David Olefeldt

List of Publications by Citations

54 papers	4,343 citations	25 h-index	65 g-index
78 ext. papers	5,663 ext. citations	9.1 avg, IF	5.34 L-index

#	Paper	IF	Citations
54	Climate change and the permafrost carbon feedback. *Nature*, **2015**, 520, 171-9	50.4	1667
53	A synthesis of methane emissions from 71 northern, temperate, and subtropical wetlands. *Global Change Biology*, **2014**, 20, 2183-97	11.4	291
52	Circumpolar distribution and carbon storage of thermokarst landscapes. *Nature Communications*, **2016**, 7, 13043	17.4	238
51	Environmental and physical controls on northern terrestrial methane emissions across permafrost zones. *Global Change Biology*, **2013**, 19, 589-603	11.4	231
50	Carbon release through abrupt permafrost thaw. *Nature Geoscience*, **2020**, 13, 138-143	18.3	214
49	Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire: an expert assessment. *Environmental Research Letters*, **2016**, 11, 034014	6.2	165
48	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	11.5	142
47	Permafrost collapse is accelerating carbon release. *Nature*, **2019**, 569, 32-34	50.4	141
46	A simplified, data-constrained approach to estimate the permafrost carbon-climate feedback. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2015**, 373,	3	125
45	Large loss of CO in winter observed across the northern permafrost region.. *Nature Climate Change*, **2019**, 9, 852-857	21.4	112
44	Effects of permafrost and hydrology on the composition and transport of dissolved organic carbon in a subarctic peatland complex. *Journal of Geophysical Research*, **2012**, 117,		97
43	Wildfire as a major driver of recent permafrost thaw in boreal peatlands. *Nature Communications*, **2018**, 9, 3041	17.4	90
42	Biomass production efficiency controlled by management in temperate and boreal ecosystems. *Nature Geoscience*, **2015**, 8, 843-846	18.3	79
41	Half of global methane emissions come from highly variable aquatic ecosystem sources. *Nature Geoscience*, **2021**, 14, 225-230	18.3	77
40	Net carbon accumulation of a high-latitude permafrost palsa mire similar to permafrost-free peatlands. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	66
39	Total waterborne carbon export and DOC composition from ten nested subarctic peatland catchments□mportance of peatland cover, groundwater influence, and inter-annual variability of precipitation patterns. *Hydrological Processes*, **2013**, 27, 2280-2294	3.3	53
38	A decade of boreal rich fen greenhouse gas fluxes in response to natural and experimental water table variability. *Global Change Biology*, **2017**, 23, 2428-2440	11.4	49

37	Altered Composition and Microbial versus UV-Mediated Degradation of Dissolved Organic Matter in Boreal Soils Following Wildfire. *Ecosystems*, **2013**, 16, 1396-1412	3.9	38
36	Permafrost conditions in peatlands regulate magnitude, timing, and chemical composition of catchment dissolved organic carbon export. *Global Change Biology*, **2014**, 20, 3122-36	11.4	37
35	Changes in Methane Flux along a Permafrost Thaw Sequence on the Tibetan Plateau. *Environmental Science & Technology*, **2018**, 52, 1244-1252	10.3	31
34	Sources and fate of terrestrial dissolved organic carbon in lakes of a Boreal Plains region recently affected by wildfire. *Biogeosciences*, **2013**, 10, 6247-6265	4.6	29
33	Respiration of aged soil carbon during fall in permafrost peatlands enhanced by active layer deepening following wildfire but limited following thermokarst. *Environmental Research Letters*, **2018**, 13, 085002	6.2	28
32	Mercury and methylmercury biogeochemistry in a thawing permafrost wetland complex, Northwest Territories, Canada. *Hydrological Processes*, **2016**, 30, 3627-3638	3.3	28
31	Is the subarctic landscape still a carbon sink? Evidence from a detailed catchment balance. *Geophysical Research Letters*, **2016**, 43, 1988-1995	4.9	28
30	Influence of the permafrost boundary on dissolved organic matter characteristics in rivers within the Boreal and Taiga plains of western Canada. *Environmental Research Letters*, **2014**, 9, 035005	6.2	27
29	Influence of Holocene permafrost aggradation and thaw on the paleoecology and carbon storage of a peatland complex in northwestern Canada. *Holocene*, **2017**, 27, 1391-1405	2.6	25
28	Seasonal shifts in export of DOC and nutrients from burned and unburned peatland-rich catchments, Northwest Territories, Canada. *Hydrology and Earth System Sciences*, **2018**, 22, 4455-4472	5.5	25
27	High Resolution Mapping of Peatland Hydroperiod at a High-Latitude Swedish Mire. *Remote Sensing* , **2012**, 4, 1974-1994	5	22
26	A synthesis of three decades of hydrological research at Scotty Creek, NWT, Canada. *Hydrology and Earth System Sciences*, **2019**, 23, 2015-2039	5.5	20
25	Assessing the Potential for Mobilization of Old Soil Carbon After Permafrost Thaw: A Synthesis of 14C Measurements From the Northern Permafrost Region. *Global Biogeochemical Cycles*, **2020**, 34, e2020GB006672	5.9	18
24	Drivers of dissolved organic carbon export in a subarctic catchment: Importance of microbial decomposition, sorption-desorption, peatland and lateral flow. *Science of the Total Environment*, **2018**, 622-623, 260-274	10.2	17
23	Long-term Impacts of Permafrost Thaw on Carbon Storage in Peatlands: Deep Losses Offset by Surficial Accumulation. *Journal of Geophysical Research G: Biogeosciences*, **2020**, 125, e2019JG005501	3.7	14
22	Carbon budget estimation of a subarctic catchment using a dynamic ecosystem model at high spatial resolution. *Biogeosciences*, **2015**, 12, 2791-2808	4.6	12
21	Shallow soils are warmer under trees and tall shrubs across Arctic and Boreal ecosystems. *Environmental Research Letters*, **2021**, 16, 015001	6.2	12
20	Fluvial CO and CH patterns across wildfire-disturbed ecozones of subarctic Canada: Current status and implications for future change. *Global Change Biology*, **2019**, 26, 2304	11.4	12

19	Lability of dissolved organic carbon from boreal peatlands: interactions between permafrost thaw, wildfire, and season. *Canadian Journal of Soil Science*, **2020**, 100, 503-515	1.4	10
18	The Boreal–Arctic Wetland and Lake Dataset (BAWLD). *Earth System Science Data*, **2021**, 13, 5127-5149	10.5	10
17	Increased deep soil respiration detected despite reduced overall respiration in permafrost peat plateaus following wildfire. *Environmental Research Letters*, **2019**, 14, 125001	6.2	9
16	BAWLD-CH₄: a comprehensive dataset of methane fluxes from boreal and arctic ecosystems. *Earth System Science Data*, **2021**, 13, 5151-5189	10.5	8
15	Thermokarst amplifies fluvial inorganic carbon cycling and export across watershed scales on the Peel Plateau, Canada. *Biogeosciences*, **2020**, 17, 5163-5182	4.6	6
14	The essential carbon service provided by northern peatlands. *Frontiers in Ecology and the Environment*,	5.5	4
13	Characterizing methane emission hotspots from thawing permafrost. *Global Biogeochemical Cycles*,e2020GB006922	5.9	4
12	Fire in the Arctic: The effect of wildfire across diverse aquatic ecosystems of the Northwest Territories **2019**, 1, 31-38		4
11	Sources and fate of terrestrial dissolved organic carbon in lakes of a Boreal Plains region recently affected by wildfire		4
10	Dissolved organic carbon in streams within a subarctic catchment analysed using a GIS/remote sensing approach. *PLoS ONE*, **2018**, 13, e0199608	3.7	3
9	Opposing Effects of Climate and Permafrost Thaw on CH4 and CO2 Emissions From Northern Lakes. *AGU Advances*, **2021**, 2, e2021AV000515	5.4	3
8	The missing pieces for better future predictions in subarctic ecosystems: A Tornetrask case study. *Ambio*, **2021**, 50, 375-392	6.5	3
7	Aged soils contribute little to contemporary carbon cycling downstream of thawing permafrost peatlands. *Global Change Biology*, **2021**, 27, 5368-5382	11.4	3
6	Constraints on potential enzyme activities in thermokarst bogs: Implications for the carbon balance of peatlands following thaw. *Global Change Biology*, **2021**, 27, 4711-4726	11.4	2
5	Carbon budget estimation of a subarctic catchment using a dynamic ecosystem model at high spatial resolution		1
4	Effects of Prescribed Burn on Nutrient and Dissolved Organic Matter Characteristics in Peatland Shallow Groundwater. *Fire*, **2020**, 3, 53	2.4	1
3	Hydrological resilience to forest fire in the subarctic Canadian shield. *Hydrological Processes*, **2020**, 34, 4940-4958	3.3	1
2	Permafrost Thaw in Northern Peatlands: Rapid Changes in Ecosystem and Landscape Functions. *Ecological Studies*, **2021**, 27-67	1.1	1

1	Morphometric Control on Dissolved Organic Carbon in Subarctic Streams. *Journal of Geophysical Research G: Biogeosciences*, **2020**, 125, e2019JG005348	3.7