Claus Beier

List of Publications by Year
in descending order

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125 papers	9,396 citations	36271 51 h-index	40954 93 g-index
126 all docs	126 docs citations	126 times ranked	9988 citing authors

#	Article	IF	Citations
1	Traitâ€mediated responses to aridity and experimental drought by springtail communities across Europe. Functional Ecology, 2023, 37, 44-56.	1.7	3
2	Review of deposition monitoring methods. Tellus, Series B: Chemical and Physical Meteorology, 2022, 46, 79.	0.8	14
3	Field experiments underestimate aboveground biomass response to drought. Nature Ecology and Evolution, 2022, 6, 540-545.	3.4	30
4	Understanding ecosystems of the future will require more than realistic climate change experiments â€“ A response to Korell et al.. Global Change Biology, 2020, 26, e6-e7.	4.2	12
5	The handbook for standardized field and laboratory measurements in terrestrial climate change experiments and observational studies (ClimEx). Methods in Ecology and Evolution, 2020, 11, 22-37.	2.2	68
6	A meta-analysis of 1,119 manipulative experiments on terrestrial carbon-cycling responses to global change. Nature Ecology and Evolution, 2019, 3, 1309-1320.	3.4	304
7	Fast attrition of springtail communities by experimental drought and richnessâ€“decomposition relationships across Europe. Global Change Biology, 2019, 25, 2727-2738.	4.2	23
8	Accumulation of soil carbon under elevated CO₂ unaffected by warming and drought. Global Change Biology, 2019, 25, 2970-2977.	4.2	17
9	Globally consistent influences of seasonal precipitation limit grassland biomass response to elevated CO2. Nature Plants, 2019, 5, 167-173.	4.7	51
10	Early stage litter decomposition across biomes. Science of the Total Environment, 2018, 628-629, 1369-1394.	3.9	177
11	Isotopic methods for nonâ€destructive assessment of carbon dynamics in shrublands under longâ€term climate change manipulation. Methods in Ecology and Evolution, 2018, 9, 866-880.	2.2	6
12	Fine Root Growth and Vertical Distribution in Response to Elevated CO2, Warming and Drought in a Mixed Heathlandâ€“Grassland. Ecosystems, 2018, 21, 15-30.	1.6	44
13	On the problems of using linear models in ecological manipulation experiments: lessons learned from a climate experiment. Ecosphere, 2018, 9, e02322.	1.0	3
14	Shrubland primary production and soil respiration diverge along European climate gradient. Scientific Reports, 2017, 7, 43952.	1.6	23
15	Long-term and realistic global change manipulations had low impact on diversity of soil biota in temperate heathland. Scientific Reports, 2017, 7, 41388.	1.6	25
16	Pushing precipitation to the extremes in distributed experiments: recommendations for simulating wet and dry years. Global Change Biology, 2017, 23, 1774-1782.	4.2	132
17	Few multiyear precipitationâ€“reduction experiments find aÂshift in the productivityâ€“precipitation relationship. Global Change Biology, 2016, 22, 2570-2581.	4.2	105
18	A replicated climate change field experiment reveals rapid evolutionary response in an ecologically important soil invertebrate. Global Change Biology, 2016, 22, 2370-2379.	4.2	15

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19	Responses of enchytraeids to increased temperature, drought and atmospheric CO2: Results of an eight-year field experiment in dry heathland. European Journal of Soil Biology, 2015, 70, 15-22.	1.4	11
20	Experiments to confront the environmental extremes of climate change. Frontiers in Ecology and the Environment, 2015, 13, 219-225.	1.9	79
21	Increased sensitivity to climate change in disturbed ecosystems. Nature Communications, 2015, 6, 6682.	5.8	111
22	Global Change Experiments: Challenges and Opportunities. BioScience, 2015, 65, 922-931.	2.2	93
23	Can current moisture responses predict soil CO₂ efflux under altered precipitation regimes? A synthesis of manipulation experiments. Biogeosciences, 2014, 11, 2991-3013.	1.3	74
24	Technical Note: Mesocosm approach to quantify dissolved inorganic carbon percolation fluxes. Biogeosciences, 2014, 11, 1077-1084.	1.3	5
25	Corrigendum to "Can current moisture responses predict soil CO₂ efflux under altered precipitation regimes? A synthesis of manipulation experiments". Biogeosciences, 2014, 11, 3307-3308.	1.3	10
26	Root growth and N dynamics in response to multi-year experimental warming, summer drought and elevated CO2 in a mixed heathland-grass ecosystem. Functional Plant Biology, 2014, 41, 1.	1.1	40
27	Soil microorganisms respond to five years of climate change manipulations and elevated atmospheric CO2 in a temperate heath ecosystem. Plant and Soil, 2014, 374, 211-222.	1.8	47
28	Beyond realism in climate change experiments: gradient approaches identify thresholds and tipping points. Ecology Letters, 2014, 17, 125.	3.0	71
29	Net root growth and nutrient acquisition in response to predicted climate change in two contrasting heathland species. Plant and Soil, 2013, 369, 615-629.	1.8	38
30	Soil microarthropods are only weakly impacted after 13 years of repeated drought treatment in wet and dry heathland soils. Soil Biology and Biochemistry, 2013, 66, 110-118.	4.2	38
31	Improving the performance of infrared reflective night curtains for warming field plots. Agricultural and Forest Meteorology, 2013, 173, 53-62.	1.9	8
32	Synthesis on the carbon budget and cycling in a Danish, temperate deciduous forest. Agricultural and Forest Meteorology, 2013, 181, 94-107.	1.9	38
33	Modelling the decadal trend of ecosystem carbon fluxes demonstrates the important role of functional changes in a temperate deciduous forest. Ecological Modelling, 2013, 260, 50-61.	1.2	15
34	Complexity in Climate Change Manipulation Experiments. BioScience, 2013, 63, 763-767.	2.2	10
35	Multiâ€factor climate change effects on insect herbivore performance. Ecology and Evolution, 2013, 3, 1449-1460.	0.8	62
36	Interactions between above- and belowground organisms modified in climate change experiments. Nature Climate Change, 2012, 2, 805-808.	8.1	38

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37	Nitrogen Uptake During Fall, Winter and Spring Differs Among Plant Functional Groups in a Subarctic Heath Ecosystem. Ecosystems, 2012, 15, 927-939.	1.6	59
38	Soil respiration is stimulated by elevated CO₂ and reduced by summer drought: three years of measurements in a multifactor ecosystem manipulation experiment in a temperate heathland (CLIMAITE). Global Change Biology, 2012, 18, 1216-1230.	4.2	97
39	Temperate heath plant response to dry conditions depends on growth strategy and less on physiology. Acta Oecologica, 2012, 45, 79-87.	0.5	7
40	Suppression of soil decomposers and promotion of long-lived, root herbivorous nematodes by climate change. European Journal of Soil Biology, 2012, 52, 1-7.	1.4	39
41	Synthesizing greenhouse gas fluxes across nine European peatlands and shrublands â€“ responses to climatic and environmental changes. Biogeosciences, 2012, 9, 3739-3755.	1.3	46
42	Effects of climate variability and functional changes on the interannual variation of the carbon balance in a temperate deciduous forest. Biogeosciences, 2012, 9, 13-28.	1.3	48
43	Preface "Nitrogen & Global Change". Biogeosciences, 2012, 9, 1691-1693.	1.3	14
44	Corrigendum to "Effects of climate variability and functional changes on the interannual variation of the carbon balance in a temperate deciduous forest" published in Biogeosciences, 9, 13â€“28, 2012. Biogeosciences, 2012, 9, 715-715.	1.3	1
45	High Resilience in Heathland Plants to Changes in Temperature, Drought, and CO2 in Combination: Results from the CLIMAITE Experiment. Ecosystems, 2012, 15, 269-283.	1.6	48
46	Simple additive effects are rare: a quantitative review of plant biomass and soil process responses to combined manipulations of <scp><scp>CO₂</scp></scp> and temperature. Global Change Biology, 2012, 18, 2681-2693.	4.2	365
47	Increased frequency of drought reduces species richness of enchytraeid communities in both wet and dry heathland soils. Soil Biology and Biochemistry, 2012, 53, 43-49.	4.2	28
48	Precipitation manipulation experiments â€“ challenges and recommendations for the future. Ecology Letters, 2012, 15, 899-911.	3.0	411
49	Thresholds and interactive effects of soil moisture on the temperature response of soil respiration. European Journal of Soil Biology, 2011, 47, 247-255.	1.4	82
50	Do global change experiments overestimate impacts on terrestrial ecosystems?. Trends in Ecology and Evolution, 2011, 26, 236-241.	4.2	300
51	Effects of elevated CO₂, warming and drought episodes on plant carbon uptake in a temperate heath ecosystem are controlled by soil water status. Plant, Cell and Environment, 2011, 34, 1207-1222.	2.8	68
52	Coordinated approaches to quantify longâ€term ecosystem dynamics in response to global change. Global Change Biology, 2011, 17, 843-854.	4.2	165
53	Reduced N cycling in response to elevated CO2, warming, and drought in a Danish heathland: Synthesizing results of the CLIMAITE project after two years of treatments. Global Change Biology, 2011, 17, 1884-1899.	4.2	213
54	Effects of elevated atmospheric CO2, prolonged summer drought and temperature increase on N2O and CH4 fluxes in a temperate heathland. Soil Biology and Biochemistry, 2011, 43, 1660-1670.	4.2	43

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55	Measurement of carbon dioxide fluxes in a free-air carbon dioxide enrichment experiment using the closed flux chamber technique. Atmospheric Environment, 2011, 45, 208-214.	1.9	9
56	Organic matter flow in the food web at a temperate heath under multifactorial climate change. Rapid Communications in Mass Spectrometry, 2011, 25, 1485-1496.	0.7	21
57	Interactive effects of elevated CO2, warming, and drought on photosynthesis of Deschampsia flexuosa in a temperate heath ecosystem. Journal of Experimental Botany, 2011, 62, 4253-4266.	2.4	75
58	Belowground heathland responses after 2Âyears of combined warming, elevated CO2 and summer drought. Biogeochemistry, 2010, 101, 27-42.	1.7	26
59	Impact of drought and increasing temperatures on soil CO2 emissions in a Mediterranean shrubland (gariga). Plant and Soil, 2010, 327, 153-166.	1.8	51
60	Plant nutrient mobilization in temperate heathland responds to elevated CO2, temperature and drought. Plant and Soil, 2010, 328, 381-396.	1.8	49
61	The counteracting effects of elevated atmospheric CO2 concentrations and drought episodes: Studies of enchytraeid communities in a dry heathland. Soil Biology and Biochemistry, 2010, 42, 1958-1966.	4.2	17
62	Responses of the reflectance indices PRI and NDVI to experimental warming and drought in European shrublands along a northâ€“south climatic gradient. Remote Sensing of Environment, 2010, 114, 626-636.	4.6	57
63	The response of dissolved organic carbon (DOC) and the ecosystem carbon balance to experimental drought in a temperate shrubland. European Journal of Soil Science, 2010, 61, 697-709.	1.8	24
64	Guest Editor's Introduction: Greenhouse gas exchange in European ecosystems and their interactions with nitrogen â€“ results from NitroEurope IP. European Journal of Soil Science, 2010, 61, 627-630.	1.8	2
65	Challenges in elevated CO2 experiments on forests. Trends in Plant Science, 2010, 15, 5-10.	4.3	46
66	The rapid cold hardening response of Collembola is influenced by thermal variability of the habitat. Functional Ecology, 2009, 23, 340-347.	1.7	63
67	Changes in the onset of spring growth in shrubland species in response to experimental warming along a northâ€“south gradient in Europe. Global Ecology and Biogeography, 2009, 18, 473-484.	2.7	52
68	Glycine uptake in heath plants and soil microbes responds to elevated temperature, CO2 and drought. Acta Oecologica, 2009, 35, 786-796.	0.5	33
69	Carbon and nitrogen balances for six shrublands across Europe. Global Biogeochemical Cycles, 2009, 23, .	1.9	57
70	Experimental design of multifactor climate change experiments with elevated CO₂, warming and drought: the CLIMAITE project. Functional Ecology, 2008, 22, 185-195.	1.7	75
71	Modeled interactive effects of precipitation, temperature, and [CO₂] on ecosystem carbon and water dynamics in different climatic zones. Global Change Biology, 2008, 14, 1986-1999.	4.2	277
72	Contrasting effects of repeated summer drought on soil carbon efflux in hydric and mesic heathland soils. Global Change Biology, 2008, 14, 2388-2404.	4.2	97

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73	Modelled effects of precipitation on ecosystem carbon and water dynamics in different climatic zones. Global Change Biology, 2008, 14, 2365-2379.	4.2	112
74	Next generation of elevated [CO‹sub›2‹/sub›] experiments with crops: a critical investment for feeding the future world. Plant, Cell and Environment, 2008, 31, 1317-1324.	2.8	154
75	Carbon and nitrogen cycles in European ecosystems respond differently to global warmingâˆ†. Science of the Total Environment, 2008, 407, 692-697.	3.9	117
76	Can field populations of the enchytraeid, Cognettia sphagnetorum, adapt to increased drought stress?. Soil Biology and Biochemistry, 2008, 40, 1765-1771.	4.2	28
77	Consequences of More Extreme Precipitation Regimes for Terrestrial Ecosystems. BioScience, 2008, 58, 811-821.	2.2	959
78	Experimental warming does not enhance soil respiration in a semiarid temperate forest-steppe ecosystem. Community Ecology, 2008, 9, 29-37.	0.5	43
79	Challenges in quantifying biosphereâ€“atmosphere exchange of nitrogen species. Environmental Pollution, 2007, 150, 125-139.	3.7	203
80	Significance of cold-season respiration and photosynthesis in a subarctic heath ecosystem in Northern Sweden. Global Change Biology, 2007, 13, 1498-1508.	4.2	80
81	Response of plant species richness and primary productivity in shrublands along a northâ€“south gradient in Europe to seven years of experimental warming and drought: reductions in primary productivity in the heat and drought year of 2003. Global Change Biology, 2007, 13, 2563-2581.	4.2	211
82	Ecosystem respiration depends strongly on photosynthesis in a temperate heath. Biogeochemistry, 2007, 85, 201-213.	1.7	48
83	Factors controlling regional differences in forest soil emission of nitrogen oxides (NO and) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	1.3	205
84	Microbial community changes in heathland soil communities along a geographical gradient: interaction with climate change manipulations. Soil Biology and Biochemistry, 2005, 37, 1805-1813.	4.2	136
85	Climate change and ecosystem function â€“ fullâ€scale manipulations of CO 2 and temperature. New Phytologist, 2004, 162, 243-245.	3.5	53
86	Effects of Climate and Ecosystem Disturbances on Biogeochemical Cycling in a Semi-Natural Terrestrial Ecosystem. Water, Air and Soil Pollution, 2004, 4, 191-206.	0.8	10
87	Novel Approaches to Study Climate Change Effects on Terrestrial Ecosystems in the Field: Drought and Passive Nighttime Warming. Ecosystems, 2004, 7, 583.	1.6	232
88	Nonintrusive Field Experiments Show Different Plant Responses to Warming and Drought Among Sites, Seasons, and Species in a North?South European Gradient. Ecosystems, 2004, 7, 598.	1.6	211
89	Effects of an Experimental Increase of Temperature and Drought on the Photosynthetic Performance of Two Ericaceous Shrub Species Along a North?South European Gradient. Ecosystems, 2004, 7, 613.	1.6	69
90	Soil Solution Chemistry and Element Fluxes in Three European Heathlands and Their Responses to Warming and Drought. Ecosystems, 2004, 7, 638.	1.6	79

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91	Climate Change Affects Carbon Allocation to the Soil in Shrublands. Ecosystems, 2004, 7, 650.	1.6	96
92	A Qualitative Ecosystem Assessment for Different Shrublands in Western Europe under Impact of Climate Change. Ecosystems, 2004, 7, 662-671.	1.6	55
93	The Response of Soil Processes to Climate Change: Results from Manipulation Studies of Shrublands Across an Environmental Gradient. Ecosystems, 2004, 7, 625.	1.6	253
94	Effects of Climate and Ecosystem Disturbances on Biogeochemical Cycling in a Semi-Natural Terrestrial Ecosystem. , 2004, , 191-206.		1
95	Effects of experimental drought on microbial processes in two temperate heathlands at contrasting water conditions. Applied Soil Ecology, 2003, 24, 165-176.	2.1	160
96	Terrestrial Ecosystem Recovery â€“ Modelling the Effects of Reduced Acidic Inputs and Increased Inputs of Sea-salts Induced by Global Change. Ambio, 2003, 32, 275-282.	2.8	21
97	Experimental manipulations of old pine forest ecosystems to predict the potential tree growth effects of increased CO2 and temperature in a future climate. Forest Ecology and Management, 2002, 158, 179-188.	1.4	21
98	Impacts of Elevated Carbon Dioxide and Temperature on a Boreal Forest Ecosystem (CLIMEX Project). Ecosystems, 1998, 1, 345-351.	1.6	55
99	Effect of drought experiments using roof installations on acidification/nitrification of soils. Forest Ecology and Management, 1998, 101, 95-109.	1.4	56
100	Field-scale â€˜clean rainâ€™ treatments to two Norway spruce stands within the EXMAN projectâ€”effects on soil solution chemistry, foliar nutrition and tree growth. Forest Ecology and Management, 1998, 101, 111-123.	1.4	33
101	Atmospheric deposition and soil acidification in five coniferous forest ecosystems: a comparison of the control plots of the EXMAN sites. Forest Ecology and Management, 1998, 101, 125-142.	1.4	52
102	Water and element fluxes calculated in a sandy forest soil taking spatial variability into account. Forest Ecology and Management, 1998, 101, 269-280.	1.4	38
103	Comparison of N and C dynamics in two Norway spruce stands using a process oriented simulation model. Environmental Pollution, 1998, 102, 395-401.	3.7	19
104	Modelling the effects of nitrogen addition on soil nitrogen status and nitrogen uptake in a Norway spruce stand in Denmark. Environmental Pollution, 1998, 102, 409-414.	3.7	8
105	Effects of nitrogen deposition and climate change on nitrogen runoff at Norwegian boreal forest catchments: the MERLIN model applied to Risdalsheia (RAIN and CLIMEX projects). Hydrology and Earth System Sciences, 1998, 2, 399-414.	1.9	21
106	Modelling the effects of nitrogen addition on soil nitrogen status and nitrogen uptake in a Norway spruce stand in Denmark. , 1998, , 409-414.		0
107	Comparison of N and C dynamics in two Norway spruce stands using a process oriented simulation model. , 1998, , 395-401.		0
108	Nitrate leaching in coniferous forest ecosystems: The European Field-Scale Manipulation Experiments NITREX (Nitrogen Saturation Experiments) and EXMAN (Experimental Manipulation of Forest) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 57 T	1.9	37

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109	Experimental manipulations of water and nutrient input to a Norway spruce plantation at Klosterhede, Denmark. Plant and Soil, 1995, 168-169, 601-611.	1.8	29
110	Experimental manipulation of water and nutrient input to a Norway spruce plantation at Klosterhede, Denmark. Plant and Soil, 1995, 168-169, 613-622.	1.8	33
111	Experimental manipulations of water and nutrient input to a Norway spruce plantation at Klosterhede, Denmark. Plant and Soil, 1995, 168-169, 623-632.	1.8	21
112	The exman projectâ€"Biogeochemical fluxes in plantation forests on acid soils. Water, Air, and Soil Pollution, 1995, 85, 1653-1658.	1.1	6
113	Magic applied to roof experiments (Risdalsheia, N; Gï¿½rdsjï¿½n, S; Klosterhede, DK) to evaluate the rate of reversibility of acidification following experimentally reduced acid deposition. Water, Air, and Soil Pollution, 1995, 85, 1745-1751.	1.1	14
114	Modelling ?clean rain? treatments in acidified soils-EXMAN project results. Water, Air, and Soil Pollution, 1995, 85, 1807-1812.	1.1	5
115	A correlative evaluation of nitrogen cycling in the forest ecosystems of the EC projects NITREX and EXMAN. Forest Ecology and Management, 1995, 71, 143-151.	1.4	84
116	Organic matter decomposition in an acidic forest soil in Denmark as measured by the cotton strip assay. Scandinavian Journal of Forest Research, 1994, 9, 106-114.	0.5	6
117	Review of deposition monitoring methods. Tellus, Series B: Chemical and Physical Meteorology, 1994, 46, 79-93.	0.8	37
118	A comparison of sites in the EXMAN project, with respect to atmospheric deposition and the chemical composition of the soil solution and foliage. Forest Ecology and Management, 1994, 68, 3-14.	1.4	21
119	Biological response of five forest ecosystems in the EXMAN project to input changes of water, nutrients and atmospheric loads. Forest Ecology and Management, 1994, 68, 15-29.	1.4	31
120	Effects of who-ecosystem manipulations on ecosystem internal processes. Trends in Ecology and Evolution, 1994, 9, 218-223.	4.2	18
121	Spatial variability of throughfall fluxes in a spruce forest. Environmental Pollution, 1993, 81, 257-267.	3.7	124
122	A new method for estimation of dry deposition of particles based on throughfall measurements in a forest edge. Atmospheric Environment Part A General Topics, 1992, 26, 1553-1559.	1.3	49
123	Long-term field comparison of ceramic and poly(tetrafluoroethene) porous cup soil water samplers. Environmental Science & Technology, 1992, 26, 2005-2011.	4.6	29
124	Separation of Gaseous and Particupate Dry Deposition of Sulfur at a Forest Edge in Denmark. Journal of Environmental Quality, 1991, 20, 460-466.	1.0	16
125	Atmospheric deposition to the edge of a spruce forest in Denmark. Environmental Pollution, 1989, 60, 257-271.	3.7	97