Kristen N. Buck (née Russell)

Associate Professor
College of Marine Science
University of South Florida
140 7th Ave. S.
St. Petersburg, FL USA
tel: 727.553.1192; fax: 727.553.3968; email: kristenbuck@usf.edu

Education

2006	Doctor of Philosophy, Ocean Sciences, University of California Santa Cruz (UCSC), USA (Professor Kenneth W. Bruland, Advisor)
2001	Bachelor of Science (cum laude), Chemistry, Pacific Lutheran University, Tacoma, WA, USA
2001	Bachelor of Arts (magna cum laude), French, Pacific Lutheran University, Tacoma, WA, USA
2000	Term Abroad, University of Pau, FRANCE

Grants and Awards

2019-2020	State of Florida, $25,000 to Buck as flow-through from Florida Fish and Wildlife: *Trace metal measurements in support of SECOORA efforts with a focus on the 2019* Karenia brevis *event.*
2019-2020	State of Florida, $310,000 to Buck as flow-through from Florida Fish and Wildlife: *Nutrients and iron biogeochemistry studies to enhance red tide monitoring and mitigation strategies.*
2019-2020	Supplemental Shiptime Request for R/V Weatherbird II, Florida Institute of Oceanography, $45,000 to Buck and T. Conway (lead): five subsidized ship-days.
2018-2022	NSF OCE-1756433, $381,815 to Buck: *Collaborative Research: Diatoms, Food Webs and Carbon Expert – Leveraging NASA EXPORTS to test the role of diatom physiology in the biological carbon pump.* Collaborators: Bethany Jenkins (URI), Mark Brzezinski (UCSB).
2018-2021	NSF OCE-1829777, $338,566 to Buck: *NSFGEO-NERC: Collaborative Research: Using Time-series Field Observations to Constrain an Ocean Iron Model.* Collaborators: Peter Sedwick (ODU), Ben Twining (Bigelow), Dan Ohnemus (Skidaway), Rod Johnson (BIOS), Alessandro Tagliabue (U Liverpool).
2018-2021	NSF OCE-1829753, $347,472 to Buck: *Collaborative Research: The Effect of Ocean Acidification on Fe Availability to Phytoplankton in Coastal and Oceanic Waters of the Eastern North Pacific.* Collaborators: Mark Wells (U Maine), Charlie Trick (U West Ontario).
2018-2021	NSF OPP-1735862, $69,149 to Buck as a subcontract from UAF: *Chemical, physical and biological processes linking snow and sea ice to the Arctic Ocean mixed layer: Improving models for the MOSAiC platform.* Collaborators: Rob Rember, Ana Aguilar-Islas, Meibing Jin, Hajo Eicken (all at U Alaska).
2018-2019	State of Florida, $293,872 to Buck as flow-through from Woods Hole Oceanographic Institution: *Assessing the impact of modified clays on dissolved and leachable particulate trace metal concentrations in water column and sediment samples from HAB mitigation efforts.*
2018	Office of Research and Innovation Equipment Acquisition and Improvement Grant, University of South Florida, $54,351: *Acquisition of a trace metal clean rosette sampling system.*
2017-2019	NSF OCE-1722761, $299,295 to Buck and M. Breitbart: *EAGER: Iron-Virus Interactions in the Oceans.*
2017-2018	Supplemental Shiptime Request for R/V Hogarth, Florida Institute of Oceanography, $32,000: four subsidized ship-days.
2015-2018	NSF OPP-1443483, $299,479 to Buck: *Collaborative Research: Investigating iron-binding ligands in Southern Ocean diatom communities: The role of diatom-bacteria associations.* Collaborators: Bethany Jenkins (URI), Dreux Chappell (ODU).
2015	Office of Research and Innovation One-to-One Cost Match, University of South Florida, $33,024 to Buck and F. Muller-Karger: Lachat QuickChem8500 Flow Injection Analysis System.
2014-2015	Supplemental Shiptime Request for R/V Weatherbird II, Florida Institute of Oceanography, $30,000: three subsidized ship-days.

2013-2017	NSF OCE-1333566, $206,117 to Buck: *Collaborative Research: Experimental constraints on marine Fe isotope effects – Biology, ligands and particles.* Collaborator: Seth John (USC).
2013-2017	NSF OCE-1233882, $319,000 to Buck: *Collaborative Research: US GEOTRACES Pacific Section-Measurement of the organic complexation of dissolved iron, copper and cobalt, and total dissolved cobalt.* Collaborators: Kathy Barbeau (SIO/UCSD), Mak Saito (WHOI).
2013	Roger Thayer Stone Fellowship, $8,099 and C&H Montgomery Moore Fellowship, $3,304: support funds for student internship, Veronique Oldham.
2012-2016	Scientific Committee of Oceanic Research (SCOR) Working Group 139, with co-chairs Maeve Lohan (NOC Southampton, UK) and Sylvia Sander (U Otago, NZ), $45,000: *Organic Ligands- The key control on trace metal biogeochemistry in the ocean.*
2012	Canadian Associates of BIOS (CaBIOS) Grant, K.N. Buck, $5,000: internship funds for Veronique Oldham, U Toronto: *Dissolved Cu speciation in Castle Harbour, Bermuda.*
2011-2012	J.M. Kaplan Fund, with fellow BIOS faculty M. Lomas, A. Knap, and G. Plumley, $50,000: *Sargasso Sea Data Repository.*
2010-2013	NSF OCE-0927453, $317,042: *US GEOTRACES North Atlantic Section: The chemical speciation of dissolved iron.*
2010	Roger Thayer Stone Fellowship, $7,303: for purchase of sampling bottles.
2008-2011	California Sea Grant CALFED Science Fellowship, 03-SFP-N, $121,500: *Copper-binding organic ligands in the San Francisco Bay Estuary: Evaluating current and future likelihood of copper toxicity events in this perturbed ecosystem.*
2006	DISCO XX Travel Grant

Appointments

2018-present	Associate Professor, Chemical Oceanography, College of Marine Science, University of South Florida, St. Petersburg, FL, USA
2014-2018	Assistant Professor, Chemical Oceanography, College of Marine Science, University of South Florida, St. Petersburg, FL, USA
2009-2013	Assistant Research Scientist, Trace Metal Biogeochemistry, Bermuda Institute of Ocean Sciences, St. George's, BERMUDA
2007-2009	Postdoctoral Research Fellow, Geosciences Research Division, Scripps Institution of Oceanography, La Jolla, CA, USA (Kathy Barbeau, Advisor)
2001-2006	Graduate Research Assistant, Ocean Sciences, UCSC, USA (Kenneth W. Bruland, Advisor)
2000	NSF-REU Undergraduate Research Assistant, le Laboratoire de la Chimie des Polymères Organiques (LCPO- Organic Polymer Chemistry Lab), University of Bordeaux I-Talence, FRANCE (Yves Gnanou and Daniel Taton, co-Advisors)
1999	NSF-REU Undergraduate Research Assistant, Chemistry, Pacific Lutheran University, Tacoma, WA, USA (Dean A. Waldow, Advisor)

Fellowships and Honors

2016	Invited by The Oceanography Society (TOS) to serve as Vice-Chair of 2018 joint TOS-ASLO-AGU Ocean Sciences Meeting and Chair of 2020 Ocean Sciences Meeting
2012	Voted "Best Teacher" for Chemical Oceanography course module by Nippon Foundation-Partnership for Observation of the Global Ocean (NF-POGO) students, year 4 (2011-2012)
2007	Scripps Institution of Oceanography Postdoctoral Fellowship Recipient, Earth Section
2006	Dissertations in Chemical Oceanography Symposium (DISCO) XX Participant, Honolulu, HI
2006	UCSC Outstanding Ocean Sciences Student of the Year Award Recipient
2006	ASLO/TOS/AGU Ocean Sciences Best Student Poster Presentation in Session
2005	Buck and Bruland (2005) 9th Most Downloaded Article, December, Marine Chemistry
2005	2nd International Surface Ocean Lower Atmosphere Study (SOLAS) Summer School Participant, Institute of Cargèse, Corsica, FRANCE, Aug 29- Sept 10
2005	SOLAS Summer School Best Student Presentation Award, Travel Grant

2005	UCSC Outstanding Ocean Sciences Student Award Nominee
2004-2006	Ida Benson Lynn Graduate Fellow in Ocean Health
2001-2004	Graduate Assistance in Areas of National Need (GAANN) Doctoral Fellowship
2001	University of California Regents Fellowship

Field Experience

2016 Sept/Oct	R/V I/B Nathaniel B. Palmer; West Antarctic Peninsula/ Southern Ocean
2015 June	R/V Weatherbird II; Eastern Gulf of Mexico, West Florida Shelf [Chief Scientist]
2014 July	R/V Melville; Central California Coast
2013 Oct	R/V Endeavor; UNOLS Training Cruise, Hudson River Shelf, New England [co-Chief Scientist]
2013 Jan	R/V Atlantic Explorer; BATS/Hydro S, Sargasso Sea, Bermuda
2011 Apr	R/V Polaris; USGS Water Quality Sampling Cruise, San Francisco Bay, California
2010 Oct/Nov	R/V Knorr; GEOTRACES North Atlantic Section, Northeast Atlantic
2010 Apr	R/V Atlantic Explorer; Ocean Flux Program, Sargasso Sea, Bermuda
2009 Jun	R/V Atlantic Explorer; Sargasso Sea, Bermuda
2009 May	R/V Knorr; GEOTRACES Intercalibration II, Central North Pacific (SAFe Station)
2008 Nov	R/V Polaris; USGS Water Quality Sampling Cruise, San Francisco Bay, California
2008 Oct	R/V Melville; CCE-LTER Process Cruise, Southern California Coast
2008 June/July	R/V New Horizon; Deep Chlorophyll Maximum and Suboxic Zone, Southern Baja, Mexico
2007 July/Aug	R/V New Horizon; Deep Chlorophyll Maximum, Southern California
2007 April	R/V Thompson; CCE-LTER Process Cruise, Southern California Coast
2006 July/Aug	R/V I/B Nathaniel B. Palmer; Shackleton Gap/ Southern Ocean
2004 Oct/Nov	R/V Melville; SAFe: Sampling & Analysis of Fe, Intercalibration exercise
2004 July	R/V Wecoma; RISE Program, Columbia River/ Oregon/ Washington
2004 June	R/V Point Sur; Coastal Oregon/ Washington/ Northern and Central California
2003 Aug/Sep	R/V Kilo Moana; Bering Sea, Alaska
2003 Mar	R/V David Johnson; San Francisco Bay, California
2003 Feb	R/V Point Sur; Central California Coast
2003 Jan	R/V David Johnson; San Francisco Bay, California

Peer-Reviewed Publications (supervised students underlined)

41. Mellett, T., and **K.N. Buck** (in review). Spatial and temporal variability of bioactive trace metals in surface waters of the eastern Gulf of Mexico. *Marine Chemistry*.

40. Hollister, A.P., K.A. Hubbard, M. Robert, C.L. Tilney, and **K.N. Buck** (accepted). Regeneration of macronutrients and trace metals during phytoplankton decay: an experimental study. *Limnology and Oceanography*.

39. Shaked, Y., **K.N. Buck**, T. Mellett, and M.T. Maldonado (accepted). Insights into the bioavailability of oceanic dissolved iron from phytoplankton uptake kinetics. *The ISME Journal*.

38. Sherman, E., J.K. Moore, K. Misumi, and **K.N. Buck** (in review). Dynamic ligand impacts on dissolved iron distributions in a global ocean biogeochemical model. *Journal of Advances in Modeling Earth Systems*.

37. Molino, C., D. Angeletti, V.E. Oldham, G. Goodbody-Gringley, and **K.N. Buck** (2019). Effect of marine antifouling paint chip waste on survival of natural Bermuda copepod communities. *Marine Pollution Bulletin*, 149: 110492.

36. Muller-Karger, F.E., Y.M. Astor, C.R. Benitez-Nelson, **K.N. Buck**, K.A. Fanning, L. Lorenzoni, E. Montes, D.T. Rueda-Roa, M.I. Scranton, E. Tappa, G.T. Taylor, R.C. Thunell, L. Troccoli, and R. Varela (2019). Scientific Legacy of the CARIACO Oceanographic Time-Series Program. *Annual Reviews of Marine Science*, 11: 413-437.

35. Hogle, S., C.L. Dupont, B. Hopkinson, A.L. King, **K.N. Buck**, K.L. Roe, R.K. Stuart, A.E. Allen, E.L. Mann, Z.I. Johnson, and K.A. Barbeau (2018). Pervasive iron limitation at subsurface chlorophyll maxima of the California Current. *Proceedings of the National Academy of Sciences*, 115: 13300-13305.

34. Schlitzer, R., et al. (2018). The GEOTRACES Intermediate Data Product 2017. *Chemical Geology*, 493: 210-223.

33. **Buck, K.N.**, P.N. Sedwick, B. Sohst, and C.A. Carlson (2018). Organic complexation of iron in the eastern tropical South Pacific: Results from US GEOTRACES Eastern Pacific Zonal Transect (GEOTRACES cruise GP16). *Marine Chemistry*, 201: 229-241.

32. Mellett, T., M.T. Brown, P.D. Chappell, C. Duckham, J. Fitzsimmons, C.P. Till, R.M. Sherrell, M.T. Maldonado, and **K.N. Buck** (2018). The biogeochemical cycling of iron, copper, nickel, cadmium, manganese, and scandium in a California Current experimental study. *Limnology and Oceanography*, 63: S425-447.

31. Fishwick, M., P.N. Sedwick, M.C. Lohan, P. Worsfold, **K.N. Buck**, T. Church, and S. Ussher (2018). Impact of surface ocean conditions and aerosol provenance on the dissolution of aerosol manganese, cobalt, nickel and lead in seawater. *Marine Chemistry*, 198: 28-43.

30. Tagliabue, A., A. Bowie, P. Boyd, **K.N. Buck**, K. Johnson, and M. Saito (2017). The integral role of iron in ocean biogeochemistry. *Nature*, 543: 51-59.

29. Stuart, R.K., R. Bundy, **K. Buck**, M. Ghassemain, K. Barbeau and B. Palenik (2017). Copper toxicity response influences mesotrophic *Synechococcus* community structure. *Environmental Microbiology*, 19: 756-769.

28. **Buck, K.N.**, L.J.A. Gerringa, and M.J.A. Rijkenberg (2016). An intercomparison of dissolved iron speciation at the Bermuda Atlantic Time-series Study (BATS) site: Results from GEOTRACES Crossover Station A. *Frontiers in Marine Biogeochemistry*, 3: article 262, doi: 10.3389/fmars.2016.00262.

27. Caprara, S., **K.N. Buck**, L.J.A. Gerringa, M.J.A. Rijkenberg, and D. Monticelli (2016). A compilation of iron speciation data for open oceanic waters. *Frontiers in Marine Science*, 3: article 221, doi: 10.3389/fmars.2016.00221.

26. Aguilar-Islas, A.M., M.J.M. Seguret, R. Rember, **K.N. Buck**, P. Proctor, C.W. Mordy, and N.B. Kachel (2016). Temporal variability of reactive iron over the Gulf of Alaska shelf. *Deep-Sea Research II*, 132: 90-106.

25. Bonnain, C., M. Breitbart, and **K.N. Buck** (2016). The Ferrojan Horse Hypothesis: Iron-virus interactions in the ocean. *Frontiers in Marine Biogeochemistry*, 3: article 82, doi: 10.3389/fmars.2016.0082.

24. Glass, J.B., C.B. Kretz, S. Ganesh, P. Ranjan, S.L. Seston, **K.N. Buck**, W.M. Landing, P.L. Morton, J.W. Moffett, S.J. Giovannoni, K.L. Vergin, and F.J. Stewart (2015). Meta-omic signatures of microbial metal and nitrogen cycling in marine oxygen minimum zones. *Frontiers in Microbiology*, 6: article 998, doi: 10.3389/fmicb.2015.00998.

23. **Buck, K.N.**, B. Sohst, and P. Sedwick (2015). The organic complexation of dissolved iron along the U.S. GEOTRACES North Atlantic section. *Deep-Sea Research II*, 116: 152-165.

22. Pižeta, I., S.G. Sander, R.J.M. Hudson, O. Baars, **K.N. Buck**, R.M. Bundy, G. Carrasco, P. Croot, C. Garnier, L.J.A. Gerringa, M. Gledhill, K. Hirose, Y. Kondo, L.M. Laglera, J. Neuster, D. Omanović, M.J.A. Rijkenberg, S. Takeda, B.S. Twining, and M. Wells (2015). Quantitative analysis of complexometric titration data: An intercomparison of methods for estimating models of metal complexation by natural ligands. *Marine Chemistry*, 173: 3-24.

21. Bundy, R.M., H.A.N. Abdulla, P.G. Hatcher, D.V. Biller, **K.N. Buck**, and K.A. Barbeau (2015). Iron-binding ligands and humic substances in the San Francisco Bay estuary and estuarine-influenced shelf regions of coastal California. *Marine Chemistry*, 173: 183-194.

20. Sander, S., **K.N. Buck**, and M. Wells (2015). The effect of natural organic ligands on trace metals in San Francisco Bay: Implications for Water Quality Criteria. *Marine Chemistry*, 173: 269-281.

19. Fishwick, M.P., P.N. Sedwick, M.C. Lohan, P.J. Worsfold, **K.N. Buck**, T.M. Church, and S.J. Ussher (2014). The impact of changing surface ocean conditions on the dissolution of aerosol iron. *Global Biogeochemical Cycles*, 28: 1235-1250.

18. Bundy, R., D.V. Biller, **K.N. Buck**, K.W. Bruland, and K.A. Barbeau (2014). Distinct pools of dissolved iron-binding ligands in the surface and benthic boundary layer of the California Current. *Limnology and Oceanography*, 59: 769-787.

17. Oldham, V.E., M.M. Swenson, and **K.N. Buck** (2014). Spatial variability of total dissolved copper and copper speciation in the inshore waters of Bermuda. *Marine Pollution Bulletin*, 79: 314-320.

16. Wells, M., **K.N. Buck**, and S.G. Sander (2013). New approach to analysis of voltammetric ligand titration data improves understanding of metal speciation in natural waters. *Limnology and Oceanography: Methods*, 11: 450-465.

15. Bundy, R., **K.N. Buck**, and K. Barbeau (2013). Sources of strong copper-binding ligands in Antarctic Peninsula surface waters. *Deep-Sea Research II*, 90: 134-146.

14. Jiang, M., K.A. Barbeau, K.E. Selph, C.I. Measures, **K.N. Buck**, F. Azam, B.G. Mitchell, and M. Zhou (2013). The role of organic ligands in iron cycling and primary productivity in the Antarctic Peninsula: A modeling study. *Deep-Sea Research II*, 90: 112-133.

13. Mackey, K.R.M., **K.N. Buck**, J.R. Casey, A. Cid, M.W. Lomas, Y. Sohrin and A. Paytan (2012). Phytoplankton responses to atmospheric metal deposition in the coastal and open-ocean Sargasso Sea. *Frontiers in Microbiology*, 3: article 359, doi: 10.3389/fmicb.2012.00359.

12. **Buck, K.N.**, J. Moffett, K. Barbeau, R. Bundy, Y. Kondo and J. Wu (2012). The organic complexation of iron and copper: an intercomparison of competitive ligand exchange- adsorptive cathodic stripping voltammetry (CLE-ACSV) techniques. *Limnology and Oceanography: Methods*, 10: 496-515.

11. *Gledhill, M. and *__K.N. Buck__ (2012). The organic complexation of iron in the marine environment, a review. *Frontiers in Microbiology*, 3: article 69, doi: 10.3389/fmicb.2012.00069. *denotes equal author contributions.

10. King, A.L., **K.N. Buck**, and K.A. Barbeau (2012). Quasi-Lagrangian drifter studies of iron speciation and cycling off Point Conception, California. *Marine Chemistry,* 129-129: 1-12.

9. **Buck, K.N.**, K.E. Selph, and K.A. Barbeau (2010). Iron-binding ligand production and copper speciation in an incubation experiment of Antarctic Peninsula shelf waters from the Bransfield Strait, Southern Ocean. *Marine Chemistry,* 122: 148-159.

8. Dupont, C.L., **K.N. Buck**, B. Palenik, and K. Barbeau (2010). Nickel utilization in phytoplankton assemblages from contrasting oceanic regimes. *Deep Sea Research Part I,* 57: 553-566.

7. Johnson, K.S., E. Boyle, K. Bruland, K. Coale, C. Measures, J. Moffett, A. Aguilar-Islas, K. Barbeau, B. Bergquist, A. Bowie, **K. Buck**, Y. Cai, Z. Chase, J. Cullen, T. Doi, V. Elrod, S. Fitzwater, M. Gordon, A. King, P. Laan, L. Laglera-Baquer, W. Landing, M. Lohan, J. Mendez, A. Milne, H. Obata, L. Ossiander, J. Plant, G. Sarthou, P. Sedwick, G. Smith, B. Sohst, S. Tanner, C. van den Berg, and J. Wu (13 March 2007). Developing standards for dissolved iron in seawater. *EOS*, 88(11): 131-132.

6. **Buck, K.N.**, J.R.M. Ross, and K.W. Bruland (2007). A Review of total dissolved copper and its chemical speciation in San Francisco Bay, California. *Environmental Research* 105: 5-19.

5. **Buck, K.N.** and K.W. Bruland (2007). The physico-chemical speciation of dissolved iron in the Bering Sea, Alaska. *Limnology and Oceanography*, 52(5): 1800-1808.

4. Aguilar-Islas, A.M., M.P. Hurst, **K.N. Buck**, B. Sohst, G.J. Smith, M.C. Lohan, and K.W. Bruland (2007). Micro- and macronutrients in the southeastern Bering Sea: Insight into iron-replete and iron-deplete regimes. *Global Biogeochemical Cycles*, 77(2): 99-126.

3. **Buck, K.N.**, M.C. Lohan, C.J.M. Berger, and K.W. Bruland (2007). Dissolved iron speciation in two distinct river plumes and an estuary: Implications for riverine iron supply. *Limnology and Oceanography*, 52(2): 843-855.

2. **Buck, K.N.** and K.W. Bruland (2005). Copper speciation in San Francisco Bay: A novel approach using multiple analytical windows. *Marine Chemistry*, 96(1-2): 185-198.

1. LeBlanc, K., C.E. Hare, P.W. Boyd, K.W. Bruland. B. Sohst, S. Pickmere, M.C. Lohan, **K. Buck**, M. Ellwood, and D.A. Hutchins (2005). Fe and Zn effects on the Si cycle and diatom community structure in two contrasting high and low-silicate HNLC areas. *Deep-Sea Research I*, 52(10): 1842-1864.

Other Publications/Products

Urban Jr., E.R., A.R. Bowie, P.W. Boyd, **K.N. Buck**, M.C. Lohan, S.G. Sander, R. Schlitzer, A. Tagliabue, and D. Turner (in press 2020). The importance of bottom-up approaches to international cooperation in ocean science: The iron story. *Oceanography*.

Hogle, S., C.L. Dupont, B. Hopkinson, A.L. King, **K.N. Buck**, K.L. Roe, R.K. Stuart, A.E. Allen, E.L. Mann, Z.I. Johnson, and K.A. Barbeau (2018). Pervasive iron limitation at subsurface chlorophyll maxima of the California Current. *EarthArXiv*, DOI: 10.31223/osf.io/s37te

K.N. Buck, M.C. Lohan, S.G. Sander, C. Hassler and I. Pižeta (2017). Organic ligands in trace metal biogeochemistry. *Frontiers in Marine Science*, eBook compilation of Research Topic, doi: 10.3389/978-2-88945-376-4.

K.N. Buck, M.C. Lohan, S.G. Sander, C. Hassler and I. Pižeta (2017). Editorial: Organic Ligands – A Key Control on Trace Metal Biogeochemistry in the Ocean. *Frontiers in Marine Science*, doi: 10.3389/fmars.2017.00313.

K.N. Buck, C. Bonnain and R.M. Bundy (2016). Biogeochemical cycling of organic iron-binding ligands: Insights from GEOTRACES data in the Atlantic Ocean. *Ocean Carbon and Biogeochemistry Newsletter*, Summer. Invited article.

Webinar featuring C. Parker, **K. Buck**, K. Barbeau (2015). Nutrients in the Open Ocean. *University of Maine Center for Ocean Sciences Education Excellence (COSEE)- Ocean Systems*, http://cosee.umaine.edu/programs/webinars/geotraces/.

Lohan, M.C., **K.N. Buck**, and S.G. Sander (2015). Organic ligands- A key control on trace metal biogeochemistry in the oceans. *Marine Chemistry*, 173: 1-2.

Buck, K.N. (2012). Copper Toxicity in the San Francisco Bay-Delta. *Research Summaries, California Sea Grant College Program, UC San Diego*, http://escholarship.org/uc/item/0tq3h2tn.

Buck, K.N., M.C. Lohan and S. Sander (2012). SCOR Working Group 139: Organic ligands- A key control on trace metal biogeochemistry. *IUPAC Chemistry International*, 34(4): 23.

Radio Interview of **K.N. Buck** (2012). Why is iron an essential micronutrient in the ocean? *Our Ocean World, Joint Ocean Commission Initiative*, http://www.heartheanswer.com/index.php?action=feature&qid=1773. Produced by Finger Lakes Productions International in collaboration with WETA, PBS Education and the National Science Foundation. Funded by NSF-OCE 0927453.

Sander, S., **K.N. Buck** and M.C. Lohan (2012). Improving understanding of organic metal-binding ligands in the oceans. *EOS*, 93: 244.

Laffoley, D.D.A., H.S.J. Roe, M.V. Angel, J. Ardron, N.R. Bates, I.L. Boyd, S. Brooke, **K.N. Buck**, C.A. Carlson, B. Causey, M.H. Conte, S. Christiansen, J. Cleary, J. Donnelly, S.A. Earle, R. Edwards, K.M. Gjerde, S.J. Giovannoni, S. Gulick, M. Gollock, J. Hallett, P. Halpin, R. Hanel, A. Hemphill, R.J. Johnson, A.H. Knap, M.W. Lomas, S.A. Mckenna, M.J. Miller, P.I. Miller, F.W. Ming, R. Moffitt, N.B. Nelson, L. Parson, A. J. Peters, J. Pitt, P. Rouja, J. Roberts, J. Roberts, D.A. Siegel, A.N.S. Siuda, D.K. Steinberg, A. Stevenson, V.R. Sumaila, W. Swartz, S. Thorrold, T.M. Trott, and V. Vats (2011). The protection and management of the Sargasso Sea: The golden floating rainforest of the Atlantic Ocean. Summary Science and Supporting Evidence Case, 44 pp. Sargasso Sea Alliance.

Lohan, M.C., **K.N. Buck**, C.J. Berger, A.M. Aguilar-Islas, B. Sohst, G.J. Smith, and K.W. Bruland (2006). Iron cycling within the Columbia River plume: The role of tidal mixing and upwelling. *Geochimica et Cosmochimica Acta*, 70(18): A369-A369.

Professional Service

2018-2020	Chair, 2020 Ocean Sciences Meeting Planning Committee, TOS
2018	Chair, Chemical Oceanography Search Committee, University of South Florida
2016-present	Associate Editor, Limnology and Oceanography: Letters
2016-2018	Vice Chair, 2018 Ocean Sciences Meeting Planning Committee, TOS
2016	Planning Committee, OCB-GEOTRACES Synthesis Workshop
2015-present	Mentor, Oceanography Camp for Girls, University of South Florida, College of Marine Science
2015-present	Guest Editor, Frontiers in Marine Biogeochemistry, SCOR WG 139
2015-present	Web Committee Member, University of South Florida, College of Marine Science

2015-2016	Chemical Oceanography Search Committee Member, University of South Florida
2014-2015	Guest Editor, Special Issue on Women in Oceanography, Oceanography Magazine
2014-2015	Guest Editor, Marine Chemistry, SCOR WG 139
2014-present	Review Editor, Frontiers in Marine Biogeochemistry
2014-2016	Scientific Steering Committee, Ocean Carbon and Biogeochemistry (OCB)
2014-2016	Chemical Oceanography Councilor, The Oceanography Society (TOS)
2014-2016	Annual Review Committee Member, University of South Florida, College of Marine Science
2014-present	Safety Committee Member, University of South Florida, College of Marine Science
2014-present	Admissions Committee Member, University of South Florida, College of Marine Science
2014	Biological Oceanography Search Committee Member, University of South Florida
2014	Renate E. Bernstein Outstanding Authorship Award Committee Member, University of South Florida, College of Marine Science
2011-present	Reviewer of proposals for Sea Grant programs
2010-present	Reviewer of NSF proposals for Chemical Oceanography, Office of Polar Programs, Ocean Technology and Interdisciplinary Coordination programs
2005-present	Reviewer of manuscripts for Environmental Science & Technology, Limnology and Oceanography, Marine Chemistry, Limnology and Oceanography- Methods, Geophysical Research Letters, Global Biogeochemical Cycles, Applied Geochemistry, Oceanography, Environmental Research, Deep Sea Research I and II, Marine Environmental Research, and Estuarine, Coastal and Shelf Science
2009-2013	Participant in presenting research highlights to weekly public tours at BIOS
2009-2013	Participant in annual Marine Science Day public outreach activities at BIOS, including presentations for "Ask a Scientist" venue and coordination of "Plankton Lab"
2012	Reviewer of proposals for Gulf of Mexico Research Initiative II
2010-2012	Co-Chair, Safety and Health Committee, BIOS
2010	Science liaison officer, BIOS Marine Science Day 2010, included two local radio interviews
2009	Science Fair Judge, East End Primary School
2007	Expanding Your Horizons Volunteer
2005-2007	Ocean Sciences Graduate Student Communication Club Founder/Organizer
2006	Annual Ocean Sciences Graduate Student Research Symposium Organizer
2005-2006	Young Women in Science Volunteer
2004-2006	Santa Cruz Science Fair Judge

Invited Talks

2018 Feb	GEOTRACES 2017 IDP Town Hall, Ocean Sciences Meeting, Portland, OR: **Buck, K.N.** Inter-basin distinctions in iron-binding ligands.
2017 Nov	Department of Earth, Ocean and Atmospheric Sciences (EOAS) Seminar, University of British Columbia, Vancouver, BC, CANADA: **Buck, K.N.** Insights into trace metal biogeochemistry from field and experimental studies: the role of organic ligands.
2017 Aug	GEOTRACES Summer School, Brest, FRANCE: **Buck, K.N.** Basin-scale studies of iron-binding organic ligands: Application of voltammetry methods in the GEOTRACES program.
2017 Jun	100th Canadian Chemistry Research Conference, Toronto, Ontario, CANADA: **Buck, K.N.** Iron biogeochemistry and the role of organic ligands: Insights from field and experimental studies.
2017 May	Center for Earth, Ocean and Atmospheric Sciences (CEOAS) OEB Seminar, Oregon State University, Corvallis, OR, USA: **Buck, K.N.** Iron-binding ligands in the deep blue sea: Insights from GEOTRACES.
2016 Nov	Environmental Research Interdisciplinary Colloquium (ERIC) Seminar, University of South Florida, Tampa, FL, USA: **Buck, K.N.** Biogeochemical cycling of trace metals in the marine environment: the role of organic ligands.

2016 Aug GEOTRACES-OCB Joint Synthesis Workshop on Internal Cycling, Lamont-Doherty Earth Observatory, Palisades, NY, USA: **Buck, K.N.** Metal speciation and ligand production.

2016 Jun Marine Chemistry and Geochemistry Seminar, Scripps Institution of Oceanography, La Jolla, CA, USA: **Buck, K.N.** Iron-binding ligands in the oceans: Insights from GEOTRACES.

2015 Dec AGU Fall Meeting, San Francisco, CA, USA: **Buck, K.N.**, R. Bundy, S. Sander, M. Wells, D. Biller, K. Bruland, and K. Barbeau. Copper, iron and the organic ligands that bind them – updates from San Francisco Bay and beyond.

2015 Oct Chemistry Department Seminar, University of North Florida: **Buck, K.N.** The importance of ligands in the biogeochemistry of Fe and Cu: Insights from field and experimental studies.

2014 May Florida American Chemical Society Meeting (FAME), Innisbrook, FL, USA: **Buck, K.N.** Heavy Metal Hookups: The importance of ligands in Fe and Cu biogeochemistry.

2014 Jan University of South Florida College of Marine Science, First Friday Seminar Series: **Buck, K.N.** Trace metal biogeochemistry, GEOTRACES, and the role of ligands.

2013 Aug Gordon Research Conference: Chemical Oceanography, Biddeford, Maine: **Buck, K.N.** Fe-binding ligands from the U.S. GEOTRACES North Atlantic section.

2012 Oct COST 801 "Voltammetry and GEOTRACES" Workshop, Rudjer Boskovic Institute, Sibenik, Croatia: **Buck, K.N.** The organic complexation of Fe along U.S. GEOTRACES North Atlantic Section, Leg 1.

2011 Dec Environmental Geochemistry and Geology Seminar Series, Princeton University: **Buck, K.N.** The organic complexation of iron in the ocean.

2010 Aug COST Action ES0801/735 Joint Workshop, IFM-GEOMAR, University of Kiel, Germany: **Buck, K.N.** The "State of the Art": Dissolved Fe and Cu speciation in the open ocean.

2010 June Gordon Research Conference: Environmental BioInorganic Chemistry (EBIC), Newport, RI, USA: **Buck, K.N.**, A. King, R. Bundy, and K. Barbeau. High throughput studies of Fe speciation.

2008 March Department of Marine Environmental Biology, University of Southern California: **Buck, K.N.**, K. Barbeau, K.W. Bruland, K. Selph, C. Measures, and W. Landing. Controls on dissolved iron concentrations in the world ocean: Recent studies of iron speciation in natural and model systems.

2008 Feb Division of Geological and Planetary Sciences, California Institute of Technology: **Buck, K.N.**, K. Barbeau, K.W. Bruland, K. Selph, C. Measures, and W. Landing. Controls on dissolved iron concentrations in the world ocean: Recent studies of iron speciation in natural and model systems.

2007 June Department of Geosciences, Marine Chemistry and Geochemistry, Scripps Institution of Oceanography: **Buck, K.N.** Chemical speciation of copper and iron in estuarine, coastal, and open ocean environments: New implications for toxicity and bioavailability.

2004 May Ocean Sciences Department, University of California Santa Cruz: **Buck, K.N.** and K.W. Bruland. Copper Speciation in San Francisco Bay.

Current Graduate Students

2020-present Stephen Thompson, MSc student, University of South Florida.

2019-present Delfina Navarro-Estrada, PhD student, University of South Florida.

2016-present Gabriel Browning, MSc student, University of South Florida.

2016-present Shannon Burns, PhD student, University of South Florida.

2014-present Travis Mellett, PhD student, University of South Florida.

Student Committees

Katelyn Schockman (PhD), major professor: Bob Byrne

Jonathan Sharp (PhD), major professor: Bob Byrne

Natalie Sawaya (PhD), major professor: Mya Breitbart

Michelle Guitard (PhD), major professor: Amelia Shevenell

Nora Douglas (PhD), major professor: Bob Byrne

Brittany Leigh (PhD), major professor: Mya Breitbart

Former Graduate Students

2016-2019 Adrienne Hollister, MSc student: *Regeneration of marine trace metals during phytoplankton decay: An experimental study*. University of South Florida. Currently a PhD student at Jacobs University, Germany.

2014-2019 Chelsea Bonnain, MSc student: *Iron-virus interactions: Development and testing of the Ferrojan Horse Hypothesis*. University of South Florida. Currently North FL Area Representative for LabRepCo.

2012-2016 Matt Fishwick, PhD student, co-supervised with Simon Ussher, Maeve Lohan, Paul Worsfold: *Dissolution of aerosol derived trace metals in seawater*. University of Plymouth, United Kingdom.

2014-2015 William Abbott, MSc student, co-supervised with Kent Fanning: *The development of a fluorescence-based reverse flow injection analysis (rFIA) method for quantifying ammonium at nanomolar concentrations in oligotrophic seawater*. University of South Florida. Currently Junior Officer in NOAA Corps.

Post-Doctoral Researchers

2016-2019 Salvatore Caprara; conducting trace metal analyses and method development for Ferrojan Horse project (NSF-EAGER grant on iron-virus interactions).

2015-2016 Carley Farst; developing new flow injection analysis capabilities in my lab for shipboard dissolved iron and iron(II) measurements. Currently Lab Manager/Production Chemistry, Tintometer, Inc.

Undergraduate Students and Interns

2018 May-Aug Kady Palmer, Eckerd College summer intern.

2017 May-Aug Mary DesRosiers, University of South Florida summer intern (Florida State University undergrad).

2015-2017 Noahie Encarnacion, University of South Florida.

2016 Jun-Aug Andrew Ropp, University of South Florida, St. Petersburg.

2013 Aug-Nov NSF-REU student Derek Schwenkmeyer, co-mentored with Dr. Helena Reinardy: *Genotoxic effects of environmental copper contamination in Bermuda.*

2013 Jul-Aug Bermuda Program student William Halliday, co-mentored with Dr. Andrew Peters: *Baseline for trace metals in macroalgae of the Sargasso Sea near Bermuda.*

2012-2013 CaBIOS (Sept-Dec 2012) and BIOS (Jan-Jun 2013) Intern Véronique Oldham, University of Toronto: *Dissolved Cu speciation in Castle Harbour, Bermuda.*

2012 Jun-Aug Galbraith Fellow Angela Tomassini, Eckerd College: *Biological incubation experiments for the production of iron-binding ligands.*

2012 Jun-Aug Princeton intern Kila Pickering, Princeton University: *Bermuda sediment copper toxicity to phytoplankton communities*.

2011 Aug-Nov NSF-REU student Nick Fylstra, California Polytechnic State University (Cal Poly): *Copper toxicity of the inshore waters of Castle Harbour, Bermuda.*

2010 Aug-Nov NSF-REU student Janelle Steffen, Indiana University, co-mentored with Dr. Simon Ussher: *Current trace metal fluxes in wet deposition for the Bermuda Atlantic Time-series Station region.*

2009 Aug-Nov NSF-REU student Michael Swenson, Gustavus Adolphus College: *Copper speciation and total dissolved copper in Castle Harbour and other Bermuda waters.*

2009 Aug-Nov NSF-REU student Alicia Hendrix, Scripps College, co-mentored with Dr. Rob Condon: *A preliminary investigation of iron and copper complexation by jellyfish-exuded dissolved organic matter using incubation experiments of Sargasso Sea water.*

Visiting Scientists

2020 Jan-Mar Dr. Ana Aguilar-Islas, Associate Professor, University of Alaska Fairbanks.

2018 Oct-Nov Dr. Turki Al-Said, Associate Research Scientist, Kuwait Institute for Scientific Research.

2015 Apr-Sep Salvatore Caprara, PhD candidate from University of Insubria, Como, Italy.

Student Mentoring, Nippon Foundation/POGO Center of Excellence in Operational Oceanography program at BIOS, see http://www.ocean-partners.org/centre-of-excellence for details

2013 Mar-Jun Ali Thabet, Egypt, co-mentored with Dr. Gretchen Goodbody-Gringley: *Effect of antifouling paint chips on sea urchin (*Lytechinus variegatus*) larval development.*

2013 Mar-Jun Chiara Molina, Italy, co-mentored with Dr. Gretchen Goodbody-Gringley: *Effect of marine antifouling paint chip waste on natural Bermuda copepod communities.*

2011 Feb-May Lazare Akpetou, Ivory Coast: *Copper speciation near a waste dump in Castle Harbour, Bermuda.*

2011 Feb-May Yosra Khammeri, Tunisia, co-mentored with Dr. Simon Ussher: *The effect of atmospheric dust on phytoplankton growth in the Sargasso Sea.*

2010 Feb-May Bennet Foli, Ghana: *Copper and zinc distributions in Castle Harbour, Bermuda using a chemical leach method.*

Teaching Experience

2020 Spring Co-Instructor, Professional Development II, USF.

2019 Fall Co-Instructor, Professional Development I, USF.

2019 Fall Co-Instructor, Chemical Oceanography core course, USF.

2018 Fall Co-Instructor, Chemical Oceanography core course, USF.

2018 Spring Lead Instructor, Chemical Oceanography core course, USF.

2018 Spring Co-Instructor, Professional Development II, USF.

2017 Fall Co-Instructor, Deciphering DOC seminar course, USF.

2017 Fall Co-Instructor, Metals and Microbes seminar course, USF.

2017 Aug Lead Instructor, Voltammetry Workshop, GEOTRACES Summer School, Brest, FRANCE.

2017 Spring Co-Instructor, Chemical Oceanography core course, USF.

2016 Spring Co-Instructor, Chemical Oceanography core course, USF.

2015 Fall Instructor, Periodic Table in the Marine Environment seminar course, USF.

2015 Spring Lead Instructor, Chemical Oceanography core course, USF.

2014 Fall Co-Instructor, Professional Development II, USF.

2014 Spring Guest Lectures, Chemical Oceanography core course, USF: Trace metals and phytoplankton; Trace metal sampling and the GEOTRACES program.

2013 Sept Guest Lecture, Global Marine Biology field course, Newcastle University, BIOS: Phytoplankton nutrient limitation and the role of trace metals.

2013 May Co-Instructor, Oceans and Human Health course for Furman University, BIOS

2013 May Guest Lecture, Washington College, BIOS: Oceanography: An introduction to the discipline and research topics.

2012 Dec Instructor, Chemical Oceanography Module, Center of Excellence in Observational Oceanography (CoEOO) program, BIOS

2012 Oct Instructor, General Oceanography Module, CoEOO program, BIOS

2012 Apr, Sept Guest Lecture, Global Marine Biology field course, Newcastle University, BIOS: Phytoplankton nutrient limitation and the role of trace metals.

2012 Apr Guest Lecture, Waynflete School, BIOS: Oceanography: An introduction to the discipline and research topics.

2011-2012 Co-Instructor, Science Writing Module, POGO (Partnership for Observation of the Global Oceans) program, BIOS

2011 Oct Instructor, Chemical Oceanography Module, POGO program, BIOS

2011 Sept Guest Lecture, Global Marine Biology field course, Newcastle University, BIOS: Phytoplankton nutrient limitation and the role of trace metals.

2011 Aug Instructor, General Oceanography Module, POGO program, BIOS

2011 Mar Guest Lecture, Elderhostel: Science in Bermuda Shorts, BIOS: An overview of oceanography, from the perspective of a trace metal chemist.

2010 Sept Instructor, Chemical Oceanography Module, POGO program, BIOS

2010 Aug Co-Instructor, General Oceanography Module, POGO program, BIOS

2009 Sept Instructor, Chemical Oceanography Module, POGO program, BIOS

2009 Aug Instructor, General Oceanography Module, POGO program, BIOS

2008 Guest Lecturer, SIO 101: California Coastal Oceanography, SIO

2007 Guest Lecturer, SIO 263: Aqueous Chemistry, SIO

2007	Guest Lecturer, SIO 279: California Current Ecosystem Dynamics, SIO
2005, 2006	Guest Lecturer, Ocean Sciences 101: The Marine Environment, UCSC
2005	Guest Lecturer, Ocean Sciences 001: The Oceans, UCSC
2005	Guest Lecturer, Ocean Sciences 120: Aquatic Chemistry, UCSC
2003-2006	Teaching Assistant, Ocean Sciences 101: The Marine Environment, UCSC (Winter Quarters)
2002	Teaching Assistant, Ocean Sciences 001: The Oceans, UCSC

Conference Sessions Chaired

Hogle, S., K. Heal, R. Bundy, **K. Buck**, and P.D. Chappell. Special Session SS051: New views on the biological transformation of metals in the marine environment. ASLO Aquatic Sciences Meeting, 24 Feb-1 Mar 2019, San Juan, PUERTO RICO.

Boyd, P.W., **K.N. Buck**, J.N. Fitzsimmons, and A. Tagliabue. Special Session CT001: Abiotic and biotic retention, recycling and remineralization of metals in the ocean. AGU/ASLO/TOS Ocean Sciences Meeting, 11-16 Feb 2018, Portland, OR, USA.

Conway, T., G. Sarthou, T. Chen, G. de Souza, A.G. González, **K. Buck**, T. van de Flierdt, W. Geibert, Z. Cao, C. Jeandel, Y. Plancherel, and P. Lam. Special Session 10i: Cycles of trace elements and isotopes in the ocean: GEOTRACES and beyond. Goldschmidt Meeting, 13-18 Aug 2017, Paris, FRANCE.

Buck, K. Discussion Leader: Multi-element approaches to chemical oceanography. Gordon Research Conference, Chemical Oceanography, 23-28 Jul 2017, New London, NH, USA.

Turner, D., C. van den Berg, S. Sander, **K. Buck**, R. Shelley, P. Morton, C. Schlosser, and E. Achterberg. Special Session CT-31A: Trace metal speciation in seawater: Measurements, modeling and impact on marine biogeochemistry. ASLO/AGU/TOS Ocean Sciences Meeting, 21-26 Feb 2016, New Orleans, Louisiana, USA.

Barbeau, K., A. Bowie, **K. Buck**, R. Middag, C. Pearce, P. Pogge von Strandmann, and G. Sarthou. Special Session 02a: Trace Metals in the Ocean: Distributions, Isotopic Variation and Speciation. Goldschmidt Meeting, 16-21 Aug 2015, Prague, CZECH REPUBLIC.

Cutter, G., A. Aguilar-Islas, **K. Buck**, W. Landing, and M. Lohan. Special Session 092: From VERTEX to GEOTRACES: Honoring Ken Bruland's contributions to marine biogeochemical cycles. ASLO/TOS/AGU Ocean Sciences Meeting, 23-28 Feb 2014, Honolulu, Hawai'i, USA.

Lohan, M., **K. Buck**, and S. Sander. Special Session 116: Advances in approaches to assess metal-binding organic ligands and perspectives on the impacts of ligands on metal-biota interactions in the oceans. ASLO/TOS/AGU Ocean Sciences Meeting, 23-28 Feb 2014, Honolulu, Hawai'i, USA.

Lohan, M., S. Sander, and **K. Buck**. Special Session 008: Biogeochemistry of metal-binding organic ligands in the ocean: sources, composition and impacts on trace metal cycling. ASLO Aquatic Sciences Meeting, 18-23 Feb 2013, New Orleans, Louisiana, USA.

Sander, S., C. van den Berg, and **K. Buck**. Special Session 005: Metal speciation in the ocean: Metal-binding ligand composition and role in the transport of metals through the marine environment. ASLO/TOS/AGU Ocean Sciences Meeting, 20-24 Feb 2012, Salt Lake City, Utah, USA.

Buck, K., M. Lohan, K. Barbeau, and Y. Shaked. Special Session 081: Biological transformations of trace metals. ASLO Aquatic Sciences Meeting, 25-30 Jan 2009, Nice, FRANCE.

Conference Abstracts and Presentations (supervised students underlined), 2010-present only

Bundy, R.M., **K.N. Buck**, and D.J. Repeta. The role of siderophores in the regeneration of particulate iron by heterotrophic bacteria. Presentation, ASLO Aquatic Sciences Meeting, 24 Feb-1 Mar 2019, San Juan, PUERTO RICO.

Burns, S., P.D. Chappell, B. Jenkins, and **K.N. Buck**. Investigating biogeochemical feedbacks between trace metals and diatom growth: Insight from Southern Ocean phytoplankton incubation experiments. Presentation, ASLO Aquatic Sciences Meeting, 24 Feb-1 Mar 2019, San Juan, PUERTO RICO.

Hollister, A.P., K. Palmer, M. Roberts, M. Breitbart, K. Hubbard, A. Djurhuus, and **K.N. Buck**. Remineralization of trace metals and macronutrients from natural phytoplankton assemblages. Presentation, ASLO Aquatic Sciences Meeting, 24 Feb-1 Mar 2019, San Juan, PUERTO RICO.

Knapp, A.N., **K.N. Buck**, R. Boiteau, C. Miranda, A. McKenna, Y. Corilo, S. Caprara, and P.D. Chappell. Novel observations of correlated dissolved organic nitrogen and dissolved iron concentrations in the Gulf of Mexico. Presentation, ASLO Aquatic Sciences Meeting, 24 Feb-1 Mar 2019, San Juan, PUERTO RICO.

Chappell, D., **K.N. Buck**, Z.M. Abdulla, R. Bundy, S. Burns, K. Powell, A. Sterling, and B.D. Jenkins. Both dissolved iron and coastal water additions to Southern Drake Passage waters stimulate similar growth responses and shifts in diatom community composition. Poster Presentation, Ocean Carbon and Biogeochemistry Meeting, 25-28 Jun 2018, Woods Hole, Massachusetts, USA.

Holland, L.Z., A. Sterling, **K.N. Buck**, P.D. Chappell, R.M. Bundy, and B.D. Jenkins. Comparison of bacteria recruited by axenic Southern Ocean diatoms under iron stress. Poster Presentation, Ocean Carbon and Biogeochemistry Meeting, 25-28 Jun 2018, Woods Hole, Massachusetts, USA.

Burns, S., and **K.N. Buck**. Investigating feedbacks between chemistry and biology: Insights from Southern Ocean incubation experiments. Poster Presentation, Southeastern Biogeochemistry Symposium, 6-8 Apr 2018, Tallahassee, Florida, USA.

Hollister, A., and **K.N. Buck**. Mapping marine trace metal and macronutrient remineralization following a phytoplankton bloom. Poster Presentation, Southeastern Biogeochemistry Symposium, 6-8 Apr 2018, Tallahassee, Florida, USA.

Bundy, R.M., **K.N. Buck**, S. Burns, A.R. Sterling, L.Z. Holland, D. Repeta, D. Chappell, and B. Jenkins. Dynamic cycling of siderophores during the growth and decline of an iron-limited phytoplankton assemblage in a Southern Ocean mesocosm experiment. Presentation, AGU/ASLO/TOS Ocean Sciences Meeting, 11-16 Feb 2018, Portland, Oregon, USA.

Gomes, K.M., L.Z. Holland, S. Burns, R.M. Bundy, **K.N. Buck**, D. Chappell, and B.D. Jenkins. Metatranscriptome analysis of plastid targeted genes in iron-limited Southern Ocean diatoms. Poster Presentation, AGU/ASLO/TOS Ocean Sciences Meeting, 11-16 Feb 2018, Portland, Oregon, USA.

Sterling, A.R., L.Z. Holland, E.J. McDermith, **K.N. Buck**, D. Chappell, R.M. Bundy, and B.D. Jenkins. Siderophore-producing bacteria associated with diatoms in the iron-limited Southern Ocean. Poster Presentation, AGU/ASLO/TOS Ocean Sciences Meeting, 11-16 Feb 2018, Portland, Oregon, USA.

Holland, L.Z., A.R. Sterling, **K.N. Buck**, D. Chappell, R.M. Bundy, and B.D. Jenkins. Comparison of bacteria recruited by axenic Southern Ocean diatoms under iron stress. Poster Presentation, AGU/ASLO/TOS Ocean Sciences Meeting, 11-16 Feb 2018, Portland, Oregon, USA.

Shaked, Y., **K.N. Buck**, T. Mellett, A. Tagliabue, and M.T. Maldonado. Probing and quantifying the bioavailability of oceanic dissolved iron through phytoplankton uptake kinetics. Presentation, AGU/ASLO/TOS Ocean Sciences Meeting, 11-16 Feb 2018, Portland, Oregon, USA.

Chappell, D., **K.N. Buck**, Z.M. Abdulla, S. Burns, K. Powell, A. Sterling, and B.D. Jenkins. Both dissolved iron and coastal water additions to Southern Drake Passage waters stimulate similar growth responses and shifts in diatom community composition. Presentation, AGU/ASLO/TOS Ocean Sciences Meeting, 11-16 Feb 2018, Portland, Oregon, USA.

Knapp, A.N., **K.N. Buck**, R. Boiteau, C. Miranda, A.M. McKenna, Y.E. Corilo, S. Caprara, and D. Chappell. Dissolved iron and dissolved organic nitrogen concentrations are correlated in Gulf of Mexico surface waters. Presentation, AGU/ASLO/TOS Ocean Sciences Meeting, 11-16 Feb 2018, Portland, Oregon, USA.

Browning, G., and **K.N. Buck**. The direct detection of humic-type iron-binding ligands in samples from GEOTRACES cruise GP16 in the Tropical East Pacific. Poster Presentation, GEOTRACES Summer School, 20-26 Aug 2017, Brest, FRANCE.

Buck, K.N., T. Mellett, C. Till, A. King, and K. Barbeau. Iron-binding organic ligands in the oceans: Insights from GEOTRACES field efforts and shipboard experimental studies. Poster Presentation, Goldschmidt Meeting, 13-18 Aug 2017, Paris, FRANCE.

Bonnain, C., **K.N. Buck**, and M. Breitbart. Testing the Ferrojan Horse Hypothesis: Iron-virus interactions in the oceans. Poster and Presentation, 22nd Biennial International Evergreen Phage Meeting, 5-11 Aug 2017, Olympia, Washington, USA.

Bonnain, C., **K.N. Buck**, and M. Breitbart. The Ferrojan Horse Hypothesis: Iron-virus interactions in the oceans. Poster Presentation, 3rd International Hands-on Phage Biotechnology Course, 19-23 Jul 2017, Braga, PORTUGAL.

Hollister, A., and **K.N. Buck**. Riding the Ferrous Wheel: A study in marine iron remineralization. Poster Presentation, Florida ACS Meeting, 4-6 May 2017, Innisbrook, Florida, USA.

Ebling, A.M., J.R. Westrich, E.K. Lipp, **K. Buck**, R.U. Shelley, A. Knapp, T.B. Kelly, and W. Landing. The biogeochemistry of trace elements in the sea surface microlayer in response to atmospheric deposition. Invited Talk, ASLO Aquatic Sciences Meeting, 26 Feb-3 Mar 2017, Honolulu, Hawaii, USA.

Bonnain, C., S. Caprara, M. Breitbart, and **K.N. Buck**. The Ferrojan Horse Hypothesis: Iron-virus interactions in the oceans. Poster Presentation, Viruses of Microbes, 18-22 Jul 2016, Liverpool, UK.

Bonnain, C., S. Caprara, M. Breitbart, and **K.N. Buck**. The Ferrojan Horse Hypothesis: Iron-virus interactions in the oceans. Poster Presentation, Aquatic Virus Workshop, 11-13 Jul 2016, Plymouth, UK.

Buck, K.N., B. Sohst, J. Fitzsimmons, R. Sherrell, and P. Sedwick. Iron-binding ligands in the Eastern Tropical South Pacific: Results from the U.S. GEOTRACES cruise GP16. Presentation, ASLO/AGU/TOS Ocean Sciences Meeting, 21-26 Feb 2016, New Orleans, Louisiana, USA.

Ebling, A., J. Westrich, E. Lipp, T. Mellett, **K. Buck**, and W. Landing. Trace elements in the sea surface microlayer: Results from a two year study in the Florida Keys. Invited Poster, ASLO/AGU/TOS Ocean Sciences Meeting, 21-26 Feb 2016, New Orleans, Louisiana, USA.

Mellett, T., C. Parker, M. Brown, C. Duckham, D. Chappell, M. Maldonado, K. Bruland, and **K. Buck**. Organic complexation of dissolved copper and iron from shipboard incubations in the Central California Current System: Investigating the impacts of light conditions and phytoplankton growth on iron- and copper-binding ligands. Presentation, ASLO/AGU/TOS Ocean Sciences Meeting, 21-26 Feb 2016, New Orleans, Louisiana, USA.

Sander, S., **K. Buck**, M. Lohan, D. Turner, and S. Clegg. Metal speciation analysis and modeling – How do we best estimate the bioavailable form. Presentation, ASLO/AGU/TOS Ocean Sciences Meeting, 21-26 Feb 2016, New Orleans, Louisiana, USA.

Bonnain, C., **K. Buck**, and M. Breitbart. Iron-virus interactions in the ocean. Poster, ASLO/AGU/TOS Ocean Sciences Meeting, 21-26 Feb 2016, New Orleans, Louisiana, USA.

Caprara, S., J. Fitzsimmons, D. Ohnemus, B. Twining, D. Chappell, R. Sherrell, D. Monticelli, and **K. Buck**. Investigating feedbacks between natural metal-binding organic ligands and particle dissolution in central California coast seawater. Poster, ASLO/AGU/TOS Ocean Sciences Meeting, 21-26 Feb 2016, New Orleans, Louisiana, USA.

Ussher, S., M. Fishwick, M. Lohan, P. Worsfold, **K. Buck**, and P. Sedwick. Dissolution of aerosol trace metals into North Atlantic surface waters: Influence of seawater temperature, pH and presence of organic ligands. Poster, SOLAS Open Science Conference, 7-11 Sept 2015, Kiel, GERMANY.

Buck, K.N., B. Sohst, and P.N. Sedwick. Organic complexation of dissolved iron from the U.S. GEOTRACES cruise (GP 16) in the South Pacific. Presentation, Goldschmidt Meeting, 17-21 Aug 2015, Prague, CZECH REPUBLIC.

Buck, K.N., B. Sohst, and P.N. Sedwick. Dissolved iron speciation in the Eastern Tropical South Pacific: Results from the U.S. GEOTRACES Section Cruise. Poster, AGU Fall Meeting, 14-19 Dec 2014, San Francisco, CA, USA.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. The impact of seawater temperature, pH and presence of organic ligands on the dissolution of aerosol iron. Poster, The Challenger Society of Marine Science Conference, 7 Sept 2014, Southampton, UK.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. Dissolution of aerosol derived iron in North Atlantic seawater. Poster, Royal Society of Chemistry Analytical Research Forum, 7 July 2014, London, UK.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. Dissolution of aerosol iron into surface waters, influence of seawater temperature, pH and presence of organic ligands. Presentation, DUST 2014 – International Conference on Atmospheric Dust, 1 June 2014, Castellaneta Marina, ITALY.

Buck, K.N., D. Biller, K.W. Bruland, and K.A. Barbeau. Evaluating copper toxicity in the San Francisco Bay Delta and Estuary: Copper speciation and dissolved trace metal concentrations. Poster, ASLO/TOS/AGU Ocean Sciences Meeting, 23-28 Feb 2014, Honolulu, HI, USA.

Aguilar-Islas, A.M., M. Seguret, R. Rember, D. Stockwell, and **K.N. Buck**. Iron and related parameters along the Gulf of Alaska shelf. Presentation, ASLO/TOS/AGU Ocean Sciences Meeting, 23-28 Feb 2014, Honolulu, HI, USA.

Barbeau, K.A., A.L. King, B.M. Hopkinson, **K.N. Buck**, and R.M. Bundy. Investigations of iron biogeochemistry in the Southern California Current System. Presentation, ASLO/TOS/AGU Ocean Sciences Meeting, 23-28 Feb 2014, Honolulu, HI, USA.

Coale, T.H., and **K.N. Buck**. Distribution of dissolved trace metals at time-series sites in the Sargasso Sea. Poster, ASLO/TOS/AGU Ocean Sciences Meeting, 23-28 Feb 2014, Honolulu, HI, USA.

Glass, J.B., **K.N. Buck**, L.A. Bristow, B. Thamdrup, and F.J. Stewart. Bioessential trace metal and nitrogen cycling in the Eastern Tropical North Pacific oxygen minimum zone. Presentation, ASLO/TOS/AGU Ocean Sciences Meeting, 23-28 Feb 2014, Honolulu, HI, USA.

Twining, B.S., S. Rauschenberg, P.N. Sedwick, J.N. Fitzsimmons, and **K.N. Buck**. Iron quotas of North Atlantic phytoplankton reflect biogeochemical environment. Presentation, ASLO/TOS/AGU Ocean Sciences Meeting, 23-28 Feb 2014, Honolulu, HI, USA.

Wu, J., S. Roshan, M. Hatta, C. Measures, and **K. Buck**. Dissolved Fe enrichment in the oxygen minimum zone of the Eastern Tropical North Atlantic Ocean. Presentation, ASLO/TOS/AGU Ocean Sciences Meeting, 23-28 Feb 2014, Honolulu, HI, USA.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. The impact of environmental change on aerosol iron dissolution. Presentation, 5th Annual Biogeochemistry Conference, 12 Dec 2013, Plymouth, UK.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. The impact of environmental change on aerosol iron dissolution. Presentation, Making Waves 2013, 28 Nov 2013, Plymouth, UK.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. Understanding the role of iron in the oceans. Video Presentation, World Ocean Week, 10 Nov 2013, Xiamen, CHINA.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. Dissolution of aerosol derived iron in North Atlantic seawater. Poster and Presentation, SOLAS Summer School, 30 Aug 2013, Xiamen, CHINA.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. Delivery of continental iron to the surface of the Sargasso Sea: Importance of Seawater Chemistry. Invited Talk, Bermuda Institute of Ocean Sciences, 20 July 2013, St. George's, BERMUDA.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. Dissolution of aerosol derived iron in North Atlantic seawater. Poster, 12th International Estuarine Biogeochemistry Symposium, 1 July 2013, Plymouth, UK.

Buck, K.N. The organic complexation of dissolved Fe across the North Atlantic basin: Results from the U.S. GEOTRACES North Atlantic Section cruises. Presentation, ASLO Aquatic Sciences Meeting, 18-23 Feb 2013, New Orleans, Louisiana, USA.

Bundy, R.M., D.V. Biller, K.A. Barbeau, and **K.N. Buck.** Sources of iron-binding ligands in Central California and San Francisco Bay. Presentation, ASLO Aquatic Sciences Meeting, 18-23 Feb 2013, New Orleans, Louisiana, USA.

Farst, C.M., A. Stenson, **K.N. Buck**, and W.M. Landing. Isolation and characterization of marine siderophores by electrospray ionization mass spectrometry and CLE-ACSV. Presentation, ASLO Aquatic Sciences Meeting, 18-23 Feb 2013, New Orleans, Louisiana, USA.

Sander, S.G., M. Lohan, and **K.N. Buck.** Biogeochemistry of metal-binding organic ligands in the ocean: sources, composition and impacts on trace metal cycling. Presentation, ASLO Aquatic Sciences Meeting, 18-23 Feb 2013, New Orleans, Louisiana, USA.

Fishwick, M.P., S.J. Ussher, P.N. Sedwick, M.C. Lohan, P.J. Worsfold, and **K.N. Buck**. Determination of the concentration of iron in seawater using flow injection analysis. Presentation, 4th Annual Biogeochemistry Conference, 17 Dec 2012, Plymouth, UK.

Buck, K.N., D. Biller, K.W. Bruland, K.A. Barbeau. Evaluating copper toxicity in the San Francisco Bay Delta and Estuary: Copper speciation and dissolved trace metal concentrations. Poster presented *in absentia*, 7th Biennial Bay-Delta Science Conference, 16-18 Oct 2012, Sacramento, California, USA.

Khammeri, Y., S. Ussher, **K.N. Buck**. The effect of atmospheric dust on phytoplankton growth in the Sargasso Sea. Poster presented by Y. Khammeri, 15th Biennial Challenger Conference for Marine Sciences, 3-6 Sept 2012, University of East Anglia, Norwich, UK.

Buck, K.N. The organic complexation of dissolved Fe in NE Atlantic depth profiles: Preliminary results from leg 1 of the U.S. GEOTRACES North Atlantic Section. Poster, Ocean Carbon Biogeochemistry (OCB) Summer Workshop, 16-19 Jul 2012, Woods Hole, Massachusetts, USA.

Buck, K.N., B.M. Sohst, and P.N. Sedwick. The organic complexation of dissolved Fe on leg 1 of the U.S. GEOTRACES North Atlantic section. Poster, ASLO/AGU/TOS Ocean Sciences Meeting, 19-24 Feb 2012, Salt Lake City, Utah, USA.

Aguilar-Islas, A.M., and **K.N. Buck.** The fractional solubility of aerosol-derived iron in seawater. Presentation, ASLO/AGU/TOS Ocean Sciences Meeting, 19-24 Feb 2012, Salt Lake City, Utah, USA.

Bundy, R.M., K.A. Barbeau, and **K.N. Buck.** Sources of strong copper-binding ligands in Antarctic Peninsula surface waters. Presentation, ASLO/AGU/TOS Ocean Sciences Meeting, 19-24 Feb 2012, Salt Lake City, Utah, USA.

Farst, C., W.M. Landing, A. Stenson, and **K.N. Buck.** Natural marine siderophore isolation through immobilized metal affinity chromatography with electrospray mass spectrometric analysis. Presentation, ASLO/AGU/TOS Ocean Sciences Meeting, 19-24 Feb 2012, Salt Lake City, Utah, USA.

Buck, K.N., B. Foli, S. Ussher, K.A. Barbeau. Copper speciation in the San Francisco Bay Delta and Estuary: Evaluating current and future likelihood of copper toxicity events in a perturbed ecosystem. Poster presented *in absentia*, 6th Biennial Bay-Delta Science Conference, 27-29 Sept 2010, Sacramento, California, USA.

Buck, K.N., R. Bundy, K. Barbeau, Y. Kondo, J. Moffett, J. Wu, K. Bin Mohamed, E. Achterberg. GEOTRACES Intercalibration II: Dissolved Fe and Cu speciation. Presentation, ASLO/AGU/TOS Ocean Sciences Meeting, 21-27 Feb 2010, Portland, Oregon, USA.

Professional Memberships

2014-present American Association for the Advancement of Science
2014-present American Chemical Society
2004-present The Oceanography Society
2003-present American Geophysical Union
2001-present Association for the Sciences of Limnology and Oceanography