Lars Kutzbach

List of Publications by Year
in descending order

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66 papers	3,376 citations	159525 30 h-index	168321 53 g-index
111 all docs	111 docs citations	111 times ranked	3756 citing authors

#	Article	IF	Citations
1	CO₂ flux determination by closed-chamber methods can be seriously biased by inappropriate application of linear regression. Biogeosciences, 2007, 4, 1005-1025.	1.3	254
2	Large loss of CO2 in winter observed across the northern permafrost region. Nature Climate Change, 2019, 9, 852-857.	8.1	225
3	Methane emission from Siberian arctic polygonal tundra: eddy covariance measurements and modeling. Global Change Biology, 2008, 14, 1395-1408.	4.2	224
4	Effect of microrelief and vegetation on methane emission from wet polygonal tundra, Lena Delta, Northern Siberia. Biogeochemistry, 2004, 69, 341-362.	1.7	207
5	Baseline characteristics of climate, permafrost and land cover from a new permafrost observatory in the Lena River Delta, Siberia (1998â€“2011). Biogeosciences, 2013, 10, 2105-2128.	1.3	144
6	Environmental controls on ecosystemâ€scale CH₄ emission from polygonal tundra in the Lena River Delta, Siberia. Journal of Geophysical Research, 2008, 113, .	3.3	132
7	Increasing contribution of peatlands to boreal evapotranspiration in a warming climate. Nature Climate Change, 2020, 10, 555-560.	8.1	106
8	Environmental controls on CH₄ emission from polygonal tundra on the microsite scale in the Lena river delta, Siberia. Global Change Biology, 2010, 16, 3096-3110.	4.2	97
9	The exchange of carbon dioxide between wet arctic tundra and the atmosphere at the Lena River Delta, Northern Siberia. Biogeosciences, 2007, 4, 869-890.	1.3	82
10	Organic carbon and total nitrogen stocks in soils of the Lena River Delta. Biogeosciences, 2013, 10, 3507-3524.	1.3	81
11	Spatial and seasonal variability of polygonal tundra water balance: Lena River Delta, northern Siberia (Russia). Hydrogeology Journal, 2013, 21, 133-147.	0.9	71
12	Monthly gridded data product of northern wetland methane emissions based on upscaling eddy covariance observations. Earth System Science Data, 2019, 11, 1263-1289.	3.7	69
13	A 16-year record (2002â€“2017) of permafrost, active-layer, and meteorological conditions at the Samoylov Island Arctic permafrost research site, Lena River delta, northern Siberia: an opportunity to validate remote-sensing data and land surface, snow, and permafrost models. Earth System Science Data, 2019, 11, 261-299.	3.7	69
14	Regulation of methane production, oxidation, and emission by vascular plants and bryophytes in ponds of the northeast Siberian polygonal tundra. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2525-2541.	1.3	60
15	A comparison of linear and exponential regression for estimating diffusive CH4 fluxes by closed-chambers in peatlands. Soil Biology and Biochemistry, 2010, 42, 507-515.	4.2	58
16	High methane emissions dominated annual greenhouse gas balances 30 years after bog rewetting. Biogeosciences, 2015, 12, 4361-4371.	1.3	58
17	Trace metal distribution in pristine permafrost-affected soils of the Lena River delta and its hinterland, northern Siberia, Russia. Biogeosciences, 2014, 11, 1-15.	1.3	57
18	Cross-evaluation of measurements of peatland methane emissions on microform and ecosystem scales using high-resolution landcover classification and source weight modelling. Agricultural and Forest Meteorology, 2011, 151, 864-874.	1.9	56

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19	Permafrost-affected soils and their carbon pools with a focus on the Russian Arctic. Solid Earth, 2014, 5, 595-609.	1.2	55
20	Application of high-resolution spectral absorbance measurements to determine dissolved organic carbon concentration in remote areas. Journal of Hydrology, 2014, 517, 435-446.	2.3	53
21	Element Redistribution along Hydraulic and Redox Gradients of Lowâ€Centered Polygons, Lena Delta, Northern Siberia. Soil Science Society of America Journal, 2004, 68, 1002-1011.	1.2	50
22	The surface energy balance and its drivers in a boreal peatland fen of northwestern Russia. Journal of Hydrology, 2014, 511, 359-373.	2.3	48
23	Permafrost Thaw and Liberation of Inorganic Nitrogen in Eastern Siberia. Permafrost and Periglacial Processes, 2017, 28, 605-618.	1.5	43
24	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
25	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
26	Evapotranspiration dynamics in a boreal peatland and its impact on the water and energy balance. Journal of Geophysical Research, 2010, 115, .	3.3	42
27	Assessing the longâ€term carbonâ€sequestration potential of the semiâ€natural salt marshes in the European Wadden Sea. Ecosphere, 2019, 10, e02556.	1.0	42
28	Bulk partitioning the growing season net ecosystem exchange of CO₂ in Siberian tundra reveals the seasonality of its carbon sequestration strength. Biogeosciences, 2013, 10, 1337-1349.	1.3	39
29	Stoichiometric analysis of nutrient availability (N, P, K) within soils of polygonal tundra. Biogeochemistry, 2015, 122, 211-227.	1.7	38
30	Modeled Microbial Dynamics Explain the Apparent Temperature Sensitivity of Wetland Methane Emissions. Global Biogeochemical Cycles, 2020, 34, e2020GB006678.	1.9	34
31	Do we miss the hot spots? â€“ The use of very high resolution aerial photographs to quantify carbon fluxes in peatlands. Biogeosciences, 2008, 5, 1387-1393.	1.3	32
32	Diurnal dynamics of CH₄ from a boreal peatland during snowmelt. Tellus, Series B: Chemical and Physical Meteorology, 2022, 62, 133.	0.8	32
33	Carbon dioxide exchange fluxes of a boreal peatland over a complete growing season, Komi Republic, NW Russia. Biogeochemistry, 2012, 111, 485-513.	1.7	32
34	Comparative modeling of annual CO2 flux of temperate peat soils under permanent grassland management. Agriculture, Ecosystems and Environment, 2014, 186, 64-76.	2.5	32
35	The biophysical climate mitigation potential of boreal peatlands during the growing season. Environmental Research Letters, 2020, 15, 104004.	2.2	31
36	Modeling micro-topographic controls on boreal peatland hydrology and methane fluxes. Biogeosciences, 2015, 12, 5689-5704.	1.3	30

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37	A stochastic model for the polygonal tundra based on Poissonâ€“Voronoi diagrams. Earth System Dynamics, 2013, 4, 187-198.	2.7	29
38	Analysing uncertainties in the calculation of fluxes using whole-plant chambers: random and systematic errors. Plant and Soil, 2015, 393, 229-244.	1.8	29
39	Overestimation of CO₂ respiration fluxes by the closed chamber method in lowâ€turbulence nighttime conditions. Journal of Geophysical Research, 2009, 114, .	3.3	25
40	Attenuation Correction Procedures for Water Vapour Fluxes from Closed-Path Eddy-Covariance Systems. Boundary-Layer Meteorology, 2012, 142, 401-423.	1.2	25
41	Hydrology-driven ecosystem respiration determines the carbon balance of a boreal peatland. Science of the Total Environment, 2013, 463-464, 675-682.	3.9	24
42	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
43	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
44	A long-term (2002 to 2017) record of closed-path and open-path eddy covariance CO₂ net ecosystem exchange fluxes from the Siberian Arctic. Earth System Science Data, 2019, 11, 221-240.	3.7	20
45	Are Remote Sensing Evapotranspiration Models Reliable Across South American Ecoregions?. Water Resources Research, 2021, 57, e2020WR028752.	1.7	17
46	Cushion bogs are stronger carbon dioxide net sinks than moss-dominated bogs as revealed by eddy covariance measurements on Tierra del Fuego, Argentina. Biogeosciences, 2019, 16, 3397-3423.	1.3	16
47	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
48	Partitioning net ecosystem exchange of CO₂ on the pedon scale in the Lena River Delta, Siberia. Biogeosciences, 2019, 16, 1543-1562.	1.3	15
49	Spatial Variations in Pore-Water Biogeochemistry Greatly Exceed Temporal Changes During Baseflow Conditions in a Boreal River Valley Mire Complex, Northwest Russia. Wetlands, 2014, 34, 1171-1182.	0.7	14
50	Identification of linear relationships from noisy data using errors-in-variables modelsâ€”relevance for reconstruction of past climate from tree-ring and other proxy information. Climatic Change, 2011, 105, 155-177.	1.7	13
51	Introduction of a guideline for measurements of greenhouse gas fluxes from soils using nonâ€steadyâ€state chambers. Journal of Plant Nutrition and Soil Science, 2022, 185, 447-461.	1.1	13
52	Comparison of eddy covariance CO₂ and CH₄ fluxes from mined and recently rewetted sections in a northwestern German cutover bog. Biogeosciences, 2020, 17, 2853-2874.	1.3	11
53	Russian boreal peatlands dominate the natural European methane budget. Environmental Research Letters, 2016, 11, 014004.	2.2	10
54	Ignoring carbon emissions from thermokarst ponds results in overestimation of tundra net carbon uptake. Biogeosciences, 2022, 19, 1225-1244.	1.3	10

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55	Assessing methane emissions for northern peatlands in ORCHIDEE-PEAT revision 7020. Geoscientific Model Development, 2022, 15, 2813-2838.	1.3	8
56	Dissolved organic matter dynamics during the spring snowmelt at a boreal river valley mire complex in Northwest Russia. Hydrological Processes, 2016, 30, 1727-1741.	1.1	7
57	Effects of disturbance on the carbon dioxide balance of an anthropogenic peatland in northern Patagonia. Wetlands Ecology and Management, 2019, 27, 635-650.	0.7	7
58	Scaling and balancing carbon dioxide fluxes in a heterogeneous tundra ecosystem of the Lena River Delta. Biogeosciences, 2019, 16, 2591-2615.	1.3	7
59	Scaling and balancing methane fluxes in a heterogeneous tundra ecosystem of the Lena River Delta. Agricultural and Forest Meteorology, 2019, 266-267, 243-255.	1.9	7
60	Identifying Drivers Behind Spatial Variability of Methane Concentrations in East Siberian Ponds. Frontiers in Earth Science, 2021, 9, .	0.8	7
61	Soil Chamber Measurements. Springer Handbooks, 2021, , 1603-1624.	0.3	5
62	Evaluating closed chamber evapotranspiration estimates against eddy covariance measurements in an arctic wetland. Journal of Hydrology, 2019, 578, 124030.	2.3	4
63	Cushion bog plant community responses to passive warming in southern Patagonia. Biogeosciences, 2021, 18, 4817-4839.	1.3	3
64	Analyzing links between simulated Laptev Sea sea ice and atmospheric conditions over adjoining landmasses using causal-effect networks. Cryosphere, 2020, 14, 4201-4215.	1.5	3
65	Environmental Impactsâ€”Terrestrial Ecosystems. Regional Climate Studies, 2016, , 341-372.	1.2	2
66	A comment on â€˜Vulnerability of permafrost carbon to global warming. Part I: model description and role of heat generated by organic matter decompositionâ€™ by D. V. Khvorostyanov et al. (2008). Tellus, Series B: Chemical and Physical Meteorology, 2009, 61, 577-578.	0.8	1