C M Iversen

List of Publications by Year
in descending order

91 papers	10,653 citations	53794 45 h-index	46799 89 g-index
100 all docs	100 docs citations	100 times ranked	12142 citing authors

#	Article	IF	Citations
1	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	9.5	1,038
2	Redefining fine roots improves understanding of belowâ€ground contributions to terrestrial biosphere processes. New Phytologist, 2015, 207, 505-518.	7.3	906
3	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.	7.1	814
4	Plant functional trait change across a warming tundra biome. Nature, 2018, 562, 57-62.	27.8	451
5	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.	7.3	378
6	The fungal collaboration gradient dominates the root economics space in plants. Science Advances, 2020, 6, .	10.3	377
7	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.	7.1	353
8	Potential carbon emissions dominated by carbon dioxide from thawed permafrost soils. Nature Climate Change, 2016, 6, 950-953.	18.8	288
9	Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO₂. New Phytologist, 2021, 229, 2413-2445.	7.3	286
10	Root traits as drivers of plant and ecosystem functioning: current understanding, pitfalls and future research needs. New Phytologist, 2021, 232, 1123-1158.	7.3	277
11	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.	7.3	263
12	The unseen iceberg: plant roots in arctic tundra. New Phytologist, 2015, 205, 34-58.	7.3	260
13	A global Fineâ€Root Ecology Database to address belowâ€ground challenges in plant ecology. New Phytologist, 2017, 215, 15-26.	7.3	250
14	Using ecosystem experiments to improve vegetation models. Nature Climate Change, 2015, 5, 528-534.	18.8	249
15	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.	2.9	240
16	Climate, soil and plant functional types as drivers of global fineâ€root trait variation. Journal of Ecology, 2017, 105, 1182-1196.	4.0	234
17	Digging deeper: fineâ€root responses to rising atmospheric CO₂ concentration in forested ecosystems. New Phytologist, 2010, 186, 346-357.	7.3	231
18	A starting guide to root ecology: strengthening ecological concepts and standardising root classification, sampling, processing and trait measurements. New Phytologist, 2021, 232, 973-1122.	7.3	216

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19	Root structural and functional dynamics in terrestrial biosphere models â€“ evaluation and recommendations. New Phytologist, 2015, 205, 59-78.	7.3	214
20	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.	3.0	170
21	Building a better foundation: improving rootâ€trait measurements to understand and model plant and ecosystem processes. New Phytologist, 2017, 215, 27-37.	7.3	159
22	An integrated framework of plant form and function: the belowground perspective. New Phytologist, 2021, 232, 42-59.	7.3	153
23	CO₂ enrichment increases carbon and nitrogen input from fine roots in a deciduous forest. New Phytologist, 2008, 179, 837-847.	7.3	146
24	Open Science principles for accelerating trait-based science across the Tree of Life. Nature Ecology and Evolution, 2020, 4, 294-303.	7.8	144
25	A panâ€Arctic synthesis of CH₄ and CO₂ production from anoxic soil incubations. Global Change Biology, 2015, 21, 2787-2803.	9.5	138
26	NITROGEN UPTAKE, DISTRIBUTION, TURNOVER, AND EFFICIENCY OF USE IN A CO2-ENRICHED SWEETGUM FOREST. Ecology, 2006, 87, 5-14.	3.2	117
27	Physical and Functional Constraints on Viable Belowground Acquisition Strategies. Frontiers in Plant Science, 2019, 10, 1215.	3.6	115
28	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.	3.0	95
29	Peatland warming strongly increases fine-root growth. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17627-17634.	7.1	95
30	Global root traits (GRooT) database. Global Ecology and Biogeography, 2021, 30, 25-37.	5.8	90
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.	9.5	89
32	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.	9.5	74
33	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.	9.5	72
34	Stored carbon partly fuels fineâ€root respiration but is not used for production of new fine roots. New Phytologist, 2013, 199, 420-430.	7.3	69
35	Rapid Net Carbon Loss From a Wholeâ€Ecosystem Warmed Peatland. AGU Advances, 2020, 1, e2020AV000163.	5.4	69
36	Decadal biomass increment in early secondary succession woody ecosystems is increased by CO2 enrichment. Nature Communications, 2019, 10, 454.	12.8	68

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37	Scaling plant nitrogen use and uptake efficiencies in response to nutrient addition in peatlands. Ecology, 2010, 91, 693-707.	3.2	64
38	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.	7.8	62
39	Plant root distributions and nitrogen uptake predicted by a hypothesis of optimal root foraging. Ecology and Evolution, 2012, 2, 1235-1250.	1.9	59
40	Fine-root growth in a forested bog is seasonally dynamic, but shallowly distributed in nutrient-poor peat. Plant and Soil, 2018, 424, 123-143.	3.7	58
41	Limited effects of six years of fertilization on carbon mineralization dynamics in a Minnesota fen. Soil Biology and Biochemistry, 2005, 37, 1197-1204.	8.8	57
42	Advancing the use of minirhizotrons in wetlands. Plant and Soil, 2012, 352, 23-39.	3.7	57
43	Tundra Trait Team: A database of plant traits spanning the tundra biome. Global Ecology and Biogeography, 2018, 27, 1402-1411.	5.8	57
44	Litterfall¹⁵N abundance indicates declining soil nitrogen availability in a free-air CO₂enrichment experiment. Ecology, 2011, 92, 133-139.	3.2	55
45	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.	3.0	52
46	Global plant trait relationships extend to the climatic extremes of the tundra biome. Nature Communications, 2020, 11, 1351.	12.8	52
47	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.	5.8	49
48	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.	9.5	48
49	Using root form to improve our understanding of root function. New Phytologist, 2014, 203, 707-709.	7.3	48
50	Nutrient control of microbial carbon cycling along an ombrotrophic-minerotrophic peatland gradient. Journal of Geophysical Research, 2006, 111, .	3.3	46
51	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.	3.1	38
52	Nitrogen limitation in a sweetgum plantation: implications for carbon allocation and storage. Canadian Journal of Forest Research, 2008, 38, 1021-1032.	1.7	37
53	Alder Distribution and Expansion Across a Tundra Hillslope: Implications for Local N Cycling. Frontiers in Plant Science, 2019, 10, 1099.	3.6	37
54	Arctic Vegetation Mapping Using Unsupervised Training Datasets and Convolutional Neural Networks. Remote Sensing, 2019, 11, 69.	4.0	35

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55	Mapping Arctic Plant Functional Type Distributions in the Barrow Environmental Observatory Using WorldView-2 and LiDAR Datasets. Remote Sensing, 2016, 8, 733.	4.0	34
56	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.	2.2	34
57	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.	1.5	34
58	Long-term carbon and nitrogen dynamics at SPRUCE revealed through stable isotopes in peat profiles. Biogeosciences, 2017, 14, 2481-2494.	3.3	32
59	Modeling the spatiotemporal variability in subsurface thermal regimes across a low-relief polygonal tundra landscape. Cryosphere, 2016, 10, 2241-2274.	3.9	29
60	The landscape of soil carbon data: Emerging questions, synergies and databases. Progress in Physical Geography, 2019, 43, 707-719.	3.2	27
61	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.	3.8	27
62	Local-scale Arctic tundra heterogeneity affects regional-scale carbon dynamics. Nature Communications, 2020, 11, 4925.	12.8	25
63	Isotopic identification of soil and permafrost nitrate sources in an Arctic tundra ecosystem. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1000-1017.	3.0	22
64	Controls on Fine-Scale Spatial and Temporal Variability of Plant-Available Inorganic Nitrogen in a Polygonal Tundra Landscape. Ecosystems, 2019, 22, 528-543.	3.4	21
65	Highâ€resolution minirhizotrons advance our understanding of rootâ€fungal dynamics in an experimentally warmed peatland. Plants People Planet, 2021, 3, 640-652.	3.3	20
66	Forest soil carbon oxidation state and oxidative ratio responses to elevated CO 2. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1797-1811.	3.0	19
67	Evaluating the Community Land Model in a pine stand with shading manipulations and ¹³CO₂ labeling. Biogeosciences, 2016, 13, 641-657.	3.3	18
68	Significant inconsistency of vegetation carbon density in CMIP5 Earth system models against observational data. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2282-2297.	3.0	17
69	Local Spatial Heterogeneity of Holocene Carbon Accumulation throughout the Peat Profile of an Ombrotrophic Northern Minnesota Bog. Radiocarbon, 2018, 60, 941-962.	1.8	15
70	Nitrogen and phosphorus cycling in an ombrotrophic peatland: a benchmark for assessing change. Plant and Soil, 2021, 466, 649-674.	3.7	15
71	The Alaska Arctic Vegetation Archive (AVA-AK). Phytocoenologia, 2016, 46, 221-229.	0.5	14
72	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.	3.8	14

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73	Filling gaps in our understanding of belowground plant traits across the world: an introduction to a Virtual Issue. New Phytologist, 2021, 231, 2097-2103.	7.3	14
74	Topographical Controls on Hillslopeâ€Scale Hydrology Drive Shrub Distributions on the Seward Peninsula, Alaska. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005823.	3.0	13
75	Whole-Ecosystem Warming Increases Plant-Available Nitrogen and Phosphorus in an Ombrotrophic Bog. Ecosystems, 2023, 26, 86-113.	3.4	13
76	Forest stand and canopy development unaltered by 12Âyears of CO2 enrichment*. Tree Physiology, 2022, 42, 428-440.	3.1	12
77	Genomics in a changing arctic: critical questions await the molecular ecologist. Molecular Ecology, 2015, 24, 2301-2309.	3.9	10
78	CO2 Enhancement of Forest Productivity Constrained by Limited Nitrogen Availability. Nature Precedings, 0, , .	0.1	9
79	A Scientific Function Test Framework for Modular Environmental Model Development: Application to the Community Land Model. , 2015, , .		9
80	Evaluating alternative ebullition models for predicting peatland methane emission and its pathways via dataâ€"model fusion. Biogeosciences, 2022, 19, 2245-2262.	3.3	5
81	Terrestrial Plant Productivity and Carbon Allocation in a Changing Climate. , 2014, , 297-316.		4
82	Expanding Use of Plant Trait Observation in Earth System Models. Eos, 2016, 97, .	0.1	4
83	Moving forward with fineâ€root definitions and research. New Phytologist, 2016, 212, 313-313.	7.3	3
84	Building a Virtual Ecosystem Dynamic Model for Root Research. Environmental Modelling and Software, 2017, 89, 97-105.	4.5	3
85	Introduction to a <i>Virtual Issue</i> on root traits. New Phytologist, 2017, 215, 5-8.	7.3	3
86	Better Plant Data at the Root of Ecosystem Models. Eos, 2018, 99, .	0.1	3
87	The Fate of Root Carbon in Soil: Data and Model Gaps. Eos, 2018, 99, .	0.1	3
88	Assessing dynamic vegetation model parameter uncertainty across Alaskan arctic tundra plant communities. Ecological Applications, 2022, 32, e02499.	3.8	3
89	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
90	Untargeted Exometabolomics Provides a Powerful Approach to Investigate Biogeochemical Hotspots with Vegetation and Polygon Type in Arctic Tundra Soils. Soil Systems, 2021, 5, 10.	2.6	1

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91	Deciphering the shifting role of intrinsic and extrinsic drivers on moss decomposition in peatlands over a 5â€year period. Oikos, 2022, 2022, .	2.7	0