Niall P Mcnamara

List of Publications by Year
in descending order

113 papers	6,323 citations	61857 43 h-index	74018 75 g-index
115 all docs	115 docs citations	115 times ranked	8186 citing authors

#	Article	IF	Citations
1	The effect of biochar addition on N2O and CO2 emissions from a sandy loam soil â€“ The role of soil aeration. Soil Biology and Biochemistry, 2012, 51, 125-134.	4.2	354
2	Effects of acute gamma irradiation on chemical, physical and biological properties of soils. Applied Soil Ecology, 2003, 24, 117-132.	2.1	352
3	Integrating plantâ€“soil interactions into global carbon cycle models. Journal of Ecology, 2009, 97, 851-863.	1.9	233
4	Microbes follow Humboldt: temperature drives plant and soil microbial diversity patterns from the Amazon to the Andes. Ecology, 2018, 99, 2455-2466.	1.5	197
5	Environmental costs and benefits of growing <i>Miscanthus</i> for bioenergy in the <scp>UK</scp>. GCB Bioenergy, 2017, 9, 489-507.	2.5	183
6	Microbial community composition explains soil respiration responses to changing carbon inputs along an <scp>A</scp>ndesâ€toâ€<scp>A</scp>mazon elevation gradient. Journal of Ecology, 2014, 102, 1058-1071.	1.9	181
7	Overriding water table control on managed peatland greenhouse gas emissions. Nature, 2021, 593, 548-552.	13.7	172
8	Long-Term Consequences of Grazing and Burning on Northern Peatland Carbon Dynamics. Ecosystems, 2007, 10, 1069-1083.	1.6	165
9	Biochar suppresses N2O emissions while maintaining N availability in a sandy loam soil. Soil Biology and Biochemistry, 2015, 81, 178-185.	4.2	164
10	Towards an integrated global framework to assess the impacts of land use and management change on soil carbon: current capability and future vision. Global Change Biology, 2012, 18, 2089-2101.	4.2	150
11	Additional carbon sequestration benefits of grassland diversity restoration. Journal of Applied Ecology, 2011, 48, 600-608.	1.9	145
12	Diversity of the active methanotrophic community in acidic peatlands as assessed by mRNA and SIPâ€PLFA analyses. Environmental Microbiology, 2008, 10, 446-459.	1.8	139
13	Plant functional group identity influences shortâ€term peatland ecosystem carbon flux: evidence from a plant removal experiment. Functional Ecology, 2009, 23, 454-462.	1.7	139
14	C mineralization and microbial activity in four biochar field experiments several years after incorporation. Soil Biology and Biochemistry, 2014, 78, 195-203.	4.2	138
15	The role of Eriophorum vaginatum in CH4 flux from an ombrotrophic peatland. Plant and Soil, 2000, 227, 265-272.	1.8	134
16	Carbon balance of UK peatlands: current state of knowledge and future research challenges. Climate Research, 2010, 45, 13-29.	0.4	134
17	Can biochar reduce soil greenhouse gas emissions from a <scp>M</scp>iscanthus bioenergy crop?. GCB Bioenergy, 2014, 6, 76-89.	2.5	132
18	Changes in soil organic carbon under perennial crops. Global Change Biology, 2020, 26, 4158-4168.	4.2	132

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19	Increases in soil organic carbon sequestration can reduce the global warming potential of long-term liming to permanent grassland. Global Change Biology, 2011, 17, 1925-1934.	4.2	118
20	Functional shifts of grassland soil communities in response to soil warming. Soil Biology and Biochemistry, 2009, 41, 315-322.	4.2	114
21	Vegetation Affects the Relative Abundances of Dominant Soil Bacterial Taxa and Soil Respiration Rates in an Upland Grassland Soil. Microbial Ecology, 2010, 59, 335-343.	1.4	107
22	Methane emissions from soils: synthesis and analysis of a large <scp>UK</scp> data set. Global Change Biology, 2012, 18, 1657-1669.	4.2	107
23	Revealing the uncultivated majority: combining DNA stableâ€isotope probing, multiple displacement amplification and metagenomic analyses of uncultivated<i>Methylocystis</i>in acidic peatlands. Environmental Microbiology, 2008, 10, 2609-2622.	1.8	100
24	Environmental and microbial controls on microbial necromass recycling, an important precursor for soil carbon stabilization. Communications Earth & Environment, 2020, 1, .	2.6	87
25	Bacteriohopanepolyol signatures as markers for methanotrophic bacteria in peat moss. Geochimica Et Cosmochimica Acta, 2012, 77, 52-61.	1.6	83
26	Translocation of surface litter carbon into soil by Collembola. Soil Biology and Biochemistry, 2006, 38, 2655-2664.	4.2	82
27	Elevated CO2 Effects on Peatland Plant Community Carbon Dynamics and DOC Production. Ecosystems, 2007, 10, 635-647.	1.6	81
28	Consensus, uncertainties and challenges for perennial bioenergy crops and land use. GCB Bioenergy, 2018, 10, 150-164.	2.5	80
29	Sticky dead microbes: Rapid abiotic retention of microbial necromass in soil. Soil Biology and Biochemistry, 2020, 149, 107929.	4.2	76
30	Temperature sensitivity of soil enzymes along an elevation gradient in the Peruvian Andes. Biogeochemistry, 2016, 127, 217-230.	1.7	75
31	Effect of tree species on methane and ammonium oxidation capacity in forest soils. Soil Biology and Biochemistry, 2005, 37, 719-730.	4.2	73
32	13CO2 pulse labelling of plants in tandem with stable isotope probing: methodological considerations for examining microbial function in the rhizosphere. Journal of Microbiological Methods, 2004, 58, 119-129.	0.7	70
33	Environmental distribution and abundance of the facultative methanotroph <i>Methylocella</i>. ISME Journal, 2011, 5, 1061-1066.	4.4	65
34	Microbial responses to warming enhance soil carbon loss following translocation across a tropical forest elevation gradient. Ecology Letters, 2019, 22, 1889-1899.	3.0	65
35	Soil microbial nutrient constraints along a tropical forest elevation gradient: a belowground test of a biogeochemical paradigm. Biogeosciences, 2015, 12, 6071-6083.	1.3	62
36	Extreme rainfall affects assembly of the rootâ€associated fungal community. New Phytologist, 2018, 220, 1172-1184.	3.5	60

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37	Temperature-Induced Increase in Methane Release from Peat Bogs: A Mesocosm Experiment. PLoS ONE, 2012, 7, e39614.	1.1	59
38	Effects of sieving, drying and rewetting upon soil bacterial community structure and respiration rates. Journal of Microbiological Methods, 2010, 83, 69-73.	0.7	58
39	Interactive biotic and abiotic regulators of soil carbon cycling: evidence from controlled climate experiments on peatland and boreal soils. Global Change Biology, 2014, 20, 2971-2982.	4.2	58
40	Gully hotspot contribution to landscape methane (CH4) and carbon dioxide (CO2) fluxes in a northern peatland. Science of the Total Environment, 2008, 404, 354-360.	3.9	57
41	Effects of land-use on the activity and diversity of methane oxidizing bacteria in forest soils. Soil Biology and Biochemistry, 2001, 33, 1613-1623.	4.2	54
42	Comparing the closed static versus the closed dynamic chamber flux methodology: Implications for soil respiration studies. Plant and Soil, 2011, 346, 145-151.	1.8	52
43	Trade-off in ecosystem services of the Somerset Levels and Moors wetlands. Hydrological Sciences Journal, 2011, 56, 1543-1565.	1.2	47
44	Highâ€resolution spatial modelling of greenhouse gas emissions from landâ€use change to energy crops in the United Kingdom. GCB Bioenergy, 2017, 9, 627-644.	2.5	47
45	Litter evenness influences short-term peatland decomposition processes. Oecologia, 2010, 164, 511-520.	0.9	44
46	The sensitivity of a forest soil microbial community to acute gamma-irradiation. Applied Soil Ecology, 2007, 37, 1-9.	2.1	43
47	Microbial communities of Lumbricus terrestris L. middens: structure, activity, and changes through time in relation to earthworm presence. Journal of Soils and Sediments, 2009, 9, 54-61.	1.5	40
48	Plant soil interactions alter carbon cycling in an upland grassland soil. Frontiers in Microbiology, 2013, 4, 253.	1.5	39
49	Initial soil C and landâ€use history determine soil C sequestration under perennial bioenergy crops. GCB Bioenergy, 2016, 8, 1046-1060.	2.5	39
50	Temporally Variable Geographical Distance Effects Contribute to the Assembly of Root-Associated Fungal Communities. Frontiers in Microbiology, 2016, 7, 195.	1.5	36
51	Grazing increases the temperature sensitivity of soil organic matter decomposition in a temperate grassland. Environmental Research Letters, 2012, 7, 014027.	2.2	35
52	Microbial carbon mineralization in tropical lowland and montane forest soils of Peru. Frontiers in Microbiology, 2014, 5, 720.	1.5	31
53	A <i>Miscanthus</i> plantation can be carbon neutral without increasing soil carbon stocks. GCB Bioenergy, 2017, 9, 645-661.	2.5	30
54	A new method for identifying the origins of simple and complex hopanoids in sedimentary materials using stable isotope labelling with 13CH4 and compound specific stable isotope analyses. Organic Geochemistry, 2001, 32, 359-364.	0.9	29

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55	Insights into the fate of a 13C labelled phenol pulse for stable isotope probing (SIP) experiments. Journal of Microbiological Methods, 2007, 69, 340-344.	0.7	27
56	Landâ€use change to bioenergy: grassland to short rotation coppice willow has an improved carbon balance. GCB Bioenergy, 2017, 9, 469-484.	2.5	27
57	The influence of afforestation and tree species on soil methane fluxes from shallow organic soils at the UK Gisburn Forest Experiment. Soil Use and Management, 2008, 24, 1-7.	2.6	26
58	Implications of landâ€use change to Short Rotation Forestry in Great Britain for soil and biomass carbon. GCB Bioenergy, 2015, 7, 541-552.	2.5	24
59	Greenhouse gas emissions from the energy crop oilseed rape (<i>Brassica napus</i>); the role of photosynthetically active radiation in diurnal N₂O flux variation. GCB Bioenergy, 2018, 10, 306-319.	2.5	24
60	Legumes increase grassland productivity with no effect on nitrous oxide emissions. Plant and Soil, 2020, 446, 163-177.	1.8	24
61	Spatio-Temporal Variation of Core and Satellite Arbuscular Mycorrhizal Fungus Communities in Miscanthus giganteus. Frontiers in Microbiology, 2016, 7, 1278.	1.5	23
62	Diversity of isoprene-degrading bacteria in phyllosphere and soil communities from a high isoprene-emitting environment: a Malaysian oil palm plantation. Microbiome, 2020, 8, 81.	4.9	23
63	The impact of burning and Calluna removal on below-ground methanotroph diversity and activity in a peatland soil. Applied Soil Ecology, 2008, 40, 291-298.	2.1	22
64	An interyear comparison of <scp>CO</scp>₂ flux and carbon budget at a commercialâ€scale landâ€use transition from semiâ€improved grassland to <i>Miscanthus x giganteus</i>. GCB Bioenergy, 2017, 9, 229-245.	2.5	21
65	A new estimate of atmospheric 14C discharges from sellafield. Journal of Environmental Radioactivity, 1998, 41, 1-10.	0.9	20
66	Modelling the carbon cycle of <i>Miscanthus</i> plantations: existing models and the potential for their improvement. GCB Bioenergy, 2015, 7, 405-421.	2.5	20
67	The functions and components of the Sourhope soil microbiota. Applied Soil Ecology, 2006, 33, 114-126.	2.1	19
68	Simulation of greenhouse gases following landâ€use change to bioenergy crops using the <scp>ECOSSE</scp> model: aÂcomparison between site measurements and model predictions. GCB Bioenergy, 2016, 8, 925-940.	2.5	19
69	Evaluation of the <scp>ECOSSE</scp> model for simulating soil organic carbon under <i><scp>M</scp>iscanthus</i> and short rotation coppiceâ€willow crops in <scp>B</scp>ritain. GCB Bioenergy, 2016, 8, 790-804.	2.5	18
70	Agroforestry Innovation through Planned Farmer Behavior: Trimming in Pineâ€“Coffee Systems. Land, 2020, 9, 363.	1.2	18
71	Diurnal variability in soil nitrous oxide emissions is a widespread phenomenon. Global Change Biology, 2021, 27, 4950-4966.	4.2	18
72	Predicting future biomass yield in <i>Miscanthus</i> using the carbohydrate metabolic profile as a biomarker. GCB Bioenergy, 2017, 9, 1264-1278.	2.5	17

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73	Functional differences in the microbial processing of recent assimilates under two contrasting perennial bioenergy plantations. Soil Biology and Biochemistry, 2017, 114, 248-262.	4.2	17
74	Direct isotopic evidence of biogenic methane production and efflux from beneath a temperate glacier. Scientific Reports, 2018, 8, 17118.	1.6	17
75	Bioenergy driven land use change impacts on soil greenhouse gas regulation under Short Rotation Forestry. Biomass and Bioenergy, 2015, 82, 40-48.	2.9	16
76	Effects of Leucaena biochar addition on crop productivity in degraded tropical soils. Biomass and Bioenergy, 2020, 142, 105710.	2.9	16
77	Plant identity control on soil food web structure and C transfers under perennial bioenergy plantations. Soil Biology and Biochemistry, 2019, 138, 107603.	4.2	15
78	Soil Microbial Community and Litter Quality Controls on Decomposition Across a Tropical Forest Disturbance Gradient. Frontiers in Forests and Global Change, 2020, 3, .	1.0	15
79	Soil carbon stock impacts following reversion of <i>MiscanthusÂÃ—Âgiganteus</i> and short rotation coppice willow commercial plantations into arable cropping. GCB Bioenergy, 2020, 12, 680-693.	2.5	14
80	Physical Determinants of Methane Oxidation Capacity in a Temperate Soil. Water, Air and Soil Pollution, 2001, 1, 401-414.	0.8	13
81	Evaluation of the <scp>ECOSSE</scp> model for simulating soil carbon under short rotation forestry energy crops in Britain. GCB Bioenergy, 2015, 7, 527-540.	2.5	13
82	Soil nitrous oxide flux following landâ€use reversion from Miscanthus and SRC willow to perennial ryegrass. GCB Bioenergy, 2018, 10, 914-929.	2.5	13
83	Zones of influence for soil organic matter dynamics: A conceptual framework for data and models. Global Change Biology, 2019, 25, 3996-4007.	4.2	13
84	A global, empirical, harmonised dataset of soil organic carbon changes under perennial crops. Scientific Data, 2019, 6, 57.	2.4	13
85	Measured and modelled effect of landâ€use change from temperate grassland to Miscanthus on soil carbon stocks after 12 years. GCB Bioenergy, 2019, 11, 1173-1186.	2.5	13
86	Soil Methane Sink Capacity Response to a Long-Term Wildfire Chronosequence in Northern Sweden. PLoS ONE, 2015, 10, e0129892.	1.1	12
87	Difference in Soil Methane (CH4) and Nitrous Oxide (N2O) Fluxes from Bioenergy Crops SRC Willow and SRF Scots Pine Compared with Adjacent Arable and Fallow in a Temperate Climate. Bioenergy Research, 2017, 10, 575-582.	2.2	12
88	Influence of temperature on the Î´¹³C values and distribution of methanotrophâ€related hopanoids in <i>Sphagnum</i>â€dominated peat bogs. Geobiology, 2020, 18, 497-507.	1.1	12
89	Microbial necromass carbon and nitrogen persistence are decoupled in agricultural grassland soils. Communications Earth & Environment, 2022, 3, .	2.6	11
90	Carbon Inputs from Miscanthus Displace Older Soil Organic Carbon Without Inducing Priming. Bioenergy Research, 2017, 10, 86-101.	2.2	10

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91	Impact of water table depth on forest soil methane turnover in laboratory soil cores deduced from natural abundance and tracer13C stable isotope experiments. Isotopes in Environmental and Health Studies, 2006, 42, 379-390.	0.5	9
92	Soil N₂O emissions with different reduced tillage methods during the establishment of <i>Miscanthus</i> in temperate grassland. GCB Bioenergy, 2019, 11, 539-549.	2.5	9
93	Technical note: A bootstrapped LOESS regression approach for comparing soil depth profiles. Biogeosciences, 2016, 13, 3863-3868.	1.3	8
94	The importance of nitrogen for net carbon sequestration when considering natural climate solutions. Global Change Biology, 2021, 27, 218-219.	4.2	8
95	Interactions between climate warming and land management regulate greenhouse gas fluxes in a temperate grassland ecosystem. Science of the Total Environment, 2022, 833, 155212.	3.9	8
96	Research Spotlight: The ELUM project: Ecosystem Land-Use Modeling and Soil Carbon GHG Flux Trial. Biofuels, 2014, 5, 111-116.	1.4	7
97	Evapotranspiration model comparison and an estimate of field scale <i>Miscanthus</i> canopy precipitation interception. GCB Bioenergy, 2018, 10, 353-366.	2.5	7
98	PopFor: A new model for estimating poplar yields. Biomass and Bioenergy, 2020, 134, 105470.	2.9	7
99	Diversity and Ecological Guild Analysis of the Oil Palm Fungal Microbiome Across Root, Rhizosphere, and Soil Compartments. Frontiers in Microbiology, 2022, 13, 792928.	1.5	7
100	Development of a trace gas stable isotope capture system in a mobile laboratory for temporal and spatial sampling of field and laboratory experiments. Rapid Communications in Mass Spectrometry, 2002, 16, 2165-2171.	0.7	6
101	Realâ€time monitoring of greenhouse gas emissions with tall chambers reveals diurnal N₂O variation and increased emissions of CO₂ and N₂O from <i>Miscanthus</i> following compost addition. GCB Bioenergy, 2019, 11, 1456-1470.	2.5	6
102	Multiâ€year carbon budget of a mature commercial short rotation coppice willow plantation. GCB Bioenergy, 2019, 11, 895-909.	2.5	6
103	Soil Fungal Community Characteristics and Mycelial Production Across a Disturbance Gradient in Lowland Dipterocarp Rainforest in Borneo. Frontiers in Forests and Global Change, 2020, 3, .	1.0	6
104	Isoprene-degrading bacteria associated with the phyllosphere of Salix fragilis, a high isoprene-emitting willow of the Northern Hemisphere. Environmental Microbiomes, 2021, 16, 17.	2.2	6
105	Vinasse application and cessation of burning in sugarcane management can have positive impact on soil carbon stocks. PeerJ, 2018, 6, e5398.	0.9	6
106	Soil & Water Assessment Tool (SWAT) simulated hydrological impacts of land use change from temperate grassland to energy crops: A case study in western UK. GCB Bioenergy, 2019, 11, 1298-1317.	2.5	5
107	Increases in soil organic carbon sequestration can reduce the global warming potential of long-term liming to permanent grassland. Global Change Biology, 2011, 17, 2762-2762.	4.2	4
108	Partitioning of ecosystem respiration of <scp>CO</scp>₂ released during landâ€use transition from temperate agricultural grassland to <i>Miscanthus</i> Ã— <i>giganteus</i>. GCB Bioenergy, 2017, 9, 710-724.	2.5	4

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109	Mobile methane measurements: Effects of instrument specifications on data interpretation, reproducibility, and isotopic precision. Atmospheric Environment, 2021, 246, 118067.	1.9	4
110	A Review of 14C Waste Arising from the Nuclear Industry in the United Kingdom. Radiocarbon, 1997, 40, 425-432.	0.8	3
111	The Coffee Compromise: Is Agricultural Expansion into Tree Plantations a Sustainable Option?. Sustainability, 2022, 14, 3019.	1.6	3
112	Greenhouse Gas (GHG) and Biogenic Volatile Organic Compound (bVOC) Fluxes Associated With Land-Use Change to Bioenergy Crops. , 2018, , 77-96.		2
113	Improved Coffee Management by Farmers in State Forest Plantations in Indonesia: An Experimental Platform. Land, 2022, 11, 671.	1.2	2