Rien Aerts

List of Publications by Year
in descending order

64 papers	10,091 citations	71061 41 h-index	118793 62 g-index
65 all docs	65 docs citations	65 times ranked	11817 citing authors

#	Article	IF	Citations
1	Plant species traits are the predominant control on litter decomposition rates within biomes worldwide. Ecology Letters, 2008, 11, 1065-1071.	3.0	1,913
2	Climate, Leaf Litter Chemistry and Leaf Litter Decomposition in Terrestrial Ecosystems: A Triangular Relationship. Oikos, 1997, 79, 439.	1.2	1,375
3	Carbon respiration from subsurface peat accelerated by climate warming in the subarctic. Nature, 2009, 460, 616-619.	13.7	612
4	Consequences of biodiversity loss for litter decomposition across biomes. Nature, 2014, 509, 218-221.	13.7	600
5	Evidence of the â€˜plant economics spectrumâ€™ in a subarctic flora. Journal of Ecology, 2010, 98, 362-373.	1.9	434
6	Highly consistent effects of plant litter identity and functional traits on decomposition across a latitudinal gradient. Ecology Letters, 2012, 15, 1033-1041.	3.0	356
7	Methane Feedbacks to the Global Climate System in a Warmer World. Reviews of Geophysics, 2018, 56, 207-250.	9.0	354
8	Ecosystem feedbacks and cascade processes: understanding their role in the responses of Arctic and alpine ecosystems to environmental change. Global Change Biology, 2009, 15, 1153-1172.	4.2	344
9	A plant economics spectrum of litter decomposability. Functional Ecology, 2012, 26, 56-65.	1.7	312
10	A frozen feast: thawing permafrost increases plantâ€available nitrogen in subarctic peatlands. Global Change Biology, 2012, 18, 1998-2007.	4.2	217
11	Multiple mechanisms for trait effects on litter decomposition: moving beyond homeâ€field advantage with a new hypothesis. Journal of Ecology, 2012, 100, 619-630.	1.9	205
12	Size and structure of bacterial, fungal and nematode communities along an Antarctic environmental gradient. FEMS Microbiology Ecology, 2006, 59, 436-451.	1.3	202
13	Are growth forms consistent predictors of leaf litter quality and decomposability across peatlands along a latitudinal gradient?. Journal of Ecology, 2005, 93, 817-828.	1.9	186
14	An experimental comparison of chemical traits and litter decomposition rates in a diverse range of subarctic bryophyte, lichen and vascular plant species. Journal of Ecology, 2009, 97, 886-900.	1.9	175
15	Substantial nutrient resorption from leaves, stems and roots in a subarctic flora: what is the link with other resource economics traits?. New Phytologist, 2010, 186, 879-889.	3.5	175
16	Summer warming and increased winter snow cover affect Sphagnum fuscum growth, structure and production in a sub-arctic bog. Global Change Biology, 2004, 10, 93-104.	4.2	169
17	DECOMPOSITION OF SUB-ARCTIC PLANTS WITH DIFFERING NITROGEN ECONOMIES: A FUNCTIONAL ROLE FOR HEMIPARASITES. Ecology, 2003, 84, 3209-3221.	1.5	156
18	Global change effects on plant communities are magnified by time and the number of global change factors imposed. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17867-17873.	3.3	141

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19	Interspecific differences in wood decay rates: insights from a new shortâ€term method to study longâ€term wood decomposition. Journal of Ecology, 2012, 100, 161-170.	1.9	136
20	Summer warming accelerates subâ€arctic peatland nitrogen cycling without changing enzyme pools or microbial community structure. Global Change Biology, 2012, 18, 138-150.	4.2	125
21	Arctic warming on two continents has consistent negative effects on lichen diversity and mixed effects on bryophyte diversity. Global Change Biology, 2012, 18, 1096-1107.	4.2	113
22	Global maps of soil temperature. Global Change Biology, 2022, 28, 3110-3144.	4.2	113
23	Interspecific competition in natural plant communities: mechanisms, trade-offs and plant-soil feedbacks. Journal of Experimental Botany, 1999, 50, 29-37.	2.4	110
24	Global to community scale differences in the prevalence of convergent over divergent leaf trait distributions in plant assemblages. Global Ecology and Biogeography, 2011, 20, 755-765.	2.7	106
25	Experimentally increased nutrient availability at the permafrost thaw front selectively enhances biomass production of deepâ€rooting subarctic peatland species. Global Change Biology, 2017, 23, 4257-4266.	4.2	105
26	Do physical plant litter traits explain nonâ€additivity in litter mixtures? A test of the improved microenvironmental conditions theory. Oikos, 2013, 122, 987-997.	1.2	97
27	Inclusion of ecologically based trait variation in plant functional types reduces the projected land carbon sink in an earth system model. Global Change Biology, 2015, 21, 3074-3086.	4.2	94
28	Decadal warming causes a consistent and persistent shift from heterotrophic to autotrophic respiration in contrasting permafrost ecosystems. Global Change Biology, 2015, 21, 4508-4519.	4.2	81
29	PLANT COMMUNITY MEDIATED VS. NUTRITIONAL CONTROLS ON LITTER DECOMPOSITION RATES IN GRASSLANDS. Ecology, 2003, 84, 3198-3208.	1.5	77
30	Nitrogen Inputs by Marine Vertebrates Drive Abundance and Richness in Antarctic Terrestrial Ecosystems. Current Biology, 2019, 29, 1721-1727.e3.	1.8	75
31	The effect of environmental change on vascular plant and cryptogam communities from the Falkland Islands and the Maritime Antarctic. BMC Ecology, 2007, 7, 15.	3.0	65
32	Seasonal climate manipulations result in speciesâ€specific changes in leaf nutrient levels and isotopic composition in a subâ€arctic bog. Functional Ecology, 2009, 23, 680-688.	1.7	64
33	Successionâ€induced trait shifts across a wide range of NW European ecosystems are driven by light and modulated by initial abiotic conditions. Journal of Ecology, 2012, 100, 366-380.	1.9	62
34	Polar lessons learned: longâ€term management based on shared threats in Arctic and Antarctic environments. Frontiers in Ecology and the Environment, 2015, 13, 316-324.	1.9	59
35	Decomposition of leaf litter mixtures across biomes: The role of litter identity, diversity and soil fauna. Journal of Ecology, 2020, 108, 2283-2297.	1.9	59
36	Litter quality and interactive effects in litter mixtures: more negative interactions under elevated CO2?. Journal of Ecology, 2002, 90, 1009-1016.	1.9	51

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37	Are litter decomposition and fire linked through plant species traits?. New Phytologist, 2017, 216, 653-669.	3.5	50
38	A Race for Space? How Sphagnum fuscum stabilizes vegetation composition during long-term climate manipulations. Global Change Biology, 2011, 17, 2162-2171.	4.2	48
39	Plant Species Composition Can Be Used as a Proxy to Predict Methane Emissions in Peatland Ecosystems After Land-Use Changes. Ecosystems, 2010, 13, 526-538.	1.6	47
40	Litter Mixture Interactions at the Level of Plant Functional Types are Additive. Ecosystems, 2010, 13, 90-98.	1.6	46
41	Determinants of cryptogam composition and diversity in <i>Sphagnum</i>â€dominated peatlands: the importance of temporal, spatial and functional scales. Journal of Ecology, 2009, 97, 299-310.	1.9	45
42	Nitrogenâ€dependent recovery of subarctic tundra vegetation after simulation of extreme winter warming damage to <i>Empetrum hermaphroditum</i>. Global Change Biology, 2010, 16, 1071-1081.	4.2	42
43	Moss Responses to Elevated CO2 and Variation in Hydrology in a Temperate Lowland Peatland. Plant Ecology, 2006, 182, 27-40.	0.7	30
44	Climate change threatens endangered plant species by stronger and interacting water-related stresses. Journal of Geophysical Research, 2011, 116, .	3.3	29
45	Variation in trait tradeâ€offs allows differentiation among predefined plant functional types: implications for predictive ecology. New Phytologist, 2016, 209, 563-575.	3.5	28
46	Usnea antarctica, an important Antarctic lichen, is vulnerable to aspects of regional environmental change. Polar Biology, 2016, 39, 511-521.	0.5	28
47	Processâ€based proxy of oxygen stress surpasses indirect ones in predicting vegetation characteristics. Ecohydrology, 2012, 5, 746-758.	1.1	21
48	Compositional Stability of the Bacterial Community in a Climate-Sensitive Sub-Arctic Peatland. Frontiers in Microbiology, 2017, 8, 317.	1.5	20
49	Elevated UV-B radiation has no effect on litter quality and decomposition of two dune grassland species: evidence from a long-term field experiment. Global Change Biology, 2004, 10, 200-208.	4.2	18
50	Optimal growth temperature of Arctic soil bacterial communities increases under experimental warming. Global Change Biology, 2022, 28, 6050-6064.	4.2	16
51	Is there a trade-off between the plant's growth response to elevated CO2 and subsequent litter decomposability?. Oikos, 2003, 103, 17-30.	1.2	14
52	Vascular Plant Responses to Elevated CO2 in a Temperate Lowland Sphagnum Peatland. Plant Ecology, 2006, 182, 13-24.	0.7	14
53	Northern peatland Collembola communities unaffected by three summers of simulated extreme precipitation. Applied Soil Ecology, 2014, 79, 70-76.	2.1	11
54	Nitrogen supply effects on leaf dynamics and nutrient input into the soil of plant species in a sub-arctic tundra ecosystem. Polar Biology, 2009, 32, 207-214.	0.5	9

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55	Sixteen years of simulated summer and winter warming have contrasting effects on soil mite communities in a sub-Arctic peat bog. Polar Biology, 2019, 42, 581-591.	0.5	9
56	Warming impacts potential germination of non-native plants on the Antarctic Peninsula. Communications Biology, 2021, 4, 403.	2.0	9
57	Potential impacts of groundwater conservation measures on catchment-wide vegetation patterns in a future climate. Landscape Ecology, 2015, 30, 855-869.	1.9	8
58	Does plant size affect growth responses to water availability at glacial, modern and future CO₂ concentrations?. Ecological Research, 2016, 31, 213-227.	0.7	8
59	Temperature impact on the influence of penguinâ€derived nutrients and mosses on nonâ€native grass in a simulated polar ecosystem. Global Change Biology, 2022, 28, 816-828.	4.2	8
60	Icelandic grasslands as long-term C sinks under elevated organic N inputs. Biogeochemistry, 2017, 134, 279-299.	1.7	6
61	Is the differential response of riparian plant performance to extreme drought and inundation events related to differences in intraspecific trait variation?. Functional Plant Biology, 2014, 41, 609.	1.1	5
62	Explanations for nitrogen decline. Science, 2022, 376, 1169-1170.	6.0	4
63	Special issue â€“ Plants and Climate Change. Plant Ecology, 2005, , 1.	0.7	0
64	A novel way to understand plant species preferences in relation to groundwater discharge conditions using a traitâ€based approach. Ecohydrology, 2016, 9, 549-559.	1.1	0