Christian Poll

List of Publications by Year
in descending order

60 papers	3,574 citations	172207 29 h-index	138251 58 g-index
62 all docs	62 docs citations	62 times ranked	5718 citing authors

#	Article	IF	Citations
1	Quantifying global soil carbon losses in response to warming. Nature, 2016, 540, 104-108.	13.7	879
2	Temperature response of soil respiration largely unaltered with experimental warming. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13797-13802.	3.3	308
3	Soilâ€carbon preservation through habitat constraints and biological limitations on decomposer activity. Journal of Plant Nutrition and Soil Science, 2008, 171, 27-35.	1.1	156
4	Dynamics of litter carbon turnover and microbial abundance in a rye detritusphere. Soil Biology and Biochemistry, 2008, 40, 1306-1321.	4.2	145
5	Rhizosphere bacteria affected by transgenic potatoes with antibacterial activities compared with the effects of soil, wild-type potatoes, vegetation stage and pathogen exposure. FEMS Microbiology Ecology, 2006, 56, 219-235.	1.3	143
6	Micro-scale distribution of microorganisms and microbial enzyme activities in a soil with long-term organic amendment. European Journal of Soil Science, 2003, 54, 715-724.	1.8	115
7	Mechanisms of solute transport affect small-scale abundance and function of soil microorganisms in the detritusphere. European Journal of Soil Science, 2006, 57, 583-595.	1.8	112
8	Impacts of temperature increase and change in precipitation pattern on crop yield and yield quality of barley. Food Chemistry, 2013, 136, 1470-1477.	4.2	101
9	Field-scale manipulation of soil temperature and precipitation change soil CO2 flux in a temperate agricultural ecosystem. Agriculture, Ecosystems and Environment, 2013, 165, 88-97.	2.5	83
10	Micro-scale modelling of carbon turnover driven by microbial succession at a biogeochemical interface. Soil Biology and Biochemistry, 2008, 40, 864-878.	4.2	75
11	Offsetting global warmingâ€induced elevated greenhouse gas emissions from an arable soil by biochar application. Global Change Biology, 2018, 24, e318-e334.	4.2	75
12	Can current moisture responses predict soil CO₂ efflux under altered precipitation regimes? A synthesis of manipulation experiments. Biogeosciences, 2014, 11, 2991-3013.	1.3	74
13	Microbial biomass and enzyme activities under reduced nitrogen deposition in a spruce forest soil. Applied Soil Ecology, 2009, 43, 11-21.	2.1	73
14	Influence of land-use intensity on the spatial distribution of N-cycling microorganisms in grassland soils. FEMS Microbiology Ecology, 2011, 77, 95-106.	1.3	70
15	Interaction of minerals, organic matter, and microorganisms during biogeochemical interface formation as shown by a series of artificial soil experiments. Biology and Fertility of Soils, 2017, 53, 9-22.	2.3	67
16	Small-scale Diversity and Succession of Fungi in the Detritusphere of Rye Residues. Microbial Ecology, 2010, 59, 130-140.	1.4	65
17	Short-term response of soil microorganisms to biochar addition in a temperate agroecosystem under soil warming. Agriculture, Ecosystems and Environment, 2016, 233, 308-317.	2.5	60
18	Endogeic earthworms alter carbon translocation by fungi at the soilâ€“litter interface. Soil Biology and Biochemistry, 2007, 39, 2854-2864.	4.2	53

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19	Carbon flow from litter through soil microorganisms: From incorporation rates to mean residence times in bacteria and fungi. Soil Biology and Biochemistry, 2017, 115, 187-196.	4.2	53
20	Fungal biomass and extracellular enzyme activities in coarse woody debris of 13 tree species in the early phase of decomposition. Forest Ecology and Management, 2016, 378, 181-192.	1.4	51
21	Rhizosphere activity in an old-growth forest reacts rapidly to changes in soil moisture and shapes whole-tree carbon allocation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 24885-24892.	3.3	50
22	Modelling in situ activities of enzymes as a tool to explain seasonal variation of soil respiration from agro-ecosystems. Soil Biology and Biochemistry, 2015, 81, 291-303.	4.2	48
23	Dynamics of soil respiration and microbial communities: Interactive controls of temperature and substrate quality. Soil Biology and Biochemistry, 2018, 127, 60-70.	4.2	47
24	Influence of elevated soil temperature and biochar application on organic matter associated with aggregate-size and density fractions in an arable soil. Agriculture, Ecosystems and Environment, 2017, 241, 79-87.	2.5	45
25	Regulation of bacterial and fungal MCPA degradation at the soilâ€“litter interface. Soil Biology and Biochemistry, 2010, 42, 1879-1887.	4.2	42
26	Microbial community response to changes in substrate availability and habitat conditions in a reciprocal subsoil transfer experiment. Soil Biology and Biochemistry, 2017, 105, 138-152.	4.2	39
27	The impact of chemical pollution on the resilience of soils under multiple stresses: A conceptual framework for future research. Science of the Total Environment, 2016, 568, 1076-1085.	3.9	37
28	Controls on microbially regulated soil organic carbon decomposition at the regional scale. Soil Biology and Biochemistry, 2018, 118, 59-68.	4.2	35
29	Additive effects of earthworms, nitrogen-rich litter and elevated soil temperature on N2O emission and nitrate leaching from an arable soil. Applied Soil Ecology, 2015, 86, 55-61.	2.1	34
30	Fungi and bacteria respond differently to changing environmental conditions within a soil profile. Soil Biology and Biochemistry, 2019, 137, 107543.	4.2	31
31	Land-use intensity modifies spatial distribution and function of soil microorganisms in grasslands. Pedobiologia, 2011, 54, 341-351.	0.5	29
32	Changes in Chemical and Microbial Soil Parameters Following 8ÂYears of Deadwood Decay: An Experiment with Logs of 13 Tree Species in 30 Forests. Ecosystems, 2021, 24, 955-967.	1.6	24
33	Earthworms modulate the effects of climate warming on the taxon richness of soil meso- and macrofauna in an agricultural system. Agriculture, Ecosystems and Environment, 2019, 278, 72-80.	2.5	23
34	Modeling coupled pesticide degradation and organic matter turnover: From gene abundance to process rates. Soil Biology and Biochemistry, 2016, 103, 349-364.	4.2	22
35	Cross-laboratory comparison of fluorimetric microplate and colorimetric bench-scale soil enzyme assays. Soil Biology and Biochemistry, 2018, 121, 240-248.	4.2	22
36	Succession of soil microbial communities and enzyme activities in artificial soils. Pedobiologia, 2016, 59, 93-104.	0.5	21

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37	Biodegradation of Pesticides at the Limit: Kinetics and Microbial Substrate Use at Low Concentrations. Frontiers in Microbiology, 2020, 11, 2107.	1.5	21
38	Succession of bacterial and fungal 4-chloro-2-methylphenoxyacetic acid degraders at the soil-litter interface. FEMS Microbiology Ecology, 2013, 86, 85-100.	1.3	20
39	Micro-scale modeling of pesticide degradation coupled to carbon turnover in the detritusphere: model description and sensitivity analysis. Biogeochemistry, 2014, 117, 185-204.	1.7	20
40	Nitrogen Cycle Enzymes. Soil Science Society of America Book Series, 0, , 211-245.	0.3	19
41	Partitioning of ecosystem respiration in winter wheat and silage maizeâ€"modeling seasonal temperature effects. Agriculture, Ecosystems and Environment, 2016, 224, 131-144.	2.5	18
42	Spatial Control of Carbon Dynamics in Soil by Microbial Decomposer Communities. Frontiers in Environmental Science, 2020, 8, .	1.5	15
43	Whatâ€™s in a colluvial deposit? Perspectives from archaeopedology. Catena, 2021, 198, 105040.	2.2	12
44	Middle Bronze Age land use practices in the northwestern Alpine foreland â€“ a multi-proxy study of colluvial deposits, archaeological features and peat bogs. Soil, 2021, 7, 269-304.	2.2	12
45	Do Soil Warming and Changes in Precipitation Patterns Affect Seed Yield and Seed Quality of Field-Grown Winter Oilseed Rape?. Agronomy, 2020, 10, 520.	1.3	11
46	Microbial Utilisation of Aboveground Litter-Derived Organic Carbon Within a Sandy Dystric Cambisol Profile. Frontiers in Soil Science, 2021, 1, .	0.8	11
47	Corrigendum to "Can current moisture responses predict soil CO₂ efflux under altered precipitation regimes? A synthesis of manipulation experiments". Biogeosciences, 2014, 11, 3307-3308.	1.3	10
48	Effect of water redistribution by two distinct saprotrophic fungi on carbon mineralization and nitrogen translocation in dry soil. Soil Biology and Biochemistry, 2016, 103, 380-387.	4.2	10
49	Water flow drives small scale biogeography of pesticides and bacterial pesticide degraders - A microcosm study using 2,4-D as a model compound. Soil Biology and Biochemistry, 2018, 127, 137-147.	4.2	10
50	Plant litter enhances degradation of the herbicide MCPA and increases formation of biogenic non-extractable residues in soil. Environment International, 2020, 142, 105867.	4.8	10
51	Soil Properties Control Microbial Carbon Assimilation and Its Mean Residence Time. Frontiers in Environmental Science, 2020, 8, .	1.5	10
52	Modeling temperature sensitivity of soil organic matter decomposition: Splitting the pools. Soil Biology and Biochemistry, 2021, 153, 108108.	4.2	10
53	Evidence for the importance of litter as a co-substrate for MCPA dissipation in an agricultural soil. Environmental Science and Pollution Research, 2016, 23, 4164-4175.	2.7	9
54	Independent effects of warming and altered precipitation pattern on nematode community structure in an arable field. Agriculture, Ecosystems and Environment, 2021, 316, 107467.	2.5	9

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55	Vineyard management system affects soil microbiological properties. Oeno One, 2020, 54, .	0.7	9
56	Longâ€term manipulation of mean climatic conditions alters drought effects on Câ€•and Nâ€cycling in an arable soil. Global Change Biology, 2022, 28, 3974-3990.	4.2	6
57	13C assimilation as well as functional gene abundance and expression elucidate the biodegradation of glyphosate in a field experiment. Environmental Pollution, 2022, 306, 119382.	3.7	6
58	The influence of the herbicide 2-methyl-4-chlorophenoxyacetic acid (MCPA) on the mineralization of litter-derived alkanes and the abundance of the alkane monooxygenase gene (alkB) in the detritusphere of Pisum sativum (L.). Biology and Fertility of Soils, 2012, 48, 933-940.	2.3	2
59	Heavy rainfall following a summer drought stimulates soil redox dynamics and facilitates rapid and deep translocation of glyphosate in floodplain soils. Environmental Sciences: Processes and Impacts, 2022, , .	1.7	2
60	Inquiry-Based Learning in theÂLife Sciences. , 2019, , 171-180.		1