

**KAREN L. CASCIOTTI**

Curriculum vitae  
September 30, 2025

Stanford University  
Oceans Department  
Department of Earth System Science  
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**EDUCATION**

Princeton University, Ph.D., Geosciences	2002
Princeton University, M.A., Geosciences	1999
Scripps Institution of Oceanography, UC San Diego, M.S., Oceanography	1998
California Institute of Technology, B.S., Environmental Engineering Science	1995

**PROFESSIONAL EXPERIENCE**

**Positions held**

Professor, Oceans Department, Stanford University	2022-present
Professor, Department of Earth System Science, Stanford University	2020-present
Associate Professor, Department of Earth System Science Stanford University	2015 - 2020
Assistant Professor, Department of Environmental Earth System Science Stanford University	2011 – 2015
Associate Scientist, Department of Marine Chemistry and Geochemistry Woods Hole Oceanographic Institution	2008 - 2011
Assistant Scientist, Department of Marine Chemistry and Geochemistry Woods Hole Oceanographic Institution	2004 - 2008
NRC Postdoctoral Fellow, US Geological Survey, Reston VA	2002 - 2004

**Courses taught**

**Stanford**

Measurements in Earth Systems (ESS 212) Winter 2012, 2013, 2014, 2015, 2016, 2017  
Nitrogen in the Marine Environment (ESS 275) Winter 2016, 2018, 2020, 2022, Fall 2023  
Marine Stable Isotopes (ESS 249) Spring 2012, 2013, Winter 2015, 2017, 2019, 2021, 2025  
Marine Chemistry (ESS 152/252) Winter 2013, Spring 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2022, 2023, Fall 2024, 2025  
Biology and Global Change (ESYS 111) Winter 2020, 2021, 2022, 2023  
Quals Prep Writing Workshop (OCEANS 303) Fall 2024, 2025

Quals Prep Workshop (OCEANS 304) Winter 2025  
Tinkering in Marine Science (Oceans 265) Spring 2025

### **Woods Hole Oceanographic Institution**

Marine Chemistry (MIT/WHOI 12.742) 2004, 2005, 2006  
Marine Chemistry Seminar (MIT/WHOI 12.759) 2005  
Introduction to Isotope Chemistry (MIT/WHOI 12.748) 2006, 2008, 2010  
Marine Isotope Chemistry (MIT/WHOI 12.744) 2006, 2008, 2010

### **Postdoctoral Mentoring**

Avanti Shrikumar, Ram and Vijay Shriram Data Science Fellow, Stanford University (Sept 2020-2022).  
Alyson Santoro, Postdoctoral Scholar and Investigator, WHOI (December 2008-April 2011)  
Currently: Assistant Professor, University of California, Santa Barbara  
Jagruti Vedamati, Postdoctoral Researcher (March 3, 2014-2015, Stanford)  
Taylor Martin, Postdoctoral Investigator (July 1, 2018-February 28, 2019, Stanford)

### **Graduate students (completed)**

Daniel Rogers, PhD. Graduated June 2010, MIT/WHOI Joint Program in Chemical Oceanography.  
Currently: Assistant Professor, Stonehill College.  
Erin Banning, PhD. Graduated June 2010, MIT/WHOI Joint Program in Biological Oceanography.  
Currently: Research Scientist, Algenol Biofuels, Inc.  
Caitlin Frame, PhD. Graduated February 2011, MIT/WHOI Joint Program in Chemical Oceanography. Currently: Postdoctoral Investigator, University of Basel, Switzerland  
Carolyn Buchwald, PhD. Graduated September 2012, MIT/WHOI Joint Program in Chemical Oceanography. Currently: Assistant Professor, Dalhousie University.  
Brian Peters, PhD. Graduated November, 2016, Stanford ESS. Volunteer, Amigos for Christ, Nicaragua.  
Taylor Martin, PhD. Graduated May, 2018, Stanford ESS.  
Heidi Hirsh, Ph.D. Graduated December, 2020, Stanford ESS. Currently: Postdoctoral Investigator, University of Miami.  
Nicole Travis, Ph.D. Graduated June 2023, Stanford ESS. Currently: Postdoctoral investigator, University of Hawaii  
Colette Kelly, Ph.D. Graduated June 2023, Stanford ESS. Currently: Postdoctoral Fellow, WHOI  
Noah Gluschkoff, Ph.D. Graduated June 2025, Stanford ESS.

### **Graduate students (in progress)**

Hanif Sulaiman, PhD candidate (current 4<sup>th</sup> year ESS student)  
Meléa Emunah, pre-quals PhD student (current 3<sup>rd</sup> year Oceans student)  
Luke Calderaro, pre-quals PhD student (current 3<sup>rd</sup> year Oceans student)  
Lev Romashkov, pre-quals PhD student (current 2<sup>nd</sup> year Oceans student)

### **Undergraduate researchers**

Celine Heck (Stanford), June 2025-present

Hannah McGoran (Stanford), Stanford SESUR program, summer 2022-present  
Jacquelin Chen (Cal State Long Beach SURGE program, summer 2022  
Patrick Monreal (Stanford), Stanford undergraduate research assistant, June 2020-2022  
Karen Gutierrez (UC San Diego), Stanford SURGE program, summer 2019  
Jaclyn Pittman (San Diego State) Stanford SURGE program, summer 2017  
Carlos Miranda (FSU), Stanford guest student researcher, summer 2015  
Emilie Dirck (CSU-MB), Stanford SURGE program, summer 2015  
Cathleen Turner, Stanford SURGE program, 2011  
Timothy Santos, Stanford SES Undergraduate Research Program, 2011  
Cara Manning, WHOI 2009 summer student fellow  
Carolyn Buchwald, WHOI summer student fellow, 2006

### **High School Students**

Connery Wood (Stanford School of Earth Sciences High School Intern Program, 2016 and 2017).  
Currently: Undergraduate at Stanford University  
Leo Page-Blau (Stanford School of Earth Sciences High School Intern Program, 2014).  
Currently: Penn State University.  
Charlotte Philip (Stanford School of Earth Sciences High School Intern Program, 2013).  
Currently: Stanford University  
Anna Leschen-Lindell (Falmouth Academy Science Fair Project, 2006). Graduate, Colby College,  
BA in Global Environmental Justice, 2013.

### **HONORS, FELLOWSHIPS, AND AWARDS**

2021	John Hayes Award, the Geochemical Society
2011	Gabilan Fellow, Stanford University
2011	Terman Fellow, Stanford University
2008-2011	WHOI Coastal Ocean Institute Fellow
2002	NRC Postdoctoral Research Associateship
2002	Ocean Sciences Meeting Outstanding Student Presentation Award
2001	Princeton University Harold W. Dodds Honorific Fellowship
1997	AGU Fall Meeting Outstanding Student Paper-Atmospheric Sciences
1994	NSF Research Experience for Undergraduates (REU) Fellowship

### **UNIVERSITY SERVICE:**

Associate Dean, Space Planning, April 2023-present  
Stanford IDEAL Faculty Leader, August 2022-June 2023  
Senate of the Academic Council, September 2019-2023  
Earth Systems Faculty Director, September 2019-March 2023  
Earth Systems Director of Graduate Studies, September 2019-March 2023  
Search Committee for Founding Dean, Stanford's new School focused on Climate and  
Sustainability Aug 2021-May 2022

Earth System Science Department DEI committee  
Natural World Design Team, November 2018-May 2019  
Committee on Undergraduate Admissions and Financial Aid, November 2018-2022  
SE3 Council, 2016-2021  
Associate Chair for Diversity and Inclusion, Stanford ESS, Jan 2016-June 2019  
University Committee on Health and Safety, November 2018-November 2019  
Earth Systems Executive Committee, 2016-2019

#### **PROFESSIONAL ACTIVITIES**

Co-chair for GEOTRACES International Scientific Steering Committee (January 2020-present)  
US GEOTRACES Steering Committee member January 2012-2017  
International GEOTRACES Standards and Intercalibration Committee May 2013-2021  
Co-cruise leader GEOTRACES Pacific Meridional Transect (GP15), August 2016-present  
Chair, 2017 Gordon Research Conference in Chemical Oceanography  
Vice Chair, 2015 Gordon Research Conference in Chemical Oceanography  
Lead (AGU) Co-chair for 2016 Ocean Sciences Meeting, New Orleans, LA  
Executive Committee AGU/Ocean Sciences Section, 2013-2016  
Program Committee for 2014 AGU/Ocean Sciences Meeting, Honolulu, HI  
Associate Editor, Marine Chemistry, 2009-2020  
Associate Editor, Limnology and Oceanography: Methods, 2006-2015  
Intercalibration coordinator for GEOTRACES nitrate isotope measurements, 2007-present  
Attended GEOTRACES scoping workshops for the Pacific Ocean (June 25-30, 2007) and Indian Ocean (October 24-26, 2007), implementation workshops for the Atlantic Ocean (September 22-24, 2008) and Pacific Ocean (October 1-3, 2008), intercalibration workshops (December 8-9, 2007 and December 13-14, 2008), North Atlantic Section data workshop (March 11-15, 2013), Pacific Section cruise planning meeting (April 24-26, 2013).  
Reviewer for NSF (OCE CO and BO, MIP/MO, ETBC, Ecosystems, Chemistry, PIRE), as well as the following journals: Science, Nature, Nature Geoscience, Proceedings of the National Academy of Sciences, ISME Journal, Environmental Microbiology, PLOS Biology, Limnology and Oceanography, Limnology and Oceanography: Methods, Global Biogeochemical Cycles, Marine Chemistry, Deep Sea Research, Applied and Environmental Microbiology, Analytical Chemistry, Progress in Oceanography, Journal of Geophysical Research, Geophysical Research Letters, Rapid Communications in Mass Spectrometry, Geochimica et Cosmochimica Acta, and two chapters for the new edition of *Nitrogen in the Marine Environment*.

#### **MEMBERSHIP IN PROFESSIONAL SOCIETIES AND SCHOLARLY ORGANIZATIONS:**

American Geophysical Union (AGU)

Association for the Sciences of Limnology and Oceanography (ASLO)  
Geochemical Society  
Nitrification Network

**PEER-REVIEWED PUBLICATIONS** (110 PUBLICATIONS, 14034 CITATIONS, H-INDEX 54)

(\* = Authored by graduate student or postdoctoral member of Casciotti group)

(\*\* = Authored by undergraduate student in Casciotti group)

1. N. Gluschankoff\*, H. McGoran\*\*, **K.L. Casciotti**. 2025. [The Effects of Biogeochemistry and Water Mass Mixing on the Distribution of Nitrous Oxide in the Tropical South Pacific](#). Resubmitted to Global Biogeochemical Cycles.
2. D. Marconi, D. Sigman, K.L. Casciotti, R. Lawrence\*, A. Martinez-Garcia. 2023. Distinguishing the isotopic signals of nitrate assimilation and denitrification along meridional Pacific section US GEOTRACES GP15. *Re-submitted to Journal of Geophysical Research*.
3. **K.L. Casciotti**, T.A. Marshall, S.E. Fawcett, A.N. Knapp. 2024. [Advances in understanding the marine nitrogen cycle in the GEOTRACES era](#). *Oceanography* 37 (2).
4. Arandia-Gorostidi, N., Jaffe, A.L., Parada, A.E., Kapili, B.J., **Casciotti, K.L.**, Salcedo, R.S., Baumas, C.M. and Dekas, A.E., 2024. Urea assimilation and oxidation support activity of phylogenetically diverse microbial communities of the dark ocean. *The ISME Journal*, 18(1), p.wrae230.
5. C.L. Kelly\*, N.M. Travis\*, P.A. Baya\*, C. Frey, X. Sun, B.B. Ward, **K.L. Casciotti**. 2024. Isotopomer labeling and oxygen dependence of hybrid nitrous oxide production. *Biogeosciences* 21 (14), 3215-3238.
6. N. Travis\*, C. Kelly\*, and **K.L. Casciotti**. 2023. Testing the influence of light on nitrite cycling rates in eastern tropical North Pacific. *Biogeosciences*, 21(8): 1985-2004.
7. N. Gluschankoff\*, A.E. Santoro, C. Buchwald, **K.L. Casciotti**. 2023. [Shifts in the Isotopic Composition of Nitrous Oxide between El Niño and La Niña in the Eastern Tropical South Pacific](#). *Global Biogeochemical Cycles* 37(10), e2023GB007959.
8. C. Proctor, P. Coupel, **K. L. Casciotti**, J.E. Tremblay, E. Zakem, K. Arrigo, M. Mills. 2023. Light, ammonium, pH, and phytoplankton competition as environmental factors controlling nitrification. *Limnology and Oceanography* 68(7), 1490-1503.
9. N. M. Travis\*, C.L. Kelly\*, M.R. Mulholland, **K.L. Casciotti**. 2023. [Nitrite cycling in the primary nitrite maxima of the eastern tropical North Pacific](#), *Biogeosciences* 20: 325-347.
10. C.L. Kelly\*, C. Manning, C. Frey, J. Kaiser, N. Gluschankoff\*, **K.L. Casciotti**. 2023. [pyisotopomer: A Python package for obtaining intramolecular isotope ratio differences from mass spectrometric analysis of nitrous oxide isotopocules](#), *Rapid Communications in Mass Spectrometry*, e9513.

11. X.J. Gu, L. Wang, K.L. Casciotti, Y. Xin, S.M. Liu, and G.L. Zhang. 2023. Mixed archaeal production and nitrifier denitrification dominate N<sub>2</sub>O production in the East China Sea: Insights from isotopocule and hydroxylamine analyses. *Journal of Geophysical Research: Oceans* 128(8), e2022JC019355.
12. X.S. Wan, H.-X. Sheng, M. Dai, **K.L. Casciotti**, M.J. Church, W. Zou, L. Liu, H. Shen, K. Zhou, B.B. Ward, S.-J. Kao. 2023. [Epipelagic nitrous oxide production offsets carbon sequestration by the biological pump](#), *Nature Geoscience*, 16: 29-36.
13. C. Frey, X. Sun, L. Szemlerski, **K.L. Casciotti**, E. Garcia-Robledo, A. Jayakumar, C.L. Kelly\*, M.F. Lehmann, B.B. Ward. 2023. [Kinetics of nitrous oxide production from ammonia oxidation in the Eastern Tropical North Pacific](#), *Limnology and Oceanography*, 68: 424-438.
14. T. Cinay, D. Dumit, R.J. Woosley, E.L. Boles, J.V. Kwiecinski, S. Mullen, T.J. Tamasi, M.J. Wolf, C.L. Kelly\*, N.M. Travis\*, **K.L. Casciotti**, A.R. Babbin. 2022. [Coincident biogenic nitrite and pH maxima arise in the upper anoxic layer in the Eastern Tropical North Pacific](#), *Global Biogeochemical Cycles*, e22GB007470.
15. Monreal\*\*, P.J., C.L. Kelly\*, N.M. Travis\*, and **K.L. Casciotti**. 2022. Investigating heterogeneity in nitrous oxide cycling of the Eastern Tropical North Pacific through isotopocules. *Global Biogeochemical Cycles* 36 (6), e2022GB007310.
16. Marshall, T., J. Granger, **K.L. Casciotti**, K. Dahnke, K-C. Emeis, D. Marconi, M. McIlvin, A. Noble, M. Saito, D. Sigman, and S. Fawcett. 2022. The Angola Gyre is a hotspot for nitrogen fixation in the South Atlantic Ocean. *Nature Communications Earth and Environment* 3(1), 151.
17. Lawrence\*, R.M., A. Shrikumar\*\*, E. Le Roy, J.H. Swift, P.J. Lam, G. Cutter, and **K.L. Casciotti**. 2022. Water mass analysis of the 2018 GEOTRACES Pacific Meridional Transect (GP15), ESSOAr, <https://doi.org/10.1002/essoar.10510438.1>
18. Shrikumar\*\*, A., R.M. Lawrence\*, **K.L. Casciotti**. 2022. Pyompa technical note. ESSOAr <https://doi.org/10.1002/essoar.10507053.4>
19. Schutte, C.A., V.A. Samarkin, M.W. Bowles, B. Peters\*, **K.L. Casciotti**, M.T. Madigan, S.B. Joye. 2022. Abiotic nitrous oxide production from sediments and brine of Don Juan Pond, Wright Valley Antarctica, at Mars analog temperatures (-40 C). *Geophysical Research Letters*, e2021GL09435.
20. Kelly\*, C.L., N.M. Travis\*, P.A. Baya\*, and **K.L. Casciotti**. 2021. Quantifying nitrous oxide cycling regimes in the Eastern Tropical North Pacific Ocean with isotopomer analysis. *Global Biogeochemical Cycles*, 35: e2020GB006637.
21. Santoro\*, A.E., C. Buchwald\*, A.N. Knapp, W.M. Berelson, D.G. Capone, and **K.L. Casciotti**. 2021. Nitrification and nitrous oxide production in the offshore waters of the Eastern Tropical South Pacific. *Global Biogeochemical Cycles*, 35: e2020GB006716.

22. Bourbonnais, A., C. Frey, Z. Sun, L.A. Bristow, A. Jayakumar, N.E. Ostrom, **K.L. Casciotti**, and B.B. Ward. 2021. Protocols for assessing transformation rates of nitrous oxide in the water column. *Frontiers in Marine Science*, 8: 293.
23. Sun, X., A. Jayakumar, J.C. Tracey, E. Wallace, C.L. Kelly\*, **K.L. Casciotti**, and B.B. Ward. 2020. Microbial N<sub>2</sub>O consumption in and above marine N<sub>2</sub>O production hotspots. *The ISME Journal*, 1-11.
24. Jenkins, W.J., M. Hatta, J.N. Fitzsimmons, R. Schlitzer, N.T. Lanning, A. Shiller, N.R. Buckley, C.R. German, D.E. Lott III, G. Weiss, L. Whitmore, **K. Casciotti**, P.J. Lam, G.A. Cutter, K.L. Kahill. 2020. An intermediate-depth source of hydrothermal <sup>3</sup>He and dissolved ion in the North Pacific. *Earth and Planetary Science Letters*, 539: 116223.
25. Damgaard, L.R., C. Kelly\*, **K. Casciotti**, B.B. Ward, N.P. Revsbech. 2020. Amperometric sensor for nanomolar nitrous oxide analysis. *Analytica Chimica Acta*, 1101: 135-140.
26. Martin\*, T.S., F. Primeau, and **K.L. Casciotti**. 2019. Assessing marine nitrogen cycle rates and process sensitivities with a global 3D inverse model. *Global Biogeochemical Cycles*, 33: 1026-1047.
27. Bouskill, N.J., M.E. Conrad, M. Bill, E.L. Brodie, Y. Cheng, C. Hobson, M. Forbes\*, **K.L. Casciotti**, and K.H. Williams. 2019. Evidence for microbial mediated nitrate cycling within floodplain sediments during groundwater fluctuations. *Frontiers in Earth Science*, 7: 189.
28. Schutte, C.A., V.A. Samarkin, B. Peters\*, M.T. Madigan, M. Bowles, R. Morgan-Kiss, **K. Casciotti**, and S. Joye. 2019. Vertical stratification and stability of biogeochemical processes in the deep saline waters of Lake Vanda, Antarctica. *Limnology and Oceanography*, 2019.
29. Zhang, G.-L., S.-M. Liu, **K.L. Casciotti**, M. Forbes\*, Y.-Y. Ren, W.-J. Zheng, and X.-J. Gu. 2019. Distribution of concentration and stable isotopic composition of N<sub>2</sub>O in the shelf and slope of the northern South China Sea: Implications for production and emission. *JGR Oceans*, 124: 6218-6234.
30. Kobayashi, K., A. Makabe, M. Yano, M. Oshiki, T. Kindaichi, **K. Casciotti**, and S. Okabe. Dual nitrogen and oxygen isotope fractionation during anaerobic ammonium oxidation by anammox bacteria. *ISME Journal*, <https://doi.org/10.1038/s41396-019-0440-x>.
31. Martin\*, T.S., F. Primeau, and **K.L. Casciotti**. 2019. Modeling oceanic nitrate and nitrite concentrations and isotopes using a 3-D inverse N cycle model. *Biogeosciences* 16: 347-367.
32. **Casciotti, K.L.**, M. Forbes\*, J. Vedamati\*, B. Peters\*, T. Martin\*, and C. Mordy. 2018. Nitrous oxide cycling in the Eastern Tropical South Pacific as inferred from isotopic and isotopomeric data. *Deep Sea Research II*, 156: 155-167.
33. Meinhardt, K. A., N. Stopnisek, M.W. Pannu, S.E. Strand, S.C. Fransen, **K.L. Casciotti**, and D.A. Stahl. Ammonia-oxidizing bacteria are the primary N<sub>2</sub>O producers in an ammonia-

- oxidizing archaea dominated alkaline agricultural soil. *Environmental Microbiology*, 20: 2195-2206.
34. Peters\*, B.P., R. Horak, A. Devol, C. Fuchsman, M. Forbes\*, C. Mordy, and **K.L. Casciotti**. Estimating fixed nitrogen loss and associated isotope effects using concentration and isotope measurements of  $\text{NO}_3^-$ ,  $\text{NO}_2^-$ , and  $\text{N}_2$  from the Eastern Tropical South Pacific oxygen deficient zone. *Deep Sea Research II*, 156: 121-136.
  35. Fuchsman, C.A., A.H. Devol, **K.L. Casciotti**, C. Buchwald\*, B.X. Chang, and R.E.A. Horak. 2017. An N isotope mass balance of the Eastern Tropical North Pacific oxygen deficient zone. *Deep Sea Research II*, 156: 137-147.
  36. Schlitzer, R. et al. The GEOTRACES Intermediate Data Product 2017. 2018. *Chemical Geology*, 493: 210-223.
  37. Ostrom, N.E., H. Gandhi, T.B. Coplen, S. Toyoda, J.K. Bohlke, W.A. Brand, **K.L. Casciotti**, J. Dyckmans, A. Gieseemann, J. Mohn, R. Well, L. Yu, and N. Yoshida. Preliminary assessment of stable nitrogen and oxygen isotopic composition of USGS51 and USGS52 nitrous oxide reference gases and perspectives on calibration needs. *Rapid Communications in Mass Spectrometry*, 32: 1207-1214.
  38. Knapp, A.N., **K.L. Casciotti**, M.G., Prokopenko. 2018. Dissolved organic nitrogen production and consumption in Eastern Tropical South Pacific Waters. 2018. *Global Biogeochemical Cycles* 32: 769-783.
  39. Peters\*, B.D., W.J. Jenkins, J.H. Swift, C.R. German, J.W. Moffett, G.A. Cutter, M.A. Brzezinski, and **K.L. Casciotti**. 2018. Water mass analysis of the 2013 US GEOTRACES Eastern Pacific Zonal Transect (GP16). *Marine Chemistry*, 201: 6-19.
  40. Peters\*, B.D. P.J., Lam, and **K.L. Casciotti**. 2018. Nitrogen and oxygen isotope measurements of  $\text{NO}_3^-$  along the US GEOTRACES Eastern Pacific Zonal Transect (GP16) yield insights into nitrate supply, remineralization, and water mass transport. *Marine Chemistry*, 201: 137-150.
  41. Marconi, D., D.M. Sigman, **K.L. Casciotti**, E.C. Campbell, M.A. Weigand, S.E. Fawcett, A.N. Knapp, P.A. Rafter, B.B. Ward, and G.H. Haug. 2017. Tropical dominance of  $\text{N}_2$  fixation in the North Atlantic Ocean. *Global Biogeochemical Cycles* 31: 1608-1623.
  42. Fassbender, A.J. et al. 2017. Perspectives on Chemical Oceanography in a changing environment: Participants of the COME ABOARD Meeting examine the field in the context of 40 years of DISCO. *Marine Chemistry* 196: 181-190.
  43. Sperber, C., O.A. Chadwick, **K.L. Casciotti**, K.G. Peay, C.A. Francis, A.E. Kim, P.M. Vitousek. 2017. Controls of nitrogen cycling evaluated along a well-characterized climate gradient. *Ecology* 98: 1117-1129.
  44. Martin\*, T.S. and **K.L. Casciotti**. 2017. Paired N and O isotopic analysis of nitrate and nitrite in the Arabian Sea oxygen deficient zone. *Deep Sea Research I* 121: 121-131.

45. Babbin, A.R., B.D. Peters\*, C.W. Mordy, B. Widner, **K.L. Casciotti**, B.B. Ward. 2017. Multiple metabolisms constrain the anaerobic nitrite budget in the Eastern Tropical South Pacific. *Global Biogeochemical Cycles* 31: 258-271.
46. C. R. German, **K.L. Casciotti**, J.-C. Dutay, L.E. Heimbürger, W.J. Jenkins, C.I. Measures, R.A. Mills, H. Obata, R. Schlitzer, A. Tagliabue, D.R. Turner, H. Whitby. 2016. Hydrothermal impacts on trace element and isotope ocean biogeochemistry. *Phil. Trans. R. Soc. A.* 374: 20160035.
47. Wenk, C.B, C.H. Frame\*, K. Koba, **K.L. Casciotti**, M. Veronesi, H. Niemann, C.J. Schubert, N. Yoshida, S. Toyoda, A. Makabe, J. Zopfi, M.F. Lehmann. 2016. Differential N<sub>2</sub>O dynamics in two oxygen-deficient lake basins revealed by stable isotope and isotopomer distribution. *Limnology and Oceanography* 61: 1735-1749.
48. Peters\*, B.D., A.R. Babbin, K.A. Lettmann, C.W. Mordy, O. Ulloa, B.B. Ward, and **K.L. Casciotti**. 2016. Vertical modeling of the nitrogen cycle in the eastern tropical South Pacific oxygen deficient zone using high-resolution concentration and isotope measurements. *Global Biogeochemical Cycles* 30: 1661-1681.
49. **Casciotti, K.L.** 2016. Nitrite isotopes as tracers of marine N cycle processes. *Phil. Trans. R. Soc. A.* 374: 20150295.
50. Knapp, A., **K. L. Casciotti**, W. M. Berelson, M. G. Prokopenko, and D. G. Capone. 2016. Low rates of nitrogen fixation in eastern tropical South Pacific surface waters. *PNAS* 113: 4398-4403.
51. Damashek, J., **K. L. Casciotti**, and C. A. Francis. 2016. Variable nitrification rates across environmental gradients in turbid, nutrient-rich estuary waters of San Francisco Bay. *Estuarine, Coastal, and Shelf Science* 39: 1050-1071.
52. Martin\*, T and **K. L. Casciotti**. 2016. Nitrogen and oxygen isotopic fractionation during microbial nitrite reduction. *Limnology and Oceanography* 61: 1134-1143.
53. **Casciotti, K.L.** 2016. Nitrogen and oxygen isotopic studies of the marine nitrogen cycle. *Annual Reviews in Marine Science* 8: 379-407.
54. Buchwald\*, C., A.E. Santoro\*, R.H.R. Stanley, **K.L. Casciotti**. Nitrogen cycling in the secondary nitrite maximum in the Costa Rica Upwelling Dome. 2015. *Global Biogeochemical Cycles* 29: 2061-2081.
55. Schutte, C.A., S. B. Joye, A. M. Wilson, T. Evans, W. S. Moore, **K. L. Casciotti**. 2015. Intense nitrogen cycling in permeable intertidal sediments revealed by a nitrous oxide hot spot. *Global Biogeochemical Cycles* 29: 1584-1598.
56. Marconi, D., A.M. Weigand, P. Rafter, M. McIlvin\*, M. Forbes\*, **K. L. Casciotti**, D.M. Sigman. 2015. Nitrate isotope distributions on the US GEOTRACES North Atlantic cross-basin section: Signals of polar nitrate sources and low latitude nitrogen cycling. *Marine Chemistry* 177: 143-156.

57. Jones, L.C., B. Peters\*, J.S. Lezama Pacheco, **K. L. Casciotti**, and S. Fendorf. 2015. Stable isotopes and iron oxide mineral products as markers of chemodenitrification. *Environmental Science and Technology* 49: 3444-3452.
58. Frame\* C.H., E. Deal, C.D. Nevison, and **K.L. Casciotti**. 2014. N<sub>2</sub>O production in the eastern South Atlantic: Analysis of N<sub>2</sub>O stable isotopic and concentration data. *Global Biogeochemical Cycles* 28: 1262-1278.
59. Mohn, J., B. Wolf, S. Toyoda, C.T. Lin, M.C. Liang, N. Brüggermann, H. Wisel, A.E. Steiker, J. Dyckmans, et al., 2014. Interlaboratory assessment of nitrous oxide isotopomer analysis by isotope ratio mass spectrometry and laser spectroscopy: current status and perspectives. *Rapid Communications in Mass Spectrometry* 28: 1995-2007.
60. Johnston, D.T., B.C. Gill, A. Masterson, E. Beirne, **K.L. Casciotti**, A.N. Knapp, and W. Berelson, 2014. Placing an upper limit on cryptic marine sulphur cycling. *Nature* 513: 530
61. Z. W. Brown, **K. L. Casciotti**, R. L. Pickart, J. H. Swift, and K. R. Arrigo. 2015. Aspects of the Marine Nitrogen Cycle on the Chukchi Sea Shelf and Canada Basin. *Deep Sea Research II, ICESCAPE Special Issue 118*: 73-87.
62. B. Peters\*, **K. L. Casciotti**, V. A. Samarkin, M. T. Madigan, C. A. Schutte, and S. B. Joye. 2014. Stable isotopic analyses of NO<sub>2</sub><sup>-</sup>, NO<sub>3</sub><sup>-</sup>, and N<sub>2</sub>O in hypersaline ponds and soils of the McMurdo Dry Valleys, Antarctica. In press, *Geochimica et Cosmochimica Acta*.
63. Smith, J. M., **K. L. Casciotti**, F. P. Chavez, C. A. Francis. 2014. Differential contributions of archaeal ammonia oxidizer ecotypes to nitrification in coastal surface waters. *ISME Journal* doi:10.1038/ismej.2014.11.
64. **Casciotti, K. L.**, C. Buchwald\*, and M. R. McIlvin\*. 2013. Implications of nitrate and nitrite isotopic measurements for the mechanisms of nitrogen cycling in the Peru oxygen deficient zone. *Deep Sea Research I* 80: 78-93.
65. Hastings, M. G., **K. L. Casciotti**, and E. M. Elliott. 2013. Stable isotopes as tracers of anthropogenic nitrogen sources, deposition, and impacts. *Elements* 9: 339-344.
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#### BOOK CHAPTERS:

- Francis, C.A. and K.L. Casciotti. 2016. Geomicrobiology of Nitrogen. In H.L. Erlich, D.K. Newman, and A. Kappler (eds.) *Erlich's Geomicrobiology*, 6<sup>th</sup> edition. CRC Press, New York. P. 281-296.
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#### MEETING PRESENTATIONS

1. Kelly\*, C.L., N.M. Travis\*, P.A. Baya\*, **K.L. Casciotti**. Quantifying nitrous oxide cycling regimes in the eastern tropical North Pacific Ocean with isotopomer analysis. Workshop 'What can we learn from N<sub>2</sub>O isotope data?', October 23-24, 2019, EMPA, Dubendorf, Switzerland.
2. Kelly\*, C.L., N.M. Travis\*, P.A. Baya\*, **K.L. Casciotti**. Quantifying nitrous oxide cycling regimes in the eastern tropical North Pacific Ocean with isotopomer analysis. 2019 Gordon Research Conference in Chemical Oceanography.
3. **Casciotti, K.L.**, G. Cutter, P.J. Lam, S. Becker, K. Jackson, M. Miller, J. Gum, A. Barna, E. Hunt, K. Vogel, and J. Calderwood. A first look at the US GEOTRACES GP15 Section: hydrography and nutrients. 2019 Gordon Research Conference in Chemical Oceanography.
4. Kelly\*, C.L., B.X. Chang, C. Buchwald\*, N.M. Travis\*, M. Forbes\*, A.R. Babbin, and **K.L. Casciotti**. Drivers of nitrous oxide cycling in the Eastern Tropical North Pacific Ocean. 2018 Ocean Sciences Meeting oral presentation.
5. Martin\* T.S., F. Primeau, and **K.L. Casciotti**. Controls on nitrite distribution and isotopes: insights from a 3D global inverse model. 2018 Ocean Sciences Meeting poster presentation.

6. Travis\*, N.M., M. Forbes\*, and **K.L. Casciotti**. Nitrogen cycling processes across the upper and lower boundaries of the primary nitrite maximum in the Eastern Tropical North Pacific. 2018 Ocean Sciences Meeting poster presentation.
7. Pittman\*, J., B. Peters\*, E. Achterberg, and **K.L. Casciotti**. Examination of the nitrogen and oxygen isotopes of nitrate in the Benguela upwelling zone. 2018 Ocean Sciences Meeting poster presentation.
8. Martin\*, T.S., F. Primeau, and **K.L. Casciotti**. Using a 3D inverse global model to understand marine nitrogen cycling processes. 2017 Gordon Research Conference in Chemical Oceanography poster presentation.
9. Travis\*, N., M. Forbes\*, and **K.L. Casciotti**. Isotopes of nitrite produced by phytoplankton during growth on nitrate. 2017 Gordon Research Conference in Chemical Oceanography poster presentation.
10. **Casciotti, K.L.**, M. Forbes\*, J. Vedamati\*, B. Peters\*, T. Martin\*, and M. McIlvin\*. Paired N and O isotopic analysis of nitrate, nitrite, and nitrous oxide from marine oxygen deficient zones. 2016 International symposium on Microbial Responses to Ocean Deoxygenation. GOA, India. INVITED talk.
11. Buchwald\*, C., M. Forbes\*, and **K.L. Casciotti**. Using natural abundance stable isotopes of nitrate and nitrite as tracers for nitrogen cycling in the Eastern Tropical North Pacific. 2016 International symposium on Microbial Responses to Ocean Deoxygenation. GOA, India. INVITED talk.
12. Wood\*, C., M. Forbes\*, and **K.L. Casciotti**. Understanding the differences in the nitrogen cycle in the seasonal low oxygen zone in the Saanich Inlet of Vancouver Island, BC. 2017 AGU Fall Meeting.
13. Wood\*, C., M. Forbes\*, and **K.L. Casciotti**. Understanding the differences in the nitrogen cycle in low-oxygen zones in the Eastern Tropical North Pacific. 2016 AGU Fall Meeting.
14. **Casciotti, K.L.**, M. Forbes\*, J. Vedamati\*, B. Peters\*. Nitrous oxide cycling in the Eastern Tropical South Pacific oxygen deficient zone. 2016 AGU Fall meeting. INVITED oral presentation.
15. **Casciotti, K. L.**, C. Buchwald\*, B. Peters\*, M. Forbes\*, and T. Martin\*. Nitrite isotopes as tracers for marine N cycles processes. 2016 Ocean Sciences Meeting INVITED poster presentation.
16. Dirck, E. B., M. M. Mills, **K. L. Casciotti**, M. S. Forbes\*, P. Coupel, K. R. Arrigo. Controls on Water Column Nitrification Over the Chukchi Shelf, Arctic Ocean During the SUBICE Campaign (May - June, 2014). 2016 Ocean Sciences Meeting poster presentation.
17. Forbes\*, M. S., B. D. Peters\*, **K. L. Casciotti**, J. Vedamati\*. Nitrous Oxide (N<sub>2</sub>O) cycling in the Equatorial Tropical South Pacific (ETSP) Oxygen Deficient Zone (ODZ) - evidence for production, consumption and N<sub>2</sub>O transport. 2016 Ocean Sciences Meeting poster presentation.
18. Hastings, M. G., and **K. L. Casciotti**. Isotopes of atmospheric nitrate from the GEOTRACES Atlantic and Pacific Sections. 2016 Ocean Sciences Meeting oral presentation.
19. Damashek, J., T. Challenor, **K.L. Casciotti**, and C. A. Francis. Nitrification from the Pacific Ocean to the Sacramento River: Do Distinct Microbial Communities Affect

- Biogeochemical Nitrogen Cycling in the Waters of a Large Urban Estuary? 2016 Ocean Sciences Meeting poster presentation.
20. Martin\*, T. S., and **K. L. Casciotti**. Investigating N cycle processes in the Arabian Sea oxygen deficient zone using paired N and O isotope measurements of nitrate and nitrite. 2016 Ocean Sciences Meeting poster presentation.
  21. Knapp, A. N., **K. L. Casciotti**, and M. G. Prokopenko. Surface ocean dissolved organic nitrogen concentration and isotopic composition in the eastern tropical South Pacific. 2016 Ocean Sciences Meeting oral presentation.
  22. Peters\*, B. D., **K. L. Casciotti**, M. A. Altabet, and J. Larkum. Estimating  $\delta^{15}\text{N}$  of remineralized  $\text{NO}_3^-$  in water masses of the eastern tropical south Pacific using  $\text{NO}_3^-$  isotope measurements from the GEOTRACES Eastern Pacific Zonal Transect. 2016 Ocean Sciences Meeting poster presentation.
  23. Primeau, F. and **K. L. Casciotti**. A biogeochemical inverse model constrained with delta- $^{15}\text{N}$  measurements to infer N-fixation rates in the Atlantic Ocean. 2015 GRC in Chemical Oceanography poster presentation.
  24. Peters\*, B. and **K. L. Casciotti**. Modification of  $\text{NO}_3^-$  isotopes along a density surface: insights from  $\delta^{15}\text{N}_{\text{NO}_3}$  and  $\delta^{18}\text{O}_{\text{NO}_3}$  measurements collected during the 2013 GEOTRACES Eastern Pacific Zonal Transect. 2015 GRC in Chemical Oceanography poster presentation.
  25. Santoro, A. E., C. Buchwald, A. Knapp, and **K. L. Casciotti**. Nitrification and nitrous oxide production in the offshore waters of the ETSP. 2015 GRC in Chemical Oceanography poster presentation.
  26. Vedamati\*, J., B. Chang, B. Peters\*, M. Forbes\*, C. Mordy, M. Warner, B. Ward, A. Devol, and **K. L. Casciotti**. Nitrous oxide cycling in the Eastern Tropical South Pacific as inferred from isotopic and isotopomeric data. 2014 AGU Fall Meeting oral presentation.
  27. Peters\*, B. and **K. L. Casciotti**. Nitrite production mechanisms in the primary nitrite maximum of the tropical south Pacific inferred from nitrite isotopes collected during the GEOTRACES 2013 cruise. 2014 AGU Fall Meeting poster presentation.
  28. Martin, T. S. and **K. L. Casciotti**. Determining the N and O isotope effects of microbial nitrite reduction: the global N cycle implications of an enzyme-dependent isotope effect. 2014 AGU Fall Meeting poster presentation.
  29. Peters\*, B., C. Buchwald\*, A. Knapp, and **K. L. Casciotti**. Tracking nitrate isotopes along density surfaces in the eastern tropical south Pacific. 2014 Ocean Sciences Meeting, poster presentation.
  30. Johnston, D. T., B. C. Gill, A. Masterson, E. Beirne, W. Berelson, and **K. L. Casciotti**. Quantifying the cryptic OMZ S cycle. 2014 Ocean Sciences Meeting, oral presentation.
  31. **Casciotti, K. L.** Nitrogen dynamics in the ocean elucidated from new analytical methods. 2013 Tokyo University of Agriculture and Technology Symposium, INVITED talk.
  32. **Casciotti, K. L.**, C. Buchwald\*, and A. Santoro\*. A biogeochemical perspective on the formation of the primary nitrite maximum. 2013 International Conference on Nitrification, INVITED plenary talk.
  33. **Casciotti, K. L.**, D. Sigman, M. Hastings, D. Marconi, P. Rafter, A. Weigand, and H. Ren. Sectional nitrate isotope data reveal the extent of low  $\delta^{15}\text{N}\text{-NO}_3^-$  in the North Atlantic. 2013 Gordon Research Conference in Chemical Oceanography, poster presentation.

34. **Casciotti, K. L.** Perspectives on nitrogen cycling in oxygen minimum zones from natural abundance  $\text{NO}_3^-$  and  $\text{NO}_2^-$  isotope ratio measurements. 2013 Moore Foundation Workshop on Oceanic Oxygen Minimum Zones, INVITED talk.
35. Buchwald\*, C., A. Santoro\*, R. Stanley, and **K. L. Casciotti**. Nitrogen cycling in the secondary nitrite maximum in the Costa Rica Upwelling Dome. 2013 ASLO Aquatic Sciences Meeting, student oral presentation.
36. Smith, J. M., **K. L. Casciotti**, F. P. Chavez, C. A. Francis. Relating functional gene markers for ammonia-oxidizing archaea to rates of nitrification across ocean gradients. 2013 ASLO Aquatic Sciences Meeting, student poster presentation.
37. **Casciotti, K. L.** and C. Buchwald\*. Implications of Nitrate and Nitrite Isotopic Measurements for the Mechanisms of Fixed Nitrogen Cycling and Loss from the Peru Oxygen Deficient Zone. 2012 AGU Fall Meeting, INVITED talk.
38. **Casciotti, K. L.** Sources and Cycling of Marine Nitrous Oxide. 2012 General Meeting of the American Society for Microbiology, INVITED talk.
39. Buchwald\*, C. and **K. L. Casciotti**. Insights on nitrite turnover times in the ocean from the oxygen isotopes in nitrite. 2012 ASLO Ocean Sciences Meeting, student oral presentation.
40. **Casciotti, K. L.**, C. Buchwald\*, and A. Santoro\*. Use of nitrate and nitrite isotopes to study nitrogen cycling in oceanic oxygen deficient zones. 2012 ASLO Ocean Sciences Meeting, INVITED talk.
41. **Casciotti, K. L.** Kinetic isotopic fractionation during bacterial nitrite oxidation and its expression in the environment. 2012 Gordon Research Conference in Isotopes in Chemical and Biological Processes, INVITED talk.
42. **Casciotti, K. L.**, A. E. Santoro\*, and C. Buchwald\*. Stable isotopic fractionation and  $\text{N}_2\text{O}$  production by ammonia-oxidizing bacteria and archaea. 2011 Nitrification Network Conference, INVITED talk.
43. **Casciotti, K. L.**, C. Buchwald\*, A. E. Santoro\*, and M. McIlvin. Implications of nitrate and nitrite isotopic measurements from the Peru oxygen deficient zone for the mechanisms of nitrogen cycling and loss. 2011 Gordon Research Conference in Chemical Oceanography, poster presentation.
44. Buchwald\*, C., A. E. Santoro\*, and **K. L. Casciotti**. Nitrite turnover in the primary and secondary nitrite maxima: Insights from the oxygen isotopic composition of nitrite in the Costa Rica upwelling dome. 2011 Gordon Research Conference in Chemical Oceanography, student poster presentation.
45. Santoro\*, A. E., C. Buchwald\*, M. R. McIlvin\*, and **K. L. Casciotti**. Nitrous oxide production by marine ammonia-oxidizing archaea. 2011 Gordon Research Conference in Chemical Oceanography, poster presentation.
46. Bernhard, J. M., V. P. Edgcomb, **K. L. Casciotti**, M. R. McIlvin\*, and D. J. Beaudoin. 2010 International Symposium on Foraminifera, oral presentation.
47. Banning\*, E. C., **K. L. Casciotti**, and E. B. Kujawinski. Predatory Flavobacteria colonize biofilms and accelerate macronutrient regeneration. 2010 ISME Meeting, student oral presentation.

48. Buchwald\*, C., **K. L. Casciotti**, M. McIlvin\*, and A. Santoro\*. Determining the oxygen isotope value of nitrate from nitrification. 2010 ISME meeting, student poster presentation.
49. Santoro\*, A. E., C. Buchwald\*, and **K. L. Casciotti**. Enrichment and characterization of ammonia-oxidizing archaea from the open ocean: Phylogeny and stable isotope fractionation. 2010 ISME meeting, postdoc poster presentation.
50. Santoro\*, A. E. and **K. L. Casciotti**. Enrichment and characterization of ammonia-oxidizing archaea from the open ocean: Phylogeny and stable isotope fractionation. 2010 Gordon Research Conference in Marine Microbes, postdoc poster presentation.
51. Bernhard, J. M., V. P. Edgcomb, **K. L. Casciotti**, M. R. McIlvin\*, and D. J. Beaudoin. Denitrification: Not just for prokaryotes anymore? 2010 12<sup>th</sup> Deep Sea Biology Symposium, poster presentation.
52. **Casciotti, K.L.**, C. Buchwald\*, and M. McIlvin\*. Oxygen isotopic fractionation and exchange during bacterial ammonia oxidation. 2009 Gordon Research Conference in Chemical Oceanography, poster presentation.
53. Buchwald\*, C. and **K. L. Casciotti**. Oxygen isotopic fractionation and exchange during bacterial nitrite oxidation. 2009 Gordon Research Conference in Chemical Oceanography, student poster presentation.
54. **Casciotti, K.L.** Using natural abundance stable isotopes to tease apart oxidative and reductive fates for nitrite in oxygen deficient zones. 2009 ICoN1 Nitrification Network Conference, INVITED talk.
55. **Casciotti, K.L.**, S. Sievert, M. McIlvin\*, C. Wuchter, and J. Corredor. Nitrification in the Tropical Sponge *Chondrilla nucula*. 2009 ASLO Aquatic Sciences Meeting, poster presentation.
56. Rogers\*, D. and **K. L. Casciotti**. Functional Roles of Archaea and Bacteria in a Subterranean Estuary as Suggested by Chemical and Molecular Markers. 2009 ASLO Aquatic Sciences Meeting, student oral presentation.
57. Frame\*, C. and **K. L. Casciotti**. Controls on Nitrous Oxide Yield and Production Mechanisms in a Marine Ammonia-Oxidizing Bacterium. 2009 ASLO Aquatic Sciences Meeting, student poster presentation.
58. Buchwald\*, C. and **K. L. Casciotti**. Inverse Kinetic Isotope Fractionation of Bacterial Nitrite Oxidation. 2009 ASLO Aquatic Sciences Meeting, student poster presentation.
59. Santoro\*, A., **Casciotti, K.L.**, and Francis, C. Activity and Abundance of Archaeal and Bacterial Nitrifiers Across a Coastal Transition Zone in the Eastern North Pacific. 2009 ASLO Aquatic Sciences Meeting, postdoc oral presentation.
60. **Casciotti, K.L.** Coupled isotopic measurements of nitrate and nitrite: new insights into N cycling in oceanic oxygen minimum zones. 2007 GRC Chemical Oceanography, INVITED talk.

61. **Casciotti, K.L.** Microbial community interactions and N<sub>2</sub>O cycling in low O<sub>2</sub> regions. 2006 ASLO Summer Meeting, INVITED talk.
62. **Casciotti, K. L.**, F. Dehairs, and T. Trull. Nitrogen and Oxygen Isotopes in Nitrate from Contrasting Sites in the Pacific. 2006 Ocean Sciences Meeting, poster presentation.
63. McIlvin, M and **K. L. Casciotti**. A Comparison of Two Methods for Nitrate and Nitrite Isotopic Analysis and a New Method for Oxygen Isotopic Analysis of Water. 2006 Ocean Sciences Meeting, poster presentation.
64. **Casciotti, K. L.** Coupled Isotopic Analyses of Nitrite and Nitrate: A Comparison of New Methods Based on Conversion to N<sub>2</sub>O. 2005 SPOT-ON Workshop, poster presentation.
65. **Casciotti, K. L.** Exploring Nitrogen and Oxygen Isotopic Relationships Among Nitrification Products. 2004 Fall AGU Meeting, poster presentation.
66. **Casciotti, K. L.**, L.M. Proctor, C.R. Childs, M.T. Peglar, M.A. Voytek, J.D. Kirshtein, S.R. MacAuley, N. Rabalais. Relationship Between Denitrifier Diversity and Rates of Sedimentary Denitrification Potential in the Northern Gulf of Mexico Hypoxic Zone. 2004 International Society for Microbial Ecology Meeting, poster presentation.
67. **Casciotti, K. L.**, M.A. Voytek, and J.K. Bohlke. Nitrogen Isotopic Fractionation by In-Stream Populations of Ammonia-Oxidizing Bacteria. 2003 Fall AGU Meeting, oral presentation.
68. **Casciotti, K.L.** Linking Diversity and Stable Isotope Fractionation in Ammonia-Oxidizing Bacteria. 2003 DISCO XVIII Symposium, oral presentation.
69. **Casciotti, K. L.**, D. M. Sigman, and B. B. Ward. Linking Diversity and Stable Isotope Fractionation in Ammonia-Oxidizing Bacteria. 2002 Fall AGU Meeting, INVITED oral presentation,
70. **Casciotti, K. L.**, D. M. Sigman, and B. B. Ward. Isotope Signatures for N<sub>2</sub>O Production by Marine Ammonia-Oxidizing Bacteria. 2002 Ocean Sciences Meeting, poster presentation.
71. **Casciotti, K. L.**, D. M. Sigman, and B. B. Ward. Isotope Effects for Ammonia Oxidation and Nitrite Reduction by Ammonia-Oxidizing Bacteria. 2001 Gordon Research Conference in Chemical Oceanography, poster presentation.
72. **Casciotti, K. L.**, D. M. Sigman, and B. B. Ward. Molecular and Biogeochemical Similarity of Nitrite Reductase in Nitrifying and Denitrifying Bacteria. 2001 Annual Meeting of the American Society of Limnology and Oceanography, oral presentation
73. **Casciotti, K. L.**, and B. B. Ward. Molecular Characterization of Copper-Containing Nitrite Reductases from Ammonia-Oxidizing Bacteria. 2000 General Meeting of the American Society for Microbiology, poster presentation.
74. **Casciotti, K. L.**, and B. B. Ward. Dissimilatory Nitrite Reductase Gene from *Nitrosomonas marina*. 1999 Summer Meeting of the Center for Environmental Bioinorganic Chemistry, oral presentation.

75. **Casciotti, K. L.**, T. Rahn, and M. Wahlen. Stable Isotopes of N and O Nitrous Oxide Emissions from Fertilized Soils. 1997 Fall Meeting of the American Geophysical Union, poster presentation.

#### **INVITED LECTURES**

December 8, 2015: The Royal Society, London  
November 4, 2015: UC Irvine, Earth System Science Seminar  
October 7, 2015: San Diego State University Tiburon Marine Sciences Center  
February 6, 2015: UC Santa Cruz, Department of Ocean Sciences Seminar  
September 6, 2013: Tokyo University of Agriculture and Technology Symposium  
March 20, 2013: Moore Foundation workshop on Oxygen Deficient Marine Waters.  
April 20, 2012: Stanford University EES Seminar Series  
January 13, 2012: University of California, Santa Cruz Ocean Sciences Seminar  
November 11, 2011 Stanford University Isotope Geochemistry course  
July 13, 2011: Stanford University SES summer seminar series  
March 30, 2011: Stanford University EESS Department seminar  
November 8-10, 2010: SOLAS OMZ workshop  
May 17, 2010: CIFAR Nitrogen workshop  
September 20, 2010: Harvard Earth and Planetary Science Colloquium  
May 12, 2009: Princeton University Environmental Geology and Geochemistry Seminar  
May 4, 2009: Scripps Institution of Oceanography, UCSD, Earth Section Seminar  
April 8, 2009: Stanford University, Earth and Environmental Systems Science Seminar  
June 22-28 2008: Agouron/CMORE course in Microbial Oceanography  
February 2008: USC Marine Environmental Biology Seminar  
February 2008: Stanford University Earth and Environmental Systems Science Seminar  
August 2007: Gordon Research Conference in Chemical Oceanography  
April 2007: MIT Chemical Oceanography Seminar  
April 2006: University of Rhode Island GSO Seminar  
March 2006: University of Puerto Rico Chemical Oceanography Seminar  
March 2005: UMASS Dartmouth SMAST Seminar  
March 2005: MIT Chemical Oceanography Seminar  
February 2005: Cornell University Biogeochemistry Seminar  
September 2003: University of Maryland Department of Geology Seminar

#### **FIELD RESEARCH PARTICIPATION**

April 13-26, 2024	R/V Marcus G. Langseth, Benguela Upwelling, Co-leader
Sept. 18 – Nov. 24, 2018	R/V <i>Roger Revelle</i> , GEOTRACES GP15, Co-leader.
Sept. 20 - Oct. 18, 2007	R/V <i>Roger Revelle</i> , Arabian Sea; Goa, India to Goa, India.
March 3-15, 2006	Sponge Biodiversity and Biogeochemistry, Puerto Rico.
Oct 18-Nov 10, 2005	R/V <i>Knorr</i> , Peru Upwelling and OMZ; Arica to Manzanillo.
June 20-July 10, 2004	R/V <i>Kilo Moana</i> , VERTIGO I
Nov 09-Dec 14, 2000	Denitrification in Lake Bonney, Antarctica.

Jun 12-16, 1998	R/V <i>Robert Gordon Sproul</i> , Chief scientist, Southern California Bight.
Oct 20-Nov 24, 1997	R/V <i>Roger Revelle</i> , U.S. JGOFS AESOPS Survey I Cruise, Antarctic Polar Front.
Aug 27-Sep 01, 1995	R/V <i>Moana Wave</i> , Hawaii Ocean Time Series Cruise 65.
Jul 28-Aug 02, 1995	R/V <i>Maurice Ewing</i> , Hawaii Ocean Time Series Cruise 64.
Aug 20-Sept 17, 1994	Field assistant for paleomagnetic sample collection in Namibia.
Jul 23-Jul 28, 1994	R/V <i>Moana Wave</i> , Hawaii Ocean Time Series Cruise 55.
Jun 17-Jun 22, 1994	R/V <i>Moana Wave</i> , Hawaii Ocean Time Series Cruise 54.