Liesje Mommer

List of Publications by Year
in descending order

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94 papers	11,636 citations	34105 52 h-index	43889 91 g-index
99 all docs	99 docs citations	99 times ranked	11963 citing authors

#	Article	IF	Citations
1	Biomass allocation to leaves, stems and roots: metaâ€analyses of interspecific variation and environmental control. New Phytologist, 2012, 193, 30-50.	7.3	2,012
2	Going underground: root traits as drivers of ecosystem processes. Trends in Ecology and Evolution, 2014, 29, 692-699.	8.7	881
3	Towards a multidimensional root trait framework: a tree root review. New Phytologist, 2016, 211, 1159-1169.	7.3	432
4	The fungal collaboration gradient dominates the root economics space in plants. Science Advances, 2020, 6, .	10.3	377
5	Root biomass and exudates link plant diversity with soil bacterial and fungal biomass. Scientific Reports, 2017, 7, 44641.	3.3	309
6	Biodiversity effects on ecosystem functioning in a 15-year grassland experiment: Patterns, mechanisms, and open questions. Basic and Applied Ecology, 2017, 23, 1-73.	2.7	307
7	Root traits as drivers of plant and ecosystem functioning: current understanding, pitfalls and future research needs. New Phytologist, 2021, 232, 1123-1158.	7.3	277
8	The Future of Complementarity: Disentangling Causes from Consequences. Trends in Ecology and Evolution, 2019, 34, 167-180.	8.7	246
9	Biochar application does not improve the soil hydrological function of a sandy soil. Geoderma, 2015, 251-252, 47-54.	5.1	240
10	Underwater Photosynthesis in Flooded Terrestrial Plants: A Matter of Leaf Plasticity. Annals of Botany, 2005, 96, 581-589.	2.9	231
11	Persistence of dissolved organic matter explained by molecular changes during its passage through soil. Nature Geoscience, 2019, 12, 755-761.	12.9	230
12	The way forward in biochar research: targeting tradeâ€offs between the potential wins. GCB Bioenergy, 2015, 7, 1-13.	5.6	228
13	Plant species richness promotes soil carbon and nitrogen stocks in grasslands without legumes. Journal of Ecology, 2014, 102, 1163-1170.	4.0	220
14	Unveiling belowâ€ground species abundance in a biodiversity experiment: a test of vertical niche differentiation among grassland species. Journal of Ecology, 2010, 98, 1117-1127.	4.0	219
15	A starting guide to root ecology: strengthening ecological concepts and standardising root classification, sampling, processing and trait measurements. New Phytologist, 2021, 232, 973-1122.	7.3	216
16	Root responses to nutrients and soil biota: drivers of species coexistence and ecosystem productivity. Journal of Ecology, 2012, 100, 6-15.	4.0	182
17	Longâ€term study of root biomass in a biodiversity experiment reveals shifts in diversity effects over time. Oikos, 2014, 123, 1528-1536.	2.7	165
18	A modular concept of plant foraging behaviour: the interplay between local responses and systemic control. Plant, Cell and Environment, 2009, 32, 704-712.	5.7	164

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19	Molecular mechanisms of plant competition: neighbour detection and response strategies. Functional Ecology, 2013, 27, 841-853.	3.6	162
20	Lost in diversity: the interactions between soilâ€borne fungi, biodiversity and plant productivity. New Phytologist, 2018, 218, 542-553.	7.3	160
21	A physiological production model for cocoa (Theobroma cacao): model presentation, validation and application. Agricultural Systems, 2005, 84, 195-225.	6.1	155
22	An integrated framework of plant form and function: the belowground perspective. New Phytologist, 2021, 232, 42-59.	7.3	153
23	Rootâ€“Root Interactions: Towards A Rhizosphere Framework. Trends in Plant Science, 2016, 21, 209-217.	8.8	149
24	Ecophysiological determinants of plant performance under flooding: a comparative study of seven plant families. Journal of Ecology, 2006, 94, 1117-1129.	4.0	126
25	Submergence-Induced Morphological, Anatomical, and Biochemical Responses in a Terrestrial Species Affect Gas Diffusion Resistance and Photosynthetic Performance. Plant Physiology, 2005, 139, 497-508.	4.8	124
26	Interactive effects of nutrient heterogeneity and competition: implications for root foraging theory?. Functional Ecology, 2012, 26, 66-73.	3.6	124
27	Flooding disturbances increase resource availability and productivity but reduce stability in diverse plant communities. Nature Communications, 2015, 6, 6092.	12.8	116
28	Soil amendment with biochar increases the competitive ability of legumes via increased potassium availability. Agriculture, Ecosystems and Environment, 2014, 191, 92-98.	5.3	114
29	Plant traits alone are poor predictors of ecosystem properties and long-term ecosystem functioning. Nature Ecology and Evolution, 2020, 4, 1602-1611.	7.8	114
30	Improving the Scale and Precision of Hypotheses to Explain Root Foraging Ability. Annals of Botany, 2008, 101, 1295-1301.	2.9	111
31	Independent variations of plant and soil mixtures reveal soil feedback effects on plant community overyielding. Journal of Ecology, 2013, 101, 287-297.	4.0	111
32	Contrasting root behaviour in two grass species: a test of functionality in dynamic heterogeneous conditions. Plant and Soil, 2011, 344, 347-360.	3.7	107
33	Plant species diversity affects infiltration capacity in an experimental grassland through changes in soil properties. Plant and Soil, 2015, 397, 1-16.	3.7	105
34	The role of roots in the resource economics spectrum. New Phytologist, 2012, 195, 725-727.	7.3	98
35	The results of biodiversityâ€“ecosystem functioning experiments are realistic. Nature Ecology and Evolution, 2020, 4, 1485-1494.	7.8	93
36	Competing neighbors: light perception and root function. Oecologia, 2014, 176, 1-10.	2.0	91

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37	Global root traits (GRooT) database. Global Ecology and Biogeography, 2021, 30, 25-37.	5.8	90
38	Root foraging theory put to the test. Trends in Ecology and Evolution, 2006, 21, 113-116.	8.7	88
39	Effects of biodiversity strengthen over time as ecosystem functioning declines at low and increases at high biodiversity. Ecosphere, 2016, 7, e01619.	2.2	87
40	Linking root traits and competitive success in grassland species. Plant and Soil, 2016, 407, 39-53.	3.7	87
41	Plants are less negatively affected by flooding when growing in speciesâ€rich plant communities. New Phytologist, 2017, 213, 645-656.	7.3	79
42	Advances in the rhizosphere: stretching the interface of life. Plant and Soil, 2016, 407, 1-8.	3.7	78
43	Plant Phenotypic and Transcriptional Changes Induced by Volatiles from the Fungal Root Pathogen Rhizoctonia solani. Frontiers in Plant Science, 2017, 8, 1262.	3.6	78
44	Belowâ€ground complementarity effects in a grassland biodiversity experiment are related to deepâ€rooting species. Journal of Ecology, 2018, 106, 265-277.	4.0	76
45	Fine-root trait plasticity of beech (Fagus sylvatica) and spruce (Picea abies) forests on two contrasting soils. Plant and Soil, 2017, 415, 175-188.	3.7	71
46	Plant species richness and functional groups have different effects on soil water content in a decadeâ€long grassland experiment. Journal of Ecology, 2019, 107, 127-141.	4.0	69
47	Early Root Overproduction Not Triggered by Nutrients Decisive for Competitive Success Belowground. PLoS ONE, 2013, 8, e55805.	2.5	67
48	A functional comparison of acclimation to shade and submergence in two terrestrial plant species. New Phytologist, 2005, 167, 197-206.	7.3	64
49	Submergenceâ€induced leaf acclimation in terrestrial species varying in flooding tolerance. New Phytologist, 2007, 176, 337-345.	7.3	64
50	Deciphering the role of specialist and generalist plantâ€“microbial interactions as drivers of plantâ€“soil feedback. New Phytologist, 2022, 234, 1929-1944.	7.3	63
51	Photosynthetic consequences of phenotypic plasticity in response to submergence: Rumex palustris as a case study. Journal of Experimental Botany, 2006, 57, 283-290.	4.8	62
52	Spatial heterogeneity of plantâ€“soil feedback affects root interactions and interspecific competition. New Phytologist, 2015, 207, 830-840.	7.3	62
53	Root traits explain plant species distributions along climatic gradients yet challenge the nature of ecological trade-offs. Nature Ecology and Evolution, 2021, 5, 1123-1134.	7.8	62
54	The role of fineâ€root mass, specific root length and life span in tree performance: A wholeâ€tree exploration. Functional Ecology, 2020, 34, 575-585.	3.6	61

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55	Plant diversity shapes microbeâ€rhizosphere effects on P mobilisation from organic matter in soil. Ecology Letters, 2015, 18, 1356-1365.	6.4	57
56	Root plasticity maintains growth of temperate grassland species under pulsed water supply. Plant and Soil, 2013, 369, 377-386.	3.7	55
57	Belowâ€ground resource partitioning alone cannot explain the biodiversityâ€“ecosystem function relationship: A field test using multiple tracers. Journal of Ecology, 2018, 106, 2002-2018.	4.0	53
58	From pots to plots: hierarchical traitâ€based prediction of plant performance in a mesic grassland. Journal of Ecology, 2016, 104, 206-218.	4.0	51
59	Soil biochar amendment in a nature restoration area: effects on plant productivity and community composition. Ecological Applications, 2014, 24, 1167-1177.	3.8	50
60	Plant functional group drives the community structure of saprophytic fungi in a grassland biodiversity experiment. Plant and Soil, 2021, 461, 91-105.	3.7	50
61	Seasonal changes and vertical distribution of root standing biomass of graminoids and shrubs at a Siberian tundra site. Plant and Soil, 2016, 407, 55-65.	3.7	49
62	Aboveâ€and belowâ€ground responses of four tundra plant functional types to deep soil heating and surface soil fertilization. Journal of Ecology, 2017, 105, 947-957.	4.0	49
63	Do soilâ€borne fungal pathogens mediate plant diversityâ€“productivity relationships? Evidence and future opportunities. Journal of Ecology, 2020, 108, 1810-1821.	4.0	49
64	Functional trait dissimilarity drives both species complementarity and competitive disparity. Functional Ecology, 2017, 31, 2320-2329.	3.6	48
65	Belowground plant biomass allocation in tundra ecosystems and its relationship with temperature. Environmental Research Letters, 2016, 11, 055003.	5.2	45
66	Biodiversity increases multitrophic energy use efficiency, flow and storage in grasslands. Nature Ecology and Evolution, 2020, 4, 393-405.	7.8	45
67	Belowground DNA-based techniques: untangling the network of plant root interactions. Plant and Soil, 2011, 348, 115-121.	3.7	43
68	Plant species richness leaves a legacy of enhanced root litter-induced decomposition in soil. Soil Biology and Biochemistry, 2015, 80, 341-348.	8.8	42
69	Linking ecology and plant pathology to unravel the importance of soil-borne fungal pathogens in species-rich grasslands. European Journal of Plant Pathology, 2019, 154, 141-156.	1.7	42
70	Plant species richness negatively affects root decomposition in grasslands. Journal of Ecology, 2017, 105, 209-218.	4.0	41
71	Limited evidence for spatial resource partitioning across temperate grassland biodiversity experiments. Ecology, 2020, 101, e02905.	3.2	40
72	Root responses of grassland species to spatial heterogeneity of plantâ€“soil feedback. Functional Ecology, 2015, 29, 177-186.	3.6	38

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73	Breeding Beyond Monoculture: Putting the â€œIntercropâ€•Into Crops. Frontiers in Plant Science, 2021, 12, 734167.	3.6	32
74	Diversity effects on root length production and loss in an experimental grassland community. Functional Ecology, 2015, 29, 1560-1568.	3.6	31
75	Drivers of total and pathogenic soil-borne fungal communities in grassland plant species. Fungal Ecology, 2020, 48, 100987.	1.6	24
76	Initial biochar effects on plant productivity derive from N fertilization. Plant and Soil, 2017, 415, 435-448.	3.7	22
77	Effects of extreme rainfall events are independent of plant species richness in an experimental grassland community. Oecologia, 2019, 191, 177-190.	2.0	18
78	Depthâ€based differentiation in nitrogen uptake between graminoids and shrubs in an Arctic tundra plant community. Journal of Vegetation Science, 2018, 29, 34-41.	2.2	17
79	Plant diversity enhances production and downward transport of biodegradable dissolved organic matter. Journal of Ecology, 2021, 109, 1284-1297.	4.0	17
80	Mycorrhizal associations change root functionality: a 3D modelling study on competitive interactions between plants for light and nutrients. New Phytologist, 2021, 231, 1171-1182.	7.3	17
81	Microbial catabolic diversity in and beyond the rhizosphere of plant species and plant genotypes. Pedobiologia, 2017, 61, 43-49.	1.2	16
82	Using root traits to understand temporal changes in biodiversity effects in grassland mixtures. Oikos, 2019, 128, 208-220.	2.7	16
83	Root chemistry and soil fauna, but not soil abiotic conditions explain the effects of plant diversity on root decomposition. Oecologia, 2017, 185, 499-511.	2.0	13
84	Above- and belowground overyielding are related at the community and species level in a grassland biodiversity experiment. Advances in Ecological Research, 2019, 61, 55-89.	2.7	12
85	msGBS: A new highâ€throughput approach to quantify the relative species abundance in root samples of multispecies plant communities. Molecular Ecology Resources, 2021, 21, 1021-1036.	4.8	12
86	Maize varieties can strengthen positive plant-soil feedback through beneficial arbuscular mycorrhizal fungal mutualists. Mycorrhiza, 2019, 29, 251-261.	2.8	11
87	Plant neighbours can make or break the disease transmission chain of a fungal root pathogen. New Phytologist, 2022, 233, 1303-1316.	7.3	11
88	Short-term root and leaf decomposition of two dominant plant species in a Siberian tundra. Pedobiologia, 2017, 65, 68-76.	1.2	10
89	Soil Biodiversity: Stateâ€ofâ€theâ€Art and Possible Implementation in Chemical Risk Assessment. Integrated Environmental Assessment and Management, 2021, 17, 541-551.	2.9	10
90	Can root trait diversity explain complementarity effects in a grassland biodiversity experiment?. Journal of Plant Ecology, 2016, , rtw111.	2.3	9

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91	Biochars produced from individual grassland species differ in their effect on plant growth. Basic and Applied Ecology, 2014, 15, 18-25.	2.7	8
92	Focusing on individual plants to understand community scale biodiversity effects: the case of root distribution in grasslands. Oikos, 0, , .	2.7	6
93	Focus on a locus. Nature Ecology and Evolution, 2018, 2, 1838-1839.	7.8	1
94	Snow roots: Where are they and what are they for?. Ecology, 2021, 102, e03255.	3.2	0