

Karen Casciotti

List of Publications by Citations

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89
papers

7,673
citations

42
h-index

87
g-index

101
ext. papers

8,764
ext. citations

6.5
avg, IF

6.16
L-index

#	Paper	IF	Citations
89	A bacterial method for the nitrogen isotopic analysis of nitrate in seawater and freshwater. <i>Analytical Chemistry</i> , 2001 , 73, 4145-53	7.8	1202
88	Measurement of the oxygen isotopic composition of nitrate in seawater and freshwater using the denitrifier method. <i>Analytical Chemistry</i> , 2002 , 74, 4905-12	7.8	1021
87	Revisiting carbon flux through the ocean's twilight zone. <i>Science</i> , 2007 , 316, 567-70	33.3	449
86	Isotopic signature of N ₂ O produced by marine ammonia-oxidizing archaea. <i>Science</i> , 2011 , 333, 1282-5	33.3	305
85	Activity, abundance and diversity of nitrifying archaea and bacteria in the central California Current. <i>Environmental Microbiology</i> , 2010 , 12, 1989-2006	5.2	288
84	Linking Diversity and Stable Isotope Fractionation in Ammonia-Oxidizing Bacteria. <i>Geomicrobiology Journal</i> , 2003 , 20, 335-353	2.5	229
83	The GEOTRACES Intermediate Data Product 2017. <i>Chemical Geology</i> , 2018 , 493, 210-223	4.2	195
82	Inverse kinetic isotope fractionation during bacterial nitrite oxidation. <i>Geochimica Et Cosmochimica Acta</i> , 2009 , 73, 2061-2076	5.5	170
81	Oxygen isotopes in nitrite: analysis, calibration, and equilibration. <i>Analytical Chemistry</i> , 2007 , 79, 2427-36	7.8	170
80	Technical updates to the bacterial method for nitrate isotopic analyses. <i>Analytical Chemistry</i> , 2011 , 83, 1850-6	7.8	162
79	Biogeochemical controls and isotopic signatures of nitrous oxide production by a marine ammonia-oxidizing bacterium. <i>Biogeosciences</i> , 2010 , 7, 2695-2709	4.6	158
78	Oxygen isotopic fractionation and exchange during bacterial nitrite oxidation. <i>Limnology and Oceanography</i> , 2010 , 55, 1064-1074	4.8	140
77	Dissimilatory nitrite reductase genes from autotrophic ammonia-oxidizing bacteria. <i>Applied and Environmental Microbiology</i> , 2001 , 67, 2213-21	4.8	130
76	Enrichment and characterization of ammonia-oxidizing archaea from the open ocean: phylogeny, physiology and stable isotope fractionation. <i>ISME Journal</i> , 2011 , 5, 1796-808	11.9	127
75	Isotopic analyses of nitrate and nitrite from reference mixtures and application to Eastern Tropical North Pacific waters. <i>Marine Chemistry</i> , 2007 , 107, 184-201	3.7	119
74	Abiotic nitrous oxide emission from the hypersaline Don Juan Pond in Antarctica. <i>Nature Geoscience</i> , 2010 , 3, 341-344	18.3	118
73	Basin-scale inputs of cobalt, iron, and manganese from the Benguela-Angola front to the South Atlantic Ocean. <i>Limnology and Oceanography</i> , 2012 , 57, 989-1010	4.8	106

72	Constraints on nitrogen cycling at the subtropical North Pacific Station ALOHA from isotopic measurements of nitrate and particulate nitrogen. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2008 , 55, 1661-1672	2.3	105
71	Stable isotopes and iron oxide mineral products as markers of chemodenitrification. <i>Environmental Science & Technology</i> , 2015 , 49, 3444-52	10.3	94
70	Oxygen isotopic composition of nitrate and nitrite produced by nitrifying cocultures and natural marine assemblages. <i>Limnology and Oceanography</i> , 2012 , 57, 1361-1375	4.8	87
69	Localization of Mn(II)-oxidizing activity and the putative multicopper oxidase, MnxG, to the exosporium of the marine Bacillus sp. strain SG-1. <i>Archives of Microbiology</i> , 2002 , 178, 450-6	3	86
68	Isotopic ratios of nitrite as tracers of the sources and age of oceanic nitrite. <i>Nature Geoscience</i> , 2013 , 6, 308-313	18.3	85
67	Interlaboratory assessment of nitrous oxide isotopomer analysis by isotope ratio mass spectrometry and laser spectroscopy: current status and perspectives. <i>Rapid Communications in Mass Spectrometry</i> , 2014 , 28, 1995-2007	2.2	75
66	Differential contributions of archaeal ammonia oxidizer ecotypes to nitrification in coastal surface waters. <i>ISME Journal</i> , 2014 , 8, 1704-14	11.9	73
65	Implications of nitrate and nitrite isotopic measurements for the mechanisms of nitrogen cycling in the Peru oxygen deficient zone. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2013 , 80, 78-93	3.5	73
64	Phylogenetic analysis of nitric oxide reductase gene homologues from aerobic ammonia-oxidizing bacteria. <i>FEMS Microbiology Ecology</i> , 2005 , 52, 197-205	4.3	72
63	Nitrogen and Oxygen Isotopic Studies of the Marine Nitrogen Cycle. <i>Annual Review of Marine Science</i> , 2016 , 8, 379-407	15.4	69
62	Low rates of nitrogen fixation in eastern tropical South Pacific surface waters. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 4398-403	11.5	68
61	Placing an upper limit on cryptic marine sulphur cycling. <i>Nature</i> , 2014 , 513, 530-3	50.4	67
60	Using dual-bacterial denitrification to improve delta15N determinations of nitrates containing mass-independent 17O. <i>Rapid Communications in Mass Spectrometry</i> , 2004 , 18, 245-50	2.2	63
59	Measurements of nitrite production in and around the primary nitrite maximum in the central California Current. <i>Biogeosciences</i> , 2013 , 10, 7395-7410	4.6	62
58	Oxygen isotopic exchange and fractionation during bacterial ammonia oxidation. <i>Limnology and Oceanography</i> , 2010 , 55, 753-762	4.8	62
57	Denitrification likely catalyzed by endobionts in an allogromiid foraminifer. <i>ISME Journal</i> , 2012 , 6, 951-60	1.9	61
56	Insights into nutrient assimilation and export in naturally iron-fertilized waters of the Southern Ocean from nitrogen, carbon and oxygen isotopes. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2008 , 55, 820-840	2.3	60
55	Potential importance of physiologically diverse benthic foraminifera in sedimentary nitrate storage and respiration. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		55

54	Dual isotope analyses indicate efficient processing of atmospheric nitrate by forested watersheds in the northeastern U.S.. <i>Biogeochemistry</i> , 2008 , 90, 15-27	3.8	55
53	Oxygen isotopic exchange and fractionation during bacterial ammonia oxidation 2010 , 55, 753		52
52	Nitrogen cycling in the secondary nitrite maximum of the eastern tropical North Pacific off Costa Rica. <i>Global Biogeochemical Cycles</i> , 2015 , 29, 2061-2081	5.9	49
51	Nitrate isotope distributions on the US GEOTRACES North Atlantic cross-basin section: Signals of polar nitrate sources and low latitude nitrogen cycling. <i>Marine Chemistry</i> , 2015 , 177, 143-156	3.7	43
50	Insights on the marine microbial nitrogen cycle from isotopic approaches to nitrification. <i>Frontiers in Microbiology</i> , 2012 , 3, 356	5.7	43
49	Aspects of the marine nitrogen cycle of the Chukchi Sea shelf and Canada Basin. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2015 , 118, 73-87	2.3	42
48	Variable Nitrification Rates Across Environmental Gradients in Turbid, Nutrient-Rich Estuary Waters of San Francisco Bay. <i>Estuaries and Coasts</i> , 2016 , 39, 1050-1071	2.8	42
47	Stable Isotopes as Tracers of Anthropogenic Nitrogen Sources, Deposition, and Impacts. <i>Elements</i> , 2013 , 9, 339-344	3.8	39
46	Hydrothermal impacts on trace element and isotope ocean biogeochemistry. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374,	3	37
45	Abundance and diversity of archaeal ammonia oxidizers in a coastal groundwater system. <i>Applied and Environmental Microbiology</i> , 2010 , 76, 7938-48	4.8	33
44	Multiple metabolisms constrain the anaerobic nitrite budget in the Eastern Tropical South Pacific. <i>Global Biogeochemical Cycles</i> , 2017 , 31, 258-271	5.9	32
43	Fully automated system for stable isotopic analyses of dissolved nitrous oxide at natural abundance levels. <i>Limnology and Oceanography: Methods</i> , 2010 , 8, 54-66	2.6	32
42	N ₂ O production in the eastern South Atlantic: Analysis of N ₂ O stable isotopic and concentration data. <i>Global Biogeochemical Cycles</i> , 2014 , 28, 1262-1278	5.9	30
41	Nitrogen and oxygen isotopic fractionation during microbial nitrite reduction. <i>Limnology and Oceanography</i> , 2016 , 61, 1134-1143	4.8	29
40	Ammonia-oxidizing bacteria are the primary N ₂ O producers in an ammonia-oxidizing archaea dominated alkaline agricultural soil. <i>Environmental Microbiology</i> , 2018 , 20, 2195-2206	5.2	27
39	Tropical Dominance of N ₂ Fixation in the North Atlantic Ocean. <i>Global Biogeochemical Cycles</i> , 2017 , 31, 1608-1623	5.9	27
38	Novel strains isolated from a coastal aquifer suggest a predatory role for flavobacteria. <i>FEMS Microbiology Ecology</i> , 2010 , 73, 254-70	4.3	26
37	A method for determining the nitrogen isotopic composition of porphyrins. <i>Analytical Chemistry</i> , 2009 , 81, 184-92	7.8	26

36	Vertical modeling of the nitrogen cycle in the eastern tropical South Pacific oxygen deficient zone using high-resolution concentration and isotope measurements. <i>Global Biogeochemical Cycles</i> , 2016 , 30, 1661-1681	5.9	25
35	Excess nitrate loads to coastal waters reduces nitrate removal efficiency: mechanism and implications for coastal eutrophication. <i>Environmental Microbiology</i> , 2013 , 15, 1492-504	5.2	25
34	Stable isotope analyses of NO ₂ -NO ₃ and N ₂ O in the hypersaline ponds and soils of the McMurdo Dry Valleys, Antarctica. <i>Geochimica Et Cosmochimica Acta</i> , 2014 , 135, 87-101	5.5	25
33	Water mass analysis of the 2013 US GEOTRACES eastern Pacific zonal transect (GP16). <i>Marine Chemistry</i> , 2018 , 201, 6-19	3.7	23
32	Assessment of nitrogen and oxygen isotopic fractionation during nitrification and its expression in the marine environment. <i>Methods in Enzymology</i> , 2011 , 486, 253-80	1.7	22
31	Nitrous oxide dynamics in a braided river system, New Zealand. <i>Journal of Environmental Quality</i> , 2011 , 40, 1532-41	3.4	21
30	Differential N ₂ O dynamics in two oxygen-deficient lake basins revealed by stable isotope and isotopomer distributions. <i>Limnology and Oceanography</i> , 2016 , 61, 1735-1749	4.8	20
29	Intense nitrogen cycling in permeable intertidal sediment revealed by a nitrous oxide hot spot. <i>Global Biogeochemical Cycles</i> , 2015 , 29, 1584-1598	5.9	20
28	Controls of nitrogen cycling evaluated along a well-characterized climate gradient. <i>Ecology</i> , 2017 , 98, 1117-1129	4.6	19
27	Dual nitrogen and oxygen isotope fractionation during anaerobic ammonium oxidation by anammox bacteria. <i>ISME Journal</i> , 2019 , 13, 2426-2436	11.9	19
26	Supersaturated N ₂ O in a perennially ice-covered Antarctic lake: Molecular and stable isotopic evidence for a biogeochemical relict. <i>Limnology and Oceanography</i> , 2008 , 53, 2439-2450	4.8	19
25	Preliminary assessment of stable nitrogen and oxygen isotopic composition of USGS51 and USGS52 nitrous oxide reference gases and perspectives on calibration needs. <i>Rapid Communications in Mass Spectrometry</i> , 2018 , 32, 1207-1214	2.2	19
24	Nitrogen and oxygen isotope measurements of nitrate along the US GEOTRACES Eastern Pacific Zonal Transect (GP16) yield insights into nitrate supply, remineralization, and water mass transport. <i>Marine Chemistry</i> , 2018 , 201, 137-150	3.7	18
23	Nitrite isotopes as tracers of marine N cycle processes. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374,	3	18
22	Paired N and O isotopic analysis of nitrate and nitrite in the Arabian Sea oxygen deficient zone. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2017 , 121, 121-131	2.5	17
21	Nitrous oxide cycling in the Eastern Tropical South Pacific as inferred from isotopic and isotopomeric data. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2018 , 156, 155-167	2.3	17
20	Fully automated system for stable isotopic analyses of dissolved nitrous oxide at natural abundance levels. <i>Limnology and Oceanography: Methods</i> , 2010 , 8, 54-66	2.6	17
19	Method for the analysis of delta18O in water. <i>Analytical Chemistry</i> , 2006 , 78, 2377-81	7.8	17

18	Distribution of anaerobic ammonia-oxidizing bacteria in a subterranean estuary. <i>Marine Chemistry</i> , 2012 , 136-137, 7-13	3.7	16
17	Biogeochemical controls and isotopic signatures of nitrous oxide production by a marine ammonia-oxidizing bacterium		12
16	Estimating fixed nitrogen loss and associated isotope effects using concentration and isotope measurements of NO ₃ ⁻ , NO ₂ ⁻ and N ₂ from the Eastern Tropical South Pacific oxygen deficient zone. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2018 , 156, 121-136	2.3	11
15	An N isotopic mass balance of the Eastern Tropical North Pacific oxygen deficient zone. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2018 , 156, 137-147	2.3	10
14	Microbial NO consumption in and above marine NO production hotspots. <i>ISME Journal</i> , 2021 , 15, 1434-1444	4.4	8
13	Nitrification and Nitrous Oxide Production in the Offshore Waters of the Eastern Tropical South Pacific. <i>Global Biogeochemical Cycles</i> , 2021 , 35, e2020GB006716	5.9	8
12	Modeling oceanic nitrate and nitrite concentrations and isotopes using a 3-D inverse N cycle model. <i>Biogeosciences</i> , 2019 , 16, 347-367	4.6	7
11	Dissolved Organic Nitrogen Production and Consumption in Eastern Tropical South Pacific Surface Waters. <i>Global Biogeochemical Cycles</i> , 2018 , 32, 769-783	5.9	7
10	Preparation and Analysis of Nitrogen-bearing Compounds in Water for Stable Isotope Ratio Measurement 2004 , 305-347		6
9	Measurements of nitrite production and nitrite-producing organisms in and around the primary nitrite maximum in the central California Current		6
8	Protocols for Assessing Transformation Rates of Nitrous Oxide in the Water Column. <i>Frontiers in Marine Science</i> , 2021 , 8,	4.5	6
7	Assessing Marine Nitrogen Cycle Rates and Process Sensitivities With a Global 3-D Inverse Model. <i>Global Biogeochemical Cycles</i> , 2019 , 33, 1026-1047	5.9	5
6	Amperometric sensor for nanomolar nitrous oxide analysis. <i>Analytica Chimica Acta</i> , 2020 , 1101, 135-140	6.6	5
5	Evidence for Microbial Mediated NO ₃ ⁻ Cycling Within Floodplain Sediments During Groundwater Fluctuations. <i>Frontiers in Earth Science</i> , 2019 , 7,	3.5	4
4	Distribution of Concentration and Stable Isotopic Composition of N ₂ O in the Shelf and Slope of the Northern South China Sea: Implications for Production and Emission. <i>Journal of Geophysical Research: Oceans</i> , 2019 , 124, 6218-6234	3.3	3
3	Vertical stratification and stability of biogeochemical processes in the deep saline waters of Lake Vanda, Antarctica. <i>Limnology and Oceanography</i> , 2020 , 65, 569-581	4.8	3
2	Quantifying Nitrous Oxide Cycling Regimes in the Eastern Tropical North Pacific Ocean With Isotopomer Analysis. <i>Global Biogeochemical Cycles</i> , 2021 , 35, e2020GB006637	5.9	2
1	Abiotic Nitrous Oxide Production From Sediments and Brine of Don Juan Pond, Wright Valley Antarctica, at Mars Analog Temperatures (40°C). <i>Geophysical Research Letters</i> , 2022 , 49,	4.9	1

