Jens Leifeld

List of Publications by Year
in descending order

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140 papers	11,175 citations	31976 53 h-index	31849 101 g-index
173 all docs	173 docs citations	173 times ranked	12389 citing authors

#	Article	IF	Citations
1	Wood Ash as an Additive in Biomass Pyrolysis: Effects on Biochar Yield, Properties, and Agricultural Performance. ACS Sustainable Chemistry and Engineering, 2022, 10, 2720-2729.	6.7	15
2	Reduced Nitrous Oxide Emissions From Drained Temperate Agricultural Peatland After Coverage With Mineral Soil. Frontiers in Environmental Science, 2022, 10, .	3.3	5
3	Characterizing ecosystem-driven chemical composition differences in natural and drained Finnish bogs using pyrolysis-GC/MS. Organic Geochemistry, 2022, 165, 104351.	1.8	7
4	Carbon storage in agricultural topsoils and subsoils is promoted by including temporary grasslands into the crop rotation. Geoderma, 2022, 422, 115937.	5.1	12
5	Stable isotopes (Î´13C, Î´15N) and biomarkers as indicators of the hydrological regime of fens in a European eastâ€“west transect. Science of the Total Environment, 2022, 838, 156603.	8.0	2
6	Quantifying negative radiative forcing of non-permanent and permanent soil carbon sinks. Geoderma, 2022, 423, 115971.	5.1	13
7	Identification of thermal signature and quantification of charcoal in soil using differential scanning calorimetry and benzene polycarboxylic acid (BPCA) markers. Soil, 2022, 8, 451-466.	4.9	4
8	Organo-mineral associations largely contribute to the stabilization of century-old pyrogenic organic matter in cropland soils. Geoderma, 2021, 388, 114841.	5.1	24
9	Expert assessment of future vulnerability of the global peatland carbon sink. Nature Climate Change, 2021, 11, 70-77.	18.8	167
10	Carbon budget response of an agriculturally used fen to different soil moisture conditions. Agricultural and Forest Meteorology, 2021, 300, 108319.	4.8	2
11	Tradeoff of CO2 and CH4 emissions from global peatlands under water-table drawdown. Nature Climate Change, 2021, 11, 618-622.	18.8	57
12	Accumulation of C4â€carbon from Miscanthus in organicâ€matterâ€rich soils. GCB Bioenergy, 2021, 13, 1319-1328.	5.6	3
13	Achievable agricultural soil carbon sequestration across Europe from countryâ€specific estimates. Global Change Biology, 2021, 27, 6363-6380.	9.5	27
14	Biochar in agriculture â€“ A systematic review of 26 global metaâ€analyses. GCB Bioenergy, 2021, 13, 1708-1730.	5.6	136
15	Rewetting and Drainage of Nutrient-Poor Peatlands Indicated by Specific Bacterial Membrane Fatty Acids and a Repeated Sampling of Stable Isotopes (Î´15N, Î´13C). Frontiers in Environmental Science, 2021, 9, .	3.3	6
16	Soil carbon loss from drained agricultural peatland after coverage with mineral soil. Science of the Total Environment, 2021, 800, 149498.	8.0	10
17	Formation and decay of peat bogs in the vegetable belt of Switzerland. Swiss Journal of Geosciences, 2021, 114, .	1.2	2
18	Heating up a cold case: Applications of analytical pyrolysis GC/MS to assess molecular biomarkers in peat. Advances in Agronomy, 2021, , 115-159.	5.2	2

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19	Land use-driven historical soil carbon losses in Swiss peatlands. Landscape Ecology, 2020, 35, 173-187.	4.2	8
20	Towards a global-scale soil climate mitigation strategy. Nature Communications, 2020, 11, 5427.	12.8	302
21	Investigating the influence of instrumental parameters and chemical composition on pyrolysis efficiency of peat. Communications in Soil Science and Plant Analysis, 2020, 51, 1572-1581.	1.4	3
22	Soil organic matter stoichiometry as indicator for peatland degradation. Scientific Reports, 2020, 10, 7634.	3.3	50
23	Effect of management and weather variations on the greenhouse gas budget of two grasslands during a 10-year experiment. Agriculture, Ecosystems and Environment, 2020, 292, 106814.	5.3	28
24	Peatland protection and restoration are key for climate change mitigation. Environmental Research Letters, 2020, 15, 104093.	5.2	74
25	Switch of fungal to bacterial degradation in natural, drained and rewetted oligotrophic peatlands reflected in <i>Î´</i>¹⁵N and fatty acid composition. Soil, 2020, 6, 299-313.	4.9	15
26	Intact and managed peatland soils as a source and sink of GHGs from 1850 to 2100. Nature Climate Change, 2019, 9, 945-947.	18.8	137
27	Loss of soil organic carbon in Swiss long-term agricultural experiments over a wide range of management practices. Agriculture, Ecosystems and Environment, 2019, 286, 106654.	5.3	47
28	Sustainable management of cultivated peatlands in Switzerland: Insights, challenges, and opportunities. Land Use Policy, 2019, 87, 104019.	5.6	22
29	Relationship between greenhouse gas emissions and changes in soil gas diffusivity in a field experiment with biochar and lime. Journal of Plant Nutrition and Soil Science, 2019, 182, 667-675.	1.9	7
30	Designing biochar properties through the blending of biomass feedstock with metals: Impact on oxyanions adsorption behavior. Chemosphere, 2019, 214, 743-753.	8.2	44
31	Biochar and short-term N2O and CO2 emission from plant residue-amended soil with different fertilisation history. Zemdirbyste, 2019, 106, 99-106.	0.8	8
32	Distribution of nitrous oxide emissions from managed organic soils under different land uses estimated by the peat C/N ratio to improve national GHG inventories. Science of the Total Environment, 2018, 631-632, 23-26.	8.0	23
33	Biochar affects community composition of nitrous oxide reducers in a field experiment. Soil Biology and Biochemistry, 2018, 119, 143-151.	8.8	46
34	The underappreciated potential of peatlands in global climate change mitigation strategies. Nature Communications, 2018, 9, 1071.	12.8	418
35	Response of peat decomposition to corn straw addition in managed organic soils. Geoderma, 2018, 309, 75-83.	5.1	15
36	Pyrogenic Carbon Contributes Substantially to Carbon Storage in Intact and Degraded Northern Peatlands. Land Degradation and Development, 2018, 29, 2082-2091.	3.9	35

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37	Maize and wheat root biomass, vertical distribution, and size class as affected by fertilization intensity in two long-term field trials. Field Crops Research, 2018, 216, 197-208.	5.1	60
38	Peat decomposability in managed organic soils in relation to land use, organic matter composition and temperature. Biogeosciences, 2018, 15, 703-719.	3.3	45
39	Restricting the nonlinearity parameter in soil greenhouse gas flux calculation for more reliable flux estimates. PLoS ONE, 2018, 13, e0200876.	2.5	27
40	Below ground carbon inputs to soil via root biomass and rhizodeposition of field-grown maize and wheat at harvest are independent of net primary productivity. Agriculture, Ecosystems and Environment, 2018, 265, 556-566.	5.3	77
41	Amount and stability of recent and aged plant residues in degrading peatland soils. Soil Biology and Biochemistry, 2017, 109, 167-175.	8.8	18
42	Long term change in chemical properties of preindustrial charcoal particles aged in forest and agricultural temperate soil. Organic Geochemistry, 2017, 107, 33-45.	1.8	47
43	Consequences of planned afforestation versus natural forest regrowth after disturbance for soil C stocks in Eastern European mountains. Geoderma, 2017, 297, 19-27.	5.1	7
44	Soil Organic Carbon (SOC) Equilibrium and Model Initialisation Methods: an Application to the Rothamsted Carbon (RothC) Model. Environmental Modeling and Assessment, 2017, 22, 215-229.	2.2	31
45	Evaluation of the longâ€term effect of biochar on properties of temperate agricultural soil at preâ€industrial charcoal kiln sites in Wallonia, Belgium. European Journal of Soil Science, 2017, 68, 80-89.	3.9	55
46	Proper estimate of residue input as condition for understanding drivers of soil carbon dynamics. Global Change Biology, 2017, 23, 4455-4456.	9.5	6
47	Large uncertainty in soil carbon modelling related to method of calculation of plant carbon input in agricultural systems. European Journal of Soil Science, 2017, 68, 953-963.	3.9	41
48	Palsa Uplift Identified by Stable Isotope Depth Profiles and Relation of Î´¹⁵ N to C/N Ratio. Permafrost and Periglacial Processes, 2017, 28, 485-492.	3.4	17
49	Overestimation of Crop Root Biomass in Field Experiments Due to Extraneous Organic Matter. Frontiers in Plant Science, 2017, 8, 284.	3.6	24
50	Parametrization consequences of constraining soil organic matter models by total carbon and radiocarbon using long-term field data. Biogeosciences, 2016, 13, 3003-3019.	3.3	12
51	N use efficiencies and N ₂ O emissions in two contrasting, biochar amended soils under winter wheatâ€"cover cropâ€"sorghum rotation. Environmental Research Letters, 2016, 11, 084013.	5.2	16
52	Calculating carbon changes in peat soils drained for forestry with four different profile-based methods. Forest Ecology and Management, 2016, 381, 29-36.	3.2	19
53	Historical soil amendment with charcoal increases sequestration of nonâ€charcoal carbon: a comparison among methods of black carbon quantification. European Journal of Soil Science, 2016, 67, 324-331.	3.9	32
54	MAGGnet: An international network to foster mitigation of agricultural greenhouse gases. Carbon Management, 2016, 7, 243-248.	2.4	7

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55	Current approaches neglect possible agricultural cutback under large-scale organic farming. A comment to Ponisio <i>et al</i> .. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20151623.	2.6	14
56	Toward the Standardization of Biochar Analysis: The COST Action TD1107 Interlaboratory Comparison. Journal of Agricultural and Food Chemistry, 2016, 64, 513-527.	5.2	86
57	Carbon storage and soil property changes following afforestation in mountain ecosystems of the Western Rhodopes, Bulgaria. IForest, 2016, 9, 626-634.	1.4	10
58	¹⁴C in cropland soil of a long-term field trial â€“ experimental variability and implications for estimating carbon turnover. Soil, 2015, 1, 537-542.	4.9	7
59	Turnover of Grassland Roots in Mountain Ecosystems Revealed by Their Radiocarbon Signature: Role of Temperature and Management. PLoS ONE, 2015, 10, e0119184.	2.5	30
60	Effect of biochar and liming on soil nitrous oxide emissions from a temperate maize cropping system. Soil, 2015, 1, 707-717.	4.9	36
61	Biogeochemical indicators of peatland degradation â€“ a case study of a temperate bog in northern Germany. Biogeosciences, 2015, 12, 2861-2871.	3.3	97
62	Predicting soil organic matter stability in agricultural fields through carbon and nitrogen stable isotopes. Soil Biology and Biochemistry, 2015, 88, 29-38.	8.8	54
63	Age and Thermal Stability of Particulate Organic Matter Fractions Indicate the Presence of Black Carbon in Soil. Radiocarbon, 2015, 57, 99-107.	1.8	9
64	Carbohydrates and thermal properties indicate a decrease in stable aggregate carbon following forest colonization of mountain grassland. Soil Biology and Biochemistry, 2015, 86, 135-145.	8.8	8
65	Nitrous oxide emission reduction with greenwaste biochar: comparison of laboratory and field experiments. European Journal of Soil Science, 2014, 65, 128-138.	3.9	62
66	Changes in soil carbon and crop yield over 60 years in the Zurich Organic Fertilization Experiment, following landâ€use change from grassland to cropland. Journal of Plant Nutrition and Soil Science, 2014, 177, 696-704.	1.9	56
67	Degradation changes stable carbon isotope depth profiles in palsa peatlands. Biogeosciences, 2014, 11, 3369-3380.	3.3	51
68	Chemical and microbial activation energies of soil organic matter decomposition. Biology and Fertility of Soils, 2014, 50, 147-153.	4.3	73
69	Environmental benefits and risks of biochar application to soil. Agriculture, Ecosystems and Environment, 2014, 191, 1-4.	5.3	27
70	A new facet of soil organic matter. Agriculture, Ecosystems and Environment, 2014, 185, 186-187.	5.3	11
71	On the heterogeneity of biochar and consequences for its representative sampling. Journal of Analytical and Applied Pyrolysis, 2014, 107, 25-30.	5.5	23
72	Bioavailability and isotopic composition of CO2 released from incubated soil organic matter fractions. Soil Biology and Biochemistry, 2014, 69, 168-178.	8.8	41

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73	Control of soil pH on turnover of belowground organic matter in subalpine grassland. Biogeochemistry, 2013, 112, 59-69.	3.5	57
74	Prologue paper: Soil carbon losses from land-use change and the global agricultural greenhouse gas budget. Science of the Total Environment, 2013, 465, 3-6.	8.0	18
75	Reproducibility of a soil organic carbon fractionation method to derive <scp>RothC</scp> carbon pools. European Journal of Soil Science, 2013, 64, 735-746.	3.9	51
76	Low-input farming: a way towards climate-friendly agriculture?. Carbon Management, 2013, 4, 31-41.	2.4	5
77	Anthropogenic perturbation of the carbon fluxes from land to ocean. Nature Geoscience, 2013, 6, 597-607.	12.9	937
78	Organic farming gives no climate change benefit through soil carbon sequestration. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E984.	7.1	56
79	Concurrent increase in ¹⁵N and radiocarbon age in soil density fractions. Journal of Plant Nutrition and Soil Science, 2013, 176, 505-508.	1.9	3
80	Landâ€use change in subalpine grassland soils: Effect on particulate organic carbon fractions and aggregation. Journal of Plant Nutrition and Soil Science, 2012, 175, 401-409.	1.9	24
81	Quantitative Determination of PAHs in Biochar: A Prerequisite To Ensure Its Quality and Safe Application. Journal of Agricultural and Food Chemistry, 2012, 60, 3042-3050.	5.2	199
82	Sensitivity of peatland carbon loss to organic matter quality. Geophysical Research Letters, 2012, 39, .	4.0	106
83	Free and protected soil organic carbon dynamics respond differently to abandonment of mountain grassland. Biogeosciences, 2012, 9, 853-865.	3.3	40
84	Response to Interpreting the ash trend within ombrotrophic bog profiles: atmospheric dust depositions vs. mineralization processes. The Etang de la GruÃ¨re case study. Plant and Soil, 2012, 353, 11-14.	3.7	1
85	How sustainable is organic farming?. Agriculture, Ecosystems and Environment, 2012, 150, 121-122.	5.3	59
86	Can composition and physical protection of soil organic matter explain soil respiration temperature sensitivity?. Biogeochemistry, 2012, 107, 423-436.	3.5	75
87	Alpine grassland soils contain large proportion of labile carbon but indicate long turnover times. Biogeosciences, 2011, 8, 1911-1923.	3.3	77
88	Biological residues define the ice nucleation properties of soil dust. Atmospheric Chemistry and Physics, 2011, 11, 9643-9648.	4.9	173
89	Temporal dynamics of soil organic carbon after land-use change in the temperate zone - carbon response functions as a model approach. Global Change Biology, 2011, 17, 2415-2427.	9.5	645
90	A comparison of repeated soil inventory and carbon flux budget to detect soil carbon stock changes after conversion from cropland to grasslands. Global Change Biology, 2011, 17, 3366-3375.	9.5	33

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91	Temperature and soil organic matter decomposition rates - synthesis of current knowledge and a way forward. Global Change Biology, 2011, 17, 3392-3404.	9.5	1,143
92	Peatland subsidence and carbon loss from drained temperate fens. Soil Use and Management, 2011, 27, 170-176.	4.9	86
93	Soil microbial communities in (sub)alpine grasslands indicate a moderate shift towards new environmental conditions 11 years after soil translocation. Soil Biology and Biochemistry, 2011, 43, 1148-1154.	8.8	33
94	Decomposition and stabilization of root litter in top- and subsoil horizons: what is the difference?. Plant and Soil, 2011, 338, 127-141.	3.7	114
95	Organic matter losses from temperate ombrotrophic peatlands: an evaluation of the ash residue method. Plant and Soil, 2011, 341, 349-361.	3.7	26
96	Methodological considerations for using thermal analysis in the characterization of soil organic matter. Journal of Thermal Analysis and Calorimetry, 2011, 104, 389-398.	3.6	60
97	Î´¹⁵N natural abundance in permafrost soil indicates impact of fire on nitrogen cycle. Rapid Communications in Mass Spectrometry, 2011, 25, 661-664.	1.5	3
98	Stable carbon isotopes as indicators for environmental change in palsa peats. Biogeosciences, 2011, 8, 1769-1778.	3.3	69
99	Organic Farming and Soil Carbon Sequestration: What Do We Really Know About the Benefits?. Ambio, 2010, 39, 585-599.	5.5	124
100	Thermal alteration of organic matter during a shrubland fire: A field study. Organic Geochemistry, 2010, 41, 690-697.	1.8	69
101	Consequences of Conventional versus Organic farming on Soil Carbon: Results from a 27â€Year Field Experiment. Agronomy Journal, 2009, 101, 1204-1218.	1.8	79
102	Longâ€term management effects on soil organic matter in two cold, highâ€elevation grasslands: clues from fractionation and radiocarbon dating. European Journal of Soil Science, 2009, 60, 230-239.	3.9	54
103	Storage and turnover of carbon in grassland soils along an elevation gradient in the Swiss Alps. Global Change Biology, 2009, 15, 668-679.	9.5	98
104	Treeline shifts in the Ural mountains affect soil organic matter dynamics. Global Change Biology, 2009, 15, 1570-1583.	9.5	83
105	Assessment of the nitrogen and carbon budget of two managed temperate grassland fields. Agriculture, Ecosystems and Environment, 2009, 133, 150-162.	5.3	148
106	Application of thermal analysis techniques in soil science. Geoderma, 2009, 153, 1-10.	5.1	277
107	Biased 14C-derived organic carbon turnover estimates following black carbon input to soil: an exploration with RothC. Biogeochemistry, 2008, 88, 205-211.	3.5	12
108	Calorimetric characterization of grass during its decomposition. Journal of Thermal Analysis and Calorimetry, 2008, 93, 651-655.	3.6	16

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109	Effects of Land-Use Change on Carbon Stocks in Switzerland. Ecosystems, 2008, 11, 895-907.	3.4	47
110	The effect of the tillage system on soil organic carbon content under moist, cold-temperate conditions. Soil and Tillage Research, 2008, 98, 94-105.	5.6	117
111	Temperature sensitivity of young and old soil carbon â€“ Same soil, slight differences in 13C natural abundance method, inconsistent results. Soil Biology and Biochemistry, 2008, 40, 2703-2705.	8.8	23
112	Simulating decomposition of labile soil organic carbon: Effects of pH. Soil Biology and Biochemistry, 2008, 40, 2948-2951.	8.8	48
113	Relative stability of soil carbon revealed by shifts in Î´¹⁵N and C:N ratio. Biogeosciences, 2008, 5, 123-128.	3.3	62
114	Thermal stability of black carbon characterised by oxidative differential scanning calorimetry. Organic Geochemistry, 2007, 38, 112-127.	1.8	104
115	Temporal changes in soil pore space CO2 concentration and storage under permanent grassland. Agricultural and Forest Meteorology, 2007, 142, 66-84.	4.8	102
116	Sodium hypochlorite separates an older soil organic matter fraction than acid hydrolysis. Geoderma, 2007, 139, 171-179.	5.1	76
117	Mobility of black carbon in drained peatland soils. Biogeosciences, 2007, 4, 425-432.	3.3	59
118	Measured soil organic matter fractions can be related to pools in the RothC model. European Journal of Soil Science, 2007, 58, 658-667.	3.9	343
119	Organic carbon and microbial biomass in two soil development chronosequences following glacial retreat. European Journal of Soil Science, 2007, 58, 758-762.	3.9	32
120	Quantifying soil organic carbon fractions by infrared-spectroscopy. Soil Biology and Biochemistry, 2007, 39, 224-231.	8.8	150
121	The carbon budget of newly established temperate grassland depends on management intensity. Agriculture, Ecosystems and Environment, 2007, 121, 5-20.	5.3	262
122	Effects of climate and management intensity on nitrous oxide emissions in grassland systems across Europe. Agriculture, Ecosystems and Environment, 2007, 121, 135-152.	5.3	262
123	Soils as sources and sinks of greenhouse gases. Geological Society Special Publication, 2006, 266, 23-44.	1.3	8
124	Thermal stability responses of soil organic matter to long-term fertilization practices. Biogeosciences, 2006, 3, 371-374.	3.3	26
125	Warming mineralises young and old soil carbon equally. Biogeosciences, 2006, 3, 515-519.	3.3	110
126	Application of diffuse reflectance FT-IR spectroscopy and partial least-squares regression to predict NMR properties of soil organic matter. European Journal of Soil Science, 2006, 57, 846-857.	3.9	70

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127	Thermal analysis of mineral soils before and after oxidationwith sodium hypochlorite. Journal of Thermal Analysis and Calorimetry, 2006, 86, 845-848.	3.6	2
128	Greenhouse gas emissions from Swiss agriculture since 1990: implications for environmental policies to mitigate global warming. Environmental Science and Policy, 2005, 8, 410-417.	4.9	10
129	Carbon stocks in Swiss agricultural soils predicted by land-use, soil characteristics, and altitude. Agriculture, Ecosystems and Environment, 2005, 105, 255-266.	5.3	247
130	The Temperature Response of CO2 Production from Bulk Soils and Soil Fractions is Related to Soil Organic Matter Quality. Biogeochemistry, 2005, 75, 433-453.	3.5	171
131	Soil organic matter fractions as early indicators for carbon stock changes under different land-use?. Geoderma, 2005, 124, 143-155.	5.1	304
132	A comparison of two methods for the isolation of free and occluded particulate organic matter. Journal of Plant Nutrition and Soil Science, 2005, 168, 660-667.	1.9	25
133	Microaggregates in agricultural soils and their size distribution determined by X-ray attenuation. European Journal of Soil Science, 2003, 54, 167-174.	3.9	19
134	Comments onâ€œRecalcitrant soil organic materials mineralize more efficiently at higher temperaturesâ€• by R. Bol, T. Bolger, R. Cully, and D. Little; J. Plant Nutr. Soil Sci 166, 300â€“307 (2003). Journal of Plant Nutrition and Soil Science, 2003, 166, 777-778.	1.9	9
135	Biological activity and organic matter mineralization of soils amended with biowaste composts. Journal of Plant Nutrition and Soil Science, 2002, 165, 151.	1.9	63
136	Indications for soil organic matter quality in soils under different management. Geoderma, 2002, 105, 243-258.	5.1	97
137	Changes in the chemical composition of soil organic matter after application of compost. European Journal of Soil Science, 2002, 53, 299-309.	3.9	77
138	Organic carbon and nitrogen in fine soil fractions after treatment with hydrogen peroxide. Soil Biology and Biochemistry, 2001, 33, 2155-2158.	8.8	79
139	Stabilization of Composted Organic Matter after Application to a Humusâ€Free Sandy Mining Soil. Journal of Environmental Quality, 2001, 30, 602-607.	2.0	17
140	A Microcosm System to Determine the Gas Production of Arable Soils Amended with Different Composts. , 1996, , 1335-1338.		2