

Catherine Roumet

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

14,834
citations

76326

40
h-index

133252

59
g-index

63
all docs

63
docs citations

63
times ranked

13624
citing authors

#	ARTICLE	IF	CITATIONS
1	The worldwide leaf economics spectrum. <i>Nature</i> , 2004, 428, 821-827.	27.8	6,489
2	PLANT FUNCTIONAL MARKERS CAPTURE ECOSYSTEM PROPERTIES DURING SECONDARY SUCCESSION. <i>Ecology</i> , 2004, 85, 2630-2637.	3.2	1,678
3	Assessing the Effects of Land-use Change on Plant Traits, Communities and Ecosystem Functioning in Grasslands: A Standardized Methodology and Lessons from an Application to 11 European Sites. <i>Annals of Botany</i> , 2007, 99, 967-985.	2.9	453
4	The fungal collaboration gradient dominates the root economics space in plants. <i>Science Advances</i> , 2020, 6, .	10.3	377
5	Specific Leaf Area and Dry Matter Content Estimate Thickness in Laminar Leaves. <i>Annals of Botany</i> , 2005, 96, 1129-1136.	2.9	374
6	Root structureâ€“function relationships in 74 species: evidence of a root economics spectrum related to carbon economy. <i>New Phytologist</i> , 2016, 210, 815-826.	7.3	358
7	Increasing soil carbon storage: mechanisms, effects of agricultural practices and proxies. A review. <i>Agronomy for Sustainable Development</i> , 2017, 37, 1.	5.3	292
8	Root traits as drivers of plant and ecosystem functioning: current understanding, pitfalls and future research needs. <i>New Phytologist</i> , 2021, 232, 1123-1158.	7.3	277
9	Suites of root traits differ between annual and perennial species growing in the field. <i>New Phytologist</i> , 2006, 170, 357-368.	7.3	273
10	A global Fineâ€“Root Ecology Database to address belowâ€“ground challenges in plant ecology. <i>New Phytologist</i> , 2017, 215, 15-26.	7.3	250
11	Plant Functional Types: Are We Getting Any Closer to the Holy Grail?. , 2007, , 149-164.		237
12	Climate, soil and plant functional types as drivers of global fineâ€“root trait variation. <i>Journal of Ecology</i> , 2017, 105, 1182-1196.	4.0	234
13	The root of the matter: Linking root traits and soil organic matter stabilization processes. <i>Soil Biology and Biochemistry</i> , 2018, 120, 246-259.	8.8	219
14	A worldview of root traits: the influence of ancestry, growth form, climate and mycorrhizal association on the functional trait variation of fineâ€“root tissues in seed plants. <i>New Phytologist</i> , 2017, 215, 1562-1573.	7.3	216
15	A starting guide to root ecology: strengthening ecological concepts and standardising root classification, sampling, processing and trait measurements. <i>New Phytologist</i> , 2021, 232, 973-1122.	7.3	216
16	Root functional parameters along a landâ€“use gradient: evidence of a communityâ€“level economics spectrum. <i>Journal of Ecology</i> , 2015, 103, 361-373.	4.0	166
17	Competition, traits and resource depletion in plant communities. <i>Oecologia</i> , 2009, 160, 747-755.	2.0	155
18	Evidence for a â€“plant community economics spectrumâ€“™ driven by nutrient and water limitations in a Mediterranean rangeland of southern France. <i>Journal of Ecology</i> , 2012, 100, 1315-1327.	4.0	154

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19	An integrated framework of plant form and function: the belowground perspective. <i>New Phytologist</i> , 2021, 232, 42-59.	7.3	153
20	Sampling roots to capture plant and soil functions. <i>Functional Ecology</i> , 2017, 31, 1506-1518.	3.6	150
21	Increase in soil aggregate stability along a Mediterranean successional gradient in severely eroded gully bed ecosystems: combined effects of soil, root traits and plant community characteristics. <i>Plant and Soil</i> , 2016, 398, 121-137.	3.7	144
22	Are trait-based species rankings consistent across data sets and spatial scales?. <i>Journal of Vegetation Science</i> , 2014, 25, 235-247.	2.2	127
23	Plant traits and decomposition: are the relationships for roots comparable to those for leaves?. <i>Annals of Botany</i> , 2012, 109, 463-472.	2.9	123
24	Leaf life span, dynamics and construction cost of species from Mediterranean old-fields differing in successional status. <i>New Phytologist</i> , 2003, 159, 213-228.	7.3	106
25	Soil aggregate stability in Mediterranean and tropical agro-ecosystems: effect of plant roots and soil characteristics. <i>Plant and Soil</i> , 2018, 424, 303-317.	3.7	94
26	Litter quality and decomposability of species from a Mediterranean succession depend on leaf traits but not on nitrogen supply. <i>Annals of Botany</i> , 2009, 104, 1151-1161.	2.9	92
27	Tradeoffs between functional strategies for resource-use and drought-survival in Mediterranean rangeland species. <i>Environmental and Experimental Botany</i> , 2013, 87, 126-136.	4.2	91
28	Global root traits (GRooT) database. <i>Global Ecology and Biogeography</i> , 2021, 30, 25-37.	5.8	90
29	Relating root structure and anatomy to whole-plant functioning in 14 herbaceous Mediterranean species. <i>New Phytologist</i> , 2007, 173, 313-321.	7.3	87
30	Frontiers in root ecology: recent advances and future challenges. <i>Plant and Soil</i> , 2018, 424, 1-9.	3.7	78
31	Root functional parameters predict fine root decomposability at the community level. <i>Journal of Ecology</i> , 2016, 104, 725-733.	4.0	75
32	Measurement of fine root tissue density: a comparison of three methods reveals the potential of root dry matter content. <i>Plant and Soil</i> , 2014, 374, 299-313.	3.7	74
33	Root traits are related to plant water-use among rangeland Mediterranean species. <i>Functional Ecology</i> , 2017, 31, 1700-1709.	3.6	71
34	Patterns in intraspecific variation in root traits are species-specific along an elevation gradient. <i>Functional Ecology</i> , 2021, 35, 342-356.	3.6	68
35	Root traits explain plant species distributions along climatic gradients yet challenge the nature of ecological trade-offs. <i>Nature Ecology and Evolution</i> , 2021, 5, 1123-1134.	7.8	62
36	Two dimensions define the variation of fine root traits across plant communities under the joint influence of ecological succession and annual mowing. <i>Journal of Ecology</i> , 2018, 106, 2031-2042.	4.0	60

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37	Quantifying species composition in root mixtures using two methods: near-infrared reflectance spectroscopy and plant wax markers. <i>New Phytologist</i> , 2006, 170, 631-638.	7.3	52
38	Leaf structure and chemical composition as affected by elevated CO ₂ : genotypic responses of two perennial grasses. <i>New Phytologist</i> , 1999, 143, 73-81.	7.3	51
39	Mean root trait more than root trait diversity determines drought resilience in native and cultivated Mediterranean grass mixtures. <i>Agriculture, Ecosystems and Environment</i> , 2016, 231, 122-132.	5.3	51
40	Leaf carbon and oxygen isotopes are coordinated with the leaf economics spectrum in Mediterranean rangeland species. <i>Functional Ecology</i> , 2018, 32, 612-625.	3.6	49
41	Root traits and taxonomic affiliation of nine herbaceous species grown in glasshouse conditions. <i>Plant and Soil</i> , 2008, 312, 69-83.	3.7	45
42	Root biomass, turnover and net primary productivity of a coffee agroforestry system in Costa Rica: effects of soil depth, shade trees, distance to row and coffee age. <i>Annals of Botany</i> , 2016, 118, 833-851.	2.9	45
43	Coping with drought: root trait variability within the perennial grass <i>Dactylis glomerata</i> captures a trade-off between dehydration avoidance and dehydration tolerance. <i>Plant and Soil</i> , 2019, 434, 327-342.	3.7	37
44	Species and root traits impact macroaggregation in the rhizospheric soil of a Mediterranean common garden experiment. <i>Plant and Soil</i> , 2018, 424, 289-302.	3.7	36
45	Root traits of herbaceous crops: Pre-adaptation to cultivation or evolution under domestication?. <i>Functional Ecology</i> , 2019, 33, 273-285.	3.6	29
46	Intraspecific variability of phenolic concentrations and their responses to elevated CO ₂ in two mediterranean perennial grasses. <i>Environmental and Experimental Botany</i> , 2002, 47, 205-216.	4.2	28
47	Short and long-term responses of whole-plant gas exchange to elevated CO ₂ in four herbaceous species. <i>Environmental and Experimental Botany</i> , 2000, 43, 155-169.	4.2	25
48	Functional responses of Mediterranean plant communities to soil resource heterogeneity: a mycorrhizal trait-based approach. <i>Journal of Vegetation Science</i> , 2016, 27, 1243-1253.	2.2	25
49	Allocation strategies and seed traits are hardly affected by nitrogen supply in 18 species differing in successional status. <i>Perspectives in Plant Ecology, Evolution and Systematics</i> , 2009, 11, 267-283.	2.7	23
50	Inter- and intra-specific trait shifts among sites differing in drought conditions at the north western edge of the Mediterranean Region. <i>Flora: Morphology, Distribution, Functional Ecology of Plants</i> , 2019, 254, 147-160.	1.2	22
51	Genotypic variation in the response of two perennial grass species to elevated carbon dioxide. <i>Oecologia</i> , 2002, 133, 342-348.	2.0	21
52	Vegetation creates microenvironments that influence soil microbial activity and functional diversity along an elevation gradient. <i>Soil Biology and Biochemistry</i> , 2022, 165, 108485.	8.8	20
53	Pathways to persistence: plant root traits alter carbon accumulation in different soil carbon pools. <i>Plant and Soil</i> , 2020, 452, 457-478.	3.7	19
54	Decomposition rates of fine roots from three herbaceous perennial species: combined effect of root mixture composition and living plant community. <i>Plant and Soil</i> , 2017, 415, 359-372.	3.7	16

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55	Does water shortage generate water stress? An ecohydrological approach across Mediterranean plant communities. <i>Functional Ecology</i> , 2017, 31, 1325-1335.	3.6	14
56	Variation in biomass allocation and root functional parameters in response to fire history in Brazilian savannas. <i>Journal of Ecology</i> , 2021, 109, 4143-4157.	4.0	14
57	Aboveground-trait variations in 11 (sub)alpine plants along a 1000-m elevation gradient in tropical Mexico. <i>Alpine Botany</i> , 2021, 131, 187.	2.4	13
58	Inducible nitrate reductase of rice plants as a possible indicator for nitrification in water-logged paddy soils. <i>Plant and Soil</i> , 1989, 116, 197-206.	3.7	12
59	Shifts in soil and plant functional diversity along an altitudinal gradient in the French Alps. <i>BMC Research Notes</i> , 2021, 14, 54.	1.4	11
60	Dissecting fine root diameter distribution at the community level captures root morphological diversity. <i>Oikos</i> , 2023, 2023, .	2.7	3