Naoise Nunan

List of Publications by Year
in descending order

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82 papers	6,540 citations	57758 44 h-index	66911 78 g-index
95 all docs	95 docs citations	95 times ranked	7316 citing authors

#	Article	IF	Citations
1	Persistence of soil organic carbon caused by functional complexity. Nature Geoscience, 2020, 13, 529-534.	12.9	363
2	Carbon dynamics in topsoil and in subsoil may be controlled by different regulatory mechanisms. Global Change Biology, 2010, 16, 416-426.	9.5	357
3	Spatial Ecology of Bacteria at the Microscale in Soil. PLoS ONE, 2014, 9, e87217.	2.5	312
4	Dynamic interactions at the mineralâ€“organic matter interface. Nature Reviews Earth & Environment, 2021, 2, 402-421.	29.7	301
5	Increasing soil carbon storage: mechanisms, effects of agricultural practices and proxies. A review. Agronomy for Sustainable Development, 2017, 37, 1.	5.3	292
6	Spatial distribution of bacterial communities and their relationships with the micro-architecture of soil. FEMS Microbiology Ecology, 2003, 44, 203-215.	2.7	291
7	Three-dimensional Microorganization of the Soilâ€“Rootâ€“Microbe System. Microbial Ecology, 2006, 52, 151-158.	2.8	227
8	Comparison of Tuber Proteomes of Potato Varieties, Landraces, and Genetically Modified Lines. Plant Physiology, 2005, 138, 1690-1699.	4.8	195
9	In Situ Spatial Patterns of Soil Bacterial Populations, Mapped at Multiple Scales, in an Arable Soil. Microbial Ecology, 2002, 44, 296-305.	2.8	180
10	Nano-scale secondary ion mass spectrometry â€" A new analytical tool in biogeochemistry and soil ecology: A review article. Soil Biology and Biochemistry, 2007, 39, 1835-1850.	8.8	178
11	Emergent Properties of Microbial Activity in Heterogeneous Soil Microenvironments: Different Research Approaches Are Slowly Converging, Yet Major Challenges Remain. Frontiers in Microbiology, 2018, 9, 1929.	3.5	168
12	Chapter 4 Microbial Distribution in Soils. Advances in Agronomy, 2008, 100, 81-121.	5.2	166
13	Microbial biogeography at the soil pore scale. Soil Biology and Biochemistry, 2011, 43, 280-286.	8.8	166
14	Spatial structure in soil chemical and microbiological properties in an upland grassland. FEMS Microbiology Ecology, 2004, 49, 191-205.	2.7	154
15	Links between Plant and Rhizoplane Bacterial Communities in Grassland Soils, Characterized Using Molecular Techniques. Applied and Environmental Microbiology, 2005, 71, 6784-6792.	3.1	144
16	An Efficient Markov Chain Model for the Simulation of Heterogeneous Soil Structure. Soil Science Society of America Journal, 2004, 68, 346-351.	2.2	118
17	Ultraviolet absorbance (280nm) of compounds released from soil during chloroform fumigation as an estimate of the microbial biomass. Soil Biology and Biochemistry, 1998, 30, 1599-1603.	8.8	116
18	Investigating microbial micro-habitat structure using X-ray computed tomography. Geoderma, 2006, 133, 398-407.	5.1	115

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19	Quantification of the in situ distribution of soil bacteria by large-scale imaging of thin sections of undisturbed soil. FEMS Microbiology Ecology, 2001, 37, 67-77.	2.7	104
20	The impact of long-term CO2 enrichment and moisture levels on soil microbial community structure and enzyme activities. Geoderma, 2012, 170, 331-336.	5.1	97
21	Millimeterâ€Scale Spatial Variability in Soil Water Sorptivity. Soil Science Society of America Journal, 2004, 68, 352-358.	2.2	96
22	High clay content accelerates the decomposition of fresh organic matter in artificial soils. Soil Biology and Biochemistry, 2014, 77, 100-108.	8.8	89
23	Localization of soil organic matter in soil aggregates using synchrotron-based X-ray microtomography. Soil Biology and Biochemistry, 2014, 78, 189-194.	8.8	87
24	Relationship between assemblages of mycorrhizal fungi and bacteria on grass roots. Environmental Microbiology, 2008, 10, 534-541.	3.8	86
25	Dynamics of bacterial communities in relation to soil aggregate formation during the decomposition of 13C-labelled rice straw. Applied Soil Ecology, 2012, 53, 1-9.	4.3	81
26	Seasonal controls on grassland microbial biogeography: Are they governed by plants, abiotic properties or both?. Soil Biology and Biochemistry, 2014, 71, 21-30.	8.8	79
27	Trace element concentrations along a gradient of urban pressure in forest and lawn soils of the Paris region (France). Science of the Total Environment, 2017, 598, 938-948.	8.0	78
28	A novel method for the study of the biophysical interface in soils using nano-scale secondary ion mass spectrometry. Rapid Communications in Mass Spectrometry, 2007, 21, 29-34.	1.5	77
29	Thermal acclimation of organic matter decomposition in an artificial forest soil is related to shifts in microbial community structure. Soil Biology and Biochemistry, 2014, 71, 1-12.	8.8	77
30	The ecology of heterogeneity: soil bacterial communities and C dynamics. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190249.	4.0	76
31	Variations in microbial isotopic fractionation during soil organic matter decomposition. Biogeochemistry, 2011, 106, 5-21.	3.5	75
32	Proteomic analysis of the potato tuber life cycle. Proteomics, 2006, 6, 6042-6052.	2.2	74
33	Altered precipitation seasonality impacts the dominant fungal but rare bacterial taxa in subtropical forest soils. Biology and Fertility of Soils, 2017, 53, 231-245.	4.3	64
34	Effects of different soil structures on the decomposition of native andÂadded organic carbon. European Journal of Soil Biology, 2013, 58, 81-90.	3.2	61
35	Coupling Between and Among Ammonia Oxidizers and Nitrite Oxidizers in Grassland Mesocosms Submitted to Elevated CO2 and Nitrogen Supply. Microbial Ecology, 2015, 70, 809-818.	2.8	60
36	Multivariate analysis of protein profiles of metal hyperaccumulatorThlaspi caerulescens accessions. Proteomics, 2006, 6, 3696-3706.	2.2	59

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37	Effects of habitat constraints on soil microbial community function. Scientific Reports, 2017, 7, 4280.	3.3	58
38	Isothermal Microcalorimetry Provides New Insight into Terrestrial Carbon Cycling. Environmental Science & Technology, 2014, 48, 4344-4352.	10.0	56
39	Regulation of soil organic C mineralisation at the pore scale. FEMS Microbiology Ecology, 2013, 86, 26-35.	2.7	54
40	Modeling the effect of soil meso- and macropores topology on the biodegradation of a soluble carbon substrate. Advances in Water Resources, 2015, 83, 123-136.	3.8	54
41	The microbial habitat in soil: Scale, heterogeneity and functional consequences. Journal of Plant Nutrition and Soil Science, 2017, 180, 425-429.	1.9	50
42	Contrasting composition of free and mineral-bound organic matter in top- and subsoil horizons of Andosols. Biology and Fertility of Soils, 2012, 48, 401-411.	4.3	48
43	Do general spatial relationships for microbial biomass and soil enzyme activities exist in temperate grassland soils?. Soil Biology and Biochemistry, 2015, 88, 430-440.	8.8	47
44	Dynamics of soil microbial populations involved in 2,4-D biodegradation revealed by FAME-based Stable Isotope Probing. Soil Biology and Biochemistry, 2009, 41, 77-85.	8.8	45
45	Remediation of polycyclic aromatic hydrocarbon (PAH) contaminated soil through composting with fresh organic wastes. Environmental Science and Pollution Research, 2011, 18, 1574-1584.	5.3	44
46	Simulating microbial degradation of organic matter in a simple porous system using the 3-D diffusion-based model MOSAIC. Biogeosciences, 2014, 11, 2201-2209.	3.3	44
47	Litter inputs and plant interactions affect nectar sugar content. Journal of Ecology, 2011, 99, 828-837.	4.0	41
48	Agricultural management affects the response of soil bacterial community structure and respiration to water-stress. Soil Biology and Biochemistry, 2013, 66, 69-77.	8.8	41
49	Metabolising old soil carbon: Simply a matter of simple organic matter?. Soil Biology and Biochemistry, 2015, 88, 128-136.	8.8	41
50	Impact of landuse change on the molecular composition of soil organic matter. Journal of Analytical and Applied Pyrolysis, 2009, 85, 431-434.	5.5	40
51	Recognizing Patterns: Spatial Analysis of Observed Microbial Colonization on Root Surfaces. Frontiers in Environmental Science, 2018, 6, .	3.3	38
52	Unravelling the effects of plant species diversity and aboveground litter input on soil bacterial communities. Geoderma, 2018, 317, 1-7.	5.1	37
53	Soil carbon mineralisation responses to alterations of microbial diversity and soil structure. Biology and Fertility of Soils, 2013, 49, 939-948.	4.3	34
54	Temperature and soil management effects on carbon fluxes and priming effect intensity. Soil Biology and Biochemistry, 2021, 153, 108103.	8.8	33

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55	The spatial distribution of exoenzyme activities across the soil micro-landscape, as measured in micro- and macro-aggregates, and ecosystem processes. Soil Biology and Biochemistry, 2015, 91, 258-267.	8.8	30
56	Dynamic upscaling of decomposition kinetics for carbon cycling models. Geoscientific Model Development, 2020, 13, 1399-1429.	3.6	30
57	Sheep-urine-induced changes in soil microbial community structure. FEMS Microbiology Ecology, 2006, 56, 310-320.	2.7	29
58	Spatial dependance of organic carbonâ€“metal relationships. Geoderma, 2010, 158, 120-127.	5.1	28
59	Response ofÃ¢Â€Âƒ fungal, bacterial and ureolytic communities to synthetic sheep urine deposition in a grassland soil. FEMS Microbiology Ecology, 2009, 70, 109-117.	2.7	27
60	Ageing processes and soil microbial community effects on the biodegradation of soil 13C-2,4-D nonextractable residues. Environmental Pollution, 2009, 157, 2985-2993.	7.5	26
61	Short-term responses and resistance of soil microbial community structure to elevated CO2 and N addition in grassland mesocosms. FEMS Microbiology Letters, 2017, 364, .	1.8	26
62	Substrate spatial heterogeneity reduces soil microbial activity. Soil Biology and Biochemistry, 2021, 152, 108068.	8.8	26
63	Community assembly effects shape the biodiversityâ€ecosystem functioning relationships. Functional Ecology, 2014, 28, 1523-1533.	3.6	24
64	An Efficient Markov Chain Model for the Simulation of Heterogeneous Soil Structure. Soil Science Society of America Journal, 2004, 68, 346.	2.2	24
65	The effects of soil horizons and faunal excrement on bacterial distribution in an upland grassland soil. FEMS Microbiology Ecology, 2005, 52, 139-144.	2.7	23
66	Impact of soil matric potential on the fine-scale spatial distribution and activity of specific microbial degrader communities. FEMS Microbiology Ecology, 2012, 81, 673-683.	2.7	23
67	Theory of microbial coexistence in promoting soilâ€“plant ecosystem health. Biology and Fertility of Soils, 2021, 57, 897-911.	4.3	21
68	Bacterial Interactions At The Microscale â€“ Linking Habitat To Function In Soil. , 2007, , 61-85.		21
69	Gas chromatographic metabolic profiling: A sensitive tool for functional microbial ecology. Journal of Microbiological Methods, 2008, 75, 491-500.	1.6	18
70	Tree growth and macrofauna colonization in Technosols constructed from recycled urban wastes. Ecological Engineering, 2020, 153, 105886.	3.6	13
71	Scenario modelling of carbon mineralization in <scp>3D</scp> soil architecture at the microscale: Toward an accessibility coefficient of organic matter for bacteria. European Journal of Soil Science, 2022, 73, .	3.9	10
72	Modeling Microbial Decomposition in Real 3D Soil Structures Using Partial Differential Equations. International Journal of Geosciences, 2013, 04, 15-26.	0.6	10

#	Article	IF	Citations
73	Title is missing!. Water, Air, and Soil Pollution, 2001, 130, 1055-1060.	2.4	9
74	Organic matter extracted with 0.01 M CaCl 2 or with 0.01 M NaHCO 3 as indices of N mineralisation and microbial biomass. Biology and Fertility of Soils, 2001, 34, 433-440.	4.3	8
75	Modelling the genesis of equatorial podzols: age and implications for carbon fluxes. Biogeosciences, 2017, 14, 2429-2440.	3.3	7
76	Can Organic Amendments Improve Soil Physical Characteristics and Increase Maize Performances in Contrasting Soil Water Regimes?. Agriculture (Switzerland), 2021, 11, 132.	3.1	6
77	Small-Scale Variability in Bacterial Community Structure in Different Soil Types. Microbial Ecology, 2021, 82, 470-483.	2.8	5
78	A miniaturised method to quantify microbial mineralisation of 13C-labelled organic compounds in small soil samples. Soil Biology and Biochemistry, 2010, 42, 1640-1642.	8.8	4
79	Topsoil characteristics of forests and lawns along an urbanâ€“rural gradient in the Paris region (France). Soil Use and Management, 2021, 37, 749-761.	4.9	4
80	Competition within low-density bacterial populations as an unexpected factor regulating carbon decomposition in bulk soil. Soil Biology and Biochemistry, 2022, 164, 108423.	8.8	3
81	Simulating Biological Dynamics Using Partial Differential Equations: Application to Decomposition of Organic Matter in 3D Soil Structure. Vietnam Journal of Mathematics, 2015, 43, 801-817.	0.8	2
82	Catching change in microbial diversity indicators under different soil organic matter managements: Higher taxonomic resolution, better discrimination?. Ecological Indicators, 2022, 139, 108897.	6.3	2