Merritt R Turetsky

List of Publications by Year
in descending order

110	15,025	32410 55	28425 109
papers	citations	h-index	g-index

113	113	113	14709
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Material Legacies and Environmental Constraints Underlie Fire Resilience of a Dominant Boreal Forest Type. Ecosystems, 2023, 26, 473-490.	1.6	2
2	Permafrost carbon emissions in a changing Arctic. Nature Reviews Earth & Environment, 2022, 3, 55-67.	12.2	124
3	Cascading effects of predators on algal size structure. Journal of Phycology, 2022, 58, 308-317.	1.0	4
4	Fuel Loads and Plant Traits as Communityâ€Level Predictors of Emergent Properties of Vulnerability and Resilience to a Changing Fire Regime in Black Spruce Forests of Boreal Alaska. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	1.3	3
5	Ten new insights in climate science 2020 â€“ a horizon scan. Global Sustainability, 2021, 4, .	1.6	17
6	Letter: Trophic interactions regulate peatland carbon cycling. Ecology Letters, 2021, 24, 781-790.	3.0	10
7	Carbon Fluxes and Microbial Activities From Boreal Peatlands Experiencing Permafrost Thaw. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005869.	1.3	18
8	Predicting patterns of terrestrial lichen biomass recovery following boreal wildfires. Ecosphere, 2021, 12, e03481.	1.0	8
9	Reflections and projections on a decade of climate science. Nature Climate Change, 2021, 11, 279-285.	8.1	18
10	Summary and synthesis of Changing Cold Regions Network (CCRN) research in the interior of western Canada â€“ PartÂ2: Future change in cryosphere, vegetation, and hydrology. Hydrology and Earth System Sciences, 2021, 25, 1849-1882.	1.9	20
11	Mapping and understanding the vulnerability of northern peatlands to permafrost thaw at scales relevant to community adaptation planning. Environmental Research Letters, 2021, 16, 055022.	2.2	13
12	The Rhizosphere Responds: Rich Fen Peat and Root Microbial Ecology after Long-Term Water Table Manipulation. Applied and Environmental Microbiology, 2021, 87, e0024121.	1.4	4
13	Identifying increasing risks of hazards for northern land-users caused by permafrost thaw: integrating scientific and community-based research approaches. Environmental Research Letters, 2021, 16, 064047.	2.2	7
14	Deep roots of Carex aquatilis have greater ammonium uptake capacity than shallow roots in peatlands following permafrost thaw. Plant and Soil, 2021, 465, 261-272.	1.8	6
15	Natural selection on a carbon cycling trait drives ecosystem engineering by Sphagnum (peat) Tj ETQq1 1 0.784314 rgBT /Over	1.2	6
16	Increasing fire and the decline of fire adapted black spruce in the boreal forest. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	107
17	Climate change decreases the cooling effect from postfire albedo in boreal North America. Global Change Biology, 2020, 26, 1592-1607.	4.2	29
18	When the Source of Flooding Matters: Divergent Responses in Carbon Fluxes in an Alaskan Rich Fen to Two Types of Inundation. Ecosystems, 2020, 23, 1138-1153.	1.6	13

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19	Fuel availability not fire weather controls boreal wildfire severity and carbon emissions. Nature Climate Change, 2020, 10, 1130-1136.	8.1	82
20	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
21	Increased rainfall stimulates permafrost thaw across a variety of Interior Alaskan boreal ecosystems. Npj Climate and Atmospheric Science, 2020, 3, .	2.6	59
22	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.	1.9	36
23	Getting to the Root of Plantâ€Mediated Methane Emissions and Oxidation in a Thermokarst Bog. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2020JG005825.	1.3	20
24	Evaluating Sphagnum traits in the context of resource economics and optimal partitioning theories. Oikos, 2020, 129, 1204-1215.	1.2	7
25	Wildfire combustion and carbon stocks in the southern Canadian boreal forest: Implications for a warming world. Global Change Biology, 2020, 26, 6062-6079.	4.2	49
26	Impact of wildfire on permafrost landscapes: A review of recent advances and future prospects. Permafrost and Periglacial Processes, 2020, 31, 371-382.	1.5	98
27	Focus on changing fire regimes: interactions with climate, ecosystems, and society. Environmental Research Letters, 2020, 15, 030201.	2.2	105
28	Climate change, ecosystems and abrupt change: science priorities. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190105.	1.8	169
29	Carbon release through abrupt permafrost thaw. Nature Geoscience, 2020, 13, 138-143.	5.4	434
30	Arctic fires re-emerging. Nature Geoscience, 2020, 13, 658-660.	5.4	79
31	Increasing wildfires threaten historic carbon sink of boreal forest soils. Nature, 2019, 572, 520-523.	13.7	293
32	Permafrost collapse is accelerating carbon release. Nature, 2019, 569, 32-34.	13.7	237
33	Plant functional group effects on peat carbon cycling in a boreal rich fen. Biogeochemistry, 2019, 144, 305-327.	1.7	29
34	Effect of permafrost thaw on plant and soil fungal community in a boreal forest: Does fungal community change mediate plant productivity response?. Journal of Ecology, 2019, 107, 1737-1752.	1.9	34
35	Warming Effects of Spring Rainfall Increase Methane Emissions From Thawing Permafrost. Geophysical Research Letters, 2019, 46, 1393-1401.	1.5	68
36	The response of boreal peatland community composition and <scp>NDVI</scp> to hydrologic change, warming, and elevated carbon dioxide. Global Change Biology, 2019, 25, 93-107.	4.2	72

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37	Crossâ€scale controls on carbon emissions from boreal forest megafires. Global Change Biology, 2018, 24, 4251-4265.	4.2	60
38	The Sphagnome Project: enabling ecological and evolutionary insights through a genusâ€level sequencing project. New Phytologist, 2018, 217, 16-25.	3.5	54
39	Recovery of carbon pools a decade after wildfire in black spruce forests of interior Alaska: effects of soil texture and landscape position. Canadian Journal of Forest Research, 2018, 48, 1-10.	0.8	35
40	Biological and geophysical feedbacks with fire in the Earth system. Environmental Research Letters, 2018, 13, 033003.	2.2	198
41	Controls on boreal peat combustion and resulting emissions of carbon and mercury. Environmental Research Letters, 2018, 13, 035005.	2.2	30
42	Soil organic layer combustion in boreal black spruce and jack pine stands of the Northwest Territories, Canada. International Journal of Wildland Fire, 2018, 27, 125.	1.0	48
43	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.	4.2	74
44	Mapping boreal peatland ecosystem types from multitemporal radar and optical satellite imagery. Canadian Journal of Forest Research, 2017, 47, 545-559.	0.8	45
45	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.	0.9	38
46	Legacy effects of drought alters the aquatic food web of a northern boreal peatland. Freshwater Biology, 2017, 62, 1377-1388.	1.2	15
47	Soil microbial community composition is correlated to soil carbon processing along a boreal wetland formation gradient. European Journal of Soil Biology, 2017, 82, 17-26.	1.4	19
48	Losing Legacies, Ecological Release, and Transient Responses: Key Challenges for the Future of Northern Ecosystem Science. Ecosystems, 2017, 20, 23-30.	1.6	25
49	The Sphagnum microbiome: new insights from an ancient plant lineage. New Phytologist, 2016, 211, 57-64.	3.5	123
50	Effects of permafrost thaw on nitrogen availability and plantâ€“soil interactions in a boreal Alaskan lowland. Journal of Ecology, 2016, 104, 1542-1554.	1.9	84
51	A Thermodynamic Analysis of Soil Ecosystem Development in Northern Wetlands. Wetlands, 2016, 36, 1143-1153.	0.7	1
52	Variation in plant community composition and vegetation carbon pools a decade following a severe fire season in interior Alaska. Journal of Vegetation Science, 2016, 27, 1187-1197.	1.1	43
53	Circumpolar distribution and carbon storage of thermokarst landscapes. Nature Communications, 2016, 7, 13043.	5.8	343
54	More frequent burning increases vulnerability of Alaskan boreal black spruce forests. Environmental Research Letters, 2016, 11, 095001.	2.2	33

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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	Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire: an expert assessment. Environmental Research Letters, 2016, 11, 034014.	2.2	199
57	Modeling CH4 and CO2 cycling using porewater stable isotopes in a thermokarst bog in Interior Alaska: results from three conceptual reaction networks. Biogeochemistry, 2016, 127, 57-87.	1.7	26
58	Wildfire as a key determinant of peatland microtopography. Canadian Journal of Forest Research, 2015, 45, 1132-1136.	0.8	30
59	Moderate drop in water table increases peatland vulnerability to post-fire regime shift. Scientific Reports, 2015, 5, 8063.	1.6	122
60	A panâ€Arctic synthesis of CH₄ and CO₂ production from anoxic soil incubations. Global Change Biology, 2015, 21, 2787-2803.	4.2	138
61	Algae alleviate carbon limitation of heterotrophic bacteria in a boreal peatland. Journal of Ecology, 2015, 103, 1165-1171.	1.9	43
62	Response of plant community structure and primary productivity to experimental drought and flooding in an Alaskan fen. Canadian Journal of Forest Research, 2015, 45, 185-193.	0.8	39
63	Multi-omics of permafrost, active layer and thermokarst bog soil microbiomes. Nature, 2015, 521, 208-212.	13.7	467
64	Climate change and the permafrost carbon feedback. Nature, 2015, 520, 171-179.	13.7	2,369
65	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
66	The effect of long-term drying associated with experimental drainage and road construction on vegetation composition and productivity in boreal fens. Wetlands Ecology and Management, 2015, 23, 845-854.	0.7	23
67	Global vulnerability of peatlands to fire and carbon loss. Nature Geoscience, 2015, 8, 11-14.	5.4	547
68	Transport of oxygen in soil pore-water systems: implications for modeling emissions of carbon dioxide and methane from peatlands. Biogeochemistry, 2014, 121, 455-470.	1.7	26
69	A database and synthesis of northern peatland soil properties and Holocene carbon and nitrogen accumulation. Holocene, 2014, 24, 1028-1042.	0.9	404
70	A synthesis of methane emissions from 71 northern, temperate, and subtropical wetlands. Global Change Biology, 2014, 20, 2183-2197.	4.2	389
71	Organic matter stocks increase with degree of invasion in temperate inland wetlands. Plant and Soil, 2014, 385, 107-123.	1.8	17
72	Differential response of carbon fluxes to climate in three peatland ecosystems that vary in the presence and stability of permafrost. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 1576-1595.	1.3	94

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73	Controls on methane released through ebullition in peatlands affected by permafrost degradation. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 418-431.	1.3	46
74	Expert assessment of vulnerability of permafrost carbon to climate change. Climatic Change, 2013, 119, 359-374.	1.7	257
75	Altered Composition and Microbial versus UV-Mediated Degradation of Dissolved Organic Matter in Boreal Soils Following Wildfire. Ecosystems, 2013, 16, 1396-1412.	1.6	46
76	Algal community response to experimental and interannual variation in hydrology in an Alaskan boreal fen. Freshwater Science, 2013, 32, 1-11.	0.9	13
77	Environmental and physical controls on northern terrestrial methane emissions across permafrost zones. Global Change Biology, 2013, 19, 589-603.	4.2	275
78	Evidence for elevated emissions from highâ€latitude wetlands contributing to high atmospheric CH₄ concentration in the early Holocene. Global Biogeochemical Cycles, 2013, 27, 131-140.	1.9	45
79	Controls on ecosystem and root respiration across a permafrost and wetland gradient in interior Alaska. Environmental Research Letters, 2013, 8, 045029.	2.2	30
80	The ecohydrology of forested peatlands: Simulating the effects of tree shading on moss evaporation and species composition. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 422-435.	1.3	53
81	The resilience and functional role of moss in boreal and arctic ecosystems. New Phytologist, 2012, 196, 49-67.	3.5	322
82	Experimental drying intensifies burning and carbon losses in a northern peatland. Nature Communications, 2011, 2, 514.	5.8	169
83	Model comparisons for estimating carbon emissions from North American wildland fire. Journal of Geophysical Research, 2011, 116, .	3.3	112
84	Vulnerability of high-latitude soil organic carbon in North America to disturbance. Journal of Geophysical Research, 2011, 116, .	3.3	337
85	Interactive effects of vegetation, soil moisture and bulk density on depth of burning of thick organic soils. International Journal of Wildland Fire, 2011, 20, 418.	1.0	148
86	Recent acceleration of biomass burning and carbon losses in Alaskan forests and peatlands. Nature Geoscience, 2011, 4, 27-31.	5.4	428
87	Conceptual frameworks in peatland ecohydrology: looking beyond the twoâ€layered (acrotelmâ€“catotelm) model. Ecohydrology, 2011, 4, 1-11.	1.1	66
88	Topographic controls on black carbon accumulation in Alaskan black spruce forest soils: implications for organic matter dynamics. Biogeochemistry, 2010, 100, 39-56.	1.7	56
89	The importance of nutrient coâ€limitation in regulating algal community composition, productivity and algalâ€derived DOC in an oligotrophic marsh in interior Alaska. Freshwater Biology, 2010, 55, 1845-1860.	1.2	32
90	A dynamic organic soil biogeochemical model for simulating the effects of wildfire on soil environmental conditions and carbon dynamics of black spruce forests. Journal of Geophysical Research, 2010, 115, .	3.3	56

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91	Seasonal ice and hydrologic controls on dissolved organic carbon and nitrogen concentrations in a borealâ€rich fen. Journal of Geophysical Research, 2010, 115, .	3.3	43
92	Alaskaâ€™s changing fire regimeÂâ€” implications for the vulnerability of its boreal forestsThis article is one of a selection of papers from The Dynamics of Change in Alaskaâ€™s Boreal Forests: Resilience and Vulnerability in Response to Climate Warming.. Canadian Journal of Forest Research, 2010, 40, 1313-1324.	0.8	304
93	Fire, climate change, and forest resilience in interior AlaskaThis article is one of a selection of papers from The Dynamics of Change in Alaska's Boreal Forests: Resilience and Vulnerability in Response to Climate Warming.. Canadian Journal of Forest Research, 2010, 40, 1302-1312.	0.8	306
94	Interactive Effects of Fire, Soil Climate, and Moss on CO2 Fluxes in Black Spruce Ecosystems of Interior Alaska. Ecosystems, 2009, 12, 57-72.	1.6	64
95	Effects of Experimental Water Table and Temperature Manipulations on Ecosystem CO2 Fluxes in an Alaskan Rich Fen. Ecosystems, 2009, 12, 1329-1342.	1.6	157
96	Impacts of climate change on fire activity and fire management in the circumboreal forest. Global Change Biology, 2009, 15, 549-560.	4.2	559
97	Tradeâ€offs in resource allocation among moss species control decomposition in boreal peatlands. Journal of Ecology, 2008, 96, 1297-1305.	1.9	179
98	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
99	Sphagnum mosses limit total carbon consumption during fire in Alaskan black spruce forests. Canadian Journal of Forest Research, 2008, 38, 2328-2336.	0.8	106
100	Topographic influences on wildfire consumption of soil organic carbon in interior Alaska: Implications for black carbon accumulation. Journal of Geophysical Research, 2007, 112, .	3.3	84
101	The disappearance of relict permafrost in boreal north America: Effects on peatland carbon storage and fluxes. Global Change Biology, 2007, 13, 1922-1934.	4.2	190
102	Wildfires threaten mercury stocks in northern soils. Geophysical Research Letters, 2006, 33, .	1.5	95
103	Recent changes in the fire regime across the North American boreal regionâ€”Spatial and temporal patterns of burning across Canada and Alaska. Geophysical Research Letters, 2006, 33, .	1.5	431
104	Effects of wildfire and permafrost on soil organic matter and soil climate in interior Alaska. Global Change Biology, 2006, 12, 2391-2403.	4.2	123
105	Methanogenesis and Methanogen Diversity in Three Peatland Types of the Discontinuous Permafrost Zone, Boreal Western Continental Canada. Geomicrobiology Journal, 2006, 23, 641-651.	1.0	33
106	Chemistry of burning the forest floor during the FROSTFIRE experimental burn, interior Alaska, 1999. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	77
107	Historical burn area in western Canadian peatlands and its relationship to fire weather indices. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	135
108	Current disturbance and the diminishing peatland carbon sink. Geophysical Research Letters, 2002, 29, 21-1.	1.5	231

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109	Peat as an Archive of Atmospheric, Climatic and Environmental Conditions. , 0, , 96-112.		3
110	We Must Stop Fossil Fuel Emissions to Protect Permafrost Ecosystems. Frontiers in Environmental Science, 0, 10, .	1.5	9