Matthias C Rillig

List of Publications by Citations

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405 papers	30,852 citations	93 h-index	165 g-index
448 ext. papers	39,260 ext. citations	7.3 avg, IF	7.93 L-index

#	Paper	IF	Citations
405	Biochar effects on soil biota â A review. *Soil Biology and Biochemistry*, **2011**, 43, 1812-1836	7.5	2707
404	Mycorrhizas and soil structure. *New Phytologist*, **2006**, 171, 41-53	9.8	1001
403	Mycorrhizal responses to biochar in soil â concepts and mechanisms. *Plant and Soil*, **2007**, 300, 9-20	4.2	730
402	Microplastics as an emerging threat to terrestrial ecosystems. *Global Change Biology*, **2018**, 24, 1405-1416	11.4	680
401	Arbuscular mycorrhizae, glomalin, and soil aggregation. *Canadian Journal of Soil Science*, **2004**, 84, 355-363	1.4	614
400	Microplastic in terrestrial ecosystems and the soil?. *Environmental Science & Technology*, **2012**, 46, 6453-4	10.3	612
399	Rooting theories of plant community ecology in microbial interactions. *Trends in Ecology and Evolution*, **2010**, 25, 468-78	10.9	503
398	Soil aggregation and carbon sequestration are tightly correlated with the abundance of arbuscular mycorrhizal fungi: results from long-term field experiments. *Ecology Letters*, **2009**, 12, 452-61	10	472
397	Where less may be more: how the rare biosphere pulls ecosystems strings. *ISME Journal*, **2017**, 11, 853-862	11.9	460
396	Choosing and using diversity indices: insights for ecological applications from the German Biodiversity Exploratories. *Ecology and Evolution*, **2014**, 4, 3514-24	2.8	451
395	Impacts of Microplastics on the Soil Biophysical Environment. *Environmental Science & Technology*, **2018**, 52, 9656-9665	10.3	440
394	Arbuscular mycorrhizae and terrestrial ecosystem processes. *Ecology Letters*, **2004**, 7, 740-754	10	409
393	TRY plant trait database - enhanced coverage and open access. *Global Change Biology*, **2020**, 26, 119-188	11.4	399
392	Microplastics Can Change Soil Properties and Affect Plant Performance. *Environmental Science & Technology*, **2019**, 53, 6044-6052	10.3	390
391	Soil microbes drive the classic plant diversity-productivity pattern. *Ecology*, **2011**, 92, 296-303	4.6	386
390	Large contribution of arbuscular mycorrhizal fungi to soil carbon pools in tropical forest soils. *Plant and Soil*, **2001**, 233, 167-177	4.2	371
389	Land use intensification alters ecosystem multifunctionality via loss of biodiversity and changes to functional composition. *Ecology Letters*, **2015**, 18, 834-843	10	360

388	The role of arbuscular mycorrhizal fungi and glomalin in soil aggregation: comparing effects of five plant species. *Plant and Soil*, **2002**, 238, 325-333	4.2	360
387	Biodiversity at multiple trophic levels is needed for ecosystem multifunctionality. *Nature*, **2016**, 536, 456-9	50.4	345
386	Microplastic transport in soil by earthworms. *Scientific Reports*, **2017**, 7, 1362	4.9	338
385	Mycorrhizal Symbioses and Plant Invasions. *Annual Review of Ecology, Evolution, and Systematics*, **2009**, 40, 699-715	13.5	308
384	Characterization of glomalin as a hyphal wall component of arbuscular mycorrhizal fungi. *Soil Biology and Biochemistry*, **2005**, 37, 101-106	7.5	263
383	Priming and memory of stress responses in organisms lacking a nervous system. *Biological Reviews*, **2016**, 91, 1118-1133	13.5	239
382	Material derived from hydrothermal carbonization: Effects on plant growth and arbuscular mycorrhiza. *Applied Soil Ecology*, **2010**, 45, 238-242	5	231
381	Phylogenetic trait conservatism and the evolution of functional trade-offs in arbuscular mycorrhizal fungi. *Proceedings of the Royal Society B: Biological Sciences*, **2009**, 276, 4237-45	4.4	226
380	Microplastic effects on plants. *New Phytologist*, **2019**, 223, 1066-1070	9.8	224
379	Microplastic Incorporation into Soil in Agroecosystems. *Frontiers in Plant Science*, **2017**, 8, 1805	6.2	215
378	Plant root and mycorrhizal fungal traits for understanding soil aggregation. *New Phytologist*, **2015**, 205, 1385-1388	9.8	211
377	Role of proteins in soil carbon and nitrogen storage: controls on persistence. *Biogeochemistry*, **2007** , 85, 25-44	3.8	195
376	Mycorrhizal fungal establishment in agricultural soils: factors determining inoculation success. *New Phytologist*, **2013**, 197, 1104-9	9.8	192
375	Global ecosystem thresholds driven by aridity. *Science*, **2020**, 367, 787-790	33.3	192
374	Arbuscular mycorrhiza and soil nitrogen cycling. *Soil Biology and Biochemistry*, **2012**, 46, 53-62	7.5	189
373	Microplastic in terrestrial ecosystems. *Science*, **2020**, 368, 1430-1431	33.3	188
372	Glomalin-related soil protein in a Mediterranean ecosystem affected by a copper smelter and its contribution to Cu and Zn sequestration. *Science of the Total Environment*, **2008**, 406, 154-60	10.2	188
371	Transport of microplastics by two collembolan species. *Environmental Pollution*, **2017**, 225, 456-459	9.3	187

370	Glomalin, an arbuscular-mycorrhizal fungal soil protein, responds to land-use change. *Plant and Soil*, **2003**, 253, 293-299	4.2	185
369	Plant pathogen protection by arbuscular mycorrhizas: A role for fungal diversity?. *Pedobiologia*, **2010**, 53, 197-201	1.7	177
368	The invasive plant species Centaurea maculosa alters arbuscular mycorrhizal fungal communities in the field. *Plant and Soil*, **2006**, 288, 81-90	4.2	172
367	Multiple factors influence the role of arbuscular mycorrhizal fungi in soil aggregationâ meta-analysis. *Plant and Soil*, **2014**, 374, 523-537	4.2	171
366	The role of multiple global change factors in driving soil functions and microbial biodiversity. *Science*, **2019**, 366, 886-890	33.3	169
365	Glomalin production by an arbuscular mycorrhizal fungus: a mechanism of habitat modification?. *Soil Biology and Biochemistry*, **2002**, 34, 1371-1374	7.5	169
364	Influences of non-herbaceous biochar on arbuscular mycorrhizal fungal abundances in roots and soils: Results from growth-chamber and field experiments. *Applied Soil Ecology*, **2010**, 46, 450-456	5	167
363	Interannual variation in land-use intensity enhances grassland multidiversity. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 308-13	11.5	166
362	Soil biota responses to long-term atmospheric CO enrichment in two California annual grasslands. *Oecologia*, **1999**, 119, 572-577	2.9	153
361	Biodiversity of arbuscular mycorrhizal fungi and ecosystem function. *New Phytologist*, **2018**, 220, 1059-1075	9.8	151
360	Nutrient limitation of soil microbial processes in tropical forests. *Ecological Monographs*, **2018**, 88, 4-21	9	151
359	A mycorrhizal fungus grows on biochar and captures phosphorus from its surfaces. *Soil Biology and Biochemistry*, **2014**, 77, 252-260	7.5	149
358	Soil biota contributions to soil aggregation. *Nature Ecology and Evolution*, **2017**, 1, 1828-1835	12.3	148
357	Arbuscular mycorrhizal influence on zinc nutrition in crop plants âA meta-analysis. *Soil Biology and Biochemistry*, **2014**, 69, 123-131	7.5	148
356	Artificial climate warming positively affects arbuscular mycorrhizae but decreases soil aggregate water stability in an annual grassland. *Oikos*, **2002**, 97, 52-58	4	147
355	Abrupt rise in atmospheric CO2 overestimates community response in a model plant-soil system. *Nature*, **2005**, 433, 621-4	50.4	147
354	Differential decomposition of arbuscular mycorrhizal fungal hyphae and glomalin. *Soil Biology and Biochemistry*, **2003**, 35, 191-194	7.5	145
353	Mycelium of arbuscular mycorrhizal fungi increases soil water repellency and is sufficient to maintain water-stable soil aggregates. *Soil Biology and Biochemistry*, **2010**, 42, 1189-1191	7.5	143

352	Nitrogen and phosphorus additions impact arbuscular mycorrhizal abundance and molecular diversity in a tropical montane forest. *Global Change Biology*, **2014**, 20, 3646-59	11.4	140
351	Designing belowground field experiments with the help of semi-variance and power analyses. *Applied Soil Ecology*, **1999**, 12, 227-238	5	137
350	The arbuscular mycorrhizal fungal protein glomalin is a putative homolog of heat shock protein 60. *FEMS Microbiology Letters*, **2006**, 263, 93-101	2.9	135
349	Rise in carbon dioxide changes soil structure. *Nature*, **1999**, 400, 628-628	50.4	135
348	Disentangling the impact of AM fungi versus roots on soil structure and water transport. *Plant and Soil*, **2009**, 314, 183-196	4.2	133
347	Glomalin-related soil protein: Assessment of current detection and quantification tools. *Soil Biology and Biochemistry*, **2006**, 38, 2205-2211	7.5	133
346	Arbuscular mycorrhizal contribution to copper, manganese and iron nutrient concentrations in crops âA meta-analysis. *Soil Biology and Biochemistry*, **2015**, 81, 147-158	7.5	131
345	The concept and future prospects of soil health. *Nature Reviews Earth & Environment*, **2020**, 1, 544-553	30.2	130
344	Suppression of fungal and nematode plant pathogens through arbuscular mycorrhizal fungi. *Biology Letters*, **2012**, 8, 214-7	3.6	129
343	Forces that structure plant communities: quantifying the importance of the mycorrhizal symbiosis. *New Phytologist*, **2011**, 189, 366-70	9.8	126
342	Soil aggregates as massively concurrent evolutionary incubators. *ISME Journal*, **2017**, 11, 1943-1948	11.9	125
341	Untangling the biological contributions to soil stability in semiarid shrublands **2009**, 19, 110-22		125
340	Plant diversity represents the prevalent determinant of soil fungal community structure across temperate grasslands in northern China. *Soil Biology and Biochemistry*, **2017**, 110, 12-21	7.5	124
339	Extinction risk of soil biota. *Nature Communications*, **2015**, 6, 8862	17.4	124
338	Hydrochar and Biochar Effects on Germination of Spring Barley. *Journal of Agronomy and Crop Science*, **2013**, 199, 360-373	3.9	124
337	Interchange of entire communities: microbial community coalescence. *Trends in Ecology and Evolution*, **2015**, 30, 470-6	10.9	123
336	The fungal collaboration gradient dominates the root economics space in plants. *Science Advances*, **2020**, 6,	14.3	120
335	Land use influences arbuscular mycorrhizal fungal communities in the farming-pastoral ecotone of northern China. *New Phytologist*, **2014**, 204, 968-78	9.8	118

334	Mycorrhizas in the Central European flora: relationships with plant life history traits and ecology. *Ecology*, **2013**, 94, 1389-99	4.6	116
333	The arbuscular mycorrhizal fungal protein glomalin: Limitations, progress, and a new hypothesis for its function. *Pedobiologia*, **2007**, 51, 123-130	1.7	116
332	Global distribution of earthworm diversity. *Science*, **2019**, 366, 480-485	33.3	113
331	The effects of arbuscular mycorrhizas on soil aggregation depend on the interaction between plant and fungal species. *New Phytologist*, **2004**, 164, 365-373	9.8	113
330	Microplastic Disguising As Soil Carbon Storage. *Environmental Science & Technology*, **2018**, 52, 6079-6080	10.9	113
329	Choice of methods for soil microbial community analysis: PLFA maximizes power compared to CLPP and PCR-based approaches. *Pedobiologia*, **2006**, 50, 275-280	1.7	112
328	Contributions of biotic and abiotic factors to soil aggregation across a land use gradient. *Soil Biology and Biochemistry*, **2010**, 42, 2316-2324	7.5	110
327	Does herbivory really suppress mycorrhiza? A meta-analysis. *Journal of Ecology*, **2010**, 98, 745-753	6	108
326	Fungal superhighways: do common mycorrhizal networks enhance below ground communication?. *Trends in Plant Science*, **2012**, 17, 633-7	13.1	105
325	Biochar increases arbuscular mycorrhizal plant growth enhancement and ameliorates salinity stress. *Applied Soil Ecology*, **2015**, 96, 114-121	5	104
324	Community assembly and coexistence in communities of arbuscular mycorrhizal fungi. *ISME Journal* , **2016**, 10, 2341-51	11.9	104
323	Neighboring plant influences on arbuscular mycorrhizal fungal community composition as assessed by T-RFLP analysis. *Plant and Soil*, **2005**, 271, 83-90	4.2	103
322	Do arbuscular mycorrhizal fungi affect the allometric partition of host plant biomass to shoots and roots? A meta-analysis of studies from 1990 to 2010. *Mycorrhiza*, **2012**, 22, 227-35	3.9	102
321	Below-Ground Microbial and Microfaunal Responses to Artemisia tridentata Grown Under Elevated Atmospheric Co 2. *Functional Ecology*, **1996**, 10, 527	5.6	102
320	Arbuscular mycorrhizal fungi reduce decomposition of woody plant litter while increasing soil aggregation. *Soil Biology and Biochemistry*, **2015**, 81, 323-328	7.5	101
319	The fungal fast lane: common mycorrhizal networks extend bioactive zones of allelochemicals in soils. *PLoS ONE*, **2011**, 6, e27195	3.7	101
318	Fertilization affects severity of disease caused by fungal plant pathogens. *Plant Pathology*, **2013**, 62, 961-969	2.8	98
317	Effects of hydrochar application on the dynamics of soluble nitrogen in soils and on plant availability. *Journal of Plant Nutrition and Soil Science*, **2014**, 177, 48-58	2.3	97

316	Arbuscular mycorrhizal fungi increase grain yields: a meta-analysis. *New Phytologist*, **2019**, 222, 543-555	9.8	97
315	Tropical Andean forests are highly susceptible to nutrient inputs--rapid effects of experimental N and P addition to an Ecuadorian montane forest. *PLoS ONE*, **2012**, 7, e47128	3.7	96
314	Branching out: Towards a trait-based understanding of fungal ecology. *Fungal Biology Reviews*, **2015**, 29, 34-41	6.8	95
313	Effects of Microplastic Fibers and Drought on Plant Communities. *Environmental Science & Technology*, **2020**, 54, 6166-6173	10.3	95
312	Mycorrhizal responsiveness trends in annual crop plants and their wild relativesâ meta-analysis on studies from 1981 to 2010. *Plant and Soil*, **2012**, 355, 231-250	4.2	92
311	Microsite differences in fungal hyphal length, glomalin, and soil aggregate stability in semiarid Mediterranean steppes. *Soil Biology and Biochemistry*, **2003**, 35, 1257-1260	7.5	90
310	Land-use intensity and host plant identity interactively shape communities of arbuscular mycorrhizal fungi in roots of grassland plants. *New Phytologist*, **2015**, 205, 1577-1586	9.8	88
309	Locally rare species influence grassland ecosystem multifunctionality. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2016**, 371,	5.8	88
308	Evidence for functional divergence in arbuscular mycorrhizal fungi from contrasting climatic origins. *New Phytologist*, **2011**, 189, 507-14	9.8	87
307	Divergent consequences of hydrochar in the plantâoil system: Arbuscular mycorrhiza, nodulation, plant growth and soil aggregation effects. *Applied Soil Ecology*, **2012**, 59, 68-72	5	86
306	Small-scale spatial heterogeneity of arbuscular mycorrhizal fungal abundance and community composition in a wetland plant community. *Mycorrhiza*, **2007**, 17, 175-183	3.9	86
305	Why farmers should manage the arbuscular mycorrhizal symbiosis. *New Phytologist*, **2019**, 222, 1171-1175	9.8	86
304	A connection between fungal hydrophobins and soil water repellency?. *Pedobiologia*, **2005**, 49, 395-399	1.7	84
303	Microplastic and soil protists: A call for research. *Environmental Pollution*, **2018**, 241, 1128-1131	9.3	82
302	High-resolution community profiling of arbuscular mycorrhizal fungi. *New Phytologist*, **2016**, 212, 780-791	9.8	81
301	Ecosystem service and biodiversity trade-offs in two woody successions. *Journal of Applied Ecology*, **2011**, 48, 926-934	5.8	80
300	Spatial characterization of arbuscular mycorrhizal fungal molecular diversity at the submetre scale in a temperate grassland. *FEMS Microbiology Ecology*, **2008**, 64, 260-70	4.3	79
299	Interspecific differences in the response of arbuscular mycorrhizal fungi to Artemisia tridentata grown under elevated atmospheric CO2. *New Phytologist*, **1998**, 138, 599-605	9.8	75

298	What is the role of arbuscular mycorrhizal fungi in plant-to-ecosystem responses to Elevated atmospheric CO2?. *Mycorrhiza*, **1999**, 9, 1-8	3.9	75
297	Soil fungal-arthropod responses to Populus tremuloides grown under enriched atmospheric CO2 under field conditions. *Global Change Biology*, **1997**, 3, 473-478	11.4	74
296	Foliar elemental composition of European forest tree species associated with evolutionary traits and present environmental and competitive conditions. *Global Ecology and Biogeography*, **2015**, 24, 240-255	6.1	73
295	Evolutionary criteria outperform operational approaches in producing ecologically relevant fungal species inventories. *Molecular Ecology*, **2011**, 20, 655-66	5.7	73
294	Impacts of domestication on the arbuscular mycorrhizal symbiosis of 27 crop species. *New Phytologist*, **2018**, 218, 322-334	9.8	72
293	Blind spots in global soil biodiversity and ecosystem function research. *Nature Communications*, **2020**, 11, 3870	17.4	72
292	Arbuscular mycorrhizal fungal communities are phylogenetically clustered at small scales. *ISME Journal*, **2014**, 8, 2231-42	11.9	71
291	Arbuscular mycorrhizal fungi pre-inoculant identity determines community composition in roots. *Soil Biology and Biochemistry*, **2009**, 41, 1173-1179	7.5	69
290	Seasonality of arbuscular mycorrhizal hyphae and glomalin in a western Montana grassland. *Plant and Soil*, **2003**, 257, 71-83	4.2	69
289	Elevated carbon dioxide and irrigation effects on water stable aggregates in a Sorghum field: a possible role for arbuscular mycorrhizal fungi. *Global Change Biology*, **2001**, 7, 333-337	11.4	69
288	How Soil Biota Drive Ecosystem Stability. *Trends in Plant Science*, **2018**, 23, 1057-1067	13.1	69
287	Microplastic Shape, Polymer Type, and Concentration Affect Soil Properties and Plant Biomass. *Frontiers in Plant Science*, **2021**, 12, 616645	6.2	66
286	Deciphering the relative contributions of multiple functions within plant-microbe symbioses. *Ecology*, **2010**, 91, 1591-7	4.6	65
285	Phylogeny of arbuscular mycorrhizal fungi predicts community composition of symbiosis-associated bacteria. *FEMS Microbiology Ecology*, **2006**, 57, 389-95	4.3	64
284	Protein accumulation and distribution in floodplain soils and river foam. *Ecology Letters*, **2004**, 7, 829-836	10	64
283	Towards an Integrated Mycorrhizal Technology: Harnessing Mycorrhiza for Sustainable Intensification in Agriculture. *Frontiers in Plant Science*, **2016**, 7, 1625	6.2	64
282	Foliar and soil concentrations and stoichiometry of nitrogen and phosphorous across European Pinus sylvestris forests: relationships with climate, N deposition and tree growth. *Functional Ecology*, **2016**, 30, 676-689	5.6	63
281	The influence of different stresses on glomalin levels in an arbuscular mycorrhizal fungus--salinity increases glomalin content. *PLoS ONE*, **2011**, 6, e28426	3.7	61

280	Seventeen years of carbon dioxide enrichment of sour orange trees: final results. *Global Change Biology*, **2007**, 13, 2171-2183	11.4	59
279	Functional role of microarthropods in soil aggregation. *Pedobiologia*, **2015**, 58, 59-63	1.7	57
278	Plant species-specific changes in root-inhabiting fungi in a California annual grassland: responses to elevated CO and nutrients. *Oecologia*, **1998**, 113, 252-259	2.9	57
277	Ecological understanding of root-infecting fungi using trait-based approaches. *Trends in Plant Science*, **2014**, 19, 432-8	13.1	56
276	Creating novel urban grasslands by reintroducing native species in wasteland vegetation. *Biological Conservation*, **2013**, 159, 119-126	6.2	56
275	Relationship between communities and processes; new insights from a field study of a contaminated ecosystem. *Ecology Letters*, **2005**, 8, 1201-10	10	55
274	Influence of commercial inoculation with Glomus intraradices on the structure and functioning of an AM fungal community from an agricultural site. *Plant and Soil*, **2009**, 317, 257-266	4.2	54
273	Losses of glomalin-related soil protein under prolonged arable cropping: A chronosequence study in sandy soils of the South African Highveld. *Soil Biology and Biochemistry*, **2007**, 39, 445-453	7.5	54
272	Understanding mechanisms of soil biota involvement in soil aggregation: A way forward with saprobic fungi?. *Soil Biology and Biochemistry*, **2015**, 88, 298-302	7.5	53
271	Do arbuscular mycorrhizal fungi stabilize litter-derived carbon in soil?. *Journal of Ecology*, **2016**, 104, 261-269	6	53
270	Hydrochar amendment promotes microbial immobilization of mineral nitrogen. *Journal of Plant Nutrition and Soil Science*, **2014**, 177, 59-67	2.3	53
269	Determinants of root-associated fungal communities within Asteraceae in a semi-arid grassland. *Journal of Ecology*, **2014**, 102, 425-436	6	53
268	Compositional divergence and convergence in arbuscular mycorrhizal fungal communities. *Ecology*, **2012**, 93, 1115-24	4.6	53
267	Inhibition of colonization by a native arbuscular mycorrhizal fungal community via Populus trichocarpa litter, litter extract, and soluble phenolic compounds. *Soil Biology and Biochemistry*, **2008**, 40, 709-717	7.5	53
266	Evolutionary implications of microplastics for soil biota. *Environmental Chemistry*, **2019**, 16, 3-7	3.2	53
265	Linking the community structure of arbuscular mycorrhizal fungi and plants: a story of interdependence?. *ISME Journal*, **2017**, 11, 1400-1411	11.9	51
264	Global Change and Mycorrhizal Fungi. *Ecological Studies*, **2002**, 135-160	1.1	51
263	Arbuscular mycorrhizae respond to elevated atmospheric CO2 after long-term exposure: evidence from a CO2 spring in New Zealand supports the resource balance model. *Ecology Letters*, **2000**, 3, 475-478	10	51

262	Long-term effects of soil nutrient deficiency on arbuscular mycorrhizal communities. *Functional Ecology*, **2012**, 26, 532-540	5.6	50
261	Evaluation of LSU rRNA-gene PCR primers for analysis of arbuscular mycorrhizal fungal communities via terminal restriction fragment length polymorphism analysis. *Journal of Microbiological Methods*, **2007**, 70, 200-4	2.8	50
260	Soil biota effects on soil structure: Interactions between arbuscular mycorrhizal fungal mycelium and collembola. *Soil Biology and Biochemistry*, **2012**, 50, 33-39	7.5	49
259	Do closely related plants host similar arbuscular mycorrhizal fungal communities? A meta-analysis. *Plant and Soil*, **2014**, 377, 395-406	4.2	49
258	Microbiota accompanying different arbuscular mycorrhizal fungal isolates influence soil aggregation. *Pedobiologia*, **2005**, 49, 251-259	1.7	49
257	Statistically reinforced machine learning for nonlinear patterns and variable interactions. *Ecosphere* , **2017**, 8, e01976	3.1	48
256	Arbuscular mycorrhizal fungi enhance spotted knapweed growth across a riparian chronosequence. *Biological Invasions*, **2010**, 12, 1481-1490	2.7	48
255	Historical biome distribution and recent human disturbance shape the diversity of arbuscular mycorrhizal fungi. *New Phytologist*, **2017**, 216, 227-238	9.8	47
254	Abiotic and Biotic Factors Influencing the Effect of Microplastic on Soil Aggregation. *Soil Systems*, **2019**, 3, 21	3.5	46
253	Mycorrhizal status helps explain invasion success of alien plant species. *Ecology*, **2017**, 98, 92-102	4.6	46
252	Parasitism of arbuscular mycorrhizal fungi: reviewing the evidence. *FEMS Microbiology Letters*, **2008** , 279, 8-14	2.9	46
251	Seasonal dynamics of shallow-hyporheic-zone microbial community structure along a heavy-metal contamination gradient. *Applied and Environmental Microbiology*, **2004**, 70, 2323-31	4.8	46
250	Priorities for research in soil ecology. *Pedobiologia*, **2017**, 63, 1-7	1.7	44
249	Basic Principles of Temporal Dynamics. *Trends in Ecology and Evolution*, **2019**, 34, 723-733	10.9	44
248	Arbuscular mycorrhizal fungi and collembola non-additively increase soil aggregation. *Soil Biology and Biochemistry*, **2012**, 47, 93-99	7.5	44
247	Root traits are more than analogues of leaf traits: the case for diaspore mass. *New Phytologist*, **2017**, 216, 1130-1139	9.8	44
246	Improving soil protein extraction for metaproteome analysis and glomalin-related soil protein detection. *Proteomics*, **2009**, 9, 4970-3	4.8	44
245	Application of the microbial community coalescence concept to riverine networks. *Biological Reviews*, **2018**, 93, 1832-1845	13.5	43

244	Functional Traits and Spatio-Temporal Structure of a Major Group of Soil Protists (Rhizaria: Cercozoa) in a Temperate Grassland. *Frontiers in Microbiology*, **2019**, 10, 1332	5.7	43
243	Arbuscular mycorrhizal fungi--short-term liability but long-term benefits for soil carbon storage?. *New Phytologist*, **2013**, 197, 366-368	9.8	43
242	Arbuscular mycorrhizal fungal abundance in the Mojave Desert: Seasonal dynamics and impacts of elevated CO_2. *Journal of Arid Environments*, **2009**, 73, 834-843	2.5	43
241	Structure and Seasonal Dynamics of Hyporheic Zone Microbial Communities in Free-Stone Rivers of the Western United States. *Microbial Ecology*, **2003**, 46, 200-215	4.4	43
240	Interplay of soil water repellency, soil aggregation and organic carbon. A meta-analysis. *Geoderma*, **2016**, 283, 39-47	6.7	43
239	Tracking, targeting, and conserving soil biodiversity. *Science*, **2021**, 371, 239-241	33.3	43
238	Visualizing the dynamics of soil aggregation as affected by arbuscular mycorrhizal fungi. *ISME Journal*, **2019**, 13, 1639-1646	11.9	42
237	Arbuscular mycorrhizal fungal hyphae reduce soil erosion by surface water flow in a greenhouse experiment. *Applied Soil Ecology*, **2016**, 99, 137-140	5	42
236	Hyporheic microbial community development is a sensitive indicator of metal contamination. *Environmental Science & Technology*, **2009**, 43, 6158-63	10.3	42
235	Microbial carbon-substrate utilization in the rhizosphere of Gutierrezia sarothrae grown in elevated atmospheric carbon dioxide. *Soil Biology and Biochemistry*, **1997**, 29, 1387-1394	7.5	41
234	Endogeic earthworms differentially influence bacterial communities associated with different soil aggregate size fractions. *Soil Biology and Biochemistry*, **2006**, 38, 1608-1614	7.5	41
233	Microplastic effects on carbon cycling processes in soils. *PLoS Biology*, **2021**, 19, e3001130	9.7	41
232	Biochars reduce infection rates of the root-lesion nematode Pratylenchus penetrans and associated biomass loss in carrot. *Soil Biology and Biochemistry*, **2016**, 95, 11-18	7.5	40
231	Independent effects of arbuscular mycorrhiza and earthworms on plant diversity and newcomer plant establishment. *Journal of Vegetation Science*, **2011**, 22, 1021-1030	3.1	40
230	Opposing effects of nitrogen versus phosphorus additions on mycorrhizal fungal abundance along an elevational gradient in tropical montane forests. *Soil Biology and Biochemistry*, **2016**, 94, 37-47	7.5	39
229	Increased levels of airborne fungal spores in response to Populus tremuloides grown under elevated atmospheric CO_2. *Canadian Journal of Botany*, **1997**, 75, 1670-1673		39
228	Contrasting latitudinal diversity and co-occurrence patterns of soil fungi and plants in forest ecosystems. *Soil Biology and Biochemistry*, **2019**, 131, 100-110	7.5	39
227	Arbuscular mycorrhizae respond to plants exposed to elevated atmospheric CO_2 as a function of soil depth. *Plant and Soil*, **2003**, 254, 383-391	4.2	38

226	Plant community, geographic distance and abiotic factors play different roles in predicting AMF biogeography at the regional scale in northern China. *Environmental Microbiology Reports*, **2016**, 8, 1048-1057	3.7	38
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