Per Ambus

List of Publications by Year
in descending order

133 papers	8,692 citations	47006 47 h-index	48315 88 g-index
137 all docs	137 docs citations	137 times ranked	9776 citing authors

#	Article	IF	Citations
1	Atmospheric composition change: Ecosystemsâ€œAtmosphere interactions. Atmospheric Environment, 2009, 43, 5193-5267.	4.1	609
2	Full accounting of the greenhouse gas (CO2, N2O, CH4) budget of nine European grassland sites. Agriculture, Ecosystems and Environment, 2007, 121, 121-134.	5.3	409
3	Effects of slow and fast pyrolysis biochar on soil C and N turnover dynamics. Soil Biology and Biochemistry, 2012, 46, 73-79.	8.8	401
4	Interspecific competition, N use and interference with weeds in peaâ€œbarley intercropping. Field Crops Research, 2001, 70, 101-109.	5.1	351
5	Freezeâ€œthaw regime effects on carbon and nitrogen dynamics in sub-arctic heath tundra mesocosms. Soil Biology and Biochemistry, 2004, 36, 641-654.	8.8	301
6	Influence of fast pyrolysis temperature on biochar labile fraction and short-term carbon loss in a loamy soil. Biomass and Bioenergy, 2011, 35, 1182-1189.	5.7	275
7	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
8	Peaâ€œbarley intercropping for efficient symbiotic N2-fixation, soil N acquisition and use of other nutrients in European organic cropping systems. Field Crops Research, 2009, 113, 64-71.	5.1	222
9	Evaluating effects of sewage sludge and household compost on soil physical, chemical and microbiological properties. Applied Soil Ecology, 2002, 19, 237-248.	4.3	219
10	Reduced N cycling in response to elevated CO2, warming, and drought in a Danish heathland: Synthesizing results of the CLIMAITE project after two years of treatments. Global Change Biology, 2011, 17, 1884-1899.	9.5	213
11	How does biochar influence soil N cycle? A meta-analysis. Plant and Soil, 2018, 426, 211-225.	3.7	210
12	Title is missing!. Plant and Soil, 2001, 236, 63-74.	3.7	184
13	The comparison of nitrogen use and leaching in sole cropped versus intercropped pea and barley. Nutrient Cycling in Agroecosystems, 2003, 65, 289-300.	2.2	174
14	Spatial and Seasonal Nitrous Oxide and Methane Fluxes in Danish Forestâ€š Grasslandâ€š and Agroecosystems. Journal of Environmental Quality, 1995, 24, 993-1001.	2.0	151
15	Biochar application as a tool to decrease soil nitrogen losses (<scp>NH</scp>₃) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf strength in a global perspective. Global Change Biology, 2019, 25, 2077-2093.	9.5	151
16	Application of biochar to soil and N2O emissions: potential effects of blending fast-pyrolysis biochar with anaerobically digested slurry. European Journal of Soil Science, 2011, 62, 581-589.	3.9	150
17	The competitive ability of peaâ€œbarley intercrops against weeds and the interactions with crop productivity and soil N availability. Field Crops Research, 2011, 122, 264-272.	5.1	145
18	Biomass production, symbiotic nitrogen fixation and inorganic N use in dual and tri-component annual intercrops. Plant and Soil, 2005, 266, 273-287.	3.7	127

#	Article	IF	Citations
19	Enzymatic Evidence for the Key Role of Arginine in Nitrogen Translocation by Arbuscular Mycorrhizal Fungi. Plant Physiology, 2007, 144, 782-792.	4.8	125
20	Effects of digestate from anaerobically digested cattle slurry and plant materials on soil microbial community and emission of CO2 and N2O. Applied Soil Ecology, 2013, 63, 36-44.	4.3	120
21	Measurement of N2O emission from a fertilized grassland: An analysis of spatial variability. Journal of Geophysical Research, 1994, 99, 16549.	3.3	113
22	Common arbuscular mycorrhizal networks amplify competition for phosphorus between seedlings and established plants. New Phytologist, 2013, 200, 229-240.	7.3	107
23	Biosphereâ€“atmosphere exchange of reactive nitrogen and greenhouse gases at the NitroEurope core flux measurement sites: Measurement strategy and first data sets. Agriculture, Ecosystems and Environment, 2009, 133, 139-149.	5.3	104
24	Emissions of nitrous oxide from arable organic and conventional cropping systems on two soil types. Agriculture, Ecosystems and Environment, 2010, 136, 199-208.	5.3	103
25	The Effect of Increased N Deposition on Nitrous oxide, Methane and Carbon dioxide Fluxes from Unmanaged Forest and Grassland Communities in Michigan. Biogeochemistry, 2006, 79, 315-337.	3.5	97
26	Soil respiration is stimulated by elevated CO₂ and reduced by summer drought: three years of measurements in a multifactor ecosystem manipulation experiment in a temperate heathland (CLIMAITE). Global Change Biology, 2012, 18, 1216-1230.	9.5	97
27	Terrestrial plant methane production and emission. Physiologia Plantarum, 2012, 144, 201-209.	5.2	97
28	Comparison of Denitrification in Two Riparian Soils. Soil Science Society of America Journal, 1991, 55, 994-997.	2.2	93
29	Effects of temperature, ultraviolet radiation and pectin methyl esterase on aerobic methane release from plant material. Plant Biology, 2009, 11, 43-48.	3.8	91
30	Nitrous oxide emission from an agricultural field: Comparison between measurements by flux chamber and micrometerological techniques. Atmospheric Environment, 1996, 30, 4183-4190.	4.1	88
31	Micrometeorological and chamber methods for measurement of nitrous oxide fluxes between soils and the atmosphere: Overview and conclusions. Journal of Geophysical Research, 1994, 99, 16541.	3.3	87
32	Nitrogen processes in terrestrial ecosystems. , 2011, , 99-125.		77
33	Experimental design of multifactor climate change experiments with elevated CO₂, warming and drought: the CLIMAITE project. Functional Ecology, 2008, 22, 185-195.	3.6	75
34	Natural 15N abundance of soil N pools and N2O reflect the nitrogen dynamics of forest soils. Plant and Soil, 2007, 295, 79-94.	3.7	74
35	Can current moisture responses predict soil CO₂ efflux under altered precipitation regimes? A synthesis of manipulation experiments. Biogeosciences, 2014, 11, 2991-3013.	3.3	74
36	Application of the DNDC model to predict emissions of N2O from Irish agriculture. Geoderma, 2009, 151, 327-337.	5.1	70

#	Article	IF	Citations
37	Nitrogen mineralization and denitrification as influenced by crop residue particle size. Plant and Soil, 1997, 197, 261-270.	3.7	66
38	Photorespiration Contributes to Stomatal Regulation and Carbon Isotope Fractionation: A Study with Barley, Potato and Arabidopsis Plants Deficient in Glycine Decarboxylase. Photosynthesis Research, 2004, 81, 139-152.	2.9	64
39	Productivity and carbon footprint of perennial grassâ€“forage legume intercropping strategies with high or low nitrogen fertilizer input. Science of the Total Environment, 2016, 541, 1339-1347.	8.0	64
40	Denitrification variability and control in a riparian fen irrigated with agricultural drainage water. Soil Biology and Biochemistry, 1993, 25, 915-923.	8.8	61
41	Plantâ€mediated nitrous oxide emissions from beech (Fagus sylvatica) leaves. New Phytologist, 2005, 168, 93-98.	7.3	61
42	Pan-European delta13C values of air and organic matter from forest ecosystems. Global Change Biology, 2005, 11, 1065-1093.	9.5	60
43	The influence of water stress on biomass and N accumulation, N partitioning between above and below ground parts and on N rhizodeposition during reproductive growth of pea (Pisum sativum L.). Soil Biology and Biochemistry, 2009, 41, 380-387.	8.8	59
44	Nitrous oxide production by denitrification and nitrification in temperate forest, grassland and agricultural soils. European Journal of Soil Science, 1998, 49, 495-502.	3.9	57
45	Emissions of nitrous oxide from Irish arable soils: effects of tillage and reduced N input. Nutrient Cycling in Agroecosystems, 2010, 86, 53-65.	2.2	57
46	Leaf surface wax is a source of plant methane formation under <scp>UV</scp> radiation and in the presence of oxygen. Plant Biology, 2014, 16, 512-516.	3.8	54
47	Carbon footprint of rice production under biochar amendment â€“ a case study in a Chinese rice cropping system. GCB Bioenergy, 2016, 8, 148-159.	5.6	54
48	Control of denitrification enzyme activity in a streamside soil. FEMS Microbiology Letters, 1993, 102, 225-234.	1.8	50
49	Plant nutrient mobilization in temperate heathland responds to elevated CO2, temperature and drought. Plant and Soil, 2010, 328, 381-396.	3.7	49
50	Fluxes of CH4 and N2O in aspen stands grown under ambient and twice-ambient CO2. Plant and Soil, 1999, 209, 1-8.	3.7	48
51	Redistribution of Slurry Components as Influenced by Injection Method, Soil, and Slurry Properties. Journal of Environmental Quality, 2003, 32, 2399-2409.	2.0	46
52	Assessing the use ofÎ´13C natural abundance in separation of root and microbial respiration in a Danish beech(Fagus sylvatica L.) forest. Rapid Communications in Mass Spectrometry, 2004, 18, 897-902.	1.5	43
53	Effects of elevated atmospheric CO2, prolonged summer drought and temperature increase on N2O and CH4 fluxes in a temperate heathland. Soil Biology and Biochemistry, 2011, 43, 1660-1670.	8.8	43
54	Bacteria and Fungi Respond Differently to Multifactorial Climate Change in a Temperate Heathland, Traced with 13C-Glycine and FACE CO2. PLoS ONE, 2014, 9, e85070.	2.5	42

#	Article	IF	Citations
55	Peaâ€“barley intercropping and short-term subsequent crop effects across European organic cropping conditions. Nutrient Cycling in Agroecosystems, 2009, 85, 141-155.	2.2	40
56	Biologically Fixed N2 as a Source for N2O Production in a Grassâ€“clover Mixture, Measured by 15N2. Nutrient Cycling in Agroecosystems, 2006, 74, 13-26.	2.2	39
57	Long-term effects of cropping system on N2O emission potential. Soil Biology and Biochemistry, 2013, 57, 706-712.	8.8	39
58	Enhanced priming of old, not new soil carbon at elevated atmospheric CO2. Soil Biology and Biochemistry, 2016, 100, 140-148.	8.8	39
59	Cowpea N rhizodeposition and its below-ground transfer to a co-existing and to a subsequent millet crop on a sandy soil of the Sudano-Sahelian eco-zone. Plant and Soil, 2011, 340, 369-382.	3.7	37
60	Methane Oxidation in Pig and Cattle Slurry Storages, and Effects of Surface Crust Moisture and Methane Availability. Nutrient Cycling in Agroecosystems, 2006, 74, 1-11.	2.2	36
61	Short-term carbon and nitrogen cycling in urine patches assessed by combined carbon-13 and nitrogen-15 labelling. Agriculture, Ecosystems and Environment, 2007, 121, 84-92.	5.3	35
62	Combined climate factors alleviate changes in gross soil nitrogen dynamics in heathlands. Biogeochemistry, 2014, 120, 191-201.	3.5	34
63	Relationship Between Gross Nitrogen Cycling and Nitrous Oxide Emissionin Grass-clover Pasture. Nutrient Cycling in Agroecosystems, 2005, 72, 189-199.	2.2	33
64	Glycine uptake in heath plants and soil microbes responds to elevated temperature, CO2 and drought. Acta Oecologica, 2009, 35, 786-796.	1.1	33
65	Nitrogen turnover rates in a riparian fen determined by 15N dilution. Biology and Fertility of Soils, 1992, 14, 230-236.	4.3	31
66	Influence of15N enrichment on the net isotopic fractionation factor during the reduction of nitrate to nitrous oxide in soil. Rapid Communications in Mass Spectrometry, 2007, 21, 1447-1451.	1.5	31
67	Effects of green manure storage and incorporation methods on nitrogen release and N2O emissions after soil application. Biology and Fertility of Soils, 2014, 50, 1233-1246.	4.3	31
68	Effects of clover density on N2O emissions and plant-soil N transfers in a fertilised upland pasture. Plant and Soil, 2011, 343, 97-107.	3.7	30
69	The natural abundance of 15N in litter and soil profiles under six temperate tree species: N cycling depends on tree species traits and site fertility. Plant and Soil, 2013, 368, 375-392.	3.7	30
70	Title is missing!. Nutrient Cycling in Agroecosystems, 2001, 60, 15-21.	2.2	29
71	Postfire nitrogen balance of Mediterranean shrublands: Direct combustion losses versus gaseous and leaching losses from the postfire soil mineral nitrogen flush. Global Change Biology, 2018, 24, 4505-4520.	9.5	29
72	Deepened winter snow significantly influences the availability and forms of nitrogen taken up by plants in High Arctic tundra. Soil Biology and Biochemistry, 2019, 135, 222-234.	8.8	29

#	Article	IF	Citations
73	A review of the importance of mineral nitrogen cycling in the plant-soil-microbe system of permafrost-affected soilsâ€"changing the paradigm. Environmental Research Letters, 2022, 17, 013004.	5.2	29
74	Consequences of field <scp>N₂O</scp> emissions for the environmental sustainability of plantâ€based biofuels produced within an organic farming system. GCB Bioenergy, 2012, 4, 435-452.	5.6	27
75	Belowground heathland responses after 2Âyears of combined warming, elevated CO2 and summer drought. Biogeochemistry, 2010, 101, 27-42.	3.5	26
76	Collembola feeding habits and niche specialization in agricultural grasslands of different composition. Soil Biology and Biochemistry, 2014, 74, 31-38.	8.8	26
77	Long-term and realistic global change manipulations had low impact on diversity of soil biota in temperate heathland. Scientific Reports, 2017, 7, 41388.	3.3	25
78	Similar N2O flux from soil measured with different chamber techniques. Atmospheric Environment Part A General Topics, 1993, 27, 121-123.	1.3	24
79	Impact of future climatic conditions on the potential for soil organic matter priming. Soil Biology and Biochemistry, 2013, 65, 133-140.	8.8	24
80	UV-induced carbon monoxide emission from living vegetation. Biogeosciences, 2013, 10, 7877-7882.	3.3	24
81	Nitrogen rhizodeposition from soybean (Glycine max) and its impact on nutrient budgets in two contrasting environments of the Guinean savannah zone of Nigeria. Nutrient Cycling in Agroecosystems, 2009, 84, 49-58.	2.2	23
82	Microbial biomass, microbial diversity, soil carbon storage, and stability after incubation of soil from grassâ€"clover pastures of different age. Biology and Fertility of Soils, 2012, 48, 371-383.	4.3	23
83	Fire increases the risk of higher soil N2O emissions from Mediterranean Macchia ecosystems. Soil Biology and Biochemistry, 2015, 82, 44-51.	8.8	23
84	Oxidation of13C-labeled methane in surface crusts of pig- and cattle slurry. Isotopes in Environmental and Health Studies, 2005, 41, 125-133.	1.0	22
85	Organic matter flow in the food web at a temperate heath under multifactorial climate change. Rapid Communications in Mass Spectrometry, 2011, 25, 1485-1496.	1.5	21
86	Use of feathers to assess polychlorinated biphenyl and organochlorine pesticide exposure in top predatory bird species of Pakistan. Science of the Total Environment, 2016, 569-570, 1408-1417.	8.0	21
87	Context-dependent tree species effects on soil nitrogen transformations and related microbial functional genes. Biogeochemistry, 2018, 140, 145-160.	3.5	21
88	Biodegradation of chlorinated solvents in a water unsaturated topsoil. Chemosphere, 2003, 51, 143-152.	8.2	20
89	UV-induced N2O emission from plants. Atmospheric Environment, 2014, 99, 206-214.	4.1	20
90	Biological 12Câ€"13C fractionation increases with increasing community-complexity in soil microcosms. Soil Biology and Biochemistry, 2014, 69, 197-201.	8.8	20

#	Article	IF	Citations
91	CROP RESIDUE MANAGEMENT STRATEGIES TO REDUCE N-LOSSESâ€"INTERACTION WITH CROP N SUPPLY. Communications in Soil Science and Plant Analysis, 2001, 32, 981-996.	1.4	19
92	A decade of freeâ€air <scp>CO</scp>₂ enrichment increased the carbon throughput in a grassâ€clover ecosystem but did not drastically change carbon allocation patterns. Functional Ecology, 2014, 28, 538-545.	3.6	18
93	Short-term utilization of carbon by the soil microbial community under future climatic conditions in a temperate heathland. Soil Biology and Biochemistry, 2014, 68, 9-19.	8.8	18
94	Impact of decade-long warming, nutrient addition and shading on emission and carbon isotopic composition of CO 2 from two subarctic dwarf shrub heaths. Soil Biology and Biochemistry, 2017, 111, 15-24.	8.8	18
95	Gas cleaning with hot char beds studied by stable isotopes. Journal of Analytical and Applied Pyrolysis, 2014, 107, 174-182.	5.5	17
96	Accumulation of soil carbon under elevated CO₂ unaffected by warming and drought. Global Change Biology, 2019, 25, 2970-2977.	9.5	17
97	Gross N transformation rates after application of household compost or domestic sewage sludge. Agronomy for Sustainable Development, 2002, 22, 723-730.	0.8	17
98	Development of an accumulationâ€based system for costâ€effective chamber measurements of inert trace gas fluxes. European Journal of Soil Science, 2010, 61, 785-792.	3.9	15
99	Annual maize and perennial grass-clover strip cropping for increased resource use efficiency and productivity using organic farming practice as a model. European Journal of Agronomy, 2013, 47, 55-64.	4.1	15
100	Individual variation of persistent organic pollutants in relation to stable isotope ratios, sex, reproductive phase and oxidative status in Scopoli's shearwaters (Calonectris diomedea) from the Southern Mediterranean. Science of the Total Environment, 2017, 598, 179-187.	8.0	13
101	Linking rhizospheric CH4 oxidation and net CH4 emissions in an arctic wetland based on 13CH4 labeling of mesocosms. Plant and Soil, 2017, 412, 201-213.	3.7	13
102	Resistance of soil protein depolymerization rates to eight years of elevated CO2, warming, and summer drought in a temperate heathland. Biogeochemistry, 2018, 140, 255-267.	3.5	13
103	Inorganic carbon fluxes across the vadose zone of planted and unplanted soil mesocosms. Biogeosciences, 2014, 11, 7179-7192.	3.3	12
104	The first exposure assessment of legacy and unrestricted brominated flame retardants in predatory birds of Pakistan. Environmental Pollution, 2017, 220, 1208-1219.	7.5	12
105	Nitrous oxide surface fluxes in a low Arctic heath: Effects of experimental warming along a natural snowmelt gradient. Soil Biology and Biochemistry, 2021, 160, 108346.	8.8	12
106	Reactive nitrogen and greenhouse gas flux interactions in terrestrial ecosystems. Plant and Soil, 2011, 343, 1-3.	3.7	11
107	Is methane released from the forest canopy?. IForest, 2011, 4, 200-204.	1.4	11
108	Priming of Soil Carbon Decomposition in Two Inner Mongolia Grassland Soils following Sheep Dung Addition: A Study Using 13C Natural Abundance Approach. PLoS ONE, 2013, 8, e78578.	2.5	11

#	Article	IF	Citations
109	Effects of two wood-based biochars on the fate of added fertilizer nitrogenâ€”a 15N tracing study. Biology and Fertility of Soils, 2021, 57, 457-470.	4.3	11
110	Fire increases soil nitrogen retention and alters nitrogen uptake patterns among dominant shrub species in an Arctic dry heath tundra. Science of the Total Environment, 2022, 807, 150990.	8.0	11
111	Stabilization and plant uptake of N from 15N-labelled pea residue 16.5 years after incorporation in soil. Soil Biology and Biochemistry, 2006, 38, 1998-2000.	8.8	10
112	Corrigendum to "Can current moisture responses predict soil CO₂ efflux under altered precipitation regimes? A synthesis of manipulation experiments". Biogeosciences, 2014, 11, 3307-3308.	3.3	10
113	Effects of Lime and Concrete Waste on Vadose Zone Carbon Cycling. Vadose Zone Journal, 2014, 13, 1-11.	2.2	10
114	Activity of Type I Methanotrophs Dominates under High Methane Concentration: Methanotrophic Activity in Slurry Surface Crusts as Influenced by Methane, Oxygen, and Inorganic Nitrogen. Journal of Environmental Quality, 2017, 46, 767-775.	2.0	10
115	Effects of fire on <scp>CO₂</scp>, <scp>CH₄</scp>, and <scp>N₂O</scp> exchange in a wellâ€drained Arctic heath ecosystem. Global Change Biology, 2022, 28, 4882-4899.	9.5	10
116	Measurement of carbon dioxide fluxes in a free-air carbon dioxide enrichment experiment using the closed flux chamber technique. Atmospheric Environment, 2011, 45, 208-214.	4.1	9
117	Paddy soil drainage influences residue carbon contribution to methane emissions. Journal of Environmental Management, 2018, 225, 168-176.	7.8	9
118	Nitrogen transport in a tundra landscape: the effects of early and late growing season lateral N inputs on arctic soil and plant N pools and N2O fluxes. Biogeochemistry, 2022, 157, 69-84.	3.5	9
119	<i>In situ</i>¹³CO₂ pulseâ€labeling in a temperate heathland â€“ development of a mobile multiâ€plot field setup. Rapid Communications in Mass Spectrometry, 2013, 27, 1417-1428.	1.5	8
120	Urea in Weaver Ant Feces: Quantification and Investigation of the Uptake and Translocation of Urea in Coffea arabica. Journal of Plant Growth Regulation, 2016, 35, 803-814.	5.1	8
121	Effects of experimental fire in combination with climate warming on greenhouse gas fluxes in Arctic tundra soils. Science of the Total Environment, 2021, 795, 148847.	8.0	8
122	Nitrous oxide emission from Ulva lactuca incubated in batch cultures is stimulated by nitrite, nitrate and light. Journal of Experimental Marine Biology and Ecology, 2013, 448, 37-45.	1.5	7
123	Isotopic methods for nonâ€destructive assessment of carbon dynamics in shrublands under longâ€term climate change manipulation. Methods in Ecology and Evolution, 2018, 9, 866-880.	5.2	6
124	Combining a Quantum Cascade Laser Spectrometer with an Automated Closed-Chamber System for Î´13C Measurements of Forest Soil, Tree Stem and Tree Root CO2 Fluxes. Forests, 2019, 10, 432.	2.1	6
125	Production of N2O in soil during decomposition of dead yeast cells with different spatial distributions. Plant and Soil, 1996, 181, 7-12.	3.7	5
126	Strip cropping of alternating perennial grassâ€“clover and annual ryeâ€“vetch intercrops when grown within an organic farming system. Field Crops Research, 2012, 136, 1-11.	5.1	5

#	Article	IF	Citations
127	Technical Note: Mesocosm approach to quantify dissolved inorganic carbon percolation fluxes. Biogeosciences, 2014, 11, 1077-1084.	3.3	5
128	Combined effects of glacial retreat and penguin activity on soil greenhouse gas fluxes on South Georgia, sub-Antarctica. Science of the Total Environment, 2020, 718, 135255.	8.0	5
129	Nitrogen isotopes reveal high N retention in plants and soil of old Norse and Inuit deposits along a wet-dry arctic fjord transect in Greenland. Plant and Soil, 2020, 455, 241-255.	3.7	5
130	Natural Carbon Isotopes Used to Study Methane Consumption and Production in Soil. Isotopes in Environmental and Health Studies, 2002, 38, 149-157.	1.0	4
131	Modelling impacts of lateral N flows and seasonal warming on an arctic footslope ecosystem N budget and N2O emissions based on species-level responses. Biogeochemistry, 2022, 158, 195-213.	3.5	4
132	The Influence of Grain Legume and Tillage Strategies on CO2 and N2O Gas Exchange under Varied Environmental Conditions. Agriculture (Switzerland), 2021, 11, 464.	3.1	2
133	Solar UV Irradiation-Induced Production of Greenhouse Gases from Plant Surfaces: From Leaf to Earth. Progress in Botany Fortschritte Der Botanik, 2016, , 407-437.	0.3	0