Frans-Jan W Parmentier

List of Publications by Year
in descending order

47 papers	4,657 citations	186209 28 h-index	214721 47 g-index
73 all docs	73 docs citations	73 times ranked	7622 citing authors

#	Article	IF	Citations
1	The global methane budget 2000â€“2012. Earth System Science Data, 2016, 8, 697-751.	3.7	824
2	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. Scientific Data, 2020, 7, 225.	2.4	646
3	Key indicators of Arctic climate change: 1971â€“2017. Environmental Research Letters, 2019, 14, 045010.	2.2	471
4	Complexity revealed in the greening of the Arctic. Nature Climate Change, 2020, 10, 106-117.	8.1	447
5	Large loss of CO2 in winter observed across the northern permafrost region. Nature Climate Change, 2019, 9, 852-857.	8.1	225
6	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
7	Methane emissions from permafrost thaw lakes limited by lake drainage. Nature Climate Change, 2011, 1, 119-123.	8.1	149
8	The impact of lower sea-ice extent on Arctic greenhouse-gas exchange. Nature Climate Change, 2013, 3, 195-202.	8.1	119
9	The Cooling Capacity of Mosses: Controls on Water and Energy Fluxes in a Siberian Tundra Site. Ecosystems, 2011, 14, 1055-1065.	1.6	116
10	Modeling regional to global CH₄ emissions of boreal and arctic wetlands. Global Biogeochemical Cycles, 2010, 24, .	1.9	102
11	Variability and quasi-decadal changes in the methane budget over the period 2000â€“2012. Atmospheric Chemistry and Physics, 2017, 17, 11135-11161.	1.9	85
12	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
13	Implications of Arctic Sea Ice Decline for the Earth System. Annual Review of Environment and Resources, 2014, 39, 57-89.	5.6	82
14	Longer growing seasons do not increase net carbon uptake in the northeastern Siberian tundra. Journal of Geophysical Research, 2011, 116, .	3.3	78
15	Testing the applicability of neural networks as a gap-filling method using CH₄ flux data from high latitude wetlands. Biogeosciences, 2013, 10, 8185-8200.	1.3	78
16	Spatial and temporal dynamics in eddy covariance observations of methane fluxes at a tundra site in northeastern Siberia. Journal of Geophysical Research, 2011, 116, .	3.3	66
17	A synthesis of the arctic terrestrial and marine carbon cycles under pressure from a dwindling cryosphere. Ambio, 2017, 46, 53-69.	2.8	56
18	Year-round CH₄ and CO₂ flux dynamics in two contrasting freshwater ecosystems of the subarctic. Biogeosciences, 2017, 14, 5189-5216.	1.3	55

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19	Evidence for past variations in methane availability in a Siberian thermokarst lake based on Î´13C of chitinous invertebrate remains. Quaternary Science Reviews, 2013, 66, 74-84.	1.4	49
20	The role of endophytic methane-oxidizing bacteria in submerged <I>Sphagnum</I> in determining methane emissions of Northeastern Siberian tundra. Biogeosciences, 2011, 8, 1267-1278.	1.3	46
21	The Borealâ€“Arctic Wetland and Lake Dataset (BAWLD). Earth System Science Data, 2021, 13, 5127-5149.	3.7	46
22	CO2 fluxes and evaporation on a peatland in the Netherlands appear not affected by water table fluctuations. Agricultural and Forest Meteorology, 2009, 149, 1201-1208.	1.9	45
23	Carbon stocks and fluxes in the high latitudes: using site-level data to evaluate Earth system models. Biogeosciences, 2017, 14, 5143-5169.	1.3	43
24	ORCHIDEE-PEAT (revision 4596), a model for northern peatland CO₂, water, and energy fluxes on daily to annual scales. Geoscientific Model Development, 2018, 11, 497-519.	1.3	43
25	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
26	The Arctic Carbon Cycle and Its Response to Changing Climate. Current Climate Change Reports, 2021, 7, 14-34.	2.8	38
27	Modeled Microbial Dynamics Explain the Apparent Temperature Sensitivity of Wetland Methane Emissions. Global Biogeochemical Cycles, 2020, 34, e2020GB006678.	1.9	34
28	Tundra in the Rain: Differential Vegetation Responses to Three Years of Experimentally Doubled Summer Precipitation in Siberian Shrub and Swedish Bog Tundra. Ambio, 2012, 41, 269-280.	2.8	30
29	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
30	Evaluation of a plot-scale methane emission model using eddy covariance observations and footprint modelling. Biogeosciences, 2014, 11, 4651-4664.	1.3	28
31	Snowpack fluxes of methane and carbon dioxide from high Arctic tundra. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 2886-2900.	1.3	26
32	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
33	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
34	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
35	Low impact of dry conditions on the CO ₂ exchange of a Northern-Norwegian blanket bog. Environmental Research Letters, 2015, 10, 025004.	2.2	21
36	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

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37	Rising methane emissions from northern wetlands associated with sea ice decline. Geophysical Research Letters, 2015, 42, 7214-7222.	1.5	20
38	A satellite data driven biophysical modeling approach for estimating northern peatland and tundra CO₂ and CH₄ fluxes. Biogeosciences, 2014, 11, 1961-1980.	1.3	19
39	Toward a statistical description of methane emissions from arctic wetlands. Ambio, 2017, 46, 70-80.	2.8	19
40	Improving a plot-scale methane emission model and its performance at a northeastern Siberian tundra site. Biogeosciences, 2014, 11, 3985-3999.	1.3	17
41	Vulnerability and resilience of the carbon exchange of a subarctic peatland to an extreme winter event. Environmental Research Letters, 2018, 13, 065009.	2.2	13
42	A distributed time-lapse camera network to track vegetation phenology with high temporal detail and at varying scales. Earth System Science Data, 2021, 13, 3593-3606.	3.7	8
43	Model simulations of arctic biogeochemistry and permafrost extent are highly sensitive to the implemented snow scheme in LPJ-GUESS. Biogeosciences, 2021, 18, 5767-5787.	1.3	7
44	Arctic: Speed of methane release. Nature, 2013, 500, 529-529.	13.7	6
45	Is the Northern Permafrost Zone a Source or a Sink for Carbon?. Eos, 2019, 100, .	0.1	4
46	Current knowledge and uncertainties associated with the Arctic greenhouse gas budget. , 2022, , 159-201.		1
47	Permafrost: den sovende klimakjempen. Naturen, 2021, 145, 230-235.	0.0	0