Torben R Christensen

List of Publications by Year
in descending order

140 papers	14,071 citations	20759 60 h-index	22102 113 g-index
168 all docs	168 docs citations	168 times ranked	12325 citing authors

#	Article	IF	Citations
1	Ecological Dynamics Across the Arctic Associated with Recent Climate Change. Science, 2009, 325, 1355-1358.	6.0	1,043
2	Sensitivity of the carbon cycle in the Arctic to climate change. Ecological Monographs, 2009, 79, 523-555.	2.4	814
3	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. Scientific Data, 2020, 7, 225.	2.4	646
4	Key indicators of Arctic climate change: 1971â€"2017. Environmental Research Letters, 2019, 14, 045010.	2.2	471
5	Climate change and Arctic ecosystems: 2. Modeling, paleodata-model comparisons, and future projections. Journal of Geophysical Research, 2003, 108, .	3.3	429
6	Thawing sub-arctic permafrost: Effects on vegetation and methane emissions. Geophysical Research Letters, 2004, 31, .	1.5	423
7	Factors controlling large scale variations in methane emissions from wetlands. Geophysical Research Letters, 2003, 30, .	1.5	317
8	Vascular plant controls on methane emissions from northern peatforming wetlands. Trends in Ecology and Evolution, 1999, 14, 385-388.	4.2	311
9	The polar regions in a 2Â°C warmer world. Science Advances, 2019, 5, eaaw9883.	4.7	289
10	The effect of vascular plants on carbon turnover and methane emissions from a tundra wetland. Global Change Biology, 2003, 9, 1185-1192.	4.2	284
11	Large tundra methane burst during onset of freezing. Nature, 2008, 456, 628-630.	13.7	283
12	Species-specific Effects of Vascular Plants on Carbon Turnover and Methane Emissions from Wetlands. Biogeochemistry, 2005, 75, 65-82.	1.7	282
13	Climate change and Arctic ecosystems: 1. Vegetation changes north of 55Â°N between the last glacial maximum, mid-Holocene, and present. Journal of Geophysical Research, 2003, 108, .	3.3	261
14	An assessment of the carbon balance of Arctic tundra: comparisons among observations, process models, and atmospheric inversions. Biogeosciences, 2012, 9, 3185-3204.	1.3	258
15	Expert assessment of vulnerability of permafrost carbon to climate change. Climatic Change, 2013, 119, 359-374.	1.7	257
16	Ancient bacteria show evidence of DNA repair. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14401-14405.	3.3	249
17	Methane emissions from wetlands and their relationship with vascular plants: an Arctic example. Global Change Biology, 2001, 7, 919-932.	4.2	232
18	Large loss of CO2 in winter observed across the northern permafrost region. Nature Climate Change, 2019, 9, 852-857.	8.1	225

#	ARTICLE	IF	CITATIONS
19	Decadal vegetation changes in a northern peatland, greenhouse gas fluxes and net radiative forcing. Global Change Biology, 2006, 12, 2352-2369.	4.2	214
20	Biodiversity, Distributions and Adaptations of Arctic Species in the Context of Environmental Change. Ambio, 2004, 33, 404-417.	2.8	208
21	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
22	A new climate era in the subâ€Arctic: Accelerating climate changes and multiple impacts. Geophysical Research Letters, 2010, 37, .	1.5	190
23	The uncertain climate footprint of wetlands under human pressure. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4594-4599.	3.3	171
24	Multiple Effects of Changes in Arctic Snow Cover. Ambio, 2011, 40, 32-45.	2.8	169
25	Expert assessment of future vulnerability of the global peatland carbon sink. Nature Climate Change, 2021, 11, 70-77.	8.1	167
26	Siberian wetlands: Where a sink is a source. Geophysical Research Letters, 2003, 30, .	1.5	150
27	Variability in exchange of CO₂ across 12 northern peatland and tundra sites. Global Change Biology, 2010, 16, 2436-2448.	4.2	144
28	Trace gas exchange in a high-Arctic valley: 1. Variationsin CO2and CH4Flux between tundra vegetation types. Global Biogeochemical Cycles, 2000, 14, 701-713.	1.9	143
29	Ecosystem change and stability over multiple decades in the Swedish subarctic: complex processes and multiple drivers. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20120488.	1.8	140
30	Spatial variation in high-latitude methane flux along a transect across Siberian and European tundra environments. Journal of Geophysical Research, 1995, 100, 21035.	3.3	132
31	Annual cycle of methane emission from a subarctic peatland. Journal of Geophysical Research, 2010, 115, .	3.3	128
32	The impact of lower sea-ice extent on Arctic greenhouse-gas exchange. Nature Climate Change, 2013, 3, 195-202.	8.1	119
33	Increased nitrous oxide emissions from Arctic peatlands after permafrost thaw. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6238-6243.	3.3	119
34	Annual carbon gas budget for a subarctic peatland, Northern Sweden. Biogeosciences, 2010, 7, 95-108.	1.3	118
35	Presence of Eriophorum scheuchzeri enhances substrate availability and methane emission in an Arctic wetland. Soil Biology and Biochemistry, 2012, 45, 61-70.	4.2	116
36	Methane emission from Arctic tundra. Biogeochemistry, 1993, 21, 117-139.	1.7	115

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37	Vegetation, climatic changes and net carbon sequestration in a North-Scandinavian subarctic mire over 30 years. Global Change Biology, 2005, 11, 051006062331004-???.	4.2	115
38	Below ground carbon turnover and greenhouse gas exchanges in a sub-arctic wetland. Soil Biology and Biochemistry, 2007, 39, 1689-1698.	4.2	114
39	Rapid responses of permafrost and vegetation to experimentally increased snow cover in sub-arctic Sweden. Environmental Research Letters, 2013, 8, 035025.	2.2	110
40	Biotic controls on CO2 and CH4 exchange in wetlands â€" a closed environment study. Biogeochemistry, 2003, 64, 337-354.	1.7	107
41	Revisiting factors controlling methane emissions from high-Arctic tundra. Biogeosciences, 2013, 10, 5139-5158.	1.3	103
42	Soil and Plant Community-Characteristics and Dynamics at Zackenberg. Advances in Ecological Research, 2008, 40, 223-248.	1.4	99
43	Multi-Decadal Changes in Tundra Environments and Ecosystems: Synthesis of the International Polar Year-Back to the Future Project (IPY-BTF). Ambio, 2011, 40, 705-716.	2.8	98
44	Trace gas exchange in a high-Arctic valley: 3. Integrating and scaling CO2fluxes from canopy to landscape using flux data, footprint modeling, and remote sensing. Global Biogeochemical Cycles, 2000, 14, 725-744.	1.9	93
45	Effects of drought conditions on the carbon dioxide dynamics in a temperate peatland. Environmental Research Letters, 2012, 7, 045704.	2.2	91
46	Landâ€atmosphere exchange of methane from soil thawing to soil freezing in a highâ€<scp>A</scp>rctic wet tundra ecosystem. Global Change Biology, 2012, 18, 1928-1940.	4.2	89
47	Methane flux from northern wetlands and tundra. An ecosystem source modelling approach. Tellus, Series B: Chemical and Physical Meteorology, 1996, 48, 652-661.	0.8	84
48	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
49	Rapid response of greenhouse gas emission to early spring thaw in a subarctic mire as shown by micrometeorological techniques. Geophysical Research Letters, 1997, 24, 3061-3064.	1.5	82
50	Responses to Projected Changes in Climate and UV-B at the Species Level. Ambio, 2004, 33, 418-435.	2.8	82
51	GISâ€based Maps and Area Estimates of Northern Hemisphere Permafrost Extent during the Last Glacial Maximum. Permafrost and Periglacial Processes, 2016, 27, 6-16.	1.5	78
52	What Determines the Current Presence or Absence of Permafrost in the TornetrÃsk Region, a Sub-arctic Landscape in Northern Sweden?. Ambio, 2006, 35, 190-197.	2.8	76
53	A catchment-scale carbon and greenhouse gas budget of a subarctic landscape. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2007, 365, 1643-1656.	1.6	76
54	Net carbon accumulation of a highâ€latitude permafrost palsa mire similar to permafrostâ€free peatlands. Geophysical Research Letters, 2012, 39, .	1.5	76

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55	Ecosystem responses to increased precipitation and permafrost decay in subarctic Sweden inferred from peat and lake sediments. Global Change Biology, 2009, 15, 1652-1663.	4.2	74
56	Seasonal carbon dioxide balance and respiration of a high-arctic fen ecosystem in NE-Greenland. Theoretical and Applied Climatology, 2001, 70, 149-166.	1.3	73
57	Carbon Dioxide and Methane Exchange of a Subarctic Heath in Response to Climate Change Related Environmental Manipulations. Oikos, 1997, 79, 34.	1.2	71
58	Trace gas exchange in a high-Arctic valley: 2. Landscape CH4fluxes measured and modeled using eddy correlation data. Global Biogeochemical Cycles, 2000, 14, 715-723.	1.9	68
59	Effects of N and P fertilization on the greenhouse gas exchange in two northern peatlands with contrasting N deposition rates. Biogeosciences, 2009, 6, 2135-2144.	1.3	68
60	Observations and Status of Peatland Greenhouse Gas Emissions in Europe. Ecological Studies, 2008, , 243-261.	0.4	68
61	Effects on the Structure of Arctic Ecosystems in the Short- and Long-term Perspectives. Ambio, 2004, 33, 436-447.	2.8	66
62	Annual CO2 balance of a temperate bog. Tellus, Series B: Chemical and Physical Meteorology, 2007, 59, 804-811.	0.8	62
63	The carbon budget of the northern cryosphere region. Current Opinion in Environmental Sustainability, 2010, 2, 231-236.	3.1	61
64	Monitoring the Multi-Year Carbon Balance of a Subarctic Palsa Mire with Micrometeorological Techniques. Ambio, 2012, 41, 207-217.	2.8	60
65	Response of ericoid mycorrhizal colonization and functioning to global change factors. New Phytologist, 2004, 162, 459-469.	3.5	56
66	Effects of Changes in Climate on Landscape and Regional Processes, and Feedbacks to the Climate System. Ambio, 2004, 33, 459-468.	2.8	56
67	A synthesis of the arctic terrestrial and marine carbon cycles under pressure from a dwindling cryosphere. Ambio, 2017, 46, 53-69.	2.8	56
68	Quantifying the relative importance of lake emissions in the carbon budget of a subarctic catchment. Journal of Geophysical Research, 2010, 115, .	3.3	52
69	Ecosystem carbon response of an Arctic peatland to simulated permafrost thaw. Global Change Biology, 2019, 25, 1746-1764.	4.2	52
70	Large herbivore grazing affects the vegetation structure and greenhouse gas balance in a high arctic mire. Environmental Research Letters, 2015, 10, 045001.	2.2	50
71	Moisture Effects on Temperature Sensitivity of CO2 Exchange in a Subarctic Heath Ecosystem. Biogeochemistry, 2004, 70, 315-330.	1.7	48
72	Degradation potentials of dissolved organic carbon (DOC) from thawed permafrost peat. Scientific Reports, 2017, 7, 45811.	1.6	47

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73	Carbon cycling in subarctic tundra; seasonal variation in ecosystem partitioning based on in situ 14C pulse-labelling. Soil Biology and Biochemistry, 2004, 36, 245-253.	4.2	45
74	Methane and Global Environmental Change. Annual Review of Environment and Resources, 2018, 43, 165-192.	5.6	45
75	Greenhouse gas emissions from a constructed wetland in southern Sweden. Wetlands Ecology and Management, 2007, 15, 43-50.	0.7	44
76	Modelling CH₄ emissions from arctic wetlands: effects of hydrological parameterization. Biogeosciences, 2008, 5, 111-121.	1.3	42
77	Quantification of C uptake in subarctic birch forest after setback by an extreme insect outbreak. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	42
78	Effects on the Function of Arctic Ecosystems in the Short- and Long-term Perspectives. Ambio, 2004, 33, 448-458.	2.8	41
79	Total hydrocarbon flux dynamics at a subarctic mire in northern Sweden. Journal of Geophysical Research, 2008, 113, .	3.3	41
80	Calculations of automatic chamber flux measurements of methane and carbon dioxide using short time series of concentrations. Biogeosciences, 2016, 13, 903-912.	1.3	41
81	Past and Present Permafrost Temperatures in the Abisko Area: Redrilling of Boreholes. Ambio, 2011, 40, 558-565.	2.8	39
82	Exchange of CO₂ in Arctic tundra: impacts of meteorological variations and biological disturbance. Biogeosciences, 2017, 14, 4467-4483.	1.3	37
83	Is the subarctic landscape still a carbon sink? Evidence from a detailed catchment balance. Geophysical Research Letters, 2016, 43, 1988-1995.	1.5	35
84	Non-methane volatile organic compound flux from a subarctic mire in Northern Sweden. Tellus, Series B: Chemical and Physical Meteorology, 2022, 60, 226.	0.8	33
85	Highâ€Arctic Soil CO2 and CH4 Production Controlled by Temperature, Water, Freezing and Snow. Advances in Ecological Research, 2008, 40, 441-472.	1.4	33
86	Two years with extreme and little snowfall: effects on energy partitioning and surface energy exchange in a high-Arctic tundra ecosystem. Cryosphere, 2016, 10, 1395-1413.	1.5	32
87	High-resolution satellite data reveal an increase in peak growing season gross primary production in a high-Arctic wet tundra ecosystem 1992â€“2008. International Journal of Applied Earth Observation and Geoinformation, 2012, 18, 407-416.	1.4	31
88	Plant and Vegetation Dynamics on Disko Island, West Greenland: Snapshots Separated by Over 40 Years. Ambio, 2011, 40, 624-637.	2.8	30
89	Methane emission bursts from permafrost environments during autumn freezeâ€in: New insights from groundâ€penetrating radar. Geophysical Research Letters, 2015, 42, 6732-6738.	1.5	30
90	Controls of spatial and temporal variability in CH4 flux in a high arctic fen over three years. Biogeochemistry, 2015, 125, 21-35.	1.7	30

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91	Future vegetation changes in thawing subarctic mires and implications for greenhouse gas exchangeâ€"a regional assessment. Climatic Change, 2012, 115, 379-398.	1.7	29
92	Multiple Ecosystem Effects of Extreme Weather Events in the Arctic. Ecosystems, 2021, 24, 122-136.	1.6	29
93	Focus on the impact of climate change on wetland ecosystems and carbon dynamics. Environmental Research Letters, 2016, 11, 100201.	2.2	27
94	Snowpack fluxes of methane and carbon dioxide from high Arctic tundra. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 2886-2900.	1.3	26
95	Influence of vascular plant photosynthetic rate on CH4emission from peat monoliths from southern boreal Sweden. Polar Research, 1999, 18, 215-220.	1.6	25
96	Spatial variability of CO₂ uptake in polygonal tundra: assessing low-frequency disturbances in eddy covariance flux estimates. Biogeosciences, 2017, 14, 3157-3169.	1.3	25
97	Modelling of growing season methane fluxes in a high-Arctic wet tundra ecosystem 1997â€"2010 using in situ and high-resolution satellite data. Tellus, Series B: Chemical and Physical Meteorology, 2013, 65, 19722.	0.8	24
98	Tracing the climate signal: mitigation of anthropogenic methane emissions can outweigh a large Arctic natural emission increase. Scientific Reports, 2019, 9, 1146.	1.6	22
99	Multi-year data-model evaluation reveals the importance of nutrient availability over climate in arctic ecosystem C dynamics. Environmental Research Letters, 2020, 15, 094007.	2.2	22
100	The ABCflux database: Arcticâ€"boreal CO₂ flux observations and ancillary information aggregated to monthly time steps across terrestrial ecosystems. Earth System Science Data, 2022, 14, 179-208.	3.7	22
101	Evaluation of terrestrial pan-Arctic carbon cycling using a data-assimilation system. Earth System Dynamics, 2019, 10, 233-255.	2.7	21
102	Climatic Factors Influencing the Anthrax Outbreak of 2016 in Siberia, Russia. EcoHealth, 2021, 18, 217-228.	0.9	21
103	Uncertainties and Recommendations. Ambio, 2004, 33, 474-479.	2.8	20
104	Assessing the spatial variability in peak season CO₂ exchange characteristics across the Arctic tundra using a light response curve parameterization. Biogeosciences, 2014, 11, 4897-4912.	1.3	20
105	Increased photosynthesis compensates for shorter growing season in subarctic tundraâ€"8Âyears of snow accumulation manipulations. Climatic Change, 2014, 127, 321-334.	1.7	20
106	Rising methane emissions from northern wetlands associated with sea ice decline. Geophysical Research Letters, 2015, 42, 7214-7222.	1.5	20
107	Climate science: Understand Arctic methane variability. Nature, 2014, 509, 279-281.	13.7	20
108	Sectoral approaches to improve regional carbon budgets. Climatic Change, 2008, 88, 209-249.	1.7	19

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109	Spatial and Interâ€Annual Variability of Trace Gas Fluxes in a Heterogeneous Highâ€Arctic Landscape. Advances in Ecological Research, 2008, 40, 473-498.	1.4	19
110	Carbon budget estimation of a subarctic catchment using a dynamic ecosystem model at high spatial resolution. Biogeosciences, 2015, 12, 2791-2808.	1.3	19
111	Toward a statistical description of methane emissions from arctic wetlands. Ambio, 2017, 46, 70-80.	2.8	19
112	Foreword: Synthesis of the Greenland Ecosystem Monitoring program. Ambio, 2017, 46, 1-2.	2.8	19
113	Past Changes in Arctic Terrestrial Ecosystems, Climate and UV Radiation. Ambio, 2004, 33, 398-403.	2.8	18
114	Climate and Peatlands. , 2010, , 85-121.		18
115	A high arctic experience of uniting research and monitoring. Earth's Future, 2017, 5, 650-654.	2.4	16
116	Earlier snowmelt may lead to late season declines in plant productivity and carbon sequestration in Arctic tundra ecosystems. Scientific Reports, 2022, 12, 3986.	1.6	16
117	Potential and actual trace gas fluxes in Arctic terrestrial ecosystems. Polar Research, 1999, 18, 199-206.	1.6	15
118	Tundra permafrost thaw causes significant shifts in energy partitioning. Tellus, Series B: Chemical and Physical Meteorology, 2022, 68, 30467.	0.8	15
119	Synthesis of Effects in Four Arctic Subregions. Ambio, 2004, 33, 469-473.	2.8	14
120	Environmental Monitoring and Research in the Abisko Areaâ€"An Overview. Ambio, 2012, 41, 178-186.	2.8	11
121	Plant Traits are Key Determinants in Buffering the Meteorological Sensitivity of Net Carbon Exchanges of Arctic Tundra. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 2675-2694.	1.3	11
122	Establishment of a cross-European field site network in the ALARM project for assessing large-scale changes in biodiversity. Environmental Monitoring and Assessment, 2010, 164, 337-348.	1.3	10
123	Radiation, soil water content, and temperature effects on carbon cycling in an alpine swamp meadow of the northeastern Qinghaiâ€"Tibetan Plateau. Biogeosciences, 2022, 19, 861-875.	1.3	10
124	Bimembrane diffusion probe for continuous recording of dissolved and entrapped bubble gas concentrations in peat. Soil Biology and Biochemistry, 2008, 40, 2992-3003.	4.2	9
125	The Man, the Myth, the Legend: Professor Terry V. Callaghan and His 3M Concept. Ambio, 2012, 41, 175-177.	2.8	9
126	Toward UAV-based methane emission mapping of Arctic terrestrial ecosystems. Science of the Total Environment, 2022, 819, 153161.	3.9	9

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127	Carbon partitioning in a wet and a semiwet subarctic mire ecosystem based on in situ 14C pulse-labelling. Soil Biology and Biochemistry, 2011, 43, 231-239.	4.2	8
128	Potential future methane emission hot spots in Greenland. Environmental Research Letters, 2019, 14, 035001.	2.2	8
129	Influence of vascular plant photosynthetic rate on CH4 emission from peat monoliths from southern boreal Sweden. Polar Research, 1999, 18, 215-220.	1.6	8
130	Potential and actual trace gas fluxes in Arctic terrestrial ecosystems. Polar Research, 1999, 18, 199-206.	1.6	7
131	It's a gas. Nature Geoscience, 2016, 9, 647-648.	5.4	6
132	The missing pieces for better future predictions in subarctic ecosystems: A TornetrÃsk case study. Ambio, 2021, 50, 375-392.	2.8	6
133	Microbial Community Changes in 26,500-Year-Old Thawing Permafrost. Frontiers in Microbiology, 2022, 13, 787146.	1.5	6
134	Rationale, Concepts and Approach to the Assessment. Ambio, 2004, 33, 393-397.	2.8	5
135	Methane in Zackenberg Valley, NE Greenland: multidecadal growing season fluxes of a high-Arctic tundra. Biogeosciences, 2021, 18, 6093-6114.	1.3	5
136	Laboratory Investigations of Methane Buildup in, and Release from, Shallow Peats. Geophysical Monograph Series, 0, , 205-218.	0.1	4
137	Patchy peat. Nature Geoscience, 2009, 2, 163-164.	5.4	1
138	Postscript: The future of the Greenland Ecosystem Monitoring programme. Ambio, 2017, 46, 174-177.	2.8	1
139	Ecology of Arctic environments. Sarah J. Woodin and Mick Marquiss (Editors). 1997. Oxford: Blackwell Science, vi + 286 p, illustrated, hard cover. ISBN 0-632-04218-4. Â£35.00.. Polar Record, 1998, 34, 70-71.	0.4	0
140	Polar biogeochemistry and ecosystem feedback mechanisms in a changing environment. Polar Research, 1999, 18, 189-189.	1.6	0