

## Kristen N. Buck (née Russell)

Assistant Professor  
College of Marine Science  
University of South Florida

### 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, ACS Certification, Pacific Lutheran University,  
Tacoma, WA, USA (Professor Craig Fryhle, Advisor)
- 2001 Bachelor of Arts (magna cum laude), French, Pacific Lutheran University, Tacoma, WA, USA  
(Professor Mark Jensen, Advisor)
- 2000 Term Abroad, University of Pau, FRANCE

### Grants

- 2013-2016 NSF OCE-1333566, \$206,117: *Collaborative Research: Experimental constraints on marine Fe isotope effects – Biology, ligands and particles.*
- 2013-2016 NSF OCE-1233882, \$319,000: *Collaborative Research: US GEOTRACES Pacific Section- Measurement of the organic complexation of dissolved iron, copper and cobalt, and total dissolved cobalt.*
- 2013 Roger Thayer Stone Fellowship, \$8,099 and C & H Montgomery Moore Fellowship, \$3,304:  
Support funds for student internship, Veronique Oldham.
- 2012-2015 Scientific Committee of Oceanic Research (SCOR) Working Group 139, with co-chairs Maeve Lohan (U Plymouth) and Sylvia Sander (U Otago), \$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

### Fellowships and Honors

- 2012 Voted “Best Teacher” for Chemical Oceanography course module by Nippon Foundation-Partnership for Observation of the Global Ocean (NF-POGO) Center of Excellence in Observational Oceanography (CoEEO) 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) 9<sup>th</sup> Most Downloaded Article, December, Marine Chemistry
- 2005 2<sup>nd</sup> 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
- 2004-2006 PhD Candidate, Ocean Sciences

2001-2004 Graduate Assistance in Areas of National Need (GAANN) Doctoral Fellowship  
2001 University of California Regents Fellowship

### **Research Experience**

2014-present Assistant Professor, Chemical Oceanography, College of Marine Science, University of South Florida, St. Petersburg, FL, USA  
2009-2013 Assistant 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-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)

### **Field Experience**

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 (students underlined>**

**Buck, K.N.**, B. Sohst, P. Sedwick (under review). The organic complexation of dissolved iron along the U.S. GEOTRACES North Atlantic section. *Deep-Sea Research II*.

Wu, J., S. Roshan, M. Hatta, C. Measures, and **K.N. Buck** (under review). Dissolved Fe enrichment in the oxygen minimum zone of the eastern tropical North Atlantic Ocean. *Deep-Sea Research II*.

Sander, S., **K.N. Buck**, and M. Wells (under review). The effect of natural organic ligands on trace metals in San Francisco Bay: Implications for Water Quality Criteria. *Environmental Science & Technology*.

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.

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.

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.

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.

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.

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.

**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.

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.

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.

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.

**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.

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.

**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.

**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.

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.

**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.

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.

**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.

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**

**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.

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.

### **Teaching Experience and Invited Presentations**

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|----------------|---|
| 2014 Feb       | Guest Lectures, Chemical Oceanography core course, USF: Trace metals and phytoplankton; Trace metal sampling and the GEOTRACES program.   |
| 2014 Jan       | Seminar Speaker, USF CMS First Friday Seminar Series: <b>Buck, K.N.</b> Trace metal biogeochemistry, GEOTRACES, and the role of ligands.  |
| 2013 Sept      | Guest Lecture, Global Marine Biology field course, Newcastle University, BIOS: Phytoplankton nutrient limitation and the role of trace metals.  |
| 2013 Aug       | Invited Speaker, Gordon Research Conference: Chemical Oceanography, Biddeford, Maine: <b>Buck, K.N.</b> Fe-binding ligands from the U.S. GEOTRACES North Atlantic section.  |
| 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 Oct       | Invited Speaker, COST 801 "Voltammetry and GEOTRACES" Workshop, Rudjer Boskovic Institute, Sibenik, Croatia: <b>Buck, K.N.</b> The organic complexation of Fe along U.S. GEOTRACES North Atlantic Section, Leg 1. |
| 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 Dec       | Invited Speaker, Environmental Geochemistry and Geology Seminar Series, Princeton University, Princeton, NJ: <b>Buck, K.N.</b> The organic complexation of iron in the ocean.                                     |
| 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
2010 Aug	Invited Speaker, COST Action ES0801/735 Joint Workshop, IFM-GEOMAR, University of Kiel, Germany: <b>Buck, K.N.</b> The “State of the Art”: Dissolved Fe and Cu speciation in the open ocean.
2010 June	Invited Speaker, Gordon Research Conference: Environmental BioInorganic Chemistry, Newport, RI: <b>Buck, K.N.</b> , A. King, R. Bundy, and K. Barbeau. High throughput studies of Fe speciation.
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
2008 March	Invited Speaker, Department of Marine Environmental Biology, University of Southern California, Los Angeles, CA: <b>Buck, K.N.</b> , 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	Invited Speaker, Geology Club, Division of Geological and Planetary Sciences, California Institute of Technology, Los Angeles, CA: <b>Buck, K.N.</b> , 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	Guest Lecturer, SIO 263: Aqueous Chemistry, SIO
2007 June	Invited Speaker, Department of Geosciences, Marine Chemistry and Geochemistry, Scripps Institution of Oceanography: <b>Buck, K.N.</b> Chemical speciation of copper and iron in estuarine, coastal, and open ocean environments: New implications for toxicity and bioavailability.
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
2004 May	Invited Speaker, Ocean Sciences Department, UCSC: <b>Buck, K.N.</b> and K.W. Bruland. Copper Speciation in San Francisco Bay.
2003-2006	Teaching Assistant, Ocean Sciences 101: The Marine Environment, UCSC (Winter Quarters)
2002	Teaching Assistant, Ocean Sciences 001: The Oceans, UCSC

### **Student Mentoring**

2012-present	PhD student Matt Fishwick, co-supervised with Dr. Simon Ussher, Professor Maeve Lohan and Professor Paul Worsfold: <i>Dissolution of aerosol derived trace metals in seawater</i> . University of Plymouth, UK.
2013 Aug-Nov	NSF-REU student Derek Schwenkmeyer, co-mentored with Dr. Helena Reinardy: <i>Genotoxic effects of environmental copper contamination in Bermuda</i> .
2013 Jul-Aug	Bermuda Program student William Halliday, co-mentored with Dr. Andrew Peters: <i>Baseline for trace metals in macroalgae of the Sargasso Sea near Bermuda</i> .
2013 Mar-Jun	CoEOO student Ali Thabet, Egypt, co-mentored with Dr. Gretchen Goodbody-Gringley: <i>Effect of antifouling paint chips on sea urchin (Lytechinus variegatus) larval development</i> .
2013 Mar-Jun	CoEOO student Chiara Molina, Italy, co-mentored with Dr. Gretchen Goodbody-Gringley: <i>Effect of marine antifouling paint chip waste on natural Bermuda copepod communities</i> .
2012-2013	CaBIOS (Sept-Dec 2012) and BIOS (Jan-Jun 2013) Intern Véronique Oldham, University of Toronto: <i>Dissolved Cu speciation in Castle Harbour, Bermuda</i> .
2012 Jun-Aug	Galbraith Fellow Angela Tomassini, Eckerd University: <i>Biological incubation experiments for the production of iron-binding ligands</i> .

- 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.*
- 2011 Feb-May POGO student Lazare Akpetou, Ivory Coast: *Copper speciation near a waste dump in Castle Harbour, Bermuda.*
- 2011 Feb-May POGO student Yosra Khammeri, Tunisia, co-mentored with Dr. Simon Ussher: *The effect of atmospheric dust on phytoplankton growth in the Sargasso Sea.*
- 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.*
- 2010 Feb-May POGO student Bennet Foli, Ghana: *Copper and zinc distributions in Castle Harbour, Bermuda using a chemical leach method.*
- 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.*

#### **Conference Abstracts and Presentations (students underlined)**

- 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.
- 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.
- 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*, 7<sup>th</sup> 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, 15<sup>th</sup> 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.** 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.
- 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*, 6<sup>th</sup> 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, Feb 21-27 2010, Portland, Oregon, USA.
- Buck, K.N.**, K. Selph, A. King, and K. Barbeau. Trends in the cycling of natural iron- and copper-binding ligands in seawater: Results from incubation experiments and depth profiles in distinct marine systems. Poster, Gordon Research Conference- Chemical Oceanography, Aug 2-7 2009, Tilton, NH.
- Buck, K.N.**, K. Roe, K. Selph, and K. Barbeau. Source of iron- and copper-binding ligands in natural seawater: Results of incubation experiments from distinct marine systems. Presentation, ASLO Aquatic Sciences Meeting, Jan 25-30 2009, Nice, FRANCE.
- Buck, K.N.** and K. Barbeau. Dissolved iron speciation in oxic and suboxic water column profiles: Trends in distribution and strength of iron-binding ligands. Presentation, AGU Fall Meeting, Dec 15-19 2008, San Francisco, CA.

**Buck, K.N.**, K.W. Bruland, C.I. Measures, and K. Barbeau. The biogeochemistry of iron and copper in Antarctic Peninsula shelf and Antarctic Circumpolar Current waters in the Southern Drake Passage. Presentation, ASLO/TOS/AGU Ocean Sciences Meeting, Mar 2-8 2008, Orlando, FL.

**Buck, K.N.**, C.I. Measures, W.M. Landing, K.W. Bruland, and K. Barbeau. The speciation of dissolved iron across the North Pacific and in the Bering Sea Alaska. Poster, Gordon Research Conference-Chemical Oceanography, Aug 5-10 2007, Tilton, NH.

**Buck, K.N.** and K.W. Bruland. The application of CLE-ACSV methodology to dissolved Cu speciation in San Francisco Bay, California and to dissolved Fe speciation across natural Fe concentration gradients in the NE Pacific. Presentation, DISCO XX, Oct 8-13 2006, Honolulu, HI.

**Buck, K.N.**, M.C. Lohan, and K.W. Bruland. The chemical speciation of dissolved iron in two distinct river systems: Implications for riverine iron supply. Presentation, 1<sup>st</sup> Annual UCSC Ocean Sciences Graduate Student Symposium, Apr 28 2006, Santa Cruz, CA.

**Buck, K.N.**, M.C. Lohan, and K.W. Bruland. Dissolved iron speciation in two distinct river systems: Implications for riverine iron supply. Poster and Unscheduled Presentation, ASLO/TOS/AGU Ocean Sciences Meeting, Feb 20-24 2006, Honolulu, HI.

**Buck, K.N.** and K.W. Bruland. Vertical structure of iron speciation in the Columbia River plume: Implications for the importance of iron-binding ligands in a low-salinity, high-iron plume. Poster and Presentation, SOLAS Summer School, Aug 28-Sept 10 2005, Corsica, FRANCE.

**Buck, K.N.** and K.W. Bruland. Vertical structure of iron speciation in the Columbia River plume: Implications for the importance of iron-binding ligands in a low-salinity, high-iron plume. Poster, Gordon Research Conference-Chemical Oceanography, Aug 7-12 2005, Tilton, NH.

**Buck, K.N.** and K.W. Bruland. Copper speciation in San Francisco Bay. Presentation, ASLO/TOS Ocean Research Conference, Feb 15-20 2004, Honolulu, HI.

**Russell, K.N.**, D. Taton, and Y. Gnanou. Monofunctional terminal addition of C<sub>60</sub> to polystyrene stars via Atom Transfer Radical Addition. Poster, ACS Meeting, Apr 1-5 2001, San Diego, CA.

**Russell, K.N.** and D.A. Waldow. Cloud point and phase-separation measurements on polymer blend systems with increasing additive concentration. Poster, ACS Meeting, Mar 25-28 2000, San Francisco, CA.

### **Professional Service**

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|--------------|--|
| 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  |

### **Professional Memberships**

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|--------------|---------------------------|
| 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