Graeme William Nicol

List of Publications by Year
in descending order

79 papers	16,058 citations	41323 49 h-index	66879 78 g-index
88 all docs	88 docs citations	88 times ranked	11868 citing authors

#	Article	IF	Citations
1	Archaea predominate among ammonia-oxidizing prokaryotes in soils. Nature, 2006, 442, 806-809.	13.7	2,144
2	A communal catalogue reveals Earthâ€™s multiscale microbial diversity. Nature, 2017, 551, 457-463.	13.7	1,942
3	The influence of soil pH on the diversity, abundance and transcriptional activity of ammonia oxidizing archaea and bacteria. Environmental Microbiology, 2008, 10, 2966-2978.	1.8	1,104
4	Archaeal and bacterial ammonia-oxidisers in soil: the quest for niche specialisation and differentiation. Trends in Microbiology, 2012, 20, 523-531.	3.5	853
5	Growth, activity and temperature responses of ammoniaâ€oxidizing archaea and bacteria in soil microcosms. Environmental Microbiology, 2008, 10, 1357-1364.	1.8	658
6	Ammonia concentration determines differential growth of ammonia-oxidising archaea and bacteria in soil microcosms. ISME Journal, 2011, 5, 1067-1071.	4.4	543
7	Relative contributions of archaea and bacteria to aerobic ammonia oxidation in the environment. Environmental Microbiology, 2008, 10, 2931-2941.	1.8	531
8	Cultivation of an obligate acidophilic ammonia oxidizer from a nitrifying acid soil. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 15892-15897.	3.3	464
9	Niche specialization of terrestrial archaeal ammonia oxidizers. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 21206-21211.	3.3	402
10	Links between Ammonia Oxidizer Community Structure, Abundance, and Nitrification Potential in Acidic Soils. Applied and Environmental Microbiology, 2011, 77, 4618-4625.	1.4	357
11	Archaea rather than bacteria control nitrification in two agricultural acidic soils. FEMS Microbiology Ecology, 2010, 74, 566-574.	1.3	346
12	Nitrification and nitrifiers in acidic soils. Soil Biology and Biochemistry, 2018, 116, 290-301.	4.2	327
13	Ammonia-oxidising Crenarchaeota: important players in the nitrogen cycle?. Trends in Microbiology, 2006, 14, 207-212.	3.5	315
14	Autotrophic ammonia oxidation by soil thaumarchaea. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17240-17245.	3.3	305
15	Nitrosospira spp. can produce nitrous oxide via a nitrifier denitrification pathway. Environmental Microbiology, 2006, 8, 214-222.	1.8	287
16	The consequences of niche and physiological differentiation of archaeal and bacterial ammonia oxidisers for nitrous oxide emissions. ISME Journal, 2018, 12, 1084-1093.	4.4	274
17	Differential photoinhibition of bacterial and archaeal ammonia oxidation. FEMS Microbiology Letters, 2012, 327, 41-46.	0.7	245
18	Ammonia-Oxidising Archaea â€“ Physiology, Ecology and Evolution. Advances in Microbial Physiology, 2010, 57, 1-41.	1.0	244

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19	Archaea produce lower yields of N₂O than bacteria during aerobic ammonia oxidation in soil. Environmental Microbiology, 2017, 19, 4829-4837.	1.8	243
20	Growth of ammonia-oxidizing archaea in soil microcosms is inhibited by acetylene. FEMS Microbiology Ecology, 2009, 70, 99-108.	1.3	235
21	Nitrous oxide production by ammonia oxidizers: Physiological diversity, niche differentiation and potential mitigation strategies. Global Change Biology, 2020, 26, 103-118.	4.2	227
22	Isolation of â€˜<i>Candidatus</i>Nitrosocosmicus franklandusâ€™, a novel ureolytic soil archaeal ammonia oxidiser with tolerance to high ammonia concentration. FEMS Microbiology Ecology, 2016, 92, fiw057.	1.3	197
23	Thaumarchaeal Ammonia Oxidation in an Acidic Forest Peat Soil Is Not Influenced by Ammonium Amendment. Applied and Environmental Microbiology, 2010, 76, 7626-7634.	1.4	180
24	Stimulation of thaumarchaeal ammonia oxidation by ammonia derived from organic nitrogen but not added inorganic nitrogen. FEMS Microbiology Ecology, 2012, 80, 114-123.	1.3	160
25	Exploring links between pH and bacterial community composition in soils from the Craibstone Experimental Farm. FEMS Microbiology Ecology, 2014, 87, 403-415.	1.3	154
26	Stable isotope probing analysis of the influence of liming on root exudate utilization by soil microorganisms. Environmental Microbiology, 2005, 7, 828-838.	1.8	153
27	Primary succession of soil Crenarchaeota across a receding glacier foreland. Environmental Microbiology, 2005, 7, 337-347.	1.8	145
28	Soil pH regulates the abundance and diversity of Group 1.1c Crenarchaeota. FEMS Microbiology Ecology, 2009, 70, 367-376.	1.3	143
29	Multiâ€factorial drivers of ammonia oxidizer communities: evidence from a national soil survey. Environmental Microbiology, 2013, 15, 2545-2556.	1.8	141
30	Characterisation of terrestrial acidophilic archaeal ammonia oxidisers and their inhibition and stimulation by organic compounds. FEMS Microbiology Ecology, 2014, 89, 542-552.	1.3	141
31	Homologues of nitrite reductases in ammoniaâ€oxidizing archaea: diversity and genomic context. Environmental Microbiology, 2010, 12, 1075-1088.	1.8	137
32	Effects of aboveground grazing on coupling among nitrifier activity, abundance and community structure. ISME Journal, 2008, 2, 221-232.	4.4	134
33	Environmental and spatial characterisation of bacterial community composition in soil to inform sampling strategies. Soil Biology and Biochemistry, 2009, 41, 2292-2298.	4.2	130
34	Identifying Potential Mechanisms Enabling Acidophily in the Ammonia-Oxidizing Archaeon â€œCandidatus Nitrosotalea devanaterraâ€ Applied and Environmental Microbiology, 2016, 82, 2608-2619.	1.4	117
35	Chemotaxonomic characterisation of the thaumarchaeal lipidome. Environmental Microbiology, 2017, 19, 2681-2700.	1.8	117
36	Comammox Nitrospira clade B contributes to nitrification in soil. Soil Biology and Biochemistry, 2019, 135, 392-395.	4.2	116

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37	Ammoniaâ€oxidising archaea living at low pH: Insights from comparative genomics. Environmental Microbiology, 2017, 19, 4939-4952.	1.8	107
38	Influence of soil pH on the abundance and distribution of core and intact polar lipid-derived branched GDGTs in soil. Organic Geochemistry, 2010, 41, 1171-1175.	0.9	105
39	The impact of grassland management on archaeal community structure in upland pasture rhizosphere soil. Environmental Microbiology, 2003, 5, 152-162.	1.8	96
40	Ammonia-oxidizing archaea possess a wide range of cellular ammonia affinities. ISME Journal, 2022, 16, 272-283.	4.4	96
41	pH as a Driver for Ammonia-Oxidizing Archaea in Forest Soils. Microbial Ecology, 2015, 69, 879-883.	1.4	95
42	Phylogenetic congruence and ecological coherence in terrestrial Thaumarchaeota. ISME Journal, 2016, 10, 85-96.	4.4	94
43	Spatial Analysis of Archaeal Community Structure inGrasslandSoil. Applied and Environmental Microbiology, 2003, 69, 7420-7429.	1.4	91
44	Effect of nitrification inhibitors on the growth and activity of Nitrosotalea devanaterra in culture and soil. Soil Biology and Biochemistry, 2013, 62, 129-133.	4.2	86
45	Kinetics of NH₃â€oxidation, NOâ€turnover, N₂Oâ€production and electron flow during oxygen depletion in model bacterial and archaeal ammonia oxidisers. Environmental Microbiology, 2017, 19, 4882-4896.	1.8	86
46	Biological nitrification inhibition in the rhizosphere: determining interactions and impact on microbially mediated processes and potential applications. FEMS Microbiology Reviews, 2020, 44, 874-908.	3.9	73
47	Ammonium supply rate influences archaeal and bacterial ammonia oxidizers in a wetland soil vertical profile. FEMS Microbiology Ecology, 2010, 74, 302-315.	1.3	72
48	Molecular phylogeny of slug-parasitic nematodes inferred from 18S rRNA gene sequences. Molecular Phylogenetics and Evolution, 2010, 55, 738-743.	1.2	61
49	Temperature responses of soil ammonia-oxidising archaea depend on pH. Soil Biology and Biochemistry, 2017, 106, 61-68.	4.2	58
50	Effect of nitrogen fertilizer and/or rice straw amendment on methanogenic archaeal communities and methane production from a rice paddy soil. Applied Microbiology and Biotechnology, 2016, 100, 5989-5998.	1.7	47
51	Crenarchaeal community assembly and microdiversity in developing soils at two sites associated with deglaciation. Environmental Microbiology, 2006, 8, 1382-1393.	1.8	46
52	Resource quality affects carbon cycling in deep-sea sediments. ISME Journal, 2012, 6, 1740-1748.	4.4	46
53	Differential response of archaeal and bacterial communities to nitrogen inputs and pH changes in upland pasture rhizosphere soil. Environmental Microbiology, 2004, 6, 861-867.	1.8	44
54	Molecular analysis of methanogenic archaeal communities in managed and natural upland pasture soils. Global Change Biology, 2003, 9, 1451-1457.	4.2	42

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55	Blame It on the Metabolite: 3,5-Dichloroaniline Rather than the Parent Compound Is Responsible for the Decreasing Diversity and Function of Soil Microorganisms. Applied and Environmental Microbiology, 2018, 84, .	1.4	41
56	Methane-derived carbon flows into hostâ€“virus networks at different trophic levels in soil. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	38
57	Afforestation of moorland leads to changes in crenarchaeal community structure. FEMS Microbiology Ecology, 2007, 60, 51-59.	1.3	35
58	Differential responses of soil ammonia-oxidizing archaea and bacteria to temperature and depth under two different land uses. Soil Biology and Biochemistry, 2018, 120, 272-282.	4.2	29
59	Use and abuse of potential rates in soil microbiology. Soil Biology and Biochemistry, 2021, 157, 108242.	4.2	26
60	Quantitative Assessment of Ammonia-Oxidizing Bacterial Communities in the Epiphyton of Submerged Macrophytes in Shallow Lakes. Applied and Environmental Microbiology, 2010, 76, 1813-1821.	1.4	24
61	Activity of the ammonia oxidising bacteria is responsible for zinc tolerance development of the ammonia oxidising community in soil: A stable isotope probing study. Soil Biology and Biochemistry, 2013, 58, 244-247.	4.2	21
62	Experimental testing of hypotheses for temperatureâ€•and <scp>pH</scp>â€based niche specialization of ammonia oxidizing archaea and bacteria. Environmental Microbiology, 2020, 22, 4032-4045.	1.8	21
63	Comparison of Novel and Established Nitrification Inhibitors Relevant to Agriculture on Soil Ammonia- and Nitrite-Oxidizing Isolates. Frontiers in Microbiology, 2020, 11, 581283.	1.5	21
64	Degradation of metalaxyl-M in contrasting soils is influenced more by differences in physicochemical characteristics than in microbial community composition after re-inoculation of sterilised soils. Soil Biology and Biochemistry, 2010, 42, 1123-1131.	4.2	20
65	Distribution and Activity of Ammonia-Oxidizing Archaea in Natural Environments. , 0, , 157-178.		19
66	Strategies to Determine Diversity, Growth, and Activity of Ammonia-Oxidizing Archaea in Soil. Methods in Enzymology, 2011, 496, 3-34.	0.4	18
67	Community profiling and quantification of putative autotrophic thaumarchaeal communities in environmental samples. Environmental Microbiology Reports, 2011, 3, 245-253.	1.0	18
68	Grand Challenges in Terrestrial Microbiology. Frontiers in Microbiology, 2011, 2, 6.	1.5	18
69	Use of an artificial root to examine the influence of 8-hydroxyquinoline on soil microbial activity and bacterial community structure. Soil Biology and Biochemistry, 2009, 41, 580-585.	4.2	17
70	Soil pH influences the structure of virus communities at local and global scales. Soil Biology and Biochemistry, 2022, 166, 108569.	4.2	17
71	Effects of the nitrification inhibitor 3,4-dimethylpyrazole phosphate (DMPP) on the activity and diversity of the soil microbial community under contrasting soil pH. Biology and Fertility of Soils, 2021, 57, 1117-1135.	2.3	14
72	Functional trait relationships demonstrate life strategies in terrestrial prokaryotes. FEMS Microbiology Ecology, 2021, 97, .	1.3	12

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73	Genome Sequence of â€œ <i>Candidatus</i> Nitrosocosmicus franklandusâ€•C13, a Terrestrial Ammonia-Oxidizing Archaeon. Microbiology Resource Announcements, 2019, 8, .	0.3	11
74	Glacier forelands reveal fundamental plant and microbial controls on shortâ€term ecosystem nitrogen retention. Journal of Ecology, 2021, 109, 3710-3723.	1.9	9
75	Links between seawater flooding, soil ammonia oxidiser communities and their response to changes in salinity. FEMS Microbiology Ecology, 2017, 93, .	1.3	8
76	Microbial community structure is stratified at the millimeter-scale across the soilâ€“water interface. ISME Communications, 2022, 2, .	1.7	8
77	Genetic loci regulating cadmium content in rice grains. Euphytica, 2021, 217, 35.	0.6	7
78	Comment onâ€œA Critical Review on Nitrous Oxide Production by Ammonia-Oxidizing Archaeaâ€•by Lan Wu, Xueming Chen, Wei Wei, Yiwen Liu, Dongbo Wang, and Bing-Jie Ni. Environmental Science & Technology, 2021, 55, 797-798.	4.6	6
79	Cropping systems impact changes in soil fungal, but not prokaryote, alpha-diversity and community composition stability over a growing season in a long-term field trial. FEMS Microbiology Ecology, 2021, 97, .	1.3	4