Claire C Treat

List of Publications by Year
in descending order

39 papers	5,742 citations	201575 27 h-index	289141 40 g-index
59 all docs	59 docs citations	59 times ranked	6880 citing authors

#	Article	IF	Citations
1	Hydrologic Controls on Peat Permafrost and Carbon Processes: New Insights From Past and Future Modeling. Frontiers in Environmental Science, 2022, 10, .	1.5	1
2	Expert assessment of future vulnerability of the global peatland carbon sink. Nature Climate Change, 2021, 11, 70-77.	8.1	167
3	Permafrost Thaw in Northern Peatlands: Rapid Changes in Ecosystem and Landscape Functions. Ecological Studies, 2021, , 27-67.	0.4	11
4	Spatial heterogeneity and environmental predictors of permafrost region soil organic carbon stocks. Science Advances, 2021, 7, .	4.7	130
5	Spatiotemporal patterns of northern lake formation since the Last Glacial Maximum. Quaternary Science Reviews, 2021, 253, 106773.	1.4	23
6	The role of wetland expansion and successional processes in methane emissions from northern wetlands during the Holocene. Quaternary Science Reviews, 2021, 257, 106864.	1.4	15
7	Predicted Vulnerability of Carbon in Permafrost Peatlands With Future Climate Change and Permafrost Thaw in Western Canada. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005872.	1.3	20
8	Statistical upscaling of ecosystem CO₂ fluxes across the terrestrial tundra and boreal domain: Regional patterns and uncertainties. Global Change Biology, 2021, 27, 4040-4059.	4.2	83
9	WETMETH 1.0: a new wetland methane model for implementation in Earth system models. Geoscientific Model Development, 2021, 14, 6215-6240.	1.3	8
10	The Borealâ€“Arctic Wetland and Lake Dataset (BAWLD). Earth System Science Data, 2021, 13, 5127-5149.	3.7	46
11	Large stocks of peatland carbon and nitrogen are vulnerable to permafrost thaw. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 20438-20446.	3.3	307
12	Land Use and Land Cover Affect the Depth Distribution of Soil Carbon: Insights From a Large Database of Soil Profiles. Frontiers in Environmental Science, 2020, 8, .	1.5	18
13	Decomposability of soil organic matter over time: the Soil Incubation Database (SIDb, version 1.0) and guidance for incubation procedures. Earth System Science Data, 2020, 12, 1511-1524.	3.7	26
14	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.	3.7	48
15	Ecosystem carbon response of an Arctic peatland to simulated permafrost thaw. Global Change Biology, 2019, 25, 1746-1764.	4.2	52
16	Widespread global peatland establishment and persistence over the last 130,000 y. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4822-4827.	3.3	82
17	Large loss of CO2 in winter observed across the northern permafrost region. Nature Climate Change, 2019, 9, 852-857.	8.1	225
18	Nongrowing season methane emissionsâ€“a significant component of annual emissions across northern ecosystems. Global Change Biology, 2018, 24, 3331-3343.	4.2	89

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19	Near-surface permafrost aggradation in Northern Hemisphere peatlands shows regional and global trends during the past 6000 years. Holocene, 2018, 28, 998-1010.	0.9	34
20	A North American Hydroclimate Synthesis (NAHS) of the Common Era. Global and Planetary Change, 2018, 162, 175-198.	1.6	24
21	Tundra landscape heterogeneity, not interannual variability, controls the decadal regional carbon balance in the Western Russian Arctic. Global Change Biology, 2018, 24, 5188-5204.	4.2	45
22	The positive net radiative greenhouse gas forcing of increasing methane emissions from a thawing boreal forestâ€wetland landscape. Global Change Biology, 2017, 23, 2413-2427.	4.2	63
23	Rapid carbon loss and slow recovery following permafrost thaw in boreal peatlands. Global Change Biology, 2017, 23, 1109-1127.	4.2	70
24	Longer thaw seasons increase nitrogen availability for leaching during fall in tundra soils. Environmental Research Letters, 2016, 11, 064013.	2.2	44
25	Effects of permafrost aggradation on peat properties as determined from a panâ€Arctic synthesis of plant macrofossils. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 78-94.	1.3	92
26	Potential carbon emissions dominated by carbon dioxide from thawed permafrost soils. Nature Climate Change, 2016, 6, 950-953.	8.1	288
27	A panâ€Arctic synthesis of CH₄ and CO₂ production from anoxic soil incubations. Global Change Biology, 2015, 21, 2787-2803.	4.2	138
28	Biodegradability of dissolved organic carbon in permafrost soils and aquatic systems: a meta-analysis. Biogeosciences, 2015, 12, 6915-6930.	1.3	153
29	Climate change and the permafrost carbon feedback. Nature, 2015, 520, 171-179.	13.7	2,369
30	A simplified, data-constrained approach to estimate the permafrost carbonâ€“climate feedback. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140423.	1.6	149
31	Temperature and peat type control <scp>CO</scp>₂ and <scp>CH</scp>₄ production in Alaskan permafrost peats. Global Change Biology, 2014, 20, 2674-2686.	4.2	158
32	Response of anaerobic carbon cycling to water table manipulation in an Alaskan rich fen. Soil Biology and Biochemistry, 2013, 58, 50-60.	4.2	50
33	A permafrost carbon bomb?. Nature Climate Change, 2013, 3, 865-867.	8.1	13
34	Peatlands in the Earthâ€™s 21st century climate system. Environmental Reviews, 2011, 19, 371-396.	2.1	323
35	Soil temperature response to 21st century global warming: the role of and some implications for peat carbon in thawing permafrost soils in North America. Earth System Dynamics, 2011, 2, 121-138.	2.7	57
36	Shortâ€term response of methane fluxes and methanogen activity to water table and soil warming manipulations in an Alaskan peatland. Journal of Geophysical Research, 2008, 113, .	3.3	176

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37	Historical influences on the vegetation and soils of the Marthaâ€™s Vineyard, Massachusetts coastal sandplain: Implications for conservation and restoration. Biological Conservation, 2007, 136, 17-32.	1.9	22
38	Timescale dependence of environmental and plant-mediated controls on CH4flux in a temperate fen. Journal of Geophysical Research, 2007, 112, .	3.3	91
39	A model intercomparison analysis for controls on C accumulation in North American peatlands. Journal of Geophysical Research G: Biogeosciences, 0, , .	1.3	2