nitrogen limitation in a sweetgum plantation: implications for carbon allocation and storage. Canadian Journal of Forest Research, 2008, 38, 1021-1032.	0.8	37
87	Increases in nitrogen uptake rather than nitrogen-use efficiency support higher rates of temperate forest productivity under elevated CO ₂. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14014-14019.	3.3	353
88	Nutrient control of microbial carbon cycling along an ombrotrophic-minerotrophic peatland gradient. Journal of Geophysical Research, 2006, 111, .	3.3	46
89	NITROGEN UPTAKE, DISTRIBUTION, TURNOVER, AND EFFICIENCY OF USE IN A CO2-ENRICHED SWEETGUM FOREST. Ecology, 2006, 87, 5-14.	1.5	117
90	Limited effects of six years of fertilization on carbon mineralization dynamics in a Minnesota fen. Soil Biology and Biochemistry, 2005, 37, 1197-1204.	4.2	57

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91	CO_2 Enhancement of Forest Productivity Constrained by Limited Nitrogen Availability. Nature Precedings, 0, , .	0.1	9