Andrea Polle

List of Publications by Citations

265 papers	16,474 citations	70 h-index	119 g-index
279 ext. papers	18,926 ext. citations	5.7 avg, IF	6.72 L-index

#	Paper	IF	Citations
265	Plant responses to abiotic stresses: heavy metal-induced oxidative stress and protection by mycorrhization. *Journal of Experimental Botany*, **2002**, 53, 1351-1365	7	1231
264	Making the life of heavy metal-stressed plants a little easier. *Functional Plant Biology*, **2005**, 32, 481-494	2.7	783
263	Plant responses to abiotic stresses: heavy metal-induced oxidative stress and protection by mycorrhization. *Journal of Experimental Botany*, **2002**, 53, 1351-65	7	672
262	Cadmium-induced changes in antioxidative systems, hydrogen peroxide content, and differentiation in Scots pine roots. *Plant Physiology*, **2001**, 127, 887-98	6.6	590
261	Dissecting the superoxide dismutase-ascorbate-glutathione-pathway in chloroplasts by metabolic modeling. Computer simulations as a step towards flux analysis. *Plant Physiology*, **2001**, 126, 445-62	6.6	326
260	Increases in nitrogen uptake rather than nitrogen-use efficiency support higher rates of temperate forest productivity under elevated CO2. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 14014-9	11.5	303
259	Mycorrhizal Hyphal Turnover as a Dominant Process for Carbon Input into Soil Organic Matter. *Plant and Soil*, **2006**, 281, 15-24	4.2	283
258	Downregulation of cinnamoyl-coenzyme A reductase in poplar: multiple-level phenotyping reveals effects on cell wall polymer metabolism and structure. *Plant Cell*, **2007**, 19, 3669-91	11.6	280
257	Gradual soil water depletion results in reversible changes of gene expression, protein profiles, ecophysiology, and growth performance in Populus euphratica, a poplar growing in arid regions. *Plant Physiology*, **2007**, 143, 876-92	6.6	271
256	Environmental factors affect Acidobacterial communities below the subgroup level in grassland and forest soils. *Applied and Environmental Microbiology*, **2012**, 78, 7398-406	4.8	207
255	Transgenic, non-isoprene emitting poplars don‰ like it hot. *Plant Journal*, **2007**, 51, 485-99	6.9	201
254	Populus euphratica displays apoplastic sodium accumulation, osmotic adjustment by decreases in calcium and soluble carbohydrates, and develops leaf succulence under salt stress. *Plant Physiology*, **2005**, 139, 1762-72	6.6	198
253	Transport and detoxification of manganese and copper in plants. *Brazilian Journal of Plant Physiology*, **2005**, 17, 103-112		198
252	Composition and Properties of Hydrogen Peroxide Decomposing Systems in Extracellular and Total Extracts from Needles of Norway Spruce (Picea abies L., Karst.). *Plant Physiology*, **1990**, 94, 312-9	6.6	193
251	Gene expression and metabolite profiling of Populus euphratica growing in the Negev desert. *Genome Biology*, **2005**, 6, R101	18.3	186
250	Heavy metal accumulation and signal transduction in herbaceous and woody plants: Paving the way for enhancing phytoremediation efficiency. *Biotechnology Advances*, **2016**, 34, 1131-1148	17.8	185
249	Cadmium and H2O2-induced oxidative stress in Populus □tanescens roots. *Plant Physiology and Biochemistry*, **2002**, 40, 577-584	5.4	175

248	Regulation of glutathione synthesis in leaves of transgenic poplar (Populus tremula X P. alba) overexpressing glutathione synthetase. *Plant Journal*, **1995**, 7, 141-145	6.9	174
247	Overexpression of bacterial γ-glutamylcysteine synthetase mediates changes in cadmium influx, allocation and detoxification in poplar. *New Phytologist*, **2015**, 205, 240-54	9.8	168
246	Upgrading root physiology for stress tolerance by ectomycorrhizas: insights from metabolite and transcriptional profiling into reprogramming for stress anticipation. *Plant Physiology*, **2009**, 151, 1902-17	6.6	158
245	Net cadmium flux and accumulation reveal tissue-specific oxidative stress and detoxification in Populus × canescens. *Physiologia Plantarum*, **2011**, 143, 50-63	4.6	154
244	Leaf litter decomposition in temperate deciduous forest stands with a decreasing fraction of beech (Fagus sylvatica). *Oecologia*, **2010**, 164, 1083-94	2.9	148
243	A transcriptomic network underlies microstructural and physiological responses to cadmium in Populus x canescens. *Plant Physiology*, **2013**, 162, 424-39	6.6	147
242	Tree girdling provides insight on the role of labile carbon in nitrogen partitioning between soil microorganisms and adult European beech. *Soil Biology and Biochemistry*, **2009**, 41, 1622-1631	7.5	144
241	Volatile signalling by sesquiterpenes from ectomycorrhizal fungi reprogrammes root architecture. *Nature Communications*, **2015**, 6, 6279	17.4	143
240	Nitrogen metabolism of two contrasting poplar species during acclimation to limiting nitrogen availability. *Journal of Experimental Botany*, **2013**, 64, 4207-24	7	141
239	Cadmium tolerance in six poplar species. *Environmental Science and Pollution Research*, **2013**, 20, 163-74	5.1	129
238	Comparison of different methods for lignin determination as a basis for calibration of near-infrared reflectance spectroscopy and implications of lignoproteins. *Journal of Chemical Ecology*, **2002**, 28, 2483-501	2.7	129
237	Host preferences and differential contributions of deciduous tree species shape mycorrhizal species richness in a mixed Central European forest. *Mycorrhiza*, **2011**, 21, 297-308	3.9	119
236	FTIR spectroscopy, chemical and histochemical characterisation of wood and lignin of five tropical timber wood species of the family of Dipterocarpaceae. *Wood Science and Technology*, **2010**, 44, 225-242	2.5	119
235	Volatile profiles of fungi--chemotyping of species and ecological functions. *Fungal Genetics and Biology*, **2013**, 54, 25-33	3.9	118
234	Phosphorus in forest ecosystems: New insights from an ecosystem nutrition perspective. *Journal of Plant Nutrition and Soil Science*, **2016**, 179, 129-135	2.3	115
233	Pathway analysis of the transcriptome and metabolome of salt sensitive and tolerant poplar species reveals evolutionary adaption of stress tolerance mechanisms. *BMC Plant Biology*, **2010**, 10, 150	5.3	113
232	Soil phosphorus supply controls P nutrition strategies of beech forest ecosystems in Central Europe. *Biogeochemistry*, **2017**, 136, 5-29	3.8	111
231	Cadmium interferes with auxin physiology and lignification in poplar. *Journal of Experimental Botany*, **2012**, 63, 1413-21	7	110

230	Woody biomass production during the second rotation of a bio-energy Populus plantation increases in a future high CO2 world. *Global Change Biology*, **2006**, 12, 1094-1106	11.4	106
229	General relationships between abiotic soil properties and soil biota across spatial scales and different land-use types. *PLoS ONE*, **2012**, 7, e43292	3.7	105
228	Girdling affects ectomycorrhizal fungal (EMF) diversity and reveals functional differences in EMF community composition in a beech forest. *Applied and Environmental Microbiology*, **2010**, 76, 1831-41	4.8	104
227	N-fertilization has different effects on the growth, carbon and nitrogen physiology, and wood properties of slow- and fast-growing Populus species. *Journal of Experimental Botany*, **2012**, 63, 6173-85	7	100
226	Multiple forest attributes underpin the supply of multiple ecosystem services. *Nature Communications*, **2018**, 9, 4839	17.4	99
225	Fourier transform infrared microscopy and imaging: detection of fungi in wood. *Fungal Genetics and Biology*, **2005**, 42, 829-35	3.9	94
224	Global poplar root and leaf transcriptomes reveal links between growth and stress responses under nitrogen starvation and excess. *Tree Physiology*, **2015**, 35, 1283-302	4.2	93
223	Ectomycorrhizas with Paxillus involutus enhance cadmium uptake and tolerance in Populus □tanescens. *Plant, Cell and Environment*, **2014**, 37, 627-42	8.4	93
222	Ionic homeostasis and reactive oxygen species control in leaves and xylem sap of two poplars subjected to NaCl stress. *Tree Physiology*, **2008**, 28, 947-57	4.2	93
221	Differential stress responses of antioxidative systems to drought in pendunculate oak (Quercus robur) and maritime pine (Pinus pinaster) grown under high CO2 concentrations. *Journal of Experimental Botany*, **2001**, 52, 133-143	7	93
220	Net fluxes of ammonium and nitrate in association with H+ fluxes in fine roots of Populus popularis. *Planta*, **2013**, 237, 919-31	4.7	92
219	Linking the salt transcriptome with physiological responses of a salt-resistant Populus species as a strategy to identify genes important for stress acclimation. *Plant Physiology*, **2010**, 154, 1697-709	6.6	92
218	The role of ectomycorrhizas in heavy metal stress tolerance of host plants. *Environmental and Experimental Botany*, **2014**, 108, 47-62	5.9	91
217	Verticillium longisporum infection affects the leaf apoplastic proteome, metabolome, and cell wall properties in Arabidopsis thaliana. *PLoS ONE*, **2012**, 7, e31435	3.7	90
216	Differential temperature dependencies of antioxidative enzymes in two contrasting species: Fagus sylvatica and Coleus blumei. *Plant Physiology and Biochemistry*, **2002**, 40, 141-150	5.4	90
215	FTIR-ATR-based prediction and modelling of lignin and energy contents reveals independent intra-specific variation of these traits in bioenergy poplars. *Plant Methods*, **2011**, 7, 9	5.8	89
214	Field studies on Norway spruce trees at high altitudes: II. Defence systems against oxidative stress in needles. *New Phytologist*, **1992**, 121, 635-642	9.8	87
213	Exogenous abscisic acid alleviates zinc uptake and accumulation in Populus □tanescens exposed to excess zinc. *Plant, Cell and Environment*, **2015**, 38, 207-23	8.4	86

212	Soluble phenylpropanoids are involved in the defense response of Arabidopsis against Verticillium longisporum. *New Phytologist*, **2014**, 202, 823-837	9.8	83
211	Antioxidants and Manganese Deficiency in Needles of Norway Spruce (Picea abies L.) Trees. *Plant Physiology*, **1992**, 99, 1084-9	6.6	83
210	Verticillium infection triggers VASCULAR-RELATED NAC DOMAIN7-dependent de novo xylem formation and enhances drought tolerance in Arabidopsis. *Plant Cell*, **2012**, 24, 3823-37	11.6	81
209	Leaf photosynthesis, fluorescence response to salinity and the relevance to chloroplast salt compartmentation and anti-oxidative stress in two poplars. *Trees - Structure and Function*, **2007**, 21, 581-591	2.6	81
208	Mehler Reaction: Friend or Foe in Photosynthesis?. *Botanica Acta*, **1996**, 109, 84-89		81
207	Phosphorus and nitrogen physiology of two contrasting poplar genotypes when exposed to phosphorus and/or nitrogen starvation. *Tree Physiology*, **2016**, 36, 22-38	4.2	78
206	Leaf litter production and decomposition in a poplar short-rotation coppice exposed to free air CO2 enrichment (POPFACE). *Global Change Biology*, **2005**, 11, 971-982	11.4	77
205	What the transcriptome does not tell - proteomics and metabolomics are closer to the plantsR patho-phenotype. *Current Opinion in Plant Biology*, **2015**, 26, 26-31	9.9	76
204	Defence reactions in the apoplastic proteome of oilseed rape (Brassica napus var. napus) attenuate Verticillium longisporum growth but not disease symptoms. *BMC Plant Biology*, **2008**, 8, 129	5.3	76
203	Consequences of Air Pollution on Shoot-Root Interactions. *Journal of Plant Physiology*, **1996**, 148, 296-301	3.6	76
202	Combined activity of LACS1 and LACS4 is required for proper pollen coat formation in Arabidopsis. *Plant Journal*, **2011**, 68, 715-26	6.9	75
201	On the salty side of life: molecular, physiological and anatomical adaptation and acclimation of trees to extreme habitats. *Plant, Cell and Environment*, **2015**, 38, 1794-816	8.4	71
200	Salt stress induces the formation of a novel type of Rpressure woodRin two Populus species. *New Phytologist*, **2012**, 194, 129-141	9.8	71
199	The Influence of Apoplastic Ascorbate on the Activities of Cell Wall-Associated Peroxidase and NADH Oxidase in Needles of Norway Spruce (Picea abies L.). *Plant and Cell Physiology*, **1994**, 35, 1231-1238	4.9	71
198	Determinants of Acidobacteria activity inferred from the relative abundances of 16S rRNA transcripts in German grassland and forest soils. *Environmental Microbiology*, **2014**, 16, 658-75	5.2	70
197	Populus euphratica XTH overexpression enhances salinity tolerance by the development of leaf succulence in transgenic tobacco plants. *Journal of Experimental Botany*, **2013**, 64, 4225-38	7	70
196	Molecular characterization of PeNhaD1: the first member of the NhaD Na+/H+ antiporter family of plant origin. *Plant Molecular Biology*, **2005**, 58, 75-88	4.6	70
195	Belowground communication: impacts of volatile organic compounds (VOCs) from soil fungi on other soil-inhabiting organisms. *Applied Microbiology and Biotechnology*, **2016**, 100, 8651-65	5.7	68

194	FTIR-ATR spectroscopic analyses of changes in wood properties during particle- and fibreboard production of hard- and softwood trees. *BioResources*, **2009**, 4, 49-71	1.3	68
193	Beech carbon productivity as driver of ectomycorrhizal abundance and diversity. *Plant, Cell and Environment*, **2009**, 32, 992-1003	8.4	65
192	Class I KNOX transcription factors promote differentiation of cambial derivatives into xylem fibers in the Arabidopsis hypocotyl. *Development (Cambridge)*, **2014**, 141, 4311-9	6.6	64
191	Attributing functions to ectomycorrhizal fungal identities in assemblages for nitrogen acquisition under stress. *ISME Journal*, **2014**, 8, 321-30	11.9	64
190	Salt stress affects xylem differentiation of grey poplar (Populus x canescens). *Planta*, **2009**, 229, 299-309	4.7	60
189	Characterisation of antioxidative systems in the ectomycorrhiza-building basidiomycete Paxillus involutus (Bartsch) Fr. and its reaction to cadmium. *FEMS Microbiology Ecology*, **2002**, 42, 359-66	4.3	60
188	Divergent habitat filtering of root and soil fungal communities in temperate beech forests. *Scientific Reports*, **2016**, 6, 31439	4.9	59
187	The nitrate transporter (NRT) gene family in poplar. *PLoS ONE*, **2013**, 8, e72126	3.7	59
186	Paxillus involutus strains MAJ and NAU mediate K(+)/Na(+) homeostasis in ectomycorrhizal Populus x canescens under sodium chloride stress. *Plant Physiology*, **2012**, 159, 1771-86	6.6	59
185	Effect of NaCl on photosynthesis, salt accumulation and ion compartmentation in two mangrove species, Kandelia candel and Bruguiera gymnorhiza. *Aquatic Botany*, **2008**, 88, 303-310	1.8	59
184	Influence of free air CO2 enrichment (EUROFACE) and nitrogen fertilisation on the anatomy of juvenile wood of three poplar species after coppicing. *Trees - Structure and Function*, **2005**, 19, 109-118	2.6	58
183	The slow rise of the flash-light-induced alkalization by Photosystem II of the suspending medium of thylakoids is reversibly related to thylakoid stacking. *Biochimica Et Biophysica Acta - Bioenergetics*, **1986**, 848, 257-264	4.6	58
182	RNAi-mediated suppression of isoprene emission in poplar transiently impacts phenolic metabolism under high temperature and high light intensities: a transcriptomic and metabolomic analysis. *Plant Molecular Biology*, **2010**, 74, 61-75	4.6	57
181	Wood composition and energy content in a poplar short rotation plantation on fertilized agricultural land in a future CO2 atmosphere. *Global Change Biology*, **2009**, 15, 38-47	11.4	56
180	Osmotic Stress and Ion-Specific Effects on Xylem Abscisic Acid and the Relevance to Salinity Tolerance in Poplar. *Journal of Plant Growth Regulation*, **2002**, 21, 224-233	4.7	56
179	Physiological and molecular mechanisms of heavy metal accumulation in nonmycorrhizal versus mycorrhizal plants. *Plant, Cell and Environment*, **2019**, 42, 1087-1103	8.4	56
178	Influence of environmental pollution on leaf properties of urban plane trees, Platanus orientalis L. *Bulletin of Environmental Contamination and Toxicology*, **2010**, 85, 251-5	2.7	55
177	Carbon-based secondary metabolites and internal nitrogen pools in Populus nigra under Free Air CO2 Enrichment (FACE) and nitrogen fertilisation. *Plant and Soil*, **2008**, 304, 45-57	4.2	54

176	Comparative transcriptomic analysis reveals the roles of overlapping heat-/drought-responsive genes in poplars exposed to high temperature and drought. *Scientific Reports*, **2017**, 7, 43215	4.9	53
175	The vascular pathogen Verticillium longisporum requires a jasmonic acid-independent COI1 function in roots to elicit disease symptoms in Arabidopsis shoots. *Plant Physiology*, **2012**, 159, 1192-203	6.6	53
174	Differential effects of elevated ozone on two hybrid aspen genotypes predisposed to chronic ozone fumigation. Role of ethylene and salicylic acid. *Plant Physiology*, **2003**, 132, 196-205	6.6	53
173	Intensive tropical land use massively shifts soil fungal communities. *Scientific Reports*, **2019**, 9, 3403	4.9	52
172	Trade-offs between multifunctionality and profit in tropical smallholder landscapes. *Nature Communications*, **2020**, 11, 1186	17.4	52
171	Anatomical, physiological and transcriptional responses of two contrasting poplar genotypes to drought and re-watering. *Physiologia Plantarum*, **2014**, 151, 480-94	4.6	52
170	Salt tolerance in Populus: Significance of stress signaling networks, mycorrhization, and soil amendments for cellular and whole-plant nutrition. *Environmental and Experimental Botany*, **2014**, 107, 113-124	5.9	52
169	Freezing tolerance in two Norway spruce (Picea abies [L.] Karst.) progenies is physiologically correlated with drought tolerance. *Journal of Plant Physiology*, **2005**, 162, 549-58	3.6	49
168	Specialisation and diversity of multiple trophic groups are promoted by different forest features. *Ecology Letters*, **2019**, 22, 170-180	10	49
167	Roots from beech (Fagus sylvatica L.) and ash (Fraxinus excelsior L.) differentially affect soil microorganisms and carbon dynamics. *Soil Biology and Biochemistry*, **2013**, 61, 23-32	7.5	48
166	Theory of proton flow along appressed thylakoid membranes under both non-stationary and stationary conditions. *Biochimica Et Biophysica Acta - Bioenergetics*, **1986**, 848, 265-273	4.6	48
165	The ectomycorrhizal fungus (Paxillus involutus) modulates leaf physiology of poplar towards improved salt tolerance. *Environmental and Experimental Botany*, **2011**, 72, 304-311	5.9	46
164	Ectomycorrhiza and hydrogel protect hybrid poplar from water deficit and unravel plastic responses of xylem anatomy. *Environmental and Experimental Botany*, **2010**, 69, 189-197	5.9	46
163	Heavy metal signalling in plants: linking cellular and organismic responses. *Topics in Current Genetics*, **2003**, 187-215		46
162	Field studies on Norway spruce trees at high altitudes. *New Phytologist*, **1992**, 121, 89-99	9.8	46
161	Ectomycorrhizal fungus (Paxillus involutus) and hydrogels affect performance of Populus euphratica exposed to drought stress. *Annals of Forest Science*, **2009**, 66, 106-106	3.1	44
160	Mycorrhiza-Triggered Transcriptomic and Metabolomic Networks Impinge on Herbivore Fitness. *Plant Physiology*, **2018**, 176, 2639-2656	6.6	43
159	Isoprene emission-free poplars--a chance to reduce the impact from poplar plantations on the atmosphere. *New Phytologist*, **2012**, 194, 70-82	9.8	43

158	Increased nitrogen-use efficiency of a short-rotation poplar plantation in elevated CO(2) concentration. *Tree Physiology*, **2007**, 27, 1153-63	4.2	43
157	Engineering Drought Resistance in Forest Trees. *Frontiers in Plant Science*, **2018**, 9, 1875	6.2	42
156	Changes in carbon, nutrients and stoichiometric relations under different soil depths, plant tissues and ages in black locust plantations. *Acta Physiologiae Plantarum*, **2013**, 35, 2951-2964	2.6	41
155	Seasonal Fluctuations of Ascorbate-Related Enzymes: Acute and Delayed Effects of Late Frost in Spring on Antioxidative Systems in Needles of Norway Spruce (Picea abies L.). *Plant and Cell Physiology*, **1996**, 37, 717-725	4.9	41
154	Manganese toxicity in two varieties of Douglas fir (Pseudotsuga menziesii var. viridis and glauca) seedlings as affected by phosphorus supply. *Functional Plant Biology*, **2007**, 34, 31-40	2.7	41
153	Diurnal fluctuations of antioxidative systems in leaves of field-grown beech trees (Fagus sylvatica): Responses to light and temperature. *Physiologia Plantarum*, **2001**, 111, 158-164	4.6	41
152	Superoxide Dismutase Activity in Needles of Norwegian Spruce Trees (Picea abies L.). *Plant Physiology*, **1989**, 90, 1310-5	6.6	41
151	Phosphorus availabilities in beech (Fagus sylvatica L.) forests impose habitat filtering on ectomycorrhizal communities and impact tree nutrition. *Soil Biology and Biochemistry*, **2016**, 98, 127-137	7.5	41
150	Interspecific temporal and spatial differences in the acquisition of litter-derived nitrogen by ectomycorrhizal fungal assemblages. *New Phytologist*, **2013**, 199, 520-528	9.8	40
149	Incorporation of plant carbon and microbial nitrogen into the rhizosphere food web of beech and ash. *Soil Biology and Biochemistry*, **2013**, 62, 76-81	7.5	40
148	Ectomycorrhizal fungal diversity, tree diversity and root nutrient relations in a mixed Central European forest. *Tree Physiology*, **2011**, 31, 531-8	4.2	40
147	GH3::GUS reflects cell-specific developmental patterns and stress-induced changes in wood anatomy in the poplar stem. *Tree Physiology*, **2008**, 28, 1305-15	4.2	40
146	FTIR spectroscopy in combination with principal component analysis or cluster analysis as a tool to distinguish beech (Fagus sylvatica L.) trees grown at different sites. *Holzforschung*, **2008**, 62,	2	38
145	Interactive Effects of Elevated CO2, Ozone and Drought Stress on the Activities of Antioxidative Enzymes in Needles of Norway Spruce Trees (Picea abies, [L] Karsten) Grown with Luxurious N-Supply. *Journal of Plant Physiology*, **1996**, 148, 351-355	3.6	38
144	Temporal variations of phosphorus uptake by soil microbial biomass and young beech trees in two forest soils with contrasting phosphorus stocks. *Soil Biology and Biochemistry*, **2018**, 117, 191-202	7.5	38
143	Uptake and translocation of manganese in seedlings of two varieties of Douglas fir (Pseudotsuga menziesii var. viridis and glauca). *New Phytologist*, **2006**, 170, 11-20	9.8	36
142	Growing poplars for research with and without mycorrhizas. *Frontiers in Plant Science*, **2013**, 4, 332	6.2	35
141	Quantitative trait loci affecting stomatal density and growth in a Quercus robur progeny: implications for the adaptation to changing environments. *Global Change Biology*, **2008**, 14, 1934-1946	11.4	35

140	Carbon partitioning to mobile and structural fractions in poplar wood under elevated CO2 (EUROFACE) and N fertilization. *Global Change Biology*, **2006**, 12, 272-283	11.4	35
139	Ectomycorrhizal colonization and diversity in relation to tree biomass and nutrition in a plantation of transgenic poplars with modified lignin biosynthesis. *PLoS ONE*, **2013**, 8, e59207	3.7	35
138	Reducing Fertilizer and Avoiding Herbicides in Oil Palm Plantations—Ecological and Economic Valuations. *Frontiers in Forests and Global Change*, **2019**, 2,	3.7	34
137	Intra-specific variations in expression of stress-related genes in beech progenies are stronger than drought-induced responses. *Tree Physiology*, **2014**, 34, 1348-61	4.2	34
136	Nitrogen fertilization has differential effects on N allocation and lignin in two Populus species with contrasting ecology. *Trees - Structure and Function*, **2012**, 26, 1933-1942	2.6	34
135	Protection from oxidative stress in transgenic plants. *Biochemical Society Transactions*, **1994**, 22, 936-40	5.1	34
134	Root-induced tree species effects on the source/sink strength for greenhouse gases (CH4, N2O and CO2) of a temperate deciduous forest soil. *Soil Biology and Biochemistry*, **2013**, 57, 587-597	7.5	33
133	Harnessing salt for woody biomass production. *Tree Physiology*, **2012**, 32, 1-3	4.2	33
132	Early drought-induced changes to the needle proteome of Norway spruce. *Tree Physiology*, **2007**, 27, 1423-31	4.2	33
131	Phenology, photosynthesis, and phosphorus in European beech (Fagus sylvatica L.) in two forest soils with contrasting P contents. *Journal of Plant Nutrition and Soil Science*, **2016**, 179, 151-158	2.3	33
130	Ectomycorrhizal fungal diversity increases phosphorus uptake efficiency of European beech. *New Phytologist*, **2018**, 220, 1200-1210	9.8	33
129	Nitrogen-driven stem elongation in poplar is linked with wood modification and gene clusters for stress, photosynthesis and cell wall formation. *BMC Plant Biology*, **2014**, 14, 391	5.3	32
128	Climate Change Impairs Nitrogen Cycling in European Beech Forests. *PLoS ONE*, **2016**, 11, e0158823	3.7	32
127	Auxin is a long-range signal that acts independently of ethylene signaling on leaf abscission in Populus. *Frontiers in Plant Science*, **2015**, 6, 634	6.2	30
126	Effect of magnesium-deficiency on antioxidative systems in needles of Norway spruce [Picea abies (L.) Karst.] grown with different ratios of nitrate and ammonium as nitrogen sources. *New Phytologist*, **1994**, 128, 621-628	9.8	30
125	Phosphate uptake kinetics and tissue-specific transporter expression profiles in poplar (Populus tremula × tremuloides) at different phosphorus availabilities. *BMC Plant Biology*, **2016**, 16, 206	5.3	29
124	Dynamics of phosphorus nutrition, allocation and growth of young beech (Fagus sylvatica L.) trees in P-rich and P-poor forest soil. *Tree Physiology*, **2018**, 38, 37-51	4.2	28
123	Temperature-induced lipocalin (TIL) is translocated under salt stress and protects chloroplasts from ion toxicity. *Journal of Plant Physiology*, **2014**, 171, 250-9	3.6	28

122	Ectomycorrhiza affect architecture and nitrogen partitioning of beech (Fagus sylvatica L.) seedlings under shade and drought. *Environmental and Experimental Botany*, **2013**, 87, 207-217	5.9	28
121	Seasonal Changes of the Antioxidative Systems in Foliar Buds and Leaves of Field-grown Beech Trees (Fagus sylvatica, L.) in a Stressful Climate. *Botanica Acta*, **1995**, 108, 314-320		28
120	Forest Soil Phosphorus Resources and Fertilization Affect Ectomycorrhizal Community Composition, Beech P Uptake Efficiency, and Photosynthesis. *Frontiers in Plant Science*, **2018**, 9, 463	6.2	26
119	The Effect of Elevated [CO2] on Uptake and Allocation of 13C and 15N in Beech (Fagus sylvatica L.) during Leafing. *Plant Biology*, **2000**, 2, 113-120	3.7	26
118	Relations between sulphur supply and glutathione and ascorbate concentrations in Brassica napus. *Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science*, **1995**, 158, 67-69		26
117	Poplar nutrition under drought as affected by ectomycorrhizal colonization. *Environmental and Experimental Botany*, **2014**, 108, 89-98	5.9	25
116	Degradation of Root Community Traits as Indicator for Transformation of Tropical Lowland Rain Forests into Oil Palm and Rubber Plantations. *PLoS ONE*, **2015**, 10, e0138077	3.7	25
115	Phylogenetic and functional traits of ectomycorrhizal assemblages in top soil from different biogeographic regions and forest types. *Mycorrhiza*, **2017**, 27, 233-245	3.9	24
114	Biomass traits and candidate genes for bioenergy revealed through association genetics in coppiced European Populus nigra (L.). *Biotechnology for Biofuels*, **2016**, 9, 195	7.8	24
113	Fatty acid metabolism in the ectomycorrhizal fungus Laccaria bicolor. *New Phytologist*, **2009**, 182, 950-963	7.8	24
112	Genes and gene clusters related to genotype and drought-induced variation in saccharification potential, lignin content and wood anatomical traits in Populus nigra. *Tree Physiology*, **2018**, 38, 320-339	4.2	24
111	Changes in Trophic Groups of Protists With Conversion of Rainforest Into Rubber and Oil Palm Plantations. *Frontiers in Microbiology*, **2019**, 10, 240	5.7	23
110	Poplar wood rays are involved in seasonal remodeling of tree physiology. *Plant Physiology*, **2012**, 160, 1515-29	6.6	23
109	The influence of the ectomycorrhizal fungus Rhizopogon subareolatus on growth and nutrient element localisation in two varieties of Douglas fir (Pseudotsuga menziesii var. menziesii and var. glauca) in response to manganese stress. *Mycorrhiza*, **2008**, 18, 227-239	3.9	23
108	Growth under elevated CO(2) ameliorates defenses against photo-oxidative stress in poplar (Populus alba x tremula). *Environmental and Experimental Botany*, **2001**, 45, 43-53	5.9	23
107	High rates of virus-induced gene silencing by tobacco rattle virus in Populus. *Tree Physiology*, **2015**, 35, 1016-29	4.2	22
106	Segregation of nitrogen use between ammonium and nitrate of ectomycorrhizas and beech trees. *Plant, Cell and Environment*, **2016**, 39, 2691-2700	8.4	22
105	Carbon and nitrogen fluxes between beech and their ectomycorrhizal assemblage. *Mycorrhiza*, **2014**, 24, 645-50	3.9	22

104	Minor contribution of leaf litter to N nutrition of beech (Fagus sylvatica) seedlings in a mountainous beech forest of Southern Germany. *Plant and Soil*, **2013**, 369, 657-668	4.2	22
103	Water consumption and biomass production of protoplast fusion lines of poplar hybrids under drought stress. *Frontiers in Plant Science*, **2015**, 6, 330	6.2	22
102	Assembly processes of trophic guilds in the root mycobiome of temperate forests. *Molecular Ecology*, **2019**, 28, 348-364	5.7	22
101	Amelioration of nitrate uptake under salt stress by ectomycorrhiza with and without a Hartig net. *New Phytologist*, **2019**, 222, 1951-1964	9.8	21
100	Sulphate and antioxidants in needles of Scots pine (Pinus sylvestris L.) from three SO2-polluted field sites in eastern Germany. *New Phytologist*, **1994**, 127, 571-577	9.8	20
99	Metabolic consequences of atmospheric sulphur influx into plants **1994**, 165-180		20
98	Preferential use of root litter compared to leaf litter by beech seedlings and soil microorganisms. *Plant and Soil*, **2013**, 368, 519-534	4.2	19
97	Amelioration of planting stress by soil amendment with a hydrogel□mycorrhiza mixture for early establishment of beech (Fagus sylvatica L.) seedlings. *Annals of Forest Science*, **2011**, 68, 803-810	3.1	19
96	Carbon and nitrogen balance in beech roots under competitive pressure of soil-borne microorganisms induced by girdling, drought and glucose application. *Functional Plant Biology*, **2010**, 37, 879	2.7	19
95	Does atmospheric hydrogen peroxide contribute to damage to forest trees?. *Environmental Science & Technology*, **1994**, 28, 812-5	10.3	19
94	Physiological and transcriptional regulation in poplar roots and leaves during acclimation to high temperature and drought. *Physiologia Plantarum*, **2016**, 157, 38-53	4.6	19
93	Spatial patterns of ectomycorrhizal assemblages in a monospecific forest in relation to host tree genotype. *Frontiers in Plant Science*, **2013**, 4, 103	6.2	18
92	Are beech (Fagus sylvatica) roots territorial?. *Forest Ecology and Management*, **2010**, 260, 1212-1217	3.9	18
91	Mycorrhizal communities in relation to biomass production and nutrient use efficiency in two varieties of Douglas fir (Pseudotsuga menziesii var. menziesii and var. glauca) in different forest soils. *Soil Biology and Biochemistry*, **2009**, 41, 742-753	7.5	18
90	Subcellular nutrient element localization and enrichment in ecto- and arbuscular mycorrhizas of field-grown beech and ash trees indicate functional differences. *PLoS ONE*, **2014**, 9, e114672	3.7	18
89	Abscisic acid signalling mediates biomass trade-off and allocation in poplar. *New Phytologist*, **2019**, 223, 1192-1203	9.8	17
88	Effects of Elevated Atmospheric CO2 on Microbial Community Structure at the Plant-Soil Interface of Young Beech Trees (Fagus sylvatica L.) Grown at Two Sites with Contrasting Climatic Conditions. *Microbial Ecology*, **2015**, 69, 867-78	4.4	17
87	Isoprene emission by poplar is not important for the feeding behaviour of poplar leaf beetles. *BMC Plant Biology*, **2015**, 15, 165	5.3	17

86	Towards Genetic Engineering for Drought Tolerance in Trees **2006**, 275-297		17
85	Growth and protection against oxidative stress in young clones and mature spruce trees (Picea abies L.) at high altitudes. *Oecologia*, **1999**, 121, 149-156	2.9	17
84	Superoxide dismutase activity in needles of Scots pine and Norway spruce under field and chamber conditions: lack of ozone effects. *New Phytologist*, **1991**, 117, 335-343	9.8	17
83	Ectomycorrhizal fungi induce systemic resistance against insects on a nonmycorrhizal plant in a CERK1-dependent manner. *New Phytologist*, **2020**, 228, 728-740	9.8	16
82	Competing Endogenous RNA Networks Underlying Anatomical and Physiological Characteristics of Poplar Wood in Acclimation to Low Nitrogen Availability. *Plant and Cell Physiology*, **2019**, 60, 2478-2495	4.9	16
81	Populus Responses to Abiotic Stress **2010**, 225-246		16
80	Protura are unique: first evidence of specialized feeding on ectomycorrhizal fungi in soil invertebrates. *BMC Ecology*, **2019**, 19, 10	2.7	15
79	Ectomycorrhizal Communities on the Roots of Two Beech (Fagus sylvatica) Populations from Contrasting Climates Differ in Nitrogen Acquisition in a Common Environment. *Applied and Environmental Microbiology*, **2015**, 81, 5957-67	4.8	15
78	Acid and calcareous soils affect nitrogen nutrition and organic nitrogen uptake by beech seedlings (Fagus sylvatica L.) under drought, and their ectomycorrhizal community structure. *Plant and Soil*, **2016**, 409, 143-157	4.2	15
77	Ion fluxes in Paxillus involutus-inoculated roots of Populus□anescens under saline stress. *Environmental and Experimental Botany*, **2014**, 108, 99-108	5.9	15
76	Mistletoe infestation mediates alteration of the phytohormone profile and anti-oxidative metabolism in bark and wood of its host Pinus sylvestris. *Tree Physiology*, **2017**, 37, 676-691	4.2	15
75	The slow rate of proton consumption at the reducing side of Photosystem I is limited by the rate of redox reactions of extrinsic electron acceptors, but not by a diffusion barrier for protons. *Biochimica Et Biophysica Acta - Bioenergetics*, **1986**, 848, 274-278	4.6	15
74	Sch□digung von Wald□kosystemen **2007**,		15
73	Ectomycorrhizal identification in environmental samples of tree roots by Fourier-transform infrared (FTIR) spectroscopy. *Frontiers in Plant Science*, **2014**, 5, 229	6.2	14
72	Purification of Two Superoxide Dismutase Isozymes and Their Subcellular Localization in Needles and Roots of Norway Spruce (Picea abies L.) Trees. *Plant Physiology*, **1992**, 100, 334-40	6.6	14
71	Evidence for the participation of a 5-oxo-prolinase in degradation of glutathione in Nicotiana tabacum. *Zeitschrift Fur Naturforschung - Section C Journal of Biosciences*, **1980**, 35, 708-11	1.7	14
70	Local Responses and Systemic Induced Resistance Mediated by Ectomycorrhizal Fungi. *Frontiers in Plant Science*, **2020**, 11, 590063	6.2	14
69	Root isoprene formation alters lateral root development. *Plant, Cell and Environment*, **2020**, 43, 2207-2283	7.4	13

68	Responses of antioxidative systems to acute ozone stress in transgenic poplar (Populus tremula □ P. alba) over-expressing glutathione synthetase or glutathione reductase. *Trees - Structure and Function*, **2002**, 16, 262-273	2.6	13
67	Dissecting nutrient-related co-expression networks in phosphate starved poplars. *PLoS ONE*, **2017**, 12, e0171958	3.7	13
66	Root-derived carbon and nitrogen from beech and ash trees differentially fuel soil animal food webs of deciduous forests. *PLoS ONE*, **2017**, 12, e0189502	3.7	13
65	Mycorrhizal Phosphorus Efficiencies and Microbial Competition Drive Root P Uptake. *Frontiers in Forests and Global Change*, **2020**, 3,	3.7	12
64	Quantitative X-ray microanalysis of hydrogen peroxide within plant cells. *Microscopy Research and Technique*, **2009**, 72, 49-60	2.8	12
63	Lignification and structural biomass production in tobacco with suppressed caffeic/5-hydroxy ferulic acid-O-methyl transferase activity under ambient and elevated CO concentrations. *Physiologia Plantarum*, **2004**, 121, 75-83	4.6	12
62	Role of Carbon Dioxide in Modifying the Plant Response to Ozone **1999**, 193-213		12
61	Intraspecific variations in drought response and fitness traits of beech (Fagus sylvatica L.) seedlings from three provenances differing in annual precipitation. *Trees - Structure and Function*, **2017**, 31, 1215-1225	2.6	11
60	-Facilitated Cd Influx through Plasma Membrane Ca-Permeable Channels Is Stimulated by HO and H-ATPase in Ectomycorrhizal □under Cadmium Stress. *Frontiers in Plant Science*, **2016**, 7, 1975	6.2	11
59	Drought effects on the tissue- and cell-specific cytokinin activity in poplar. *AoB PLANTS*, **2018**, 10, plx067	2.9	10
58	Phosphorus Compartmentalization on the Cellular Level of Douglas Fir Root as Affected by Mn Toxicity: A Synchrotron-Based FTIR Approach. *Spectroscopy*, **2012**, 27, 265-272		10
57	Relating genetic variation of ecologically important tree traits to associated organisms in full-sib aspen families. *European Journal of Forest Research*, **2011**, 130, 707-716	2.7	10
56	Changes in sulphur metabolism of grey poplar (Populus x canescens) leaves during salt stress: a metabolic link to photorespiration. *Tree Physiology*, **2010**, 30, 1161-73	4.2	10
55	Developmental changes of antioxidative systems in tobacco leaves as affected by limited sucrose export in transgenic plants expressing yeast-invertase in the apoplastic space. *Planta*, **1996**, 198, 253	4.7	10
54	Transient and intramembrane trapping of pumped protons in thylakoids. *FEBS Letters*, **1986**, 198, 263-267	3.8	10
53	What Makes the Wood? Exploring the Molecular Mechanisms of Xylem Acclimation in Hardwoods to an Ever-Changing Environment. *Forests*, **2019**, 10, 358	2.8	9
52	Impacts of earthworms on nitrogen acquisition from leaf litter by arbuscular mycorrhizal ash and ectomycorrhizal beech trees. *Environmental and Experimental Botany*, **2015**, 120, 1-7	5.9	9
51	Beech trees fuel soil animal food webs via root-derived nitrogen. *Basic and Applied Ecology*, **2017**, 22, 28-35	3.2	9

50	Carbohydrate depletion in roots impedes phosphorus nutrition in young forest trees. *New Phytologist*, **2021**, 229, 2611-2624	9.8	9
49	Genetic diversity in aspen and its relation to arthropod abundance. *Frontiers in Plant Science*, **2014**, 5, 806	6.2	8
48	Comparative characterization of ethanol organosolv lignin polymer from bamboo green, timber and yellow. *Wood Science and Technology*, **2018**, 52, 1331-1341	2.5	8
47	Carbohydrate Accumulation Affects the Redox State of Ascorbate in Detached Tobacco Leaves. *Botanica Acta*, **1995**, 108, 432-438		8
46	Hydrogen Sulfide Emission by Cultured Tobacco Cells. *Zeitschrift F Pflanzenphysiologie*, **1983**, 111, 189-202		8
45	Tissue- and Cell-Specific Cytokinin Activity in Populus canescens Monitored by ARR5::GUS Reporter Lines in Summer and Winter. *Frontiers in Plant Science*, **2016**, 7, 652	6.2	8
44	Mortality of Different Populus Genotypes in Recently Established Mixed Short Rotation Coppice with Robinia pseudoacacia L.. *Forests*, **2019**, 10, 410	2.8	7
43	Soil and root nutrient chemistry structure root-associated fungal assemblages in temperate forests. *Environmental Microbiology*, **2020**, 22, 3081-3095	5.2	7
42	Saprotrophic and Ectomycorrhizal Fungi Contribute Differentially to Organic P Mobilization in Beech-Dominated Forest Ecosystems. *Frontiers in Forests and Global Change*, **2020**, 3,	3.7	7
41	Quantitative X-ray Elemental Imaging in Plant Materials at the Subcellular Level with a Transmission Electron Microscope: Applications and Limitations. *Materials*, **2014**, 7, 3160-3175	3.5	7
40	Protection from Oxidative Stress in Trees as Affected by Elevated CO2 and Environmental Stress **1996**, 299-315		7
39	Changes in the fine root proteome of Fagus sylvatica L. trees associated with P-deficiency and amelioration of P-deficiency. *Journal of Proteomics*, **2017**, 169, 33-40	3.9	6
38	Interference of Heavy Metal Toxicity with Auxin Physiology **2012**, 249-259		6
37	Diurnal fluctuations of secondary photooxidants in air and of detoxification systems in the foliage of Mediterranean forest trees. *Atmospheric Environment*, **1997**, 31, 61-65	5.3	6
36	Photooxidative Stress in Trees **2019**, 199-218		6
35	Volatile organic compound patterns predict fungal trophic mode and lifestyle. *Communications Biology*, **2021**, 4, 673	6.7	6
34	Leaf litter species identity influences biochemical composition of ectomycorrhizal fungi. *Mycorrhiza* , **2019**, 29, 85-96	3.9	5
33	National Forest Inventories capture the multifunctionality of managed forests in Germany. *Forest Ecosystems*, **2021**, 8,	3.8	5

32	Effective Defense of Aleppo Pine Against the Giant Scale Through Ecophysiological and Metabolic Changes. *Frontiers in Plant Science*, **2020**, 11, 581693	6.2	4
31	Differences in Root Nitrogen Uptake Between Tropical Lowland Rainforests and Oil Palm Plantations. *Frontiers in Plant Science*, **2020**, 11, 92	6.2	4
30	A novel method to quantify H+-ATPase-dependent Na+ transport across plasma membrane vesicles. *Biochimica Et Biophysica Acta - Biomembranes*, **2007**, 1768, 2078-88	3.8	4
29	Preliminary studies of ascorbate metabolism in green and albino regions of variegated leaves of Coleus blumei, Benth. *Free Radical Research*, **1999**, 31 Suppl, S181-5	4	4
28	Effects of Photooxidants on Plants **1989**, 251-258		4
27	Shifts in root and soil chemistry drive the assembly of belowground fungal communities in tropical land-use systems. *Soil Biology and Biochemistry*, **2021**, 154, 108140	7.5	4
26	An interdisciplinary framework to describe and evaluate the functioning of forest ecosystems. *Basic and Applied Ecology*, **2021**, 52, 1-14	3.2	4
25	Wood Formation under Severe Drought Invokes Adjustment of the Hormonal and Transcriptional Landscape in Poplar. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	4
24	Impact of ectomycorrhizal community composition and soil treatment on inorganic nitrogen nutrition and performance of beech (Fagus sylvatica L.) provenances. *Trees - Structure and Function*, **2017**, 31, 1891-1904	2.6	3
23	Peroxidase Activity in Poplar Inoculated with Compatible and Incompetent Isolates of Paxillus involutus. *HAYATI Journal of Biosciences*, **2007**, 14, 49-53	1.2	3
22	Apoplastic Peroxidases in Needles of Norway Spruce (Picea abies) Progenies from Different Crossing Environments. *European Journal of Forest Research*, **2003**, 122, 153-159		3
21	5-Oxo-prolinase activity in tobacco suspension cultures: Regulation by sulfate nutrition. *Physiologia Plantarum*, **1983**, 59, 61-66	4.6	3
20	Legacy Effects Overshadow Tree Diversity Effects on Soil Fungal Communities in Oil Palm-Enrichment Plantations. *Microorganisms*, **2020**, 8,	4.9	2
19	Early stage root-Associated fungi show a high temporal turnover, but Are independent of beech progeny. *Microorganisms*, **2020**, 8,	4.9	2
18	Differential stress responses of antioxidative systems to drought in pendunculate oak (Quercus robur) and maritime pine (Pinus pinaster) grown under high CO 2 concentrations. *Journal of Experimental Botany*, **2001**, 52, 133-143	7	2
17	Mycorrhiza-Tree-Herbivore Interactions: Alterations in Poplar Metabolome and Volatilome.. *Metabolites*, **2022**, 12,	5.6	2
16	Transcriptional Landscape of Ectomycorrhizal Fungi and Their Host Provides Insight into N Uptake from Forest Soil.. *MSystems*, **2022**, e0095721	7.6	2
15	Multi-omics analysis of xylem sap uncovers dynamic modulation of poplar defenses by ammonium and nitrate		2

14	Wood properties and transcriptional responses of poplar hybrids in mixed cropping with the nitrogen-fixing species Robinia pseudoacacia. *Tree Physiology*, **2021**, 41, 865-881	4.2	2
13	Multi-omics analysis of xylem sap uncovers dynamic modulation of poplar defenses by ammonium and nitrate.. *Plant Journal*, **2022**,	6.9	2
12	Hybrid and Environmental Effects on Gene Expression in Poplar Clones in Pure and Mixed with Black Locust Stands. *Forests*, **2020**, 11, 1075	2.8	1
11	Ectomycorrhizal Fungal Strains Facilitate Cd Enrichment in a Woody Hyperaccumulator under Co-Existing Stress of Cadmium and Salt. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	1
10	Phosphorus Availability Alters the Effect of Tree Girdling on the Diversity of Phosphorus Solubilizing Soil Bacterial Communities in Temperate Beech Forests. *Frontiers in Forests and Global Change*, **2021**, 4,	3.7	1
9	The influence of transpiration on foliar accumulation of salt and nutrients under salinity in poplar (Populus □tanescens). *PLoS ONE*, **2021**, 16, e0253228	3.7	1
8	Photosynthetic Nitrogen Use Efficiency of Two Poplar Varieties Commonly Grown in Short Rotation Coppice Plantations and Implications for Fertiliser Management187-198		1
7	Response of Poplar Leaf Transcriptome to Changed Management and Environmental Conditions in Pure and Mixed with Black Locust Stands. *Forests*, **2022**, 13, 147	2.8	0
6	Early Effects of Fertilizer and Herbicide Reduction on Root-Associated Biota in Oil Palm Plantations. *Agronomy*, **2022**, 12, 199	3.6	0
5	Phylogeny, tissue-specific expression, and activities of root-secreted purple acid phosphatases for P uptake from ATP in P starved poplar. *Plant Science*, **2021**, 307, 110906	5.3	0
4	Tree species composition and soil properties in pure and mixed beech-conifer stands drive soil fungal communities. *Forest Ecology and Management*, **2021**, 502, 119709	3.9	0
3	Changes in culm surface temperature with maturity of the bamboo species Guadua angustifolia. *Journal of Forestry Research*, **2016**, 27, 419-425	2	
2	Resistance against oxidative stress in leaves of young beech trees grown in model ecosystems with different soil qualities, elevated CO2, and lachnid infestation. *European Journal of Forest Research*, **2001**, 120, 1-7		
1	Diffusion Barriers for Protons at the External Surface of Thylakoids **1984**, 261-264		