Gerlinde Barbra De Deyn

List of Publications by Year
in descending order

98 papers	10,390 citations	66343 42 h-index	40979 93 g-index
104 all docs	104 docs citations	104 times ranked	10908 citing authors

#	Article	IF	Citations
1	Soil quality â€" A critical review. Soil Biology and Biochemistry, 2018, 120, 105-125.	8.8	1,441
2	Plant functional traits and soil carbon sequestration in contrasting biomes. Ecology Letters, 2008, 11, 516-531.	6.4	1,101
3	Soil invertebrate fauna enhances grassland succession and diversity. Nature, 2003, 422, 711-713.	27.8	501
4	Earthworms increase plant production: a meta-analysis. Scientific Reports, 2014, 4, 6365.	3.3	381
5	Linking aboveground and belowground diversity. Trends in Ecology and Evolution, 2005, 20, 625-633.	8.7	359
6	Plant species identity and diversity effects on different trophic levels of nematodes in the soil food web. Oikos, 2004, 106, 576-586.	2.7	356
7	Organic farming enhances soil microbial abundance and activityâ€"A meta-analysis and meta-regression. PLoS ONE, 2017, 12, e0180442.	2.5	329
8	Selection for niche differentiation in plant communities increases biodiversity effects. Nature, 2014, 515, 108-111.	27.8	313
9	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
10	Plantâ€"Soil Feedback: Bridging Natural and Agricultural Sciences. Trends in Ecology and Evolution, 2018, 33, 129-142.	8.7	249
11	The Future of Complementarity: Disentangling Causes from Consequences. Trends in Ecology and Evolution, 2019, 34, 167-180.	8.7	246
12	Plant species richness promotes soil carbon and nitrogen stocks in grasslands without legumes. Journal of Ecology, 2014, 102, 1163-1170.	4.0	220
13	Soil microbiota as game-changers in restoration of degraded lands. Science, 2022, 375, abe0725.	12.6	216
14	Plantâ€"soil feedbacks: role of plant functional group and plant traits. Journal of Ecology, 2016, 104, 1608-1617.	4.0	213
15	Plant diversity and root traits benefit physical properties key to soil function in grasslands. Ecology Letters, 2016, 19, 1140-1149.	6.4	211
16	Plant community development is affected by nutrients and soil biota. Journal of Ecology, 2004, 92, 824-834.	4.0	200
17	Soil community composition drives aboveground plant-herbivore-parasitoid interactions. Ecology Letters, 2005, 8, 652-661.	6.4	198
18	Biotic plantâ€"soil feedbacks across temporal scales. Journal of Ecology, 2013, 101, 309-315.	4.0	184

#	Article	IF	Citations
19	Diversity reduces invasibility in experimental plant communities: the role of plant species. Ecology Letters, 2003, 6, 910-918.	6.4	180
20	Differential responses of soil bacteria, fungi, archaea and protists to plant species richness and plant functional group identity. Molecular Ecology, 2017, 26, 4085-4098.	3.9	173
21	Soil fauna: key to new carbon models. Soil, 2016, 2, 565-582.	4.9	149
22	Additional carbon sequestration benefits of grassland diversity restoration. Journal of Applied Ecology, 2011, 48, 600-608.	4.0	145
23	Vegetation composition promotes carbon and nitrogen storage in model grassland communities of contrasting soil fertility. Journal of Ecology, 2009, 97, 864-875.	4.0	134
24	Plant species richness, identity and productivity differentially influence key groups of microbes in grassland soils of contrasting fertility. Biology Letters, 2011, 7, 75-78.	2.3	129
25	Soil biotic legacy effects of extreme weather events influence plant invasiveness. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9835-9838.	7.1	125
26	Organic management and cover crop species steer soil microbial community structure and functionality along with soil organic matter properties. Agriculture, Ecosystems and Environment, 2018, 263, 7-17.	5.3	115
27	Plant species identity surpasses species richness as a key driver of <scp><scp>N₂O</scp></scp> emissions from grassland. Global Change Biology, 2014, 20, 265-275.	9.5	100
28	Rapid transfer of photosynthetic carbon through the plant-soil system in differently managed species-rich grasslands. Biogeosciences, 2011, 8, 1131-1139.	3.3	95
29	Towards an Integration of Biodiversityâ€“Ecosystem Functioning and Food Web Theory to Evaluate Relationships between Multiple Ecosystem Services. Advances in Ecological Research, 2015, , 161-199.	2.7	87
30	What plant functional traits can reduce nitrous oxide emissions from intensively managed grasslands?. Global Change Biology, 2018, 24, e248-e258.	9.5	67
31	Community evolution increases plant productivity at low diversity. Ecology Letters, 2018, 21, 128-137.	6.4	67
32	Ecosystem services: a useful concept for soil policy making!. Current Opinion in Environmental Sustainability, 2012, 4, 578-585.	6.3	63
33	Symbiotic soil fungi enhance ecosystem resilience to climate change. Global Change Biology, 2017, 23, 5228-5236.	9.5	63
34	Chemical defense, mycorrhizal colonization and growth responses in Plantago lanceolata L.. Oecologia, 2009, 160, 433-442.	2.0	60
35	Increased arbuscular mycorrhizal fungal colonization reduces yield loss of rice (Oryza sativa L.) under drought. Mycorrhiza, 2020, 30, 315-328.	2.8	60
36	Is litter decomposition enhanced in species mixtures? A meta-analysis. Soil Biology and Biochemistry, 2020, 145, 107791.	8.8	57

#	Article	IF	Citations
37	Soil invertebrate fauna affect <scp><scp>N₂O</scp></scp> emissions from soil. Global Change Biology, 2013, 19, 2814-2825.	9.5	54
38	Possible mechanisms underlying abundance and diversity responses of nematode communities to plant diversity. Ecosphere, 2017, 8, e01719.	2.2	52
39	Enhancement of Late Successional Plants on Ex-Arable Land by Soil Inoculations. PLoS ONE, 2011, 6, e21943.	2.5	52
40	Transferring biodiversity-ecosystem function research to the management of â€˜real-worldâ€™ ecosystems. Advances in Ecological Research, 2019, 61, 323-356.	2.7	51
41	Interactions between spatially separated herbivores indirectly alter plant diversity. Ecology Letters, 2004, 8, 30-37.	6.4	46
42	Winter cover crop legacy effects on litter decomposition act through litter quality and microbial community changes. Journal of Applied Ecology, 2019, 56, 132-143.	4.0	45
43	Biodiversity increases multitrophic energy use efficiency, flow and storage in grasslands. Nature Ecology and Evolution, 2020, 4, 393-405.	7.8	45
44	Trophic interactions in a changing world: modelling abovegroundâ€“belowground interactions. Basic and Applied Ecology, 2004, 5, 515-528.	2.7	42
45	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
46	Exploring the relationship between soil mesofauna, soil structure and N2O emissions. Soil Biology and Biochemistry, 2016, 96, 55-64.	8.8	41
47	Soil Biodiversity and Functions. , 2012, , 28-44.		41
48	Legacy effects of diversity in space and time driven by winter cover crop biomass and nitrogen concentration. Journal of Applied Ecology, 2018, 55, 299-310.	4.0	40
49	Above- and belowground biodiversity jointly tighten the P cycle in agricultural grasslands. Nature Communications, 2021, 12, 4431.	12.8	40
50	Feedbacks of plant identity and diversity on the diversity and community composition of rhizosphere microbiomes from a longâ€term biodiversity experiment. Molecular Ecology, 2019, 28, 863-878.	3.9	39
51	Effects of plant community history, soil legacy and plant diversity on soil microbial communities. Journal of Ecology, 2021, 109, 3007-3023.	4.0	39
52	Aboveâ€and belowground insect herbivores differentially affect soil nematode communities in speciesâ€rich plant communities. Oikos, 2007, 116, 923-930.	2.7	37
53	Plant selection and soil legacy enhance longâ€term biodiversity effects. Ecology, 2016, 97, 918-928.	3.2	36
54	Plant traitâ€based approaches to improve nitrogen cycling in agroecosystems. Journal of Applied Ecology, 2019, 56, 2454-2466.	4.0	36

#	Article	IF	Citations
55	Plant life history and aboveâ€“belowground interactions: missing links. Oikos, 2017, 126, 497-507.	2.7	35
56	Soil and Freshwater and Marine Sediment Food Webs: Their Structure and Function. BioScience, 2013, 63, 35-42.	4.9	34
57	The curse of the black box. Plant and Soil, 2012, 350, 27-33.	3.7	33
58	Remote sensing of plant trait responses to field-based plantâ€“soil feedback using UAV-based optical sensors. Biogeosciences, 2017, 14, 733-749.	3.3	32
59	Soil microbes promote complementarity effects among coâ€existing trees through soil nitrogen partitioning. Functional Ecology, 2018, 32, 1879-1889.	3.6	31
60	Biogeography and Phylogenetic Community Structure of Soil Invertebrate Ecosystem Engineers: Global to Local Patterns, Implications for Ecosystem Functioning and Services and Global Environmental Change Impacts. , 2012, , 201-232.		31
61	Crop traits drive soil carbon sequestration under organic farming. Journal of Applied Ecology, 2018, 55, 2496-2505.	4.0	30
62	Interactions between microbial-feeding and predatory soil fauna trigger N2O emissions. Soil Biology and Biochemistry, 2014, 70, 256-262.	8.8	29
63	Soil fauna diversity increases CO₂ but suppresses N₂O emissions from soil. Global Change Biology, 2020, 26, 1886-1898.	9.5	28
64	Plantâ€“soil interactions and the carbon cycle. Journal of Ecology, 2009, 97, 838-839.	4.0	26
65	Litter quality drives nitrogen release, and agricultural management (organic vs. conventional) drives carbon loss during litter decomposition in agro-ecosystems. Soil Biology and Biochemistry, 2021, 153, 108115.	8.8	25
66	Silicon application and plant growth promoting rhizobacteria consisting of six pure Bacillus species alleviate salinity stress in cucumber (Cucumis sativus L). Scientia Horticulturae, 2021, 288, 110383.	3.6	25
67	Plant diversity and identity effects on predatory nematodes and their prey. Ecology and Evolution, 2015, 5, 836-847.	1.9	23
68	Soil biota suppress positive plant diversity effects on productivity at high but not low soil fertility. Journal of Ecology, 2017, 105, 1766-1774.	4.0	23
69	The role of soils in habitat creation, maintenance and restoration. Philosophical Transactions of the Royal Society B: Biological Sciences, 2021, 376, 20200170.	4.0	23
70	Legume presence reduces the decomposition rate of non-legume roots. Soil Biology and Biochemistry, 2016, 94, 88-93.	8.8	22
71	Red clover varieties of Mattenklee type have higher production, protein yield and persistence than Ackerklee types in grassâ€“clover mixtures. Grass and Forage Science, 2018, 73, 297-308.	2.9	21
72	Applying the Aboveground-Belowground Interaction Concept in Agriculture: Spatio-Temporal Scales Matter. Frontiers in Ecology and Evolution, 2019, 7, .	2.2	20

#	Article	IF	Citations
73	Increased Plant Carbon Translocation Linked to Overyielding in Grassland Species Mixtures. PLoS ONE, 2012, 7, e45926.	2.5	18
74	Effects of plant species identity, diversity and soil fertility on biodegradation of phenanthrene in soil. Environmental Pollution, 2013, 173, 231-237.	7.5	17
75	What root traits determine grass resistance to phosphorus deficiency in production grassland?. Journal of Plant Nutrition and Soil Science, 2018, 181, 323-335.	1.9	16
76	Separating effects of soil microorganisms and nematodes on plant community dynamics. Plant and Soil, 2019, 441, 455-467.	3.7	16
77	Cascading spatial and trophic impacts of oak decline on the soil food web. Journal of Ecology, 2019, 107, 1199-1214.	4.0	15
78	Soil-derived Nature's Contributions to People and their contribution to the UN Sustainable Development Goals. Philosophical Transactions of the Royal Society B: Biological Sciences, 2021, 376, 20200185.	4.0	15
79	Plant selection and soil legacy enhance long-term biodiversity effects. Ecology, 2016, 97, 918-28.	3.2	15
80	Plant presence reduces root and shoot litter decomposition rates of crops and wild relatives. Plant and Soil, 2019, 438, 313-327.	3.7	14
81	Resistanceâ€“recovery tradeâ€off of soil microbial communities under altered rain regimes: An experimental test across European agroecosystems. Journal of Applied Ecology, 2021, 58, 406-418.	4.0	14
82	Manipulating plant community composition to steer efficient Nâ€cycling in intensively managed grasslands. Journal of Applied Ecology, 2021, 58, 167-180.	4.0	14
83	Crops and their wild progenitors recruit beneficial and detrimental soil biota in opposing ways. Plant and Soil, 2020, 456, 159-173.	3.7	13
84	Plant community flood resilience in intensively managed grasslands and the role of the plant economic spectrum. Journal of Applied Ecology, 2020, 57, 1524-1534.	4.0	13
85	Disentangling drivers of soil microbial potential enzyme activity across rain regimes: An approach based on the functional trait framework. Soil Biology and Biochemistry, 2020, 148, 107881.	8.8	13
86	Using Unmanned Aerial Systems (UAS) and Object-Based Image Analysis (OBIA) for Measuring Plant-Soil Feedback Effects on Crop Productivity. Drones, 2019, 3, 54.	4.9	12
87	Can flooding-induced greenhouse gas emissions be mitigated by trait-based plant species choice?. Science of the Total Environment, 2020, 727, 138476.	8.0	12
88	Plant traits of grass and legume species for flood resilience and N₂O mitigation. Functional Ecology, 2021, 35, 2205-2218.	3.6	6
89	Ecological networks: assembly and consequences. Oikos, 2016, 125, 443-445.	2.7	5
90	Belowground plant-plant signaling of root infection by nematodes. Pedobiologia, 2020, 83, 150688.	1.2	5

#	Article	IF	Citations
91	Plant selection and soil legacy enhance long-term biodiversity effects. Ecology, 2016, 97, 918.	3.2	3
92	Severance of arbuscular mycorrhizal fungal mycelial networks in restoration grasslands enhances seedling biomass. New Phytologist, 2021, 232, 753-761.	7.3	3
93	Spatial heterogeneity in root litter and soil legacies differentially affect legume root traits. Plant and Soil, 2018, 428, 253-264.	3.7	2
94	Leachates from plants recently infected by root-feeding nematodes cause increased biomass allocation to roots in neighbouring plants. Scientific Reports, 2021, 11, 2347.	3.3	2
95	Ecosystem Carbon and Soil Biodiversity. , 2013, , 131-153.		2
96	Scanning electron microscopical observations on the coastal marine nematode Epsilonema pustulatum (Gerlach, 1952) Lorenzen, 1973 (Nematoda: Epsilonematidae). Nematology, 2000, 2, 685-693.	0.6	1
97	Dirt poor. Chemistry and Industry (London), 2016, 80, 26-29.	0.0	0
98	20 years after View from the Park: advance ecology and avoid editorial rejection in Oikos. Oikos, 2018, 127, 1-4.	2.7	0