Holger Daims

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4404288/publications.pdf

Version: 2024-02-01

92 papers	18,630 citations	22099 59 h-index	45213 90 g-index
92 all docs	92 docs citations	92 times ranked	13373 citing authors

#	Article	IF	Citations
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, 434-444.	1.2	2,126
2	Complete nitrification by Nitrospira bacteria. Nature, 2015, 528, 504-509.	13.7	1,878
3	Deciphering the evolution and metabolism of an anammox bacterium from a community genome. Nature, 2006, 440, 790-794.	13.7	1,075
4	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, 13479-13484.	3.3	732
5	In Situ Characterization of Nitrospira -Like Nitrite-Oxidizing Bacteria Active in Wastewater Treatment Plants. Applied and Environmental Microbiology, 2001, 67, 5273-5284.	1.4	718
6	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, 2134-2139.	3.3	626
7	A New Perspective on Microbes Formerly Known as Nitrite-Oxidizing Bacteria. Trends in Microbiology, 2016, 24, 699-712.	3.5	625
8	Kinetic analysis of a complete nitrifier reveals an oligotrophic lifestyle. Nature, 2017, 549, 269-272.	13.7	588
9	daime, a novel image analysis program for microbial ecology and biofilm research. Environmental Microbiology, 2006, 8, 200-213.	1.8	565
10	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, 11371-11376.	3.3	439
11	Nitrification expanded: discovery, physiology and genomics of a nitrite-oxidizing bacterium from the phylum Chloroflexi. ISME Journal, 2012, 6, 2245-2256.	4.4	345
12	Microbial community composition and function in wastewater treatment plants. Antonie Van Leeuwenhoek, 2002, 81, 665-680.	0.7	341
13	Fluorescence in situ hybridisation for the identification and characterisation of prokaryotes. Current Opinion in Microbiology, 2003, 6, 302-309.	2.3	335
14	AmoA-Targeted Polymerase Chain Reaction Primers for the Specific Detection and Quantification of Comammox Nitrospira in the Environment. Frontiers in Microbiology, 2017, 8, 1508.	1.5	313
15	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, 1878-1889.	1.8	305
16	Microbial landscapes: new paths to biofilm research. Nature Reviews Microbiology, 2007, 5, 76-81.	13.6	288
17	Comparison of Oxidation Kinetics of Nitrite-Oxidizing Bacteria: Nitrite Availability as a Key Factor in Niche Differentiation. Applied and Environmental Microbiology, 2015, 81, 745-753.	1.4	286
18	<scp>NxrB</scp> encoding the beta subunit of nitrite oxidoreductase as functional and phylogenetic marker for nitriteâ€oxidizing <scp>N</scp>itrospira. Environmental Microbiology, 2014, 16, 3055-3071.	1.8	280

#	Article	IF	Citations
19	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, 16771-16776.	3.3	272
20	The Genome of Nitrospina gracilis Illuminates the Metabolism and Evolution of the Major Marine Nitrite Oxidizer. Frontiers in Microbiology, 2013, 4, 27.	1.5	243
21	Giant viruses with an expanded complement of translation system components. Science, 2017, 356, 82-85.	6.0	234
22	Cyanate as an energy source for nitrifiers. Nature, 2015, 524, 105-108.	13.7	231
23	Cohnâ€™sCrenothrixis a filamentous methane oxidizer with an unusual methane monooxygenase. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 2363-2367.	3.3	229
24	Wastewater treatment: a model system for microbial ecology. Trends in Biotechnology, 2006, 24, 483-489.	4.9	216
25	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, 588-596.	1.4	213
26	Nitrite concentration influences the population structure of Nitrospira-like bacteria. Environmental Microbiology, 2006, 8, 1487-1495.	1.8	209
27	Cultivation-Independent, Semiautomatic Determination of Absolute Bacterial Cell Numbers in Environmental Samples by Fluorescence In Situ Hybridization. Applied and Environmental Microbiology, 2001, 67, 5810-5818.	1.4	173
28	Nitrification in terrestrial hot springs of Iceland and Kamchatka. FEMS Microbiology Ecology, 2008, 64, 167-174.	1.3	173
29	Functionally relevant diversity of closely related Nitrospira in activated sludge. ISME Journal, 2015, 9, 643-655.	4.4	172
30	An automated Raman-based platform for the sorting of live cells by functional properties. Nature Microbiology, 2019, 4, 1035-1048.	5.9	170
31	Linking microbial community structure with function: fluorescence in situ hybridization-microautoradiography and isotope arrays. Current Opinion in Biotechnology, 2006, 17, 83-91.	3.3	166
32	Growth of nitrite-oxidizing bacteria by aerobic hydrogen oxidation. Science, 2014, 345, 1052-1054.	6.0	166
33	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, 922-926.	1.4	160
34	Nitrospira. Trends in Microbiology, 2018, 26, 462-463.	3.5	157
35	Crenothrix are major methane consumers in stratified lakes. ISME Journal, 2017, 11, 2124-2140.	4.4	146
36	Selective enrichment and molecular characterization of a previously uncultured Nitrospira-like bacterium from activated sludge. Environmental Microbiology, 2006, 8, 405-415.	1.8	143

#	Article	IF	Citations
37	Nitrotoga-like bacteria are previously unrecognized key nitrite oxidizers in full-scale wastewater treatment plants. ISME Journal, 2015, 9, 708-720.	4.4	135
38	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.	1.2	131
39	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.	1.8	126
40	Spatial distribution analyses of natural phyllosphereâ€colonizing bacteria on <scp>A</scp>rabidopsis thaliana revealed by fluorescence in situ hybridization. Environmental Microbiology, 2014, 16, 2329-2340.	1.8	125
41	Low yield and abiotic origin of N2O formed by the complete nitrifier Nitrospira inopinata. Nature Communications, 2019, 10, 1836.	5.8	123
42	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, 5068-5077.	1.4	114
43	Isolation and characterization of a moderately thermophilic nitrite-oxidizing bacterium from a geothermal spring. FEMS Microbiology Ecology, 2011, 75, 195-204.	1.3	112
44	Characterization of the First â€œ Candidatus Nitrotogaâ€•Isolate Reveals Metabolic Versatility and Separate Evolution of Widespread Nitrite-Oxidizing Bacteria. MBio, 2018, 9, .	1.8	112
45	Nitrification in sequencing biofilm batch reactors: lessons from molecular approaches. Water Science and Technology, 2001, 43, 9-18.	1.2	107
46	Environmental genomics reveals a functional chlorite dismutase in the nitriteâ€oxidizing bacterium â€˜Candidatus Nitrospira defluviiâ€™. Environmental Microbiology, 2008, 10, 3043-3056.	1.8	102
47	Ammonia-oxidizing archaea possess a wide range of cellular ammonia affinities. ISME Journal, 2022, 16, 272-283.	4.4	96
48	Quantification of uncultured microorganisms by fluorescence microscopy and digital image analysis. Applied Microbiology and Biotechnology, 2007, 75, 237-248.	1.7	95
49	Physiological and phylogenetic characterization of a novel lithoautotrophic nitrite-oxidizing bacterium, 'Candidatus Nitrospira bockiana'. International Journal of Systematic and Evolutionary Microbiology, 2008, 58, 242-250.	0.8	92
50	Interactions of Nitrifying Bacteria and Heterotrophs: Identification of a Micavibrio-Like Putative Predator of Nitrospira spp. Applied and Environmental Microbiology, 2013, 79, 2027-2037.	1.4	90
51	Linking Microbial and Ecosystem Ecology Using Ecological Stoichiometry: A Synthesis of Conceptual and Empirical Approaches. Ecosystems, 2011, 14, 261-273.	1.6	89
52	Enrichment and Genome Sequence of the Group I.1a Ammonia-Oxidizing Archaeon â€œCa. Nitrosotenuis uzonensisâ€•Representing a Clade Globally Distributed in Thermal Habitats. PLoS ONE, 2013, 8, e80835.	1.1	84
53	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.	0.8	82
54	A fiber-deprived diet disturbs the fine-scale spatial architecture of the murine colon microbiome. Nature Communications, 2019, 10, 4366.	5.8	82

#	Article	IF	Citations
55	Structural and functional characterisation of the chlorite dismutase from the nitrite-oxidizing bacterium â€œCandidatus Nitrospira defluviiâ€• Identification of a catalytically important amino acid residue. Journal of Structural Biology, 2010, 172, 331-342.	1.3	79
56	Unexpected Diversity of Chlorite Dismutases: a Catalytically Efficient Dimeric Enzyme from Nitrobacter winogradskyi. Journal of Bacteriology, 2011, 193, 2408-2417.	1.0	76
57	Cultivation and Genomic Analysis of â€œCandidatus Nitrosocaldus islandicus,â€•an Obligately Thermophilic, Ammonia-Oxidizing Thaumarchaeon from a Hot Spring Biofilm in Graendalur Valley, Iceland. Frontiers in Microbiology, 2018, 9, 193.	1.5	76
58	Adaptability as the key to success for the ubiquitous marine nitrite oxidizer Nitrococcus. Science Advances, 2017, 3, e1700807.	4.7	74
59	Activity and Metabolic Versatility of Complete Ammonia Oxidizers in Full-Scale Wastewater Treatment Systems. MBio, 2020, 11, .	1.8	65
60	New Methods for Analysis of Spatial Distribution and Coaggregation of Microbial Populations in Complex Biofilms. Applied and Environmental Microbiology, 2013, 79, 5978-5987.	1.4	64
61	Improved isolation strategies allowed the phenotypic differentiation of two Nitrospira strains from widespread phylogenetic lineages. FEMS Microbiology Ecology, 2015, 91, .	1.3	61
62	A Multicolor Fluorescence in situ Hybridization Approach Using an Extended Set of Fluorophores to Visualize Microorganisms. Frontiers in Microbiology, 2019, 10, 1383.	1.5	58
63	Three-Dimensional Stratification of Bacterial Biofilm Populations in a Moving Bed Biofilm Reactor for Nitritation-Anammox. International Journal of Molecular Sciences, 2014, 15, 2191-2206.	1.8	55
64	Exploring the upper pH limits of nitrite oxidation: diversity, ecophysiology, and adaptive traits of haloalkalitolerant Nitrospira. ISME Journal, 2020, 14, 2967-2979.	4.4	52
65	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, 1838-1845.	1.4	47
66	Nitrogen processing and the role of epilithic biofilms downstream of a wastewater treatment plant. Freshwater Science, 2012, 31, 1057-1069.	0.9	46
67	Structure and heme-binding properties of HemQ (chlorite dismutase-like protein) from Listeria monocytogenes. Archives of Biochemistry and Biophysics, 2015, 574, 36-48.	1.4	44
68	Drivers of bacterial colonization patterns in stream biofilms. FEMS Microbiology Ecology, 2010, 72, 47-57.	1.3	43
69	Colonization of freshwater biofilms by nitrifying bacteria from activated sludge. FEMS Microbiology Ecology, 2013, 85, 104-115.	1.3	41
70	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.	1.1	39
71	Ecophysiology and niche differentiation of Nitrospira-like bacteria, the key nitrite oxidizers in wastewater treatment plants. Water Science and Technology, 2006, 54, 21-27.	1.2	36
72	Looking inside the box: using Raman microspectroscopy to deconstruct microbial biomass stoichiometry one cell at a time. ISME Journal, 2011, 5, 196-208.	4.4	34

#	Article	IF	Citations
73	Structure and Community Composition of Sprout-Like Bacterial Aggregates in a Dinaric Karst Subterranean Stream. Microbial Ecology, 2013, 66, 5-18.	1.4	32
74	Manipulating Conserved Heme Cavity Residues of Chlorite Dismutase: Effect on Structure, Redox Chemistry, and Reactivity. Biochemistry, 2014, 53, 77-89.	1.2	32
75	Genomics of a phototrophic nitrite oxidizer: insights into the evolution of photosynthesis and nitrification. ISME Journal, 2016, 10, 2669-2678.	4.4	32
76	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.	0.4	30
77	Redox Thermodynamics of High-Spin and Low-Spin Forms of Chlorite Dismutases with Diverse Subunit and Oligomeric Structures. Biochemistry, 2012, 51, 9501-9512.	1.2	30
78	The draft genome sequence of â€œNitrospira lentaâ€•strain BS10, a nitrite oxidizing bacterium isolated from activated sludge. Standards in Genomic Sciences, 2018, 13, 32.	1.5	28
79	Soil carbon and nitrogen dynamics along a latitudinal transect in Western Siberia, Russia. Biogeochemistry, 2006, 81, 239-252.	1.7	27
80	Thermophilic biological nitrogen removal in industrial wastewater treatment. Applied Microbiology and Biotechnology, 2014, 98, 945-956.	1.7	26
81	Genomic and kinetic analysis of novel Nitrospinae enriched by cell sorting. ISME Journal, 2021, 15, 732-745.	4.4	23
82	Dimeric chlorite dismutase from the nitrogenâ€fixing cyanobacterium <scp>C</scp>yanothece sp. <scp>PCC</scp>7425. Molecular Microbiology, 2015, 96, 1053-1068.	1.2	22
83	Diversity, Environmental Genomics, and Ecophysiology of Nitrite-Oxidizing Bacteria. , 0, , 295-322.		20
84	A refined set of rRNA-targeted oligonucleotide probes for in situ detection and quantification of ammonia-oxidizing bacteria. Water Research, 2020, 186, 116372.	5.3	19
85	Impact of subunit and oligomeric structure on the thermal and conformational stability of chlorite dismutases. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2012, 1824, 1031-1038.	1.1	18
86	NH4+ ad-/desorption in sequencing batch reactors: simulation, laboratory and full-scale studies. Water Science and Technology, 2008, 58, 345-350.	1.2	17
87	A nitrite-oxidising bacterium constitutively consumes atmospheric hydrogen. ISME Journal, 2022, 16, 2213-2219.	4.4	17
88	Draft Genome Sequence of Telmatospirillum siberiense 26-4b1, an Acidotolerant Peatland Alphaproteobacterium Potentially Involved in Sulfur Cycling. Genome Announcements, 2018, 6, .	0.8	13
89	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, 1534-1544.	1.4	10
90	Electrochemical enrichment of marine denitrifying bacteria to enhance nitrate metabolization in seawater. Journal of Environmental Chemical Engineering, 2021, 9, 105604.	3.3	5

#	Article	IF	Citations
91	Nitrogen Kinetic Isotope Effects of Nitrification by the Complete Ammonia Oxidizer Nitrospira inopinata. MSphere, 2021, 6, e0063421.	1.3	3
92	Molecular Analyses Of Microbial Community Structure And Function Of Flocs. , 2004, , 317-338.		1