Gerhard Gebauer

List of Publications by Year
in descending order

123 papers	7,362 citations	44069 48 h-index	58581 82 g-index
125 all docs	125 docs citations	125 times ranked	5446 citing authors

#	Article	IF	Citations
1	Effects of forest decline on uptake and leaching of deposited nitrate determined from 15N and 18O measurements. Nature, 1994, 372, 765-767.	27.8	386
2	Changing partners in the dark: isotopic and molecular evidence of ectomycorrhizal liaisons between forest orchids and trees. Proceedings of the Royal Society B: Biological Sciences, 2004, 271, 1799-1806.	2.6	356
3	Carbon and nitrogen isotope ratios in different compartments of a healthy and a declining Picea abies forest in the Fichtelgebirge, NE Bavaria. Oecologia, 1991, 87, 198-207.	2.0	315
4	15 N and 13 C natural abundance of autotrophic and mycoâ€heterotrophic orchids provides insight into nitrogen and carbon gain from fungal association. New Phytologist, 2003, 160, 209-223.	7.3	283
5	Disentangling a rainforest food web using stable isotopes: dietary diversity in a species-rich ant community. Oecologia, 2003, 137, 426-435.	2.0	268
6	Mixotrophy in orchids: insights from a comparative study of green individuals and nonphotosynthetic individuals of Cephalanthera damasonium. New Phytologist, 2005, 166, 639-653.	7.3	250
7	Nitrogen nutrition and isotope differences among life forms at the northern treeline of Alaska. Oecologia, 1994, 100, 406-412.	2.0	235
8	Estimates of nitrogen fixation by trees on an aridity gradient in Namibia. Oecologia, 1991, 88, 451-455.	2.0	184
9	The Effects of Above- and Belowground Mutualisms on Orchid Speciation and Coexistence. American Naturalist, 2011, 177, E54-E68.	2.1	182
10	Loss of functional diversity of ant assemblages in secondary tropical forests. Ecology, 2010, 91, 782-792.	3.2	169
11	Wide geographical and ecological distribution of nitrogen and carbon gains from fungi in pyroloids and monotropoids (Ericaceae) and in orchids. New Phytologist, 2007, 175, 166-175.	7.3	143
12	Cephalanthera longifolia (Neottieae, Orchidaceae) is mixotrophic: a comparative study between green and nonphotosynthetic individuals. Canadian Journal of Botany, 2006, 84, 1462-1477.	1.1	133
13	Evidence for novel and specialized mycorrhizal parasitism: the orchid <i>Gastrodia confusa</i> gains carbon from saprotrophic <i>Mycena</i>. Proceedings of the Royal Society B: Biological Sciences, 2009, 276, 761-767.	2.6	133
14	Isotope ratios and concentrations of sulfur and nitrogen in needles and soils of Picea abies stands as influenced by atmospheric deposition of sulfur and nitrogen compounds. Plant and Soil, 1994, 164, 267-281.	3.7	127
15	15N natural abundance in fruit bodies of different functional groups of fungi in relation to substrate utilization. New Phytologist, 1999, 142, 93-101.	7.3	125
16	Drought turns a Central European Norway spruce forest soil from an N₂O source to a transient N₂O sink. Global Change Biology, 2009, 15, 850-860.	9.5	123
17	Photosynthetic Mediterranean meadow orchids feature partial mycoheterotrophy and specific mycorrhizal associations. American Journal of Botany, 2011, 98, 1148-1163.	1.7	113
18	Nitrate, nitrate reduction and organic nitrogen in plants from different ecological and taxonomic groups of Central Europe. Oecologia, 1988, 75, 371-385.	2.0	109

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19	Below-ground interactions in dryland agroforestry. Forest Ecology and Management, 1998, 111, 157-169.	3.2	106
20	Plastic mulching in agricultureâ€"Friend or foe of N2O emissions?. Agriculture, Ecosystems and Environment, 2013, 167, 43-51.	5.3	105
21	Partial mycoheterotrophy is more widespread among orchids than previously assumed. New Phytologist, 2016, 211, 11-15.	7.3	104
22	Partitioning of 15N-labeled ammonium and nitrate among soil, litter, below- and above-ground biomass of trees and understory in a 15-year-old Picea abies plantation. Biogeochemistry, 1996, 33, 1.	3.5	103
23	The Physiological Ecology of Mycoheterotrophy. , 2013, , 297-342.		100
24	Nitrogen Isotope Ratios in Different Compartments of a Mixed Stand of Spruce, Larch and Beech Trees and of Understorey Vegetation Including Fungi. Isotopes in Environmental and Health Studies, 1993, 29, 35-44.	0.2	96
25	Repeated dryingâ€"rewetting cycles and their effects on the emission of CO₂, N₂O, NO, and CH₄ in a forest soil. Journal of Plant Nutrition and Soil Science, 2008, 171, 719-728.	1.9	89
26	Impact of altering the water table height of an acidic fen on N₂O and NO fluxes and soil concentrations. Global Change Biology, 2010, 16, 220-233.	9.5	87
27	Distinguishing sources of N2O in European grasslands by stable isotope analysis. Rapid Communications in Mass Spectrometry, 2004, 18, 1201-1207.	1.5	86
28	Irradiance governs exploitation of fungi: fine-tuning of carbon gain by two partially myco-heterotrophic orchids. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 1333-1336.	2.6	86
29	The ectomycorrhizal specialist orchid <i>Corallorhiza trifida</i> is a partial mycoâ€heterotroph. New Phytologist, 2008, 178, 395-400.	7.3	83
30	15N-ammonium and 15N-nitrate uptake of a 15-year-old Picea abies plantation. Oecologia, 1995, 102, 361-370.	2.0	82
31	C and N stable isotope signatures reveal constraints to nutritional modes in orchids from the Mediterranean and Macaronesia. American Journal of Botany, 2010, 97, 903-912.	1.7	75
32	Emission of gaseous nitrogen oxides from an extensively managed grassland in NE Bavaria, Germany. Biogeochemistry, 2003, 63, 249-267.	3.5	74
33	Carbon and nitrogen gain during the growth of orchid seedlings in nature. New Phytologist, 2014, 202, 606-615.	7.3	74
34	Isotopic evidence of full and partial mycoâ€heterotrophy in the plant tribe Pyroleae (Ericaceae). New Phytologist, 2009, 182, 719-726.	7.3	73
35	N2O emission in a Norway spruce forest due to soil frost: concentration and isotope profiles shed a new light on an old story. Biogeochemistry, 2010, 97, 21-30.	3.5	69
36	Nitrate content and nitrate reductase activity in Rumex obtusifolius L.. Oecologia, 1984, 63, 136-142.	2.0	68

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37	Increased emissions of nitric oxide and nitrous oxide following tillage of a perennial pasture. Nutrient Cycling in Agroecosystems, 2004, 70, 13-22.	2.2	68
38	A methodological approach to improve estimates of nutrient gains by partially myco-heterotrophic plantsâ€. Isotopes in Environmental and Health Studies, 2008, 44, 393-401.	1.0	68
39	Carbon and nitrogen isotope ratios of mistletoes growing on nitrogen and non-nitrogen fixing hosts and on CAM plants in the Namib desert confirm partial heterotrophy. Oecologia, 1991, 88, 457-462.	2.0	66
40	Title is missing!. Plant and Soil, 2002, 239, 253-265.	3.7	65
41	The chlorophyllâ€containing orchid <i>Corallorhiza trifida</i> derives little carbon through photosynthesis. New Phytologist, 2009, 183, 358-364.	7.3	64
42	The utilization of nitrogen from insect capture by different growth forms of Drosera from Southwest Australia. Oecologia, 1991, 87, 240-246.	2.0	61
43	Storm pulses and varying sources of hydrologic carbon export from a mountainous watershed. Journal of Hydrology, 2012, 440-441, 90-101.	5.4	59
44	¹⁵N and ¹³C natural abundance of two mycoheterotrophic and a putative partially mycoheterotrophic species associated with arbuscular mycorrhizal fungi. New Phytologist, 2010, 188, 590-596.	7.3	58
45	The importance of associations with saprotrophic non-<i>Rhizoctonia</i>fungi among fully mycoheterotrophic orchids is currently under-estimated: novel evidence from sub-tropical Asia. Annals of Botany, 2015, 116, 423-435.	2.9	57
46	Uptake of nitrogen and carbon from doubleâ€labelled (15 N and 13 C) glycine by mycorrhizal pine seedlings. New Phytologist, 2004, 164, 383-388.	7.3	56
47	Stable N-isotope signatures of central European ants â€“ assessing positions in a trophic gradient. Insectes Sociaux, 2007, 54, 393-402.	1.2	55
48	Exploiting mycorrhizas in broad daylight: Partial mycoheterotrophy is a common nutritional strategy in meadow orchids. Journal of Ecology, 2018, 106, 168-178.	4.0	55
49	Fluxes of climateâ€relevant trace gases between a Norway spruce forest soil and atmosphere during repeated freezeâ€“thaw cycles in mesocosms. Journal of Plant Nutrition and Soil Science, 2008, 171, 729-739.	1.9	54
50	Emission of gaseous nitrogen oxides from an extensively managed grassland in NE Bavaria, Germany.. Biogeochemistry, 2003, 63, 229-247.	3.5	51
51	Mucoromycotina Fine Root Endophyte Fungi Form Nutritional Mutualisms with Vascular Plants. Plant Physiology, 2019, 181, 565-577.	4.8	51
52	Anthropogenic impacts on natural nitrogen isotope variations in Pinus sylvestris stands in an industrially polluted area. Environmental Pollution, 1997, 97, 175-181.	7.5	50
53	N₂O concentration and isotope signature along profiles provide deeper insight into the fate of N₂O in soilsâ€. Isotopes in Environmental and Health Studies, 2008, 44, 377-391.	1.0	49
54	A record of N2O and CH4 emissions and underlying soil processes of Korean rice paddies as affected by different water management practices. Biogeochemistry, 2013, 115, 317-332.	3.5	47

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55	Temporal Stability of Spatial Patterns of Nitrous Oxide Fluxes from Sloping Grassland. Journal of Environmental Quality, 2000, 29, 1397-1407.	2.0	45
56	Plant family identity distinguishes patterns of carbon and nitrogen stable isotope abundance and nitrogen concentration in mycoheterotrophic plants associated with ectomycorrhizal fungi. Annals of Botany, 2016, 118, 467-479.	2.9	45
57	You are what you get from your fungi: nitrogen stable isotope patterns in Epipactis species. Annals of Botany, 2017, 119, 1085-1095.	2.9	44
58	Temporal variation in mycorrhizal diversity and carbon and nitrogen stable isotope abundance in the wintergreen meadow orchid <i>Anacamptis morio</i>. New Phytologist, 2015, 205, 1308-1319.	7.3	41
59	N2O and NO fluxes between a Norway spruce forest soil and atmosphere as affected by prolonged summer drought. Soil Biology and Biochemistry, 2009, 41, 1986-1995.	8.8	40
60	The degree of mycoheterotrophic carbon gain in green, variegated and vegetative albino individuals of <i>Cephalanthera damasonium</i> is related to leaf chlorophyll concentrations. New Phytologist, 2011, 189, 790-796.	7.3	39
61	Stable isotope signatures of underground seedlings reveal the organic matter gained by adult orchids from mycorrhizal fungi. Functional Ecology, 2018, 32, 870-881.	3.6	36
62	Nitrate reduction and nitrate content in ash trees (Fraxinus excelsior L.): distribution between compartments, site comparison and seasonal variation. Trees - Structure and Function, 1992, 6, 236.	1.9	34
63	Are carbon and nitrogen exchange between fungi and the orchid Goodyera repens affected by irradiance?. Annals of Botany, 2015, 115, 251-261.	2.9	33
64	Biomass production and nitrate metabolism of Atriplex hortensis L. (C3 plant) and Amaranthus retroflexus L. (C4 plant) in cultures at different levels of nitrogen supply. Oecologia, 1987, 72, 303-314.	2.0	32
65	Limited carbon and mineral nutrient gain from mycorrhizal fungi by adult Australian orchids. American Journal of Botany, 2012, 99, 1133-1145.	1.7	32
66	Nitrate content and nitrate reductase activity in Rumex obtusifolius L.. Oecologia, 1984, 63, 380-385.	2.0	30
67	Is it better to give than to receive? A stable isotope perspective on orchidâ€“fungal carbon transport in the green orchid species <i>Goodyera repens </i>and<i> Goodyera oblongifolia</i>. New Phytologist, 2009, 182, 8-11.	7.3	30
68	Fungal host specificity is not a bottleneck for the germination of <scp>P</scp>yroleae species (<scp>E</scp>ricaceae) in a <scp>B</scp>avarian forest. Molecular Ecology, 2013, 22, 1473-1481.	3.9	28
69	Abundance of Methanogens, Methanotrophic Bacteria, and Denitrifiers in Rice Paddy Soils. Wetlands, 2014, 34, 213-223.	1.5	28
70	The giant mycoheterotrophic orchid <i>Erythrorchis altissima</i> is associated mainly with a divergent set of woodâ€decaying fungi. Molecular Ecology, 2018, 27, 1324-1337.	3.9	26
71	Discreet heterotrophs: green plants that receive fungal carbon through <i>Paris</i>â€type arbuscular mycorrhiza. New Phytologist, 2020, 226, 960-966.	7.3	26
72	Controlling nitrous oxide emissions from grassland livestock production systems. Nutrient Cycling in Agroecosystems, 1998, 52, 141-149.	2.2	24

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73	Biomass production and nitrogen content of C3- and C4- grasses in pure and mixed culture with different nitrogen supply. Oecologia, 1987, 71, 613-617.	2.0	23
74	The Influence of Ammonium on Nitrate Uptake and Assimilation in 2-Year-Old Ash and Oak Trees - A Tracer-Study with ¹⁵N. Isotopes in Environmental and Health Studies, 1993, 29, 85-92.	0.2	21
75	Title is missing!. Plant and Soil, 1998, 199, 59-70.	3.7	21
76	Title is missing!. Plant and Soil, 1999, 210, 249-262.	3.7	20
77	Tree species of the central amazon and soil moisture alter stable isotope composition of nitrogen and oxygen in nitrous oxide evolved from soil. Isotopes in Environmental and Health Studies, 2003, 39, 41-52.	1.0	20
78	Nitrogen uptake of sorghum (Sorghum bicolor L.) from tree mulch and mineral fertilizer under high leaching conditions estimated by nitrogen-15 enrichment. Biology and Fertility of Soils, 1999, 30, 90-95.	4.3	19
79	Partial mycoheterotrophy is common among chlorophyllous plants with <i>Paris</i>-type arbuscular mycorrhiza. Annals of Botany, 2021, 127, 645-653.	2.9	19
80	Origin and fate of nitrate runoff in an agricultural catchment: Haean, South Korea â€" Comparison of two extremely different monsoon seasons. Science of the Total Environment, 2019, 648, 66-79.	8.0	18
81	Unveiling community patterns and trophic niches of tropical and temperate ants using an integrative framework of field data, stable isotopes and fatty acids. PeerJ, 2018, 6, e5467.	2.0	18
82	Nitrogen use in mixed tree crop plantations with a legume cover crop. Plant and Soil, 2000, 225, 63-72.	3.7	17
83	Stable isotope signatures confirm carbon and nitrogen gain through ectomycorrhizas in the ghost orchid <i>Epipogium aphyllum</i> Swartz*. Plant Biology, 2011, 13, 270-275.	3.8	16
84	Complementary use of 1H NMR and multi-element IRMS in association with chemometrics enables effective origin analysis of cocoa beans (Theobroma cacao L.). Food Chemistry, 2019, 299, 125105.	8.2	16
85	Uptake of ¹⁵NH₃ by <i>Picea abies</i> in Closed Chamber Experiments. Isotopes in Environmental and Health Studies, 1993, 29, 71-76.	0.2	15
86	Inferring the mycorrhizal status of introduced plants of Cypripedium calceolus (Orchidaceae) in northern England using stable isotope analysis. Botanical Journal of the Linnean Society, 2018, 186, 587-590.	1.6	15
87	Dark septate endophytes and arbuscular mycorrhizal fungi (<i>Paris</i>â€morphotype) affect the stable isotope composition of â€˜classicallyâ€™ nonâ€mycorrhizal plants. Functional Ecology, 2020, 34, 2453-2466.	3.6	15
88	Mycoheterotrophic plants living on arbuscular mycorrhizal fungi are generally enriched in ¹³C, ¹⁵N and ²H isotopes. Journal of Ecology, 2020, 108, 1250-1261.	4.0	15
89	Light limitation and partial mycoheterotrophy in rhizoctonia-associated orchids. Oecologia, 2019, 189, 375-383.	2.0	14
90	Nitrogen uptake from 15N-enriched fertilizer by four tree crops in an Amazonian agroforest. Agroforestry Systems, 2003, 57, 213-224.	2.0	13

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91	Drying-Rewetting and Flooding Impact Denitrifier Activity Rather than Community Structure in a Moderately Acidic Fen. Frontiers in Microbiology, 2016, 7, 727.	3.5	13
92	Denitrification at two nitrogen-polluted, ombrotrophic Sphagnum bogs in Central Europe: Insights from porewater N2O-isotope profiles. Soil Biology and Biochemistry, 2015, 81, 48-57.	8.8	12
93	Biomass production and nitrogen contents of the CAM plants Kalanchoe daigremontiana and K. tubiflora in cultures with different nitrogen and water supply. Oecologia, 1990, 82, 478-483.	2.0	11
94	On-Line Analysis of Stable Isotopes of Nitrogen in NH3, NO, and NO2at Natural Abundance Levels. Analytical Chemistry, 1998, 70, 2750-2756.	6.5	11
95	Nitrogen cycling assessment in a hedgerow intercropping system using 15N enrichment. Nutrient Cycling in Agroecosystems, 2002, 62, 1-9.	2.2	11
96	Trophic ecology of parabiotic ants: Do the partners have similar food niches?. Austral Ecology, 2012, 37, 537-546.	1.5	11
97	Monsoon rains, drought periods and soil texture as drivers of soil N2O fluxes â€“ Soil drought turns East Asian temperate deciduous forest soils into temporary and unexpectedly persistent N2O sinks. Soil Biology and Biochemistry, 2013, 57, 273-281.	8.8	11
98	Peatlands in a eutrophic world â€“ Assessing the state of a poor fen-bog transition in southern Ontario, Canada, after long term nutrient input and altered hydrological conditions. Soil Biology and Biochemistry, 2017, 114, 131-144.	8.8	11
99	Influence of Nitrogen Supply and Temperature on Stable Carbon Isotope Ratios in Plants of Different Photosynthetic Pathways (C₃, C₄, CAM). Isotopes in Environmental and Health Studies, 1993, 29, 9-13.	0.2	10
100	Picky carnivorous plants? Investigating preferences for preysâ€™ trophic levels â€“ a stable isotope natural abundance approach with two terrestrial and two aquatic Lentibulariaceae tested in Central Europe. Annals of Botany, 2019, 123, 1167-1177.	2.9	10
101	Ecosystem Processes Show Uniform Sensitivity to Winter Soil Temperature Change Across a Gradient from Central to Cold Marginal Stands of a Major Temperate Forest Tree. Ecosystems, 2021, 24, 1545-1560.	3.4	10
102	Fluctuations in nitrate reductase activity, and nitrate and organic nitrogen concentrations of succulent plants under different nitrogen and water regimes. Oecologia, 1993, 94, 146-152.	2.0	8
103	The Fate of [15N]Ammonium and [15N]Nitrate in the Soil of a 140-Year-Old Spruce Stand (Picea Abies) in the Fichtelgebirge (NE-Bavaria). Isotopes in Environmental and Health Studies, 1996, 32, 149-158.	1.0	8
104	Sucrose unloading in the hypocotyl of the Ricinus communis L. seedling measured by 13 C-nuclear magnetic resonance spectroscopy in vivo. Planta, 1999, 208, 358-364.	3.2	7
105	Relationship between nitrogen isotope ratios of NO3âˆ’ and N2O in vertical porewater profiles through a polluted rain-fed peat bog. Soil Biology and Biochemistry, 2018, 123, 7-9.	8.8	7
106	An ecological perspective on â€˜plant carnivory beyond bogsâ€™: nutritional benefits of prey capture for the Mediterranean carnivorous plant Drosophyllum lusitanicum. Annals of Botany, 2019, 124, 65-76.	2.9	6
107	Distinguishing carbon gains from photosynthesis and heterotrophy in C3-hemiparasiteâ€“C3-host pairs. Annals of Botany, 2022, 129, 647-656.	2.9	6
108	Stealing sugar from the honey fungus. Plant, Cell and Environment, 2021, 44, 17-19.	5.7	5

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109	Impacts on food web properties of island invertebrate communities vary between different human land uses. Science of the Total Environment, 2022, 831, 154838.	8.0	5
110	¹⁵N-Labelled Ammonium and Nitrate Uptake by the Grass <i>Calamagrostis villosa</i>. Isotopes in Environmental and Health Studies, 1993, 29, 77-84.	0.2	4
111	Impact of Global Climate Change on the European Barley Market Requires Novel Multi-Method Approaches to Preserve Crop Quality and Authenticity. Foods, 2021, 10, 1592.	4.3	4
112	The use of stable isotopes in ecosystem research. First results of a field study with 15N. Isotopes in Environmental and Health Studies, 1992, 28, 51-59.	0.2	3
113	Uptake of [¹⁵N] Ammonium and [¹⁵N]Nitrate in a 140-Year-Old Spruce Stand (<i>Picea abies</i>) in the Fichtelgebirge (NE Bavaria). Isotopes in Environmental and Health Studies, 1996, 32, 141-148.	1.0	3
114	The fate of monsoonal atmospheric nitrate deposition in two forest catchments in Soyang lake watershed, South Korea: a mass balance and stable isotope approach. Biogeochemistry, 2019, 142, 95-116.	3.5	3
115	15N tracer enrichment in response to winter soil temperature manipulation differs between canopy trees and juveniles. Trees - Structure and Function, 2021, 35, 325-331.	1.9	3
116	Fungal association and root morphology shift stepwise during ontogenesis of orchid<i>Cremastra appendiculata</i>towards autotrophic nutrition. AoB PLANTS, 2022, 14, .	2.3	3
117	Investigations on the Nitrogen Metabolism of Forest Trees by Mathematical Modelling of Natural Isotope Ratios. Isotopes in Environmental and Health Studies, 1993, 29, 199-214.	0.2	2
118	On-Line Analysis of Nitrogen Stable Isotopes in NO from Ambient Air Samples. Analytical Chemistry, 2001, 73, 1126-1133.	6.5	2
119	Dinner with the roommates: trophic niche differentiation and competition in a mutualistic antâ€ant association. Ecological Entomology, 2021, 46, 562-572.	2.2	2
120	Specific response of sugar beet cultivars to different nitrogen forms. Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science, 1986, 149, 561-571.	0.4	1
121	Allochthonous resources are less important for faunal communities on highly productive, small tropical islands. Ecology and Evolution, 2021, 11, 13128-13138.	1.9	1
122	Drought turns a Central European Norway spruce forest soil from an N2O source to a transient N2O sink. Global Change Biology, 2008, , .	9.5	0
123	Inferring the mycorrhizal status of introduced plants of Cypripedium calceolus (Orchidaceae) in northern England using stable isotope analysis. Botanical Journal of the Linnean Society, 0, , .	1.6	0