Holger Daims

List of Publications by Year in Descending Order

91 papers	13,632 citations	53 h-index	92 g-index
92 ext. papers	16,726 ext. citations	9.4 avg, IF	6.27 L-index

#	Paper	IF	Citations
91	Genomic and kinetic analysis of novel Nitrospinae enriched by cell sorting. *ISME Journal*, **2021**, 15, 732-745	11.9	8
90	Ammonia-oxidizing archaea possess a wide range of cellular ammonia affinities. *ISME Journal*, **2021**,	11.9	15
89	Electrochemical enrichment of marine denitrifying bacteria to enhance nitrate metabolization in seawater. *Journal of Environmental Chemical Engineering*, **2021**, 9, 105604	6.8	1
88	Nitrogen Kinetic Isotope Effects of Nitrification by the Complete Ammonia Oxidizer Nitrospira inopinata. *MSphere*, **2021**, e0063421	5	1
87	Activity and Metabolic Versatility of Complete Ammonia Oxidizers in Full-Scale Wastewater Treatment Systems. *MBio*, **2020**, 11,	7.8	32
86	A refined set of rRNA-targeted oligonucleotide probes for in situ detection and quantification of ammonia-oxidizing bacteria. *Water Research*, **2020**, 186, 116372	12.5	9
85	Exploring the upper pH limits of nitrite oxidation: diversity, ecophysiology, and adaptive traits of haloalkalitolerant Nitrospira. *ISME Journal*, **2020**, 14, 2967-2979	11.9	17
84	A fiber-deprived diet disturbs the fine-scale spatial architecture of the murine colon microbiome. *Nature Communications*, **2019**, 10, 4366	17.4	34
83	A Multicolor Fluorescence Hybridization Approach Using an Extended Set of Fluorophores to Visualize Microorganisms. *Frontiers in Microbiology*, **2019**, 10, 1383	5.7	32
82	Low yield and abiotic origin of NO formed by the complete nitrifier Nitrospira inopinata. *Nature Communications*, **2019**, 10, 1836	17.4	62
81	An automated Raman-based platform for the sorting of live cells by functional properties. *Nature Microbiology*, **2019**, 4, 1035-1048	26.6	104
80	Nitrospira. *Trends in Microbiology*, **2018**, 26, 462-463	12.4	77
79	Draft Genome Sequence of 26-4b1, an Acidotolerant Peatland Alphaproteobacterium Potentially Involved in Sulfur Cycling. *Genome Announcements*, **2018**, 6,		6
78	Cultivation and Genomic Analysis of " Nitrosocaldus islandicus," an Obligately Thermophilic, Ammonia-Oxidizing Thaumarchaeon from a Hot Spring Biofilm in Graendalur Valley, Iceland. *Frontiers in Microbiology*, **2018**, 9, 193	5.7	49
77	Characterization of the First " Nitrotoga" Isolate Reveals Metabolic Versatility and Separate Evolution of Widespread Nitrite-Oxidizing Bacteria. *MBio*, **2018**, 9,	7.8	58
76	The draft genome sequence of "" strain BS10, a nitrite oxidizing bacterium isolated from activated sludge. *Standards in Genomic Sciences*, **2018**, 13, 32		13
75	Crenothrix are major methane consumers in stratified lakes. *ISME Journal*, **2017**, 11, 2124-2140	11.9	87

74	Giant viruses with an expanded complement of translation system components. *Science*, **2017**, 356, 82-85	33.3	148
73	Adaptability as the key to success for the ubiquitous marine nitrite oxidizer. *Science Advances*, **2017**, 3, e1700807	14.3	49
72	Kinetic analysis of a complete nitrifier reveals an oligotrophic lifestyle. *Nature*, **2017**, 549, 269-272	50.4	349
71	-Targeted Polymerase Chain Reaction Primers for the Specific Detection and Quantification of Comammox in the Environment. *Frontiers in Microbiology*, **2017**, 8, 1508	5.7	210
70	A New Perspective on Microbes Formerly Known as Nitrite-Oxidizing Bacteria. *Trends in Microbiology*, **2016**, 24, 699-712	12.4	362
69	Relative Abundance of Nitrotoga spp. in a Biofilter of a Cold-Freshwater Aquaculture Plant Appears To Be Stimulated by Slightly Acidic pH. *Applied and Environmental Microbiology*, **2016**, 82, 1838-45	4.8	38
68	Genomics of a phototrophic nitrite oxidizer: insights into the evolution of photosynthesis and nitrification. *ISME Journal*, **2016**, 10, 2669-2678	11.9	24
67	Comparison of oxidation kinetics of nitrite-oxidizing bacteria: nitrite availability as a key factor in niche differentiation. *Applied and Environmental Microbiology*, **2015**, 81, 745-53	4.8	194
66	Cyanate as an energy source for nitrifiers. *Nature*, **2015**, 524, 105-8	50.4	160
65	Improved isolation strategies allowed the phenotypic differentiation of two Nitrospira strains from widespread phylogenetic lineages. *FEMS Microbiology Ecology*, **2015**, 91,	4.3	42
64	Complete nitrification by Nitrospira bacteria. *Nature*, **2015**, 528, 504-9	50.4	1148
63	Expanded metabolic versatility of ubiquitous nitrite-oxidizing bacteria from the genus Nitrospira. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 11371-6	11.5	265
62	Functionally relevant diversity of closely related Nitrospira in activated sludge. *ISME Journal*, **2015**, 9, 643-55	11.9	112
61	Dimeric chlorite dismutase from the nitrogen-fixing cyanobacterium Cyanothece sp. PCC7425. *Molecular Microbiology*, **2015**, 96, 1053-68	4.1	17
60	Nitrotoga-like bacteria are previously unrecognized key nitrite oxidizers in full-scale wastewater treatment plants. *ISME Journal*, **2015**, 9, 708-20	11.9	93
59	Structure and heme-binding properties of HemQ (chlorite dismutase-like protein) from Listeria monocytogenes. *Archives of Biochemistry and Biophysics*, **2015**, 574, 36-48	4.1	32
58	Spatial distribution analyses of natural phyllosphere-colonizing bacteria on Arabidopsis thaliana revealed by fluorescence in situ hybridization. *Environmental Microbiology*, **2014**, 16, 2329-40	5.2	75
57	Manipulating conserved heme cavity residues of chlorite dismutase: effect on structure, redox chemistry, and reactivity. *Biochemistry*, **2014**, 53, 77-89	3.2	27

56	Growth of nitrite-oxidizing bacteria by aerobic hydrogen oxidation. *Science*, **2014**, 345, 1052-4	33.3	99
55	Nitrolancea hollandica gen. nov., sp. nov., a chemolithoautotrophic nitrite-oxidizing bacterium isolated from a bioreactor belonging to the phylum Chloroflexi. *International Journal of Systematic and Evolutionary Microbiology*, **2014**, 64, 1859-1865	2.2	44
54	Thermophilic biological nitrogen removal in industrial wastewater treatment. *Applied Microbiology and Biotechnology*, **2014**, 98, 945-56	5.7	20
53	Diversity, Environmental Genomics, and Ecophysiology of Nitrite-Oxidizing Bacteria **2014**, 295-322		16
52	Three-dimensional stratification of bacterial biofilm populations in a moving bed biofilm reactor for nitritation-anammox. *International Journal of Molecular Sciences*, **2014**, 15, 2191-206	6.3	43
51	NxrB encoding the beta subunit of nitrite oxidoreductase as functional and phylogenetic marker for nitrite-oxidizing Nitrospira. *Environmental Microbiology*, **2014**, 16, 3055-71	5.2	193
50	Structure and community composition of sprout-like bacterial aggregates in a Dinaric Karst subterranean stream. *Microbial Ecology*, **2013**, 66, 5-18	4.4	15
49	New methods for analysis of spatial distribution and coaggregation of microbial populations in complex biofilms. *Applied and Environmental Microbiology*, **2013**, 79, 5978-87	4.8	47
48	Interactions of nitrifying bacteria and heterotrophs: identification of a Micavibrio-like putative predator of Nitrospira spp. *Applied and Environmental Microbiology*, **2013**, 79, 2027-37	4.8	67
47	Depletion of unwanted nucleic acid templates by selective cleavage: LNAzymes, catalytically active oligonucleotides containing locked nucleic acids, open a new window for detecting rare microbial community members. *Applied and Environmental Microbiology*, **2013**, 79, 1534-44	4.8	9
46	Colonization of freshwater biofilms by nitrifying bacteria from activated sludge. *FEMS Microbiology Ecology*, **2013**, 85, 104-15	4.3	29
45	Enrichment and genome sequence of the group I.1a ammonia-oxidizing Archaeon "Ca. Nitrosotenuis uzonensis" representing a clade globally distributed in thermal habitats. *PLoS ONE*, **2013**, 8, e80835	3.7	68
44	The Genome of Nitrospina gracilis Illuminates the Metabolism and Evolution of the Major Marine Nitrite Oxidizer. *Frontiers in Microbiology*, **2013**, 4, 27	5.7	158
43	Nitrogen processing and the role of epilithic biofilms downstream of a wastewater treatment plant. *Freshwater Science*, **2012**, 31, 1057-1069	2	39
42	Redox thermodynamics of high-spin and low-spin forms of chlorite dismutases with diverse subunit and oligomeric structures. *Biochemistry*, **2012**, 51, 9501-12	3.2	27
41	Impact of subunit and oligomeric structure on the thermal and conformational stability of chlorite dismutases. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2012**, 1824, 1031-8	4	18
40	Nitrification expanded: discovery, physiology and genomics of a nitrite-oxidizing bacterium from the phylum Chloroflexi. *ISME Journal*, **2012**, 6, 2245-56	11.9	216
39	Co-localized or randomly distributed? Pair cross correlation of in vivo grown subgingival biofilm bacteria quantified by digital image analysis. *PLoS ONE*, **2012**, 7, e37583	3.7	31

38	In situ techniques and digital image analysis methods for quantifying spatial localization patterns of nitrifiers and other microorganisms in biofilm and flocs. *Methods in Enzymology*, **2011**, 496, 185-215	1.7	18
37	Isolation and characterization of a moderately thermophilic nitrite-oxidizing bacterium from a geothermal spring. *FEMS Microbiology Ecology*, **2011**, 75, 195-204	4.3	80
36	Looking inside the box: using Raman microspectroscopy to deconstruct microbial biomass stoichiometry one cell at a time. *ISME Journal*, **2011**, 5, 196-208	11.9	32
35	Linking Microbial and Ecosystem Ecology Using Ecological Stoichiometry: A Synthesis of Conceptual and Empirical Approaches. *Ecosystems*, **2011**, 14, 261-273	3.9	66
34	Thaumarchaeotes abundant in refinery nitrifying sludges express amoA but are not obligate autotrophic ammonia oxidizers. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 16771-6	11.5	239
33	Unexpected diversity of chlorite dismutases: a catalytically efficient dimeric enzyme from Nitrobacter winogradskyi. *Journal of Bacteriology*, **2011**, 193, 2408-17	3.5	66
32	Drivers of bacterial colonization patterns in stream biofilms. *FEMS Microbiology Ecology*, **2010**, 72, 47-57	4.3	33
31	Double labeling of oligonucleotide probes for fluorescence in situ hybridization (DOPE-FISH) improves signal intensity and increases rRNA accessibility. *Applied and Environmental Microbiology*, **2010**, 76, 922-6	4.8	121
30	Structural and functional characterisation of the chlorite dismutase from the nitrite-oxidizing bacterium "Candidatus Nitrospira defluvii": identification of a catalytically important amino acid residue. *Journal of Structural Biology*, **2010**, 172, 331-42	3.4	68
29	A Nitrospira metagenome illuminates the physiology and evolution of globally important nitrite-oxidizing bacteria. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 13479-84	11.5	488
28	Environmental genomics reveals a functional chlorite dismutase in the nitrite-oxidizing bacterium ‘Candidatus Nitrospira defluvii’. *Environmental Microbiology*, **2008**, 10, 3043-56	5.2	86
27	Quantification of target molecules needed to detect microorganisms by fluorescence in situ hybridization (FISH) and catalyzed reporter deposition-FISH. *Applied and Environmental Microbiology*, **2008**, 74, 5068-77	4.8	104
26	Nitrification in terrestrial hot springs of Iceland and Kamchatka. *FEMS Microbiology Ecology*, **2008**, 64, 167-74	4.3	138
25	Physiological and phylogenetic characterization of a novel lithoautotrophic nitrite-oxidizing bacterium, ‘Candidatus Nitrospira bockiana’. *International Journal of Systematic and Evolutionary Microbiology*, **2008**, 58, 242-50	2.2	64
24	NH4+ ad-/desorption in sequencing batch reactors: simulation, laboratory and full-scale studies. *Water Science and Technology*, **2008**, 58, 345-50	2.2	15
23	Initial effects of experimental warming on carbon exchange rates, plant growth and microbial dynamics of a lichen-rich dwarf shrub tundra in Siberia. *Plant and Soil*, **2008**, 307, 191-205	4.2	105
22	A moderately thermophilic ammonia-oxidizing crenarchaeote from a hot spring. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 2134-9	11.5	548
21	Microbial landscapes: new paths to biofilm research. *Nature Reviews Microbiology*, **2007**, 5, 76-81	22.2	239

20	Raman-FISH: combining stable-isotope Raman spectroscopy and fluorescence in situ hybridization for the single cell analysis of identity and function. *Environmental Microbiology*, **2007**, 9, 1878-89	5.2	257
19	Quantification of uncultured microorganisms by fluorescence microscopy and digital image analysis. *Applied Microbiology and Biotechnology*, **2007**, 75, 237-48	5.7	73
18	Wastewater treatment: a model system for microbial ecology. *Trends in Biotechnology*, **2006**, 24, 483-9	15.1	174
17	Cohn's Crenothrix is a filamentous methane oxidizer with an unusual methane monooxygenase. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 2363-7	11.5	196
16	Ecophysiology and niche differentiation of Nitrospira-like bacteria, the key nitrite oxidizers in wastewater treatment plants. *Water Science and Technology*, **2006**, 54, 21-7	2.2	25
15	daime, a novel image analysis program for microbial ecology and biofilm research. *Environmental Microbiology*, **2006**, 8, 200-13	5.2	454
14	Selective enrichment and molecular characterization of a previously uncultured Nitrospira-like bacterium from activated sludge. *Environmental Microbiology*, **2006**, 8, 405-15	5.2	111
13	Nitrite concentration influences the population structure of Nitrospira-like bacteria. *Environmental Microbiology*, **2006**, 8, 1487-95	5.2	171
12	Deciphering the evolution and metabolism of an anammox bacterium from a community genome. *Nature*, **2006**, 440, 790-4	50.4	861
11	Linking microbial community structure with function: fluorescence in situ hybridization-microautoradiography and isotope arrays. *Current Opinion in Biotechnology*, **2006**, 17, 83-91	11.4	146
10	Soil carbon and nitrogen dynamics along a latitudinal transect in Western Siberia, Russia. *Biogeochemistry*, **2006**, 81, 239-252	3.8	22
9	Use of stable-isotope probing, full-cycle rRNA analysis, and fluorescence in situ hybridization-microautoradiography to study a methanol-fed denitrifying microbial community. *Applied and Environmental Microbiology*, **2004**, 70, 588-96	4.8	192
8	Molecular Analyses Of Microbial Community Structure And Function Of Flocs **2004**, 317-338		1
7	Fluorescence in situ hybridisation for the identification and characterisation of prokaryotes. *Current Opinion in Microbiology*, **2003**, 6, 302-9	7.9	298
6	Microbial community composition and function in wastewater treatment plants. *Antonie Van Leeuwenhoek*, **2002**, 81, 665-80	2.1	287
5	Cultivation-independent, semiautomatic determination of absolute bacterial cell numbers in environmental samples by fluorescence in situ hybridization. *Applied and Environmental Microbiology*, **2001**, 67, 5810-8	4.8	147
4	In situ characterization of Nitrospira-like nitrite-oxidizing bacteria active in wastewater treatment plants. *Applied and Environmental Microbiology*, **2001**, 67, 5273-84	4.8	615
3	Nitrification in sequencing biofilm batch reactors: lessons from molecular approaches. *Water Science and Technology*, **2001**, 43, 9-18	2.2	87

2	Novel Nitrospira-like bacteria as dominant nitrite-oxidizers in biofilms from wastewater treatment plants: diversity and in situ physiology. *Water Science and Technology*, **2000**, 41, 85-90	2.2	100
1	The domain-specific probe EUB338 is insufficient for the detection of all Bacteria: development and evaluation of a more comprehensive probe set. *Systematic and Applied Microbiology*, **1999**, 22, 434-44	4.2	1815