Annegret Kohler

List of Publications by Year
in descending order

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91 papers	11,058 citations	61984 43 h-index	45317 90 g-index
100 all docs	100 docs citations	100 times ranked	9636 citing authors

#	Article	IF	Citations
1	The Paleozoic Origin of Enzymatic Lignin Decomposition Reconstructed from 31 Fungal Genomes. Science, 2012, 336, 1715-1719.	12.6	1,424
2	Convergent losses of decay mechanisms and rapid turnover of symbiosis genes in mycorrhizal mutualists. Nature Genetics, 2015, 47, 410-415.	21.4	870
3	Genome of an arbuscular mycorrhizal fungus provides insight into the oldest plant symbiosis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20117-20122.	7.1	717
4	PÃ©rigord black truffle genome uncovers evolutionary origins and mechanisms of symbiosis. Nature, 2010, 464, 1033-1038.	27.8	641
5	Obligate biotrophy features unraveled by the genomic analysis of rust fungi. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9166-9171.	7.1	640
6	The Plant Cell Wallâ€“Decomposing Machinery Underlies the Functional Diversity of Forest Fungi. Science, 2011, 333, 762-765.	12.6	512
7	A Secreted Effector Protein of Laccaria bicolor Is Required for Symbiosis Development. Current Biology, 2011, 21, 1197-1203.	3.9	447
8	Genome sequence of the button mushroom Agaricus bisporus reveals mechanisms governing adaptation to a humic-rich ecological niche. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 17501-17506.	7.1	359
9	Effector MiSSP7 of the mutualistic fungus Laccaria bicolor stabilizes the Populus JAZ6 protein and represses jasmonic acid (JA) responsive genes. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8299-8304.	7.1	329
10	Unearthing the roots of ectomycorrhizal symbioses. Nature Reviews Microbiology, 2016, 14, 760-773.	28.6	317
11	Large-scale genome sequencing of mycorrhizal fungi provides insights into the early evolution of symbiotic traits. Nature Communications, 2020, 11, 5125.	12.8	258
12	Genome-wide identification of NBS resistance genes in Populus trichocarpa. Plant Molecular Biology, 2008, 66, 619-636.	3.9	247
13	The Ectomycorrhizal FungusLaccaria bicolorStimulates Lateral Root Formation in Poplar and Arabidopsis through Auxin Transport and Signaling. Plant Physiology, 2009, 151, 1991-2005.	4.8	244
14	Insight into tradeâ€•off between wood decay and parasitism from the genome of a fungal forest pathogen. New Phytologist, 2012, 194, 1001-1013.	7.3	210
15	Comparative genomics and transcriptomics depict ericoid mycorrhizal fungi as versatile saprotrophs and plant mutualists. New Phytologist, 2018, 217, 1213-1229.	7.3	185
16	Poplar Metal Tolerance Protein 1 Confers Zinc Tolerance and Is an Oligomeric Vacuolar Zinc Transporter with an Essential Leucine Zipper Motif. Plant Cell, 2003, 15, 2911-2928.	6.6	170
17	Transcript Profiling of Poplar Leaves upon Infection with Compatible and Incompatible Strains of the Foliar Rust Melampsora larici-populina Â. Plant Physiology, 2007, 144, 347-366.	4.8	156
18	Ectomycorrhizal ecology is imprinted in the genome of the dominant symbiotic fungus Cenococcum geophilum. Nature Communications, 2016, 7, 12662.	12.8	156

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19	Mapping the proteome of poplar and application to the discovery of drought-stress responsive proteins. Proteomics, 2006, 6, 6509-6527.	2.2	155
20	A Comprehensive Analysis of Genes Encoding Small Secreted Proteins Identifies Candidate Effectors in Melampsora larici-populina (Poplar Leaf Rust). Molecular Plant-Microbe Interactions, 2012, 25, 279-293.	2.6	150
21	Cloning and expression of multiple metallothioneins from hybrid poplar. New Phytologist, 2004, 164, 83-93.	7.3	123
22	Functional guild classification predicts the enzymatic role of fungi inÂlitter and soil biogeochemistry. Soil Biology and Biochemistry, 2015, 88, 441-456.	8.8	121
23	The AINTEGUMENTA LIKE1 Homeotic Transcription Factor PtAIL1 Controls the Formation of Adventitious Root Primordia in Poplar Â Â. Plant Physiology, 2012, 160, 1996-2006.	4.8	118
24	Pezizomycetes genomes reveal the molecular basis of ectomycorrhizal truffle lifestyle. Nature Ecology and Evolution, 2018, 2, 1956-1965.	7.8	95
25	Living in harmony in the wood underground: ectomycorrhizal genomics. Current Opinion in Plant Biology, 2007, 10, 204-210.	7.1	90
26	The poplar root transcriptome: analysis of 7000 expressed sequence tags. FEBS Letters, 2003, 542, 37-41.	2.8	89
27	Ethylene and jasmonic acid act as negative modulators during mutualistic symbiosis between <scp>L</scp>accaria bicolor and <scp>P</scp>opulus roots. New Phytologist, 2014, 202, 270-286.	7.3	87
28	The Mutualist Laccaria bicolor Expresses a Core Gene Regulon During the Colonization of Diverse Host Plants and a Variable Regulon to Counteract Host-Specific Defenses. Molecular Plant-Microbe Interactions, 2015, 28, 261-273.	2.6	82
29	Genomic and transcriptomic analysis of Laccaria bicolor CAZome reveals insights into polysaccharides remodelling during symbiosis establishment. Fungal Genetics and Biology, 2014, 72, 168-181.	2.1	81
30	Melampsora larici-populina Transcript Profiling During Germination and Timecourse Infection of Poplar Leaves Reveals Dynamic Expression Patterns Associated with Virulence and Biotrophy. Molecular Plant-Microbe Interactions, 2011, 24, 808-818.	2.6	80
31	Comparative genomics, proteomics and transcriptomics give new insight into the exoproteome of the basidiomycete <scp>H</scp>ebeloma cylindrosporum and its involvement in ectomycorrhizal symbiosis. New Phytologist, 2015, 208, 1169-1187.	7.3	78
32	A gene repertoire for nitrogen transporters in Laccaria bicolor. New Phytologist, 2008, 180, 343-364.	7.3	73
33	Development of the Poplar-Laccaria bicolor Ectomycorrhiza Modifies Root Auxin Metabolism, Signaling, and Response. Plant Physiology, 2015, 169, 890-902.	4.8	70
34	Populus trichocarpa and Populus deltoides Exhibit Different Metabolomic Responses to Colonization by the Symbiotic Fungus Laccaria bicolor. Molecular Plant-Microbe Interactions, 2014, 27, 546-556.	2.6	69
35	Analysis of expressed sequence tags from the ectomycorrhizal basidiomycetes Laccaria bicolor and Pisolithus microcarpus. New Phytologist, 2003, 159, 117-129.	7.3	67
36	Identification of Genes Differentially Expressed in Extraradical Mycelium and Ectomycorrhizal Roots during Paxillus involutus-Betula pendula Ectomycorrhizal Symbiosis. Applied and Environmental Microbiology, 2005, 71, 382-391.	3.1	62

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37	Laser microdissection and microarray analysis of <scp>T</scp>uber melanosporum ectomycorrhizas reveal functional heterogeneity between mantle and <scp>H</scp>artig net compartments. Environmental Microbiology, 2013, 15, 1853-1869.	3.8	62
38	Gene organization of the mating type regions in the ectomycorrhizal fungus Laccaria bicolor reveals distinct evolution between the two mating type loci. New Phytologist, 2008, 180, 329-342.	7.3	59
39	Laser Capture Microdissection of Uredinia Formed by Melampsora larici-populina Revealed a Transcriptional Switch Between Biotrophy and Sporulation. Molecular Plant-Microbe Interactions, 2010, 23, 1275-1286.	2.6	58
40	Genetic determinants of endophytism in the Arabidopsis root mycobiome. Nature Communications, 2021, 12, 7227.	12.8	58
41	RNA-Seq of Early-Infected Poplar Leaves by the Rust Pathogen Melampsora larici-populina Uncovers PtSultr3;5, a Fungal-Induced Host Sulfate Transporter. PLoS ONE, 2012, 7, e44408.	2.5	57
42	Genome-wide inventory of metal homeostasis-related gene products including a functional phytochelatin synthase in the hypogeous mycorrhizal fungus Tuber melanosporum. Fungal Genetics and Biology, 2011, 48, 573-584.	2.1	56
43	The ectomycorrhizal basidiomycete Laccaria bicolor releases a secreted Î²â€1,4 endoglucanase that plays a key role in symbiosis development. New Phytologist, 2018, 220, 1309-1321.	7.3	49
44	Secretome of the Free-living Mycelium from the Ectomycorrhizal Basidiomycete Laccaria bicolor. Journal of Proteome Research, 2012, 11, 157-171.	3.7	47
45	Phylogenetic, genomic organization and expression analysis of hydrophobin genes in the ectomycorrhizal basidiomycete Laccaria bicolor. Fungal Genetics and Biology, 2012, 49, 199-209.	2.1	47
46	The Perigord black truffle responds to cold temperature with an extensive reprogramming of its transcriptional activity. Fungal Genetics and Biology, 2011, 48, 585-591.	2.1	45
47	The effect of elevated carbon dioxide on the interaction between <scp>E</scp>ucalyptus grandis and diverse isolates of <scp>P</scp>isolithus sp. is associated with a complex shift in the root transcriptome. New Phytologist, 2015, 206, 1423-1436.	7.3	43
48	Biosynthesis of ferulic acid esters of plant cell wall polysaccharides in endomembranes from parsley cells. FEBS Letters, 1991, 290, 209-212.	2.8	41
49	The small secreted effector protein MiSSP7.6 of Laccaria bicolor is required for the establishment of ectomycorrhizal symbiosis. Environmental Microbiology, 2020, 22, 1435-1446.	3.8	37
50	Populus trichocarpa encodes small, effector-like secreted proteins that are highly induced during mutualistic symbiosis. Scientific Reports, 2017, 7, 382.	3.3	36
51	Genomeâ€wide search and functional identification of transcription factors in the mycorrhizal fungus Tuber melanosporum. New Phytologist, 2011, 189, 736-750.	7.3	35
52	Transcriptomic Responses of Phanerochaete chrysosporium to Oak Acetonic Extracts: Focus on a New Glutathione Transferase. Applied and Environmental Microbiology, 2014, 80, 6316-6327.	3.1	34
53	Fatty acid metabolism in the ectomycorrhizal fungus Laccaria bicolor. New Phytologist, 2009, 182, 950-964.	7.3	30
54	Genome-wide analysis of cell wall-related genes in Tuber melanosporum. Current Genetics, 2012, 58, 165-177.	1.7	30

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55	Transcriptome analysis of poplar rust telia reveals overwintering adaptation and tightly coordinated karyogamy and meiosis processes. Frontiers in Plant Science, 2013, 4, 456.	3.6	30
56	An ectomycorrhizal fungus alters sensitivity to jasmonate, salicylate, gibberellin, and ethylene in host roots. Plant, Cell and Environment, 2020, 43, 1047-1068.	5.7	30
57	Gene expression analysis of Populus deltoides roots subjected to copper stress. Environmental and Experimental Botany, 2009, 67, 335-344.	4.2	28
58	Comparison of the thiolâ€dependent antioxidant systems in the ectomycorrhizal Laccaria bicolor and the saprotrophic Phanerochaete chrysosporium. New Phytologist, 2008, 180, 391-407.	7.3	27
59	Study of nitrogen and carbon transfer from soil organic matter to Tuber melanosporum mycorrhizas and ascocarps using 15N and 13C soil labelling and whole-genome oligoarrays. Plant and Soil, 2015, 395, 351-373.	3.7	26
60	Evolution of the Mode of Nutrition in Symbiotic and Saprotrophic Fungi in Forest Ecosystems. Annual Review of Ecology, Evolution, and Systematics, 2021, 52, 385-404.	8.3	26
61	Expanding genomics of mycorrhizal symbiosis. Frontiers in Microbiology, 2014, 5, 582.	3.5	25
62	The SlZRT1 Gene Encodes a Plasma Membrane-Located ZIP (Zrt-, Irt-Like Protein) Transporter in the Ectomycorrhizal Fungus Suillus luteus. Frontiers in Microbiology, 2017, 8, 2320.	3.5	24
63	Secretome Analysis from the Ectomycorrhizal Ascomycete Cenococcum geophilum. Frontiers in Microbiology, 2018, 9, 141.	3.5	24
64	Mycorrhizal effector PaMiSSP10b alters polyamine biosynthesis in Eucalyptus root cells and promotes root colonization. New Phytologist, 2020, 228, 712-727.	7.3	24
65	The mutualism effector MiSSP7 of Laccaria bicolor alters the interactions between the poplar JAZ6 protein and its associated proteins. Scientific Reports, 2020, 10, 20362.	3.3	21
66	Evolutionary transition to the ectomycorrhizal habit in the genomes of a hyperdiverse lineage of mushroomâ€forming fungi. New Phytologist, 2022, 233, 2294-2309.	7.3	21
67	The Hydrophobin-Like OmSSP1 May Be an Effector in the Ericoid Mycorrhizal Symbiosis. Frontiers in Plant Science, 2018, 9, 546.	3.6	20
68	Expansion of signal pathways in the ectomycorrhizal fungus Laccaria bicolorâ€“ evolution of nucleotide sequences and expression patterns in families of protein kinases and RAS small GTPases. New Phytologist, 2009, 183, 365-379.	7.3	19
69	Transcriptomic profiles of <scp>H</scp>eterobasidion annosum under abiotic stresses and during saprotrophic growth in bark, sapwood and heartwood. Environmental Microbiology, 2014, 16, 1654-1667.	3.8	19
70	Diversity and evolution of ABC proteins in mycorrhiza-forming fungi. BMC Evolutionary Biology, 2015, 15, 249.	3.2	19
71	Desert truffle genomes reveal their reproductive modes and new insights into plantâ€“fungal interaction and ectendomycorrhizal lifestyle. New Phytologist, 2021, 229, 2917-2932.	7.3	19
72	Evolutionary innovations through gain and loss of genes in the ectomycorrhizal Boletales. New Phytologist, 2022, 233, 1383-1400.	7.3	19

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73	Broadâ€specificity GH131 Î²â€glucanases are a hallmark of fungi and oomycetes that colonize plants. Environmental Microbiology, 2019, 21, 2724-2739.	3.8	18
74	Pta<scp>RHE</scp>1, a Populus tremulaÂÃ—ÂPopulus alba <scp>RING</scp>â€H2 protein of the <scp>ATL</scp> family, has a regulatory role in secondary phloem fibre development. Plant Journal, 2015, 82, 978-990.	5.7	17
75	Hyphal and cytoskeleton polarization in Tuber melanosporum: A genomic and cellular analysis. Fungal Genetics and Biology, 2011, 48, 561-572.	2.1	16
76	The ectomycorrhizal basidiomycete Laccaria bicolor releases a GH28 polygalacturonase that plays a key role in symbiosis establishment. New Phytologist, 2022, 233, 2534-2547.	7.3	16
77	SlZRT2 Encodes a ZIP Family Zn Transporter With Dual Localization in the Ectomycorrhizal Fungus Suillus luteus. Frontiers in Microbiology, 2019, 10, 2251.	3.5	14
78	Intraâ€species genetic variability drives carbon metabolism and symbiotic host interactions in the ectomycorrhizal fungus Pisolithus microcarpus. Environmental Microbiology, 2021, 23, 2004-2020.	3.8	14
79	Molecular basis of differential adventitious rooting competence in poplar genotypes. Journal of Experimental Botany, 2022, 73, 4046-4064.	4.8	14
80	Transfer of hydroxycinnamoyl residues to microsomal proteins from parsley. Phytochemistry, 1997, 44, 225-228.	2.9	12
81	Development and validation of an oligonucleotide microarray to characterise ectomycorrhizal fungal communities. BMC Microbiology, 2009, 9, 241.	3.3	11
82	Tapping Genomics to Unravel Ectomycorrhizal Symbiosis. Methods in Molecular Biology, 2011, 722, 249-281.	0.9	11
83	A Transcriptomic Atlas of the Ectomycorrhizal Fungus Laccaria bicolor. Microorganisms, 2021, 9, 2612.	3.6	11
84	Molecular Changes Concomitant with Vascular System Development in Mature Galls Induced by Root-Knot Nematodes in the Model Tree Host Populus tremula Ã— P. alba. International Journal of Molecular Sciences, 2020, 21, 406.	4.1	10
85	Alterations in the phenylpropanoid pathway affect poplar ability for ectomycorrhizal colonisation and susceptibility to root-knot nematodes. Mycorrhiza, 2020, 30, 555-566.	2.8	9
86	Exploring the Transcriptome of Mycorrhizal Interactions. Advances in Botanical Research, 2014, 70, 53-78.	1.1	8
87	Defense and Nutrient Mutualisms in Populus. , 2010, , 247-277.		8
88	Comparative Transcriptomics Analysis of the Symbiotic Germination of D. officinale (Orchidaceae) With Emphasis on Plant Cell Wall Modification and Cell Wall-Degrading Enzymes. Frontiers in Plant Science, 2022, 13, .	3.6	7
89	Cryptic genetic structure and copyâ€number variation in the ubiquitous forest symbiotic fungus <scp>Cenococcum geophilum</scp>. Environmental Microbiology, 2021, 23, 6536-6556.	3.8	5
90	Ectomycorrhizal Symbiosis: From Genomics to Trans-Kingdom Molecular Communication and Signaling. Rhizosphere Biology, 2022, , 273-296.	0.6	2

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91	Mycorrhizaâ€induced mycocypins of Laccaria bicolor are potent protease inhibitors with nematotoxic and collembola antifeedant activity. Environmental Microbiology, 2022, 24, 4607-4622.	3.8	2