Ectomycorrhizal fungi and past high CO_2 atmospheres enhance mineral weathering through increased below-ground carbon-energy fluxes

DOI: 10.1098/rsbl.2014.0375
Biology Letters, 2014, 10, .

#	Paper	IF	Citations
36	Oxalate secretion by ectomycorrhizal Paxillus involutus is mineral-specific and controls calcium weathering from minerals. *Scientific Reports*, **2015**, 5, 12187	4.9	50
35	The terrestrial biota prior to the origin of land plants (embryophytes): a review of the evidence. *Palaeontology*, **2015**, 58, 601-627	2.9	83
34	Constraining the role of early land plants in Palaeozoic weathering and global cooling. *Proceedings of the Royal Society B: Biological Sciences*, **2015**, 282, 20151115	4.4	44
33	Tricholoma matsutake can absorb and accumulate trace elements directly from rock fragments in the shiro. *Mycorrhiza*, **2015**, 25, 325-34	3.9	12
32	Plants, fungi and oomycetes: a 400-million year affair that shapes the biosphere. *New Phytologist*, **2015**, 206, 501-6	9.8	74
31	Investigating Devonian trees as geo-engineers of past climates: linking palaeosols to palaeobotany and experimental geobiology. *Palaeontology*, **2015**, 58, 787-801	2.9	53
30	The evolution of the mycorrhizal lifestyles â genomic perspective. **2016**, 87-106		2
29	Enhanced weathering strategies for stabilizing climate and averting ocean acidification. *Nature Climate Change*, **2016**, 6, 402-406	21.4	106
28	Carbon storage and nutrient mobilization from soil minerals by deep roots and rhizospheres. *Forest Ecology and Management*, **2016**, 359, 322-331	3.9	33
27	Potential of global croplands and bioenergy crops for climate change mitigation through deployment for enhanced weathering. *Biology Letters*, **2017**, 13,	3.6	40
26	The role of mycorrhizal symbioses in phytotechnology. *Botany*, **2017**, 95, 971-982	1.3	7
25	Immobilization of Carbon in Mycorrhizal Mycelial Biomass and Secretions. **2017**, 413-440		5
24	N-fixing tropical legume evolution: a contributor to enhanced weathering through the Cenozoic?. *Proceedings of the Royal Society B: Biological Sciences*, **2017**, 284,	4.4	10
23	Stabilization of Soil Organic Carbon as Influenced by Clay Mineralogy. *Advances in Agronomy*, **2018**, 148, 33-84	7.7	73
22	The origin and evolution of mycorrhizal symbioses: from palaeomycology to phylogenomics. *New Phytologist*, **2018**, 220, 1012-1030	9.8	126
21	Chemistry and microbiology of the Critical Zone along a steep climate and vegetation gradient in the Chilean Coastal Cordillera. *Catena*, **2018**, 170, 183-203	5.8	38
20	Mycorrhizal types differ in ecophysiology and alter plant nutrition and soil processes. *Biological Reviews*, **2019**, 94, 1857-1880	13.5	77

19	A coupled microscopy approach to assess the nano-landscape of weathering. *Scientific Reports*, **2019**, 9, 5377	4.9	13
18	Oxalotrophic bacterial assemblages in the ectomycorrhizosphere of forest trees and their effects on oxalate degradation and carbon fixation potential. *Chemical Geology*, **2019**, 514, 54-64	4.2	6
17	The different roles of Aspergillus nidulans carbonic anhydrases in wollastonite weathering accompanied by carbonation. *Geochimica Et Cosmochimica Acta*, **2019**, 244, 437-450	5.5	8
16	The ectomycorrhizal contribution to tree nutrition. *Advances in Botanical Research*, **2019**, 77-126	2.2	16
15	Three new Miocene fungal palynomorphs from the Brassington Formation, Derbyshire, UK. *Palynology*, **2019**, 43, 596-607	1.5	9
14	Increased yield and CO sequestration potential with the C cereal Sorghum bicolor cultivated in basaltic rock dust-amended agricultural soil. *Global Change Biology*, **2020**, 26, 3658-3676	11.4	22
13	Plants as Drivers of Rock Weathering. *Geophysical Monograph Series*, **2020**, 33-58	1.1	7
12	Lithological constraints on resource economies shape the mycorrhizal composition of a Bornean rain forest. *New Phytologist*, **2020**, 228, 253-268	9.8	6
11	The photosynthesis game is in the "inter-play": Mechanisms underlying CO2 diffusion in leaves. *Environmental and Experimental Botany*, **2020**, 178, 104174	5.9	13
10	Micro- and Nanoscale Techniques to Explore Bacteria and Fungi Interactions with Silicate Minerals. *Geophysical Monograph Series*, **2020**, 81-101	1.1	2
9	Reviews and syntheses: Biological weathering and its consequences at different spatial levels from nanoscale to global scale. *Biogeosciences*, **2020**, 17, 1507-1533	4.6	29
8	Clay Mineralogy: Soil Carbon Stabilization and Organic Matter Interaction. **2021**, 83-123		1
7	Devonian paleoclimate and its drivers: A reassessment based on a new conodont 18O record from South China. *Earth-Science Reviews*, **2021**, 222, 103814	10.2	2
6	Global Biogeography and Invasions of Ectomycorrhizal Plants: Past, Present and Future. *Ecological Studies*, **2017**, 469-531	1.1	15
5	Do degree and rate of silicate weathering depend on plant productivity?. *Biogeosciences*, **2020**, 17, 4883-4917	4.6	8
4	Fungal hyphae develop where titanomagnetite inclusions reach the surface of basalt grains.. *Scientific Reports*, **2022**, 12, 3407	4.9	0
3	Enhanced weathering potentialsthe role of in situ CO2 and grain size distribution. *Frontiers in Climate*, 4,	7.1	
2	Exploring the secrets of hyphosphere of arbuscular mycorrhizal fungi: processes and ecological functions.		1

1 Connecting soils to life in conservation planning, nutrient cycling, and planetary science. **2022**, 104247 0