Heike BÃ¼cking

List of Publications by Year
in descending order

51 papers	4,976 citations	159525 30 h-index	206029 48 g-index
52 all docs	52 docs citations	52 times ranked	4736 citing authors

#	Article	IF	Citations
1	Reciprocal Rewards Stabilize Cooperation in the Mycorrhizal Symbiosis. Science, 2011, 333, 880-882.	6.0	1,373
2	Nitrogen transfer in the arbuscular mycorrhizal symbiosis. Nature, 2005, 435, 819-823.	13.7	876
3	Carbon availability triggers fungal nitrogen uptake and transport in arbuscular mycorrhizal symbiosis. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 2666-2671.	3.3	337
4	Fungal nutrient allocation in common mycorrhizal networks is regulated by the carbon source strength of individual host plants. New Phytologist, 2014, 203, 646-656.	3.5	246
5	Role of Arbuscular Mycorrhizal Fungi in the Nitrogen Uptake of Plants: Current Knowledge and Research Gaps. Agronomy, 2015, 5, 587-612.	1.3	200
6	Phosphate uptake, transport and transfer by the arbuscular mycorrhizal fungus Glomus intraradices is stimulated by increased carbohydrate availability. New Phytologist, 2005, 165, 899-912.	3.5	173
7	Regulation of the Nitrogen Transfer Pathway in the Arbuscular Mycorrhizal Symbiosis: Gene Characterization and the Coordination of Expression with Nitrogen Flux Â Â. Plant Physiology, 2010, 153, 1175-1187.	2.3	152
8	High functional diversity within species of arbuscular mycorrhizal fungi is associated with differences in phosphate and nitrogen uptake and fungal phosphate metabolism. Mycorrhiza, 2015, 25, 533-546.	1.3	137
9	The fungus does not transfer carbon to or between roots in an arbuscular mycorrhizal symbiosis. New Phytologist, 2004, 163, 617-627.	3.5	92
10	A toolbox of genes, proteins, metabolites and promoters for improving drought tolerance in soybean includes the metabolite coumestrol and stomatal development genes. BMC Genomics, 2016, 17, 102.	1.2	88
11	The Ectomycorrhizal Fungus <i>Laccaria bicolor</i> Produces Lipochitooligosaccharides and Uses the Common Symbiosis Pathway to Colonize <i>Populus</i> Roots. Plant Cell, 2019, 31, 2386-2410.	3.1	73
12	Hiding in a crowdâ€"does diversity facilitate persistence of a low-quality fungal partner in the mycorrhizal symbiosis?. Symbiosis, 2013, 59, 47-56.	1.2	69
13	Nutrient demand and fungal access to resources control the carbon allocation to the symbiotic partners in tripartite interactions of <scp><i>Medicago truncatula</i></scp>. Plant, Cell and Environment, 2019, 42, 270-284.	2.8	61
14	Triacylglyceride Metabolism by <i>Fusarium graminearum</i> During Colonization and Sexual Development on Wheat. Molecular Plant-Microbe Interactions, 2009, 22, 1492-1503.	1.4	55
15	Common mycorrhizal networks and their effect on the bargaining power of the fungal partner in the arbuscular mycorrhizal symbiosis. Communicative and Integrative Biology, 2016, 9, e1107684.	0.6	55
16	Spatial Structure and Interspecific Cooperation: Theory and an Empirical Test Using the Mycorrhizal Mutualism. American Naturalist, 2012, 179, E133-E146.	1.0	54
17	The fungal sheath of ectomycorrhizal pine roots: an apoplastic barrier for the entry of calcium, magnesium, and potassium into the root cortex?. Journal of Experimental Botany, 2002, 53, 1659-1669.	2.4	53
18	Uptake and transfer of nutrients in ectomycorrhizal associations: interactions between photosynthesis and phosphate nutrition. Mycorrhiza, 2003, 13, 59-68.	1.3	53

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19	Elemental contents in vacuolar granules of ectomycorrhizal fungi measured by EELS and EDXS. A comparison of different methods and preparation techniques. Micron, 1998, 29, 53-61.	1.1	51
20	Inhibition of a ubiquitously expressed pectin methyl esterase in Solanum tuberosum L. affects plant growth, leaf growth polarity, and ion partitioning. Planta, 2004, 219, 32-40.	1.6	51
21	Root exudates stimulate the uptake and metabolism of organic carbon in germinating spores of <i>Glomus intraradices</i>. New Phytologist, 2008, 180, 684-695.	3.5	48
22	The role of carbon in fungal nutrient uptake and transport. Plant Signaling and Behavior, 2012, 7, 1509-1512.	1.2	48
23	The Role of the Mycorrhizal Symbiosis in Nutrient Uptake of Plants and the Regulatory Mechanisms Underlying These Transport Processes. , 0, , .		48
24	Harnessing Soil Microbes to Improve Plant Phosphate Efficiency in Cropping Systems. Agronomy, 2019, 9, 127.	1.3	48
25	Host plant quality mediates competition between arbuscular mycorrhizal fungi. Fungal Ecology, 2016, 20, 233-240.	0.7	46
26	The ectomycorrhizal contribution to tree nutrition. Advances in Botanical Research, 2019, , 77-126.	0.5	44
27	Subcellular compartmentation of elements in nonâ€mycorrhizal and mycorrhizal roots of Pinus sylvestris : an Xâ€ray microanalytical study. I. The distribution of phosphate. New Phytologist, 2000, 145, 311-320.	3.5	41
28	Germinating spores of <i>Glomus intraradices</i> can use internal and exogenous nitrogen sources for <i>de novo</i> biosynthesis of amino acids. New Phytologist, 2009, 184, 399-411.	3.5	41
29	Arbuscular mycorrhizal growth responses are fungal specific but do not differ between soybean genotypes with different phosphate efficiency. Annals of Botany, 2016, 118, 11-21.	1.4	39
30	Do fungivores trigger the transfer of protective metabolites from host plants to arbuscular mycorrhizal hyphae?. Ecology, 2013, 94, 2019-2029.	1.5	36
31	Seasonal and cell type specific expression of sulfate transporters in the phloem of Populus reveals tree specific characteristics for SO4 2âˆ' storage and mobilization. Plant Molecular Biology, 2010, 72, 499-517.	2.0	34
32	Biodegradation of aromatic compounds by white rot and ectomycorrhizal fungal species and the accumulation of chlorinated benzoic acid in ectomycorrhizal pine seedlings. Chemosphere, 2002, 49, 297-306.	4.2	27
33	Misconceptions on the application of biological market theory to the mycorrhizal symbiosis. Nature Plants, 2016, 2, 16063.	4.7	23
34	Subcellular compartmentation of elements in nonâ€mycorrhizal and mycorrhizal roots of Pinus sylvestris : an Xâ€ray microanalytical study. II. The distribution of calcium, potassium and sodium. New Phytologist, 2000, 145, 321-331.	3.5	22
35	Genotypic differences in phosphorus acquisition efficiency and root performance of cotton (Gossypium hirsutum) under low-phosphorus stress. Crop and Pasture Science, 2019, 70, 344.	0.7	19
36	Ultrastructural element localization by EDXS in Empetrum nigrum. Micron, 2002, 33, 339-351.	1.1	16

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37	Phosphate absorption and efflux of three ectomycorrhizal fungi as affected by external phosphate, cation and carbohydrate concentrations. Mycological Research, 2004, 108, 599-609.	2.5	16
38	Metatranscriptomic Analysis and In Silico Approach Identified Mycoviruses in the Arbuscular Mycorrhizal Fungus Rhizophagus spp.. Viruses, 2018, 10, 707.	1.5	16
39	Massilia arenosa sp. nov., isolated from the soil of a cultivated maize field. International Journal of Systematic and Evolutionary Microbiology, 2020, 70, 3912-3920.	0.8	16
40	Applied jasmonates accumulate extracellularly in tomato, but intracellularly in barley. FEBS Letters, 2004, 562, 45-50.	1.3	14
41	Ectomycoremediation: An Eco-Friendly Technique for the Remediation of Polluted Sites. Soil Biology, 2011, , 209-229.	0.6	13
42	Massilia horti sp. nov. and Noviherbaspirillum arenae sp. nov., two novel soil bacteria of the Oxalobacteraceae. International Journal of Systematic and Evolutionary Microbiology, 2021, 71, .	0.8	12
43	Physiological and transcriptomic response of Medicago truncatula to colonization by high- or low-benefit arbuscular mycorrhizal fungi. Mycorrhiza, 2022, 32, 281-303.	1.3	12
44	Single-Cell RNA Sequencing of Plant-Associated Bacterial Communities. Frontiers in Microbiology, 2019, 10, 2452.	1.5	10
45	Duganella callida sp. nov., a novel addition to the Duganella genus, isolated from the soil of a cultivated maize field. International Journal of Systematic and Evolutionary Microbiology, 2021, 71, .	0.8	10
46	Draft Genome Sequence of <i>Massilia</i> sp. Strain ONC3, a Novel Bacterial Species of the <i>Oxalobacteraceae</i> Family Isolated from Garden Soil. Microbiology Resource Announcements, 2019, 8, .	0.3	9
47	Beneficial Plant Microbe Interactions and Their Effect on Nutrient Uptake, Yield, and Stress Resistance of Soybeans. , 0, , .		7
48	Editorial: Importance of Root Symbiomes for Plant Nutrition: New Insights, Perspectives and Future Challenges. Frontiers in Plant Science, 2020, 11, 594.	1.7	4
49	Inter- and Intraspecific Fungal Diversity in the Arbuscular Mycorrhizal Symbiosis. , 2017, , 253-274.		3
50	Draft Genome Sequence of Massilia sp. Strain MC02, Isolated from a Sandy Loam Maize Soil. Microbiology Resource Announcements, 2019, 8, .	0.3	2
51	Draft Genome Sequence of <i>Duganella</i> sp. Strain DN04, Isolated from Cultivated Soil. Microbiology Resource Announcements, 2019, 8, .	0.3	2