Sara Hallin

List of Publications by Year
in descending order

119 papers	12,922 citations	38742 50 h-index	24982 109 g-index
127 all docs	127 docs citations	127 times ranked	10955 citing authors

#	Article	IF	Citations
1	Reassessing PCR primers targeting nirS, nirK and nosZ genes for community surveys of denitrifying bacteria with DGGE. FEMS Microbiology Ecology, 2004, 49, 401-417.	2.7	1,095
2	Soil bacterial networks are less stable under drought than fungal networks. Nature Communications, 2018, 9, 3033.	12.8	992
3	The ecological coherence of high bacterial taxonomic ranks. Nature Reviews Microbiology, 2010, 8, 523-529.	28.6	562
4	The unaccounted yet abundant nitrous oxide-reducing microbial community: a potential nitrous oxide sink. ISME Journal, 2013, 7, 417-426.	9.8	529
5	Microbes as Engines of Ecosystem Function: When Does Community Structure Enhance Predictions of Ecosystem Processes?. Frontiers in Microbiology, 2016, 7, 214.	3.5	479
6	Relationship between N-cycling communities and ecosystem functioning in a 50-year-old fertilization experiment. ISME Journal, 2009, 3, 597-605.	9.8	478
7	Phylogenetic Analysis of Nitrite, Nitric Oxide, and Nitrous Oxide Respiratory Enzymes Reveal a Complex Evolutionary History for Denitrification. Molecular Biology and Evolution, 2008, 25, 1955-1966.	8.9	424
8	Agricultural diversification promotes multiple ecosystem services without compromising yield. Science Advances, 2020, 6, .	10.3	405
9	PCR Detection of Genes Encoding Nitrite Reductase in Denitrifying Bacteria. Applied and Environmental Microbiology, 1999, 65, 1652-1657.	3.1	391
10	Genomics and Ecology of Novel N2O-Reducing Microorganisms. Trends in Microbiology, 2018, 26, 43-55.	7.7	388
11	Intergenomic Comparisons Highlight Modularity of the Denitrification Pathway and Underpin the Importance of Community Structure for N2O Emissions. PLoS ONE, 2014, 9, e114118.	2.5	383
12	Recently identified microbial guild mediates soil N2O sink capacity. Nature Climate Change, 2014, 4, 801-805.	18.8	364
13	Ecology of Denitrifying Prokaryotes in Agricultural Soil. Advances in Agronomy, 2007, 96, 249-305.	5.2	330
14	Importance of denitrifiers lacking the genes encoding the nitrous oxide reductase for N2O emissions from soil. Global Change Biology, 2011, 17, 1497-1504.	9.5	300
15	Activity and Composition of the Denitrifying Bacterial Community Respond Differently to Long-Term Fertilization. Applied and Environmental Microbiology, 2005, 71, 8335-8343.	3.1	286
16	Ecological and evolutionary factors underlying global and local assembly of denitrifier communities. ISME Journal, 2010, 4, 633-641.	9.8	217
17	Soil Resources Influence Spatial Patterns of Denitrifying Communities at Scales Compatible with Land Management. Applied and Environmental Microbiology, 2010, 76, 2243-2250.	3.1	202
18	Biochemical cycling in the rhizosphere having an impact on global change. Plant and Soil, 2009, 321, 61-81.	3.7	196

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19	Knowledge gaps in soil carbon and nitrogen interactions â€“ From molecular to global scale. Soil Biology and Biochemistry, 2011, 43, 702-717.	8.8	195
20	Long-term impact of fertilization on activity and composition of bacterial communities and metabolic guilds in agricultural soil. Soil Biology and Biochemistry, 2007, 39, 106-115.	8.8	194
21	Responses of bacterial and archaeal ammonia oxidizers to soil organic and fertilizer amendments under long-term management. Applied Soil Ecology, 2010, 45, 193-200.	4.3	190
22	Finding the missing link between diversity and activity using denitrifying bacteria as a model functional community. Current Opinion in Microbiology, 2005, 8, 234-239.	5.1	189
23	Soil carbon quality and nitrogen fertilization structure bacterial communities with predictable responses of major bacterial phyla. Applied Soil Ecology, 2014, 84, 62-68.	4.3	162
24	Structure and function of denitrifying and nitrifying bacterial communities in relation to the plant species in a constructed wetland. FEMS Microbiology Ecology, 2009, 67, 308-319.	2.7	148
25	Spatial distribution of ammonia-oxidizing bacteria and archaea across a 44-hectare farm related to ecosystem functioning. ISME Journal, 2011, 5, 1213-1225.	9.8	130
26	Spatial patterns of bacterial taxa in nature reflect ecological traits of deep branches of the 16S rRNA bacterial tree. Environmental Microbiology, 2009, 11, 3096-3104.	3.8	127
27	Differential responses of bacterial and archaeal groups at high taxonomical ranks to soil management. Soil Biology and Biochemistry, 2010, 42, 1759-1765.	8.8	127
28	Crop cover is more important than rotational diversity for soil multifunctionality and cereal yields in European cropping systems. Nature Food, 2021, 2, 28-37.	14.0	120
29	Silver (Ag+) reduces denitrification and induces enrichment of novelnirKgenotypes in soil. FEMS Microbiology Letters, 2007, 270, 189-194.	1.8	116
30	Genetic potential for N2O emissions from the sediment of a free water surface constructed wetland. Water Research, 2011, 45, 5621-5632.	11.3	104
31	Metabolic Profiles and Genetic Diversity of Denitrifying Communities in Activated Sludge after Addition of Methanol or Ethanol. Applied and Environmental Microbiology, 2006, 72, 5445-5452.	3.1	97
32	Inter-laboratory evaluation of the ISO standard 11063 â€œSoil quality â€” Method to directly extract DNA from soil samplesâ€. Journal of Microbiological Methods, 2011, 84, 454-460.	1.6	97
33	Non-denitrifying nitrous oxide-reducing bacteria - An effective N2O sink in soil. Soil Biology and Biochemistry, 2016, 103, 376-379.	8.8	97
34	Relative abundance of denitrifying and DNRA bacteria and their activity determine nitrogen retention or loss in agricultural soil. Soil Biology and Biochemistry, 2018, 123, 97-104.	8.8	96
35	Spatial variations in denitrification activity in wetland sediments explained by hydrology and denitrifying community structure. Water Research, 2007, 41, 4710-4720.	11.3	92
36	Habitat generalists and specialists in microbial communities across a terrestrial-freshwater gradient. Scientific Reports, 2016, 6, 37719.	3.3	91

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37	Exploiting ecosystem services in agriculture for increased food security. Global Food Security, 2018, 17, 57-63.	8.1	84
38	Archaeal Ammonia Oxidizers Dominate in Numbers, but Bacteria Drive Gross Nitrification in N-amended Grassland Soil. Frontiers in Microbiology, 2015, 6, 1350.	3.5	80
39	Unraveling negative biotic interactions determining soil microbial community assembly and functioning. ISME Journal, 2022, 16, 296-306.	9.8	80
40	Habitat diversity and ecosystem multifunctionalityâ€"The importance of direct and indirect effects. Science Advances, 2017, 3, e1601475.	10.3	78
41	METABOLIC PROPERTIES OF DENITRIFYING BACTERIA ADAPTING TO METHANOL AND ETHANOL IN ACTIVATED SLUDGE. Water Research, 1998, 32, 13-18.	11.3	77
42	Life on N2O: deciphering the ecophysiology of N2O respiring bacterial communities in a continuous culture. ISME Journal, 2018, 12, 1142-1153.	9.8	72
43	A tipping point in carbon storage when forest expands into tundra is related to mycorrhizal recycling of nitrogen. Ecology Letters, 2021, 24, 1193-1204.	6.4	70
44	Activity and composition of ammonia oxidizing bacterial communities and emission dynamics of NH₃and N₂O in a compost reactor treating organic household waste. Journal of Applied Microbiology, 2009, 106, 1502-1511.	3.1	67
45	Community survey of ammonia-oxidizing bacteria in full-scale activated sludge processes with different solids retention time. Journal of Applied Microbiology, 2005, 99, 629-640.	3.1	65
46	Abundance of archaeal and bacterial ammonia oxidizers â€" Possible bioindicator for soil monitoring. Ecological Indicators, 2011, 11, 1696-1698.	6.3	63
47	Microbial functional diversity enhances predictive models linking environmental parameters to ecosystem properties. Ecology, 2015, 96, 1985-1993.	3.2	61
48	Standardisation of methods in soil microbiology: progress and challenges. FEMS Microbiology Ecology, 2012, 82, 1-10.	2.7	59
49	Nitrogen removal and spatial distribution ofÂdenitrifier and anammox communities in a bioreactor for mine drainage treatment. Water Research, 2014, 66, 350-360.	11.3	56
50	Agricultural management and pesticide use reduce the functioning of beneficial plant symbionts. Nature Ecology and Evolution, 2022, 6, 1145-1154.	7.8	54
51	Phenotypic and genotypic heterogeneity among closely related soil-borne N2- and N2O-producing Bacillus isolates harboring the nosZ gene. FEMS Microbiology Ecology, 2011, 76, 541-552.	2.7	53
52	Spatial and phyloecological analyses of nosZ genes underscore niche differentiation amongst terrestrial N2O reducing communities. Soil Biology and Biochemistry, 2017, 115, 82-91.	8.8	52
53	Relative importance of plant uptake and plant associated denitrification for removal of nitrogen from mine drainage inÂsub-arctic wetlands. Water Research, 2015, 85, 377-383.	11.3	51
54	Geospatial variation in coâ€occurrence networks of nitrifying microbial guilds. Molecular Ecology, 2019, 28, 293-306.	3.9	50

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55	Land-use intensification differentially affects bacterial, fungal and protist communities and decreases microbiome network complexity. Environmental Microbiomes, 2022, 17, 1.	5.0	48
56	Abundance and Composition of Epiphytic Bacterial and Archaeal Ammonia Oxidizers of Marine Red and Brown Macroalgae. Applied and Environmental Microbiology, 2012, 78, 318-325.	3.1	47
57	Soil type overrides plant effect on genetic and enzymatic N2O production potential in arable soils. Soil Biology and Biochemistry, 2016, 100, 125-128.	8.8	47
58	Emergent Macrophytes Act Selectively on Ammonia-Oxidizing Bacteria and Archaea. Applied and Environmental Microbiology, 2012, 78, 6352-6356.	3.1	46
59	The role of plant type and salinity in the selection for the denitrifying community structure in the rhizosphere of wetland vegetation. International Microbiology, 2012, 15, 89-99.	2.4	46
60	Intercropping affects genetic potential for inorganic nitrogen cycling by root-associated microorganisms in Medicago sativa and Dactylis glomerata. Applied Soil Ecology, 2017, 119, 260-266.	4.3	45
61	Carbon and nitrogen cycling in Yedoma permafrost controlled by microbial functional limitations. Nature Geoscience, 2020, 13, 794-798.	12.9	45
62	The DNRA-Denitrification Dichotomy Differentiates Nitrogen Transformation Pathways in Mountain Lake Benthic Habitats. Frontiers in Microbiology, 2019, 10, 1229.	3.5	44
63	Habitat partitioning of marine benthic denitrifier communities in response to oxygen availability. Environmental Microbiology Reports, 2016, 8, 486-492.	2.4	42
64	Ammonia oxidizing bacterial community composition and process performance in wastewater treatment plants under low temperature conditions. Water Science and Technology, 2012, 65, 197-204.	2.5	41
65	Adaptation of denitrifying bacteria to acetate and methanol in activated sludge. Water Research, 1996, 30, 1445-1450.	11.3	40
66	Towards food, feed and energy crops mitigating climate change. Trends in Plant Science, 2011, 16, 476-480.	8.8	40
67	Design and evaluation of primers targeting genes encoding NO-forming nitrite reductases: implications for ecological inference of denitrifying communities. Scientific Reports, 2016, 6, 39208.	3.3	37
68	Expression of nirK and nirS genes in two strains of Pseudomonas stutzeri harbouring both types of NO-forming nitrite reductases. Research in Microbiology, 2018, 169, 343-347.	2.1	35
69	Nitrogen fixation in shallowâ€water sediments: Spatial distribution and controlling factors. Limnology and Oceanography, 2014, 59, 1932-1944.	3.1	34
70	External carbon addition for enhancing denitrification modifies bacterial community composition and affects CH4 and N2O production in sub-arctic mining pond sediments. Water Research, 2019, 158, 22-33.	11.3	32
71	Substrate type determines microbial activity and community composition in bioreactors for nitrate removal by denitrification at low temperature. Science of the Total Environment, 2021, 755, 143023.	8.0	32
72	Ammonia-oxidizing communities in agricultural soil incubated with organic waste residues. Biology and Fertility of Soils, 2006, 42, 315-323.	4.3	31

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73	Twoâ€stage anaerobic digestion for reduced hydrogen sulphide production. Journal of Chemical Technology and Biotechnology, 2016, 91, 1055-1062.	3.2	28
74	Comparison of T-RFLP and DGGE techniques to assess denitrifier community composition in soil. Letters in Applied Microbiology, 2009, 48, 145-148.	2.2	27
75	Growth yield and selection of <i>nosZ</i> clade II types in a continuous enrichment culture of N₂O respiring bacteria. Environmental Microbiology Reports, 2018, 10, 239-244.	2.4	27
76	Mixtures of macrophyte growth forms promote nitrogen cycling in wetlands. Science of the Total Environment, 2018, 635, 1436-1443.	8.0	27
77	Influence of genetically modified organisms on agro-ecosystem processes. Agriculture, Ecosystems and Environment, 2015, 214, 96-106.	5.3	25
78	Lucerne (Medicago sativa) alters N2O-reducing communities associated with cocksfoot (Dactylis) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 Biology and Biochemistry, 2019, 137, 107547.	8.8	25
79	Temporal changes in abundance and composition of ammonia-oxidizing bacterial and archaeal communities in a drained peat soil in relation to N2O emissions. Journal of Soils and Sediments, 2011, 11, 1399-1407.	3.0	23
80	Global Phylogeography of Chitinase Genes in Aquatic Metagenomes. Applied and Environmental Microbiology, 2011, 77, 1101-1106.	3.1	21
81	Importance of plant species for nitrogen removal using constructed floating wetlands in a cold climate. Ecological Engineering, 2019, 138, 126-132.	3.6	21
82	Soil Functional Operating Range Linked to Microbial Biodiversity and Community Composition Using Denitrifiers as Model Guild. PLoS ONE, 2012, 7, e51962.	2.5	19
83	Potential denitrification rates are spatially linked to colonization patterns of nosZ genotypes in an alluvial wetland. Ecological Engineering, 2015, 80, 191-197.	3.6	19
84	Catch Crop Residues Stimulate N2O Emissions During Spring, Without Affecting the Genetic Potential for Nitrite and N2O Reduction. Frontiers in Microbiology, 2018, 9, 2629.	3.5	17
85	Bacterial community diversity in paper mills processing recycled paper. Journal of Industrial Microbiology and Biotechnology, 2010, 37, 1061-1069.	3.0	16
86	Soil microbial diversity: an ISO standard for soil DNA extraction. Journal of Soils and Sediments, 2010, 10, 1344-1345.	3.0	16
87	Temporal Changes in Methane Oxidizing and Denitrifying Communities and Their Activities in a Drained Peat Soil. Wetlands, 2012, 32, 1047-1055.	1.5	16
88	Denitrification rates in lake sediments of mountains affected by high atmospheric nitrogen deposition. Scientific Reports, 2020, 10, 3003.	3.3	16
89	Combined removal of organic micropollutants and ammonium in reactive barriers developed for managed aquifer recharge. Water Research, 2021, 190, 116669.	11.3	16
90	Loss in soil microbial diversity constrains microbiome selection and alters the abundance of N-cycling guilds in barley rhizosphere. Applied Soil Ecology, 2022, 169, 104224.	4.3	16

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91	Brassicaceae cover crops reduce Aphanomyces pea root rot without suppressing genetic potential of microbial nitrogen cycling. Plant and Soil, 2015, 392, 227-238.	3.7	15
92	Acetylene inhibition for measuring denitrification rates in activated sludge. Water Science and Technology, 1994, 30, 161-167.	2.5	15
93	Diversity of archaea and niche preferences among putative ammoniaâ€oxidizing Nitrososphaeria dominating across European arable soils. Environmental Microbiology, 2022, 24, 341-356.	3.8	15
94	Abundance, activity and structure of denitrifier communities in phototrophic river biofilms (River) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6	2.0	13
95	Microbial adaptation, process performance and a suggested control strategy in a pre-denitrifying system with ethanol dosage. Water Science and Technology, 1996, 34, 91.	2.5	12
96	Shaping of soil microbial communities by plants does not translate into specific legacy effects on organic carbon mineralization. Soil Biology and Biochemistry, 2021, 163, 108449.	8.8	12
97	Microbial controls on net production of nitrous oxide in a denitrifying woodchip bioreactor. Journal of Environmental Quality, 2021, 50, 228-240.	2.0	11
98	Reactive nitrogen restructures and weakens microbial controls of soil N2O emissions. Communications Biology, 2022, 5, 273.	4.4	11
99	Survey of bromodeoxyuridine uptake among environmental bacteria and variation in uptake rates in a taxonomically diverse set of bacterial isolates. Journal of Microbiological Methods, 2011, 86, 376-378.	1.6	10
100	Control of Microthrix parvicella and sludge bulking by ozone in a full-scale WWTP. Water Science and Technology, 2016, 73, 866-872.	2.5	10
101	Differential expression of clade I and II N2O reductase genes in denitrifying<i>Thauera linaloolentis</i>47LolT under different nitrogen conditions. FEMS Microbiology Letters, 2021, 367, .	1.8	10
102	Intermittent addition of external carbon to enhance denitrification in activated sludge. Water Science and Technology, 1998, 37, 227.	2.5	9
103	Molecular Tools to Assess the Diversity and Density of Denitrifying Bacteria in Their Habitats. , 2007, , 313-330.		9
104	nir geneâ€based coâ€occurrence patterns reveal assembly mechanisms of soil denitrifiers in response to fire. Environmental Microbiology, 2021, 23, 239-251.	3.8	9
105	Plant-microbe interactions in response to grassland herbivory and nitrogen eutrophication. Soil Biology and Biochemistry, 2021, 156, 108208.	8.8	9
106	Site-specific responses of fungal and bacterial abundances to experimental warming in litter and soil across Arctic and alpine tundra. Arctic Science, 2022, 8, 992-1005.	2.3	8
107	Type of organic fertilizer rather than organic amendment per se increases abundance of soil biota. PeerJ, 2021, 9, e11204.	2.0	8
108	Molecular analyses of soil denitrifying bacteria.. , 2006, , 146-165.		7

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109	Nitrous oxide emissions and microbial communities during the transition to conservation agriculture using N-enhanced efficiency fertilisers in a semiarid climate. Soil Biology and Biochemistry, 2022, 170, 108687.	8.8	7
110	Nitrogen Removal Capacity of Microbial Communities Developing in Compost- and Woodchip-Based Multipurpose Reactive Barriers for Aquifer Recharge With Wastewater. Frontiers in Microbiology, 2022, 13, .	3.5	7
111	Grand Challenges in Terrestrial Microbiology: Moving on From a Decade of Progress in Microbial Biogeochemistry. Frontiers in Microbiology, 2020, 11, 981.	3.5	6
112	Minimizing tillage modifies fungal denitrifier communities, increases denitrification rates and enhances the genetic potential for fungal, relative to bacterial, denitrification. Soil Biology and Biochemistry, 2022, 170, 108718.	8.8	6
113	Catchment controls of denitrification and nitrous oxide production rates in headwater remediated agricultural streams. Science of the Total Environment, 2022, 838, 156513.	8.0	6
114	Habitat diversity and type govern potential nitrogen loss by denitrification in coastal sediments and differences in ecosystem-level diversities of disparate N2O reducing communities. FEMS Microbiology Ecology, 2020, 96, .	2.7	5
115	Methane and Nitrous Oxide Production From Agricultural Peat Soils in Relation to Drainage Level and Abiotic and Biotic Factors. Frontiers in Environmental Science, 2021, 9, .	3.3	5
116	Disentangling the roles of plant functional diversity and plaint traits in regulating plant nitrogen accumulation and denitrification in freshwaters. Functional Ecology, 2022, 36, 921-932.	3.6	5
117	Response of Induced Perturbation on Replicating Î²-Proteobacterial Ammonia-Oxidizing Populations in Soil. Microbial Ecology, 2012, 63, 701-709.	2.8	4
118	Intermittent dosage of ethanol in a pre-denitrifying activated sludge process. Water Science and Technology, 1996, 34, 387.	2.5	3
119	Bacterial structure of biofilms in wastewater infiltration systems. Water Science and Technology, 1998, 37, 203.	2.5	2