

Pascal Alex Niklaus

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

138
papers

8,455
citations

48
h-index

90
g-index

146
ext. papers

10,296
ext. citations

7.1
avg, IF

5.93
L-index

#	Paper	IF	Citations
138	Effects of plant community history, soil legacy and plant diversity on soil microbial communities. <i>Journal of Ecology</i> , 2021 , 109, 3007-3023	6	4
137	Precipitation patterns and N availability alter plant-soil microbial C and N dynamics. <i>Plant and Soil</i> , 2021 , 466, 151-163	4.2	1
136	Remotely sensed between-individual functional trait variation in a temperate forest. <i>Ecology and Evolution</i> , 2021 , 11, 10834-10867	2.8	2
135	Ecological and evolutionary approaches to improving crop variety mixtures. <i>Nature Ecology and Evolution</i> , 2021 , 5, 1068-1077	12.3	9
134	How does leaf functional diversity affect the light environment in forest canopies? An in-silico biodiversity experiment. <i>Ecological Modelling</i> , 2021 , 440, 109394	3	1
133	Late-spring frost risk between 1959 and 2017 decreased in North America but increased in Europe and Asia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 12192-12200	11.5	11
132	Local and landscape-level diversity effects on forest functioning. <i>PLoS ONE</i> , 2020 , 15, e0233104	3.7	
131	Temperatures beyond the community optimum promote the dominance of heat-adapted, fast growing and stress resistant bacteria in alpine soils. <i>Soil Biology and Biochemistry</i> , 2020 , 148, 107873	7.5	17
130	Directed species loss reduces community productivity in a subtropical forest biodiversity experiment. <i>Nature Ecology and Evolution</i> , 2020 , 4, 550-559	12.3	8
129	Plant trait response of tundra shrubs to permafrost thaw and nutrient addition. <i>Biogeosciences</i> , 2020 , 17, 4981-4998	4.6	2
128	Impact of reactive surfaces on the abiotic reaction between nitrite and ferrous iron and associated nitrogen and oxygen isotope dynamics. <i>Biogeosciences</i> , 2020 , 17, 4355-4374	4.6	2
127	Terrestrial land-cover type richness is positively linked to landscape-level functioning. <i>Nature Communications</i> , 2020 , 11, 154	17.4	14
126	Plant traits alone are poor predictors of ecosystem properties and long-term ecosystem functioning. <i>Nature Ecology and Evolution</i> , 2020 , 4, 1602-1611	12.3	30
125	Local and landscape-level diversity effects on forest functioning 2020 , 15, e0233104		
124	Local and landscape-level diversity effects on forest functioning 2020 , 15, e0233104		
123	Local and landscape-level diversity effects on forest functioning 2020 , 15, e0233104		
122	Local and landscape-level diversity effects on forest functioning 2020 , 15, e0233104		

121	Tree-species interactions increase light absorption and growth in Chinese subtropical mixed-species plantations. <i>Oecologia</i> , 2019 , 191, 421-432	2.9	15
120	Soil macrofauna and leaf functional traits drive the decomposition of secondary metabolites in leaf litter. <i>Soil Biology and Biochemistry</i> , 2019 , 135, 429-437	7.5	10
119	Climatic controls of decomposition drive the global biogeography of forest-tree symbioses. <i>Nature</i> , 2019 , 569, 404-408	50.4	203
118	Temperature and moisture are minor drivers of regional-scale soil organic carbon dynamics. <i>Scientific Reports</i> , 2019 , 9, 6422	4.9	11
117	Globally consistent influences of seasonal precipitation limit grassland biomass response to elevated CO ₂ . <i>Nature Plants</i> , 2019 , 5, 167-173	11.5	26
116	Response to Comment on "Impacts of species richness on productivity in a large-scale subtropical forest experiment". <i>Science</i> , 2019 , 363,	33.3	2
115	Experimental disconnection from common mycorrhizal networks has little effect on competitive interactions among common temperate grassland species. <i>Journal of Ecology</i> , 2018 , 106, 2332-2343	6	4
114	Positive diversity-functioning relationships in model communities of methanotrophic bacteria. <i>Ecology</i> , 2018 , 99, 714-723	4.6	18
113	Biodiversity across trophic levels drives multifunctionality in highly diverse forests. <i>Nature Communications</i> , 2018 , 9, 2989	17.4	83
112	Tree species richness increases ecosystem carbon storage in subtropical forests. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2018 , 285,	4.4	84
111	Alteration of nitrous oxide emissions from floodplain soils by aggregate size, litter accumulation and plant-soil interactions. <i>Biogeosciences</i> , 2018 , 15, 7043-7057	4.6	7
110	Leaf-litter overyielding in a forest biodiversity experiment in subtropical China. <i>Forest Ecosystems</i> , 2018 , 5,	3.8	12
109	Effects of plant productivity and species richness on the drought response of soil respiration in temperate grasslands. <i>PLoS ONE</i> , 2018 , 13, e0209031	3.7	5
108	Disentangling effects of air and soil temperature on C allocation in cold environments: A C pulse-labelling study with two plant species. <i>Ecology and Evolution</i> , 2018 , 8, 7778-7789	2.8	2
107	Impacts of species richness on productivity in a large-scale subtropical forest experiment. <i>Science</i> , 2018 , 362, 80-83	33.3	220
106	A plant biodiversity effect resolved to a single chromosomal region. <i>Nature Ecology and Evolution</i> , 2018 , 2, 1933-1939	12.3	20
105	Can niche plasticity promote biodiversity-productivity relationships through increased complementarity?. <i>Ecology</i> , 2017 , 98, 1104-1116	4.6	49
104	Spatial micro-distribution of methanotrophic activity along a 120-year afforestation chronosequence. <i>Plant and Soil</i> , 2017 , 415, 13-23	4.2	3

103	Reconstruction of Historic Forest Cover Changes Indicates Minor Effects on Carbon Stocks in Swiss Forest Soils. <i>Ecosystems</i> , 2017 , 20, 1512-1528	3.9	16
102	On the combined effect of soil fertility and topography on tree growth in subtropical forest ecosystems— study from SE China. <i>Journal of Plant Ecology</i> , 2017 , 10, 111-127	1.7	68
101	Biodiversity: Complementary canopies. <i>Nature Ecology and Evolution</i> , 2017 , 1, 104	12.3	12
100	Opposing intraspecific vs. interspecific diversity effects on herbivory and growth in subtropical experimental tree assemblages. <i>Journal of Plant Ecology</i> , 2017 , 10, 242-251	1.7	29
99	Tree diversity drives diversity of arthropod herbivores, but successional stage mediates detritivores. <i>Ecology and Evolution</i> , 2017 , 7, 8753-8760	2.8	15
98	Integrative research efforts at the boundary of biodiversity and global change research. <i>Current Opinion in Environmental Sustainability</i> , 2017 , 29, 215-222	7.2	5
97	Leaf litter diversity positively affects the decomposition of plant polyphenols. <i>Plant and Soil</i> , 2017 , 419, 305-317	4.2	11
96	Biodiversity promotes primary productivity and growing season lengthening at the landscape scale. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 10160-10165	11.5	62
95	Leaf litter diversity alters microbial activity, microbial abundances, and nutrient cycling in a subtropical forest ecosystem. <i>Biogeochemistry</i> , 2017 , 134, 163-181	3.8	23
94	Nitrogen fixation by <i>Alnus</i> species boosts soil nitrous oxide emissions. <i>European Journal of Soil Science</i> , 2017 , 68, 740-748	3.4	3
93	Does species richness of subtropical tree leaf litter affect decomposition, nutrient release, transfer and subsequent uptake by plants?. <i>Soil Biology and Biochemistry</i> , 2017 , 115, 44-53	7.5	10
92	Toward a methodical framework for comprehensively assessing forest multifunctionality. <i>Ecology and Evolution</i> , 2017 , 7, 10652-10674	2.8	32
91	Shrub growth rate and bark responses to soil warming and nutrient addition A dendroecological approach in a field experiment. <i>Dendrochronologia</i> , 2017 , 45, 12-22	2.8	3
90	Biodiversity effects on ecosystem functioning in a 15-year grassland experiment: Patterns, mechanisms, and open questions. <i>Basic and Applied Ecology</i> , 2017 , 23, 1-73	3.2	184
89	Spatio-temporal dynamics of soil CH ₄ uptake after application of N fertilizer with and without the nitrification inhibitor 3,4- dimethylpyrazole phosphate (DMPP). <i>Soil Biology and Biochemistry</i> , 2017 , 104, 218-225	7.5	9
88	A guide to analyzing biodiversity experiments. <i>Journal of Plant Ecology</i> , 2017 , 10, 91-110	1.7	58
87	Positive effects of tree species diversity on litterfall quantity and quality along a secondary successional chronosequence in a subtropical forest. <i>Journal of Plant Ecology</i> , 2017 , 10, 28-35	1.7	40
86	Tree diversity increases levels of herbivore damage in a subtropical forest canopy: evidence for dietary mixing by arthropods?. <i>Journal of Plant Ecology</i> , 2017 , 10, 13-27	1.7	28

85	Leaf area increases with species richness in young experimental stands of subtropical trees. <i>Journal of Plant Ecology</i> , 2017 , 10, 128-135	1.7	26
84	Leaching of soils during laboratory incubations does not affect soil organic carbon mineralisation but solubilisation. <i>PLoS ONE</i> , 2017 , 12, e0174725	3.7	8
83	Decomposing functional trait associations in a Chinese subtropical forest. <i>PLoS ONE</i> , 2017 , 12, e0175727	3.7	11
82	Experimental soil warming and cooling alters the partitioning of recent assimilates: evidence from a (14)C-labelling study at the alpine treeline. <i>Oecologia</i> , 2016 , 181, 25-37	2.9	10
81	Positive biodiversity-productivity relationship predominant in global forests. <i>Science</i> , 2016 , 354,	33.3	593
80	Interactive effects between plant functional types and soil factors on tundra species diversity and community composition. <i>Ecology and Evolution</i> , 2016 , 6, 8126-8137	2.8	13
79	Direct vs. Microclimate-Driven Effects of Tree Species Diversity on Litter Decomposition in Young Subtropical Forest Stands. <i>PLoS ONE</i> , 2016 , 11, e0160569	3.7	10
78	Tree Diversity Enhances Stand Carbon Storage but Not Leaf Area in a Subtropical Forest. <i>PLoS ONE</i> , 2016 , 11, e0167771	3.7	21
77	Options of partners improve carbon for phosphorus trade in the arbuscular mycorrhizal mutualism. <i>Ecology Letters</i> , 2016 , 19, 648-56	10	43
76	Plant species diversity affects soil-atmosphere fluxes of methane and nitrous oxide. <i>Oecologia</i> , 2016 , 181, 919-30	2.9	42
75	Tracking litter-derived dissolved organic matter along a soil chronosequence using 14C imaging: Biodegradation, physico-chemical retention or preferential flow?. <i>Soil Biology and Biochemistry</i> , 2015 , 88, 333-343	7.5	32
74	Effects of warming and drought on potential N2O emissions and denitrifying bacteria abundance in grasslands with different land-use. <i>FEMS Microbiology Ecology</i> , 2015 , 91,	4.3	27
73	Throughfall kinetic energy in young subtropical forests: Investigation on tree species richness effects and spatial variability. <i>Agricultural and Forest Meteorology</i> , 2015 , 213, 148-159	5.8	31
72	Treeline soil warming does not affect soil methane fluxes and the spatial micro-distribution of methanotrophic bacteria. <i>Soil Biology and Biochemistry</i> , 2015 , 86, 164-171	7.5	15
71	Compositional and functional stability of aerobic methane consuming communities in drained and rewetted peat meadows. <i>FEMS Microbiology Ecology</i> , 2015 , 91,	4.3	4
70	Biodiversity increases the resistance of ecosystem productivity to climate extremes. <i>Nature</i> , 2015 , 526, 574-7	50.4	647
69	Episodic High CH4 Emission Events can Damage the Potential of Soils to Act as CH4 Sink: Evidence from 17 Years of CO2 Enrichment in a Temperate Grassland Ecosystem. <i>Procedia Environmental Sciences</i> , 2015 , 29, 208-209		0
68	Plant diversity drives soil microbial biomass carbon in grasslands irrespective of global environmental change factors. <i>Global Change Biology</i> , 2015 , 21, 4076-85	11.4	105

67	The 'island effect' in terrestrial global change experiments: a problem with no solution?. <i>AoB PLANTS</i> , 2015 , 7,	2.9	9
66	The influence of leaf litter diversity and soil fauna on initial soil erosion in subtropical forests. <i>Earth Surface Processes and Landforms</i> , 2015 , 40, 1439-1447	3.7	33
65	Effects of plant diversity, functional group composition, and fertilization on soil microbial properties in experimental grassland. <i>PLoS ONE</i> , 2015 , 10, e0125678	3.7	25
64	Effects of Long-Term CO ₂ Enrichment on Soil-Atmosphere CH ₄ Fluxes and the Spatial Micro-Distribution of Methanotrophic Bacteria. <i>PLoS ONE</i> , 2015 , 10, e0131665	3.7	5
63	Flood pulses control soil nitrogen cycling in a dynamic river floodplain. <i>Geoderma</i> , 2014 , 228-229, 14-24	6.7	36
62	Can current moisture responses predict soil CO ₂ efflux under altered precipitation regimes? A synthesis of manipulation experiments. <i>Biogeosciences</i> , 2014 , 11, 2991-3013	4.6	60
61	Corrigendum to "Can current moisture responses predict soil CO ₂ efflux under altered precipitation regimes? A synthesis of manipulation experiments"; <i>Biogeosciences</i> , 2014 , 11, 3307-3308	4.6	8
60	Anthropogenic and natural methane fluxes in Switzerland synthesized within a spatially explicit inventory. <i>Biogeosciences</i> , 2014 , 11, 1941-1959	4.6	31
59	Designing forest biodiversity experiments: general considerations illustrated by a new large experiment in subtropical China. <i>Methods in Ecology and Evolution</i> , 2014 , 5, 74-89	7.7	179
58	Trait-based approaches for understanding microbial biodiversity and ecosystem functioning. <i>Frontiers in Microbiology</i> , 2014 , 5, 251	5.7	212
57	Resistance and resilience of the forest soil microbiome to logging-associated compaction. <i>ISME Journal</i> , 2014 , 8, 226-44	11.9	194
56	Tree species traits but not diversity mitigate stem breakage in a subtropical forest following a rare and extreme ice storm. <i>PLoS ONE</i> , 2014 , 9, e96022	3.7	7
55	A comparison of the strength of biodiversity effects across multiple functions. <i>Oecologia</i> , 2013 , 173, 223-37	2.9	82
54	Effects of drought and N-fertilization on N cycling in two grassland soils. <i>Oecologia</i> , 2013 , 171, 705-17	2.9	64
53	Field-scale manipulation of soil temperature and precipitation change soil CO ₂ flux in a temperate agricultural ecosystem. <i>Agriculture, Ecosystems and Environment</i> , 2013 , 165, 88-97	5.7	65
52	Soil-atmosphere fluxes of the greenhouse gases CO ₂ , CH ₄ and N ₂ O in a mountain spruce forest subjected to long-term N addition and to tree girdling. <i>Agricultural and Forest Meteorology</i> , 2013 , 181, 61-68	5.8	30
51	Biodiversity promotes tree growth during succession in subtropical forest. <i>PLoS ONE</i> , 2013 , 8, e81246	3.7	83
50	Effect of clear-cutting silviculture on soil respiration in a subtropical forest of China. <i>Journal of Plant Ecology</i> , 2013 , 6, 335-348	1.7	12

49	Soil environmental conditions and microbial build-up mediate the effect of plant diversity on soil nitrifying and denitrifying enzyme activities in temperate grasslands. <i>PLoS ONE</i> , 2013 , 8, e61069	3.7	59
48	Analysis of carbon and nitrogen dynamics in riparian soils: model validation and sensitivity to environmental controls. <i>Science of the Total Environment</i> , 2012 , 429, 246-66	10.2	14
47	Increasing soil methane sink along a 120-year afforestation chronosequence is driven by soil moisture. <i>Global Change Biology</i> , 2012 , 18, 3664-3671	11.4	68
46	Forest soil respiration reflects plant productivity across a temperature gradient in the Alps. <i>Oecologia</i> , 2012 , 170, 1143-54	2.9	21
45	Above- and below-ground methane fluxes and methanotrophic activity in a landfill-cover soil. <i>Waste Management</i> , 2012 , 32, 879-89	8.6	51
44	Effects of simulated drought and nitrogen fertilizer on plant productivity and nitrous oxide (N ₂ O) emissions of two pastures. <i>Plant and Soil</i> , 2012 , 361, 411-426	4.2	48
43	Do grassland plant communities profit from N partitioning by soil depth?. <i>Ecology</i> , 2012 , 93, 2386-96	4.6	35
42	Soil nitrogen dynamics in a river floodplain mosaic. <i>Journal of Environmental Quality</i> , 2012 , 41, 2033-45	3.4	19
41	Heterogeneity of soil carbon pools and fluxes in a channelized and a restored floodplain section (Thur River, Switzerland). <i>Hydrology and Earth System Sciences</i> , 2011 , 15, 1757-1769	5.5	39
40	Interactive effects of drought and N fertilization on the spatial distribution of methane assimilation in grassland soils. <i>Global Change Biology</i> , 2011 , 17, 2629-2639	11.4	56
39	Effects of N fertilizers and liming on the micro-scale distribution of soil methane assimilation in the long-term Park Grass experiment at Rothamsted. <i>Soil Biology and Biochemistry</i> , 2011 , 43, 1034-1041	7.5	25
38	A study of soil methane sink regulation in two grasslands exposed to drought and N fertilization. <i>Plant and Soil</i> , 2011 , 342, 265-275	4.2	43
37	A meta-analysis of responses of soil biota to global change. <i>Oecologia</i> , 2011 , 165, 553-65	2.9	285
36	Heavy-machinery traffic impacts methane emissions as well as methanogen abundance and community structure in oxic forest soils. <i>Applied and Environmental Microbiology</i> , 2011 , 77, 6060-8	4.8	69
35	Indirect effects of soil moisture reverse soil C sequestration responses of a spring wheat agroecosystem to elevated CO ₂ . <i>Global Change Biology</i> , 2010 , 16, 469-483	11.4	32
34	Diversity promotes temporal stability across levels of ecosystem organization in experimental grasslands. <i>PLoS ONE</i> , 2010 , 5, e13382	3.7	79
33	Competition for light causes plant biodiversity loss after eutrophication. <i>Science</i> , 2009 , 324, 636-8	33.3	798
32	Belowground nitrogen partitioning in experimental grassland plant communities of varying species richness. <i>Ecology</i> , 2009 , 90, 1389-99	4.6	105

31	Interactive effects of plant species diversity and elevated CO ₂ on soil biota and nutrient cycling. <i>Ecology</i> , 2007 , 88, 3153-63	4.6	32
30	Estimating soil carbon sequestration under elevated CO ₂ by combining carbon isotope labelling with soil carbon cycle modelling. <i>Global Change Biology</i> , 2006 , 12, 1909-1921	11.4	36
29	Effects of Plant Species Diversity and Composition on Nitrogen Cycling and the Trace Gas Balance of Soils. <i>Plant and Soil</i> , 2006 , 282, 83-98	4.2	103
28	Climate Change Effects on Biogeochemical Cycles, Nutrients, and Water Supply. <i>Advances in Agroecology</i> , 2006 , 11-55		2
27	SYNTHESIS OF A SIX-YEAR STUDY OF CALCAREOUS GRASSLAND RESPONSES TO IN SITU CO ₂ ENRICHMENT. <i>Ecological Monographs</i> , 2004 , 74, 491-511	9	103
26	Effects of long term CO ₂ enrichment on microbial community structure in calcareous grassland. <i>Plant and Soil</i> , 2004 , 264, 313-323	4.2	54
25	Water relations in grassland and desert ecosystems exposed to elevated atmospheric CO ₂ . <i>Oecologia</i> , 2004 , 140, 11-25	2.9	371
24	Six years of in situ CO ₂ enrichment evoke changes in soil structure and soil biota of nutrient-poor grassland. <i>Global Change Biology</i> , 2003 , 9, 585-600	11.4	128
23	Long term CO ₂ enrichment stimulates N-mineralisation and enzyme activities in calcareous grassland. <i>Soil Biology and Biochemistry</i> , 2003 , 35, 965-972	7.5	85
22	Respiratory carbon loss of calcareous grasslands in winter shows no effects of 4 years CO ₂ enrichment. <i>Functional Ecology</i> , 2002 , 16, 162-166	5.6	11
21	IN SITU DEVELOPMENT OF A SATYRID BUTTERFLY ON CALCAREOUS GRASSLAND EXPOSED TO ELEVATED CARBON DIOXIDE. <i>Ecology</i> , 2002 , 83, 1399-1411	4.6	19
20	A link between plant diversity, elevated CO and soil nitrate. <i>Oecologia</i> , 2001 , 127, 540-548	2.9	97
19	Carbon allocation in calcareous grassland under elevated CO ₂ : a combined ¹³ C pulse-labelling/soil physical fractionation study. <i>Functional Ecology</i> , 2001 , 15, 43-50	5.6	44
18	Effects of six years atmospheric CO ₂ enrichment on plant, soil, and soil microbial C of a calcareous grassland. <i>Plant and Soil</i> , 2001 , 233, 189-202	4.2	46
17	A LONG-TERM FIELD STUDY ON BIODIVERSITY [ELEVATED CO ₂ INTERACTIONS IN GRASSLAND. <i>Ecological Monographs</i> , 2001 , 71, 341-356	9	104
16	Dynamics of root systems in native grasslands: effects of elevated atmospheric CO ₂ . <i>New Phytologist</i> , 2000 , 147, 73-85	9.8	112
15	CO ₂ flux estimates tend to overestimate ecosystem C sequestration at elevated CO ₂ . <i>Functional Ecology</i> , 2000 , 14, 546-559	5.6	19
14	Soil moisture effects determine CO responses of grassland species. <i>Oecologia</i> , 2000 , 125, 380-388	2.9	112

13	A field study of the effects of elevated CO ₂ and plant species diversity on ecosystem-level gas exchange in a planted calcareous grassland. <i>Global Change Biology</i> , 1999 , 5, 95-105	11.4	57
12	A field study of the effects of elevated CO ₂ on plant biomass and community structure in a calcareous grassland. <i>Oecologia</i> , 1999 , 118, 39-49	2.9	133
11	Nutrient relations in calcareous grassland under elevated CO ₂ . <i>Oecologia</i> , 1998 , 116, 67-75	2.9	82
10	Soil moisture dynamics of calcareous grassland under elevated CO ₂ . <i>Oecologia</i> , 1998 , 117, 201-208	2.9	123
9	Effects of elevated atmospheric CO ₂ on soil microbiota in calcareous grassland. <i>Global Change Biology</i> , 1998 , 4, 451-458	11.4	54
8	The responses of alpine grassland to four seasons of CO ₂ enrichment: a synthesis. <i>Acta Oecologica</i> , 1997 , 18, 165-175	1.7	89
7	Screen-aided CO ₂ control (SACC): a middle ground between FACE and open-top chambers. <i>Acta Oecologica</i> , 1997 , 18, 207-219	1.7	38
6	Responses of soil microbiota of a late successional alpine grassland to long term CO ₂ enrichment. <i>Plant and Soil</i> , 1996 , 184, 219-229	4.2	61
5	Kinetics and thermodynamics of formation of copper-dioxygen adducts: oxygenation of mononuclear copper(I) complexes containing tripodal tetradentate ligands. <i>Journal of the American Chemical Society</i> , 1993 , 115, 9506-9514	16.4	191
4	Effects of plant community history, soil legacy and plant diversity on soil microbial communities		1
3	Strong positive biodiversity-productivity relationships in a subtropical forest experiment		1
2	Plant traits are poor predictors of long-term ecosystem functioning		2
1	Soil Fungi Promote Biodiversity-Productivity Relationships in Experimental Communities of Young Trees. <i>Ecosystems</i> , 1	3.9	0