

## **Education**

B.A. Biochemistry and Cell Biology cum laude, University of California at San Diego, 1981.

Ph.D. Marine Chemistry, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution Joint Program, 1986.

## **Professional Experience**

- Lab Technician, Scripps Institute of Oceanography, part-time, Sept. 1980 to Aug. 1981.
- M.I.T. Research Assistantship, Massachusetts Institute of Technology, Fall 1981 to Spring 1983.
- Graduate Research Assistant, Woods Hole Oceanographic Institution, Spring 1983 to Fall 1986.
- Post-Doctoral Investigator, Woods Hole Oceanographic Institution, Sept. 1986 to Feb. 1987.
- Visiting Investigator, Woods Hole Oceanographic Institution, Feb. 1987 to Sept. 1988.
- Assistant Scientist, Woods Hole Oceanographic Institution, Sept. 1988 to Sept. 1992.
- Adjunct Associate Scientist, Bermuda Biological Station for Research, Jan. 1992 to Jan. 1996.
- Associate Scientist, Woods Hole Oceanographic Institution, Sept. 1992 to March 1996.
- Associate Program Director, National Science Foundation, Ocean Sciences Division/Chemical Oceanography Program, Sept. 1996 to Sept. 1998.
- Associate Scientist w/Tenure, Woods Hole Oceanographic Institution, March 1996 to Sept. 2000.
- Executive Scientist, US JGOFS Planning and Data Management Office, Dec. 1998 to Oct. 2005.
- Department Chair, Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution, May 2003 to Sept. 2007.
- Senior Scientist, Woods Hole Oceanographic Institution, Sept. 2000 to present.
- Director, Center for Marine and Environmental Radioactivity, Jan. 2013 to present.

## **Professional Affiliations & Awards**

- Member, Geochemical Society, 1982 to 1993.
- Editorial Board, Journal of Environmental Radioactivity, 1987 to 1993.
- Member, American Geophysical Union, 1984 to present.
- Member, The Oceanography Society, 1989 to present.
- Chair, Scientific Committee on Oceanic Research Working Group 116, Sediment Trap and 234Th Methods for Carbon Export Flux Determination, 2000 to 2007.
- Fellow, Ocean Life Institute, WHOI 2001 to 2003.
- Directors Award for Collaborative Integration, US NSF, 2007.
- Paul M. Fye Chair, WHOI, 2008 to present.
- Fellow, American Geophysical Union, 2009.
- Times Higher Education top cited scientist in Oceanography, 2000 to 2010.
- Foreign member of the Royal Netherlands Academy of Arts and Sciences, 2013 to present.

- Japan Society for the Promotion of Science Short term “S” Fellowship (highest level fellowship for overseas researchers), 2013.
- Co-Chair, Scientific Committee on Oceanic Research (SCOR) Working Group Radioactivity in the Ocean, 5 decades later (RiO5), with Minhan Dai of Xiamen University, China
- Elected a Fellow of the American Association for the Advancement of Science (AAAS), 2018.
- Awarded the 2019 John H. Martin Award with co-authors by Association for the Sciences of Limnology and Oceanography for Boyd et al., (2000). A mesoscale phytoplankton bloom in the polar Southern Ocean stimulated by iron fertilisation. (PDF) *Nature*, 407, 695-702.

### Research Interests

- Upper-ocean biogeochemical cycles and POC export fluxes.
- Studies of scavenging and particle cycling processes using man-made and naturally occurring radionuclides.
- Geochemical studies of the Black Sea using Chernobyl radiotracers. plutonium isotopes and the behavior of fallout Pu in seawater and groundwater.
- Use of radium isotopes and other tracers of submarine groundwater discharge.

### Research Publications

1. Black, E.E., Lam, P.J., Lee, J.-M., Buesseler, K.O. (2019) Insights From the  $^{238}\text{U}$ - $^{234}\text{Th}$  Method Into the Coupling of Biological Export and the Cycling of Cadmium, Cobalt, and Manganese in the Southeast Pacific Ocean. *Global Biogeochemical Cycles*, 33 (1), 15-36.
2. Haji, M.N, Drysdale, J.A., Buesseler, K.O., Slocum, A.H. (2019) Results of an Ocean Trial of the Symbiotic Machine for Ocean Uranium Extraction. *Environmental Science and Technology*, 53 (4), 2229-2237.
3. Hayes, C.T., Black, E.E., Anderson, R.F., Barkaran, M., Buesseler, K.O., Charette, M.A. et al. (2018) Flux of particulate elements in the North Atlantic Ocean constrained by multiple radionuclides. *Global Biogeochemical Cycles*, 32 (12), 1738-1758.
4. Bisson, K.M., Siegel, D.A., DeVries, T., Cael, B.B., Buesseler, K.O. (2018) How data set characteristics influence ocean carbon export models. *Global Biogeochemical Cycles*, 32 (9), 1312-1328.
5. Schlitzer, R., and others, including K.O. Buesseler (The GEOTRACES Group) (2018). The GEOTRACES Intermediate Data Product 2017. *Chemical Geology*, 493, 210-223.
6. Buesseler, K., M.A. Charette, S. Pike, P. Henderson, and L. Kipp (2018). Lingering radioactivity at the Bikini and Enewetak Atolls. *Science of the Total Environment*, 621, 1185-1198.
7. Black, Erin, Ken Buesseler, Steven Pike, and Phoebe Lam (2018).  $^{234}\text{Th}$  as a tracer of particulate export and remineralization in the Southeastern Tropical Pacific. *Marine Chemistry*, 201, 35-50.
8. Vives i Battle, J., M. Aoyama, C. Bradshaw, J. Brown, K. Buesseler, N. Casacuberta Arola, M. Christl, C. Duffa, N. Impens, M. Iosjpe, P. Masqué, and J. Nishikawa (2018). Marine radioecology after the Fukushima Dai-ichi nuclear accident: Are we better positioned to understand the impact of radionuclides in marine ecosystems? *Science of the Total Environment*, 618, 80-92.

9. Casacuberta, N., M. Christl, K.O. Buesseler, Y. Lau, M. Castrillejo, H.-A. Syna, I and P. Masque (2017). Potential releases of I-129, U-236, and Pu isotopes from the Fukushima Dai-ichi nuclear power plants to the ocean from 2013 to 2015. *Environmental Science and Technology*, 51(17), 9826-9835.
10. Lerner, P., O. Marchal, P. Lam, K. Buesseler, and M. Charette (2017). Kinetics of thorium and particle cycling along the U.S. GEOTRACES North Atlantic Transect. *Deep-Sea Research I*, 125, 106-128.
11. Fassbender, A.F., H.I. Palevsky, T.R. Martz, A.E. Ingalls, Martha Gledhill, S.E. Fawcett, J.A. Brandes, L.I. Aluwihare, the participants of COME ABOARD (includes K. Buesseler), and DISCO XXV (2017). Perspectives on Chemical Oceanography in the 21st century: Participants of the COME ABOARD Meeting examine aspects of the field in the context of 40 years of DISCO. *Marine Chemistry*, 196, 181-190, doi.org/10.1016/j.marchem.2017.09.002.
12. Smith, John, Vincent Rossi, Ken Buesseler, Jay Cullen, Jack Cornett, Richard Nelson, Alison Macdonald, Marie Robert, and Jonathan Kellogg (2017). Time series measurements of the transport of the Fukushima radioactivity plume through the northeast Pacific Ocean. *Environmental Science & Technology*, 51, 10494-10502. DOI: 10.1021/acs.est.7b02712.
13. Sanial, Virginie, Ken O. Buesseler, Matthew A. Charette, and Seiya Nagao (2017). Unexpected source of Fukushima derived radiocesium to the coastal ocean of Japan. *PNAS*, 11(42), 11092-11096.
14. Estapa, M., C. Durkin, K. Buesseler, R. Johnson and M. Feen (2017). Carbon flux from bio-optical profiling floats: calibrating transmissometers for use as optical sediment traps. *Deep-Sea Research I*, 120, 100-111.
15. Lerner, P., O. Marchal, P.J. Lam, K. Buesseler and M. Charette (2017). Kinetics of thorium and particle cycling along the U.S. GEOTRACES North Atlantic Transect. *Deep-Sea Research I*, 125, 106-128.
16. Buesseler, K., M. Dai, M. Aoyama, C. Benitez-Nelson, S. Charmasson, K. Higley, V. Maderich, P. Masqué, P.J. Morris, D. Oughton, and J.N. Smith (2017). Fukushima Daiichi-Derived Radionuclides in the Ocean: Transport, Fate, and Impacts. *Annual Review of Marine Science*, 9, 173-203. DOI: 10.1146/annurev-marine-010816-060733.
17. Zhou, Kuanbo, Kanchan Maiti, Minhan Dai, Shuh-Ji Kao, and Ken Buesseler (2016). Does adsorption of dissolved organic carbon and thorium onto membrane filters affect the carbon to thorium ratios, a primary parameter in estimating export carbon flux? *Marine Chemistry*, 184, 1-10.
18. Durkin, C., B. Van Mooy, S. Dyrman and K. Buesseler (2016). Sinking phytoplankton associated with carbon flux in the Atlantic Ocean. *Limnology and Oceanography*. DOI: 10.1002/lno.10253.
19. Lerner, P., P.J. Lam, O. Marchal, R.F. Anderson, K. Buesseler, M. Charette, R.L. Edwards, C.T. Hayes, K.F. Huang, Y. Lu and L.F. Robinson (2016). Testing models of thorium and particle cycling in the ocean using data from station GT11-22 of the U.S. GEOTRACES North Atlantic Section. *Deep-Sea Research I*, 113, 57-79.
20. Siegel, David, Ken Buesseler, Mike Behrenfeld, Claudia Benitez-Nelson, Emmanuel Boss, Mark Brzezinski, Adrian Burd, Craig Carlson, Eric D'Asaro, Scott Doney, Mary Jane Perry, Rachel Stanley and Deborah Steinberg (2016). Prediction of the Export and Fate of

- Global Ocean Net Primary Production: The EXPORTS Science Plan. *Frontiers in Marine Science*, 3, 22. DOI: 10.3389/fmars.2016.00022.
21. Gill, G., L.-J. Kuo, C. Janke, J. Park, R. Jeters, G. Bonheyo, H.-B. Pan, C. Wai, T. Khangaonkar, L. Bianucci, J. Wood, M.G. Warner, S. Peterson, D. Abrecht, R. Mayes, C. Tsouris, Y. Oyola, J. Strivens, N. Schlafer, R.S. Addleman, W. Chouyyok, S. Das, J. Kim, K. Buesseler, C. Breier, and E. D'Alessandro (2016). The Uranium from Seawater Program at PNNL: Overview of Marine Testing, Adsorbent Characterization, Adsorbent Durability, Adsorbent Toxicity, and Deployment Studies. *Industrial & Engineering Chemistry Research*, 55(15), 4264-4277. DOI: 10.1021/acs.iecr.5b03649.
  22. Castrillejo, M., N. Casacuberta, C. Breier, S. Pike, P. Masque and K. Buesseler (2016). Reassessment of <sup>90</sup>Sr, <sup>137</sup>Cs and <sup>134</sup>Cs in the coast off Japan derived from the Fukushima Dai-ichi nuclear accident. *Environmental Science and Technology*, 50, 173–180. DOI: 10.1021/acs.est.5b03903.
  23. Estapa, M.L., D.A. Siegel, K.O. Buesseler, R.H.R. Stanley, M.W. Lomas, and N.B. Nelson (2015). Decoupling of net community production and export production at submesoscales in the Sargasso Sea. *Global Biogeochemical Cycles*, 29, 1266–1282. DOI: 10.1002/2014GB004913.
  24. Yoshida, S., A.M. Macdonald, S.R. Jayne, I.I. Rypina and K. Buesseler (2015). Observed eastward progression of the Fukushima <sup>134</sup>Cs signal across the North Pacific. *Geophysical Research Letters*, 42, 7139–7147. DOI: 10.1002/2015GL065259.
  25. Maiti, K., M.A. Charette, K.O. Buesseler, K. Zhou, P. Henderson, W.S. Moore, P. Morris, and L. Kipp (2015). Determination of particulate and dissolved <sup>228</sup>Th in seawater using a delayed coincidence counter. *Marine Chemistry*, 177(1), 196-202.
  26. Schlitzer, R., and others, including K.O. Buesseler (The GEOTRACES Group) (2015). The GEOTRACES Intermediate Data Product 2014. *Marine Chemistry*, 177(1), 1-8.
  27. Breier, C.A.F., S.M. Pike, F. Sebesta, K. Tradd; J.A. Breier and K.O. Buesseler (2015). New applications of KNiFC-PAN resin for broad scale monitoring of radiocesium following the Fukushima Dai-ichi nuclear disaster. *Journal of Radioanalytical and Nuclear Chemistry*, 307(3), 2193-2200. DOI: 10.1007/s10967-015-4421-x.
  28. Baumann, Z., N.S. Fisher, C.J. Gobler, K.O. Buesseler, J.A. George, C. F. Breier and J. Nishikawa (2015). Fukushima <sup>137</sup>Cs at the base of planktonic food webs off Japan. *Deep-Sea Research II*, 106, 9-16.
  29. Pike, S., A.S Adekola, J. Colaresi, G. Ilie, W.F. Mueller, K.M. Yocum and K.O. Buesseler (2015). Improved Gamma-Spectroscopy of marine samples via low background Small Anode Germanium (SAGe) Well Detector. *Journal of Radioanalytical and Nuclear Chemistry*, 307(2), 2369-2364. DOI: 10.1007/s10967.
  30. McDonnell, A.M.P., P.W. Boyd, K.O. Buesseler (2015). Effects of sinking velocities and microbial respiration rates on the attenuation of particulate carbon fluxes through the mesopelagic zone. *Global Biogeochemical Cycles*. 29 (2), 175-193. DOI: 10.1002/2014GB004935.
  31. Buesseler, K.O., C.R. German, M.C. Honda, S. Otsuka, E.E. Black, H. Kawakami, S.J. Manganini, and S.M. Pike (2015). Tracking the Fate of Particle Associated Fukushima Daiichi Cesium in the Ocean off Japan. *Environ. Sci. Technol.*, 2015, 49 (16), 9807-9816. DOI: 10.1021/acs.est.5b02635.
  32. Durkin, C., M.L. Estapa, and K.O. Buesseler (2015). Observations of carbon export by small sinking particles in the upper mesopelagic. *Marine Chemistry*, 175, 72-81.

33. Owens, S.A., S. Pike and K.O. Buesseler (2015). Thorium-234 as a tracer of particle dynamics and upper ocean export in the Atlantic Ocean. *Deep Sea Research-II*, 116, 42-59.
34. McDonnell, A.M.P., P.J. Lam, C.H. Lamborg, K.O. Buesseler, R. Sanders, J.S. Riley, C. Marsay, H.E.K. Smith, E.C. Sargent, R.S. Lampitt and J.K.B. Bishop (2015). The oceanographic toolbox for the collection of sinking and suspended marine particles. *Progress in Oceanography*, 13, 17-31.
35. Rypina, I.I., S.R. Jayne, S. Yoshida, A.M. Macdonald, and K. Buesseler (2014). Drifter-based estimate of the 5-year dispersal of Fukushima-derived radionuclides. *Journal of Geophysical Research: Oceans*, 119, 8177–8193. DOI: 10.1002/2014JC010306.
36. Dulaquais, G., M. Boye, R. Middag, S. Owens, V. Puigcorbe, K. Buesseler, P. Masqué, H. de Baar and X. Carton (2014). Contrasting biogeochemical cycles of cobalt in the surface western Atlantic Ocean. *Global Biogeochemical Cycles*, 28 (12), 1387–1412. DOI: 10.1002/2014GB004903.
37. Buesseler, Ken O. (2014). Fukushima and Ocean Radioactivity. *Oceanography*, 27(1), 92–105. DOI: 10.5670/oceanog.2014.02.
38. Black, E.E., and K.O. Buesseler (2014). Spatial variability and the fate of cesium in coastal sediments near Fukushima, Japan. *Biogeosciences*, 11, 5123-5137. DOI: 10.5194/bg-11-5123-2014.
39. Guilderson, T.P. S.J. Tumey, T.A. Brown, and K.O. Buesseler (2014). The 129-iodine content of subtropical Pacific waters: impact of Fukushima and other anthropogenic 129-iodine sources. *Biogeosciences*, 11, 4839-4852. DOI: 10.5194/bg-11-4839-2014.
40. Siegel, D.A., K.O. Buesseler, S.C. Doney, S.F. Sailley, M.J. Behrenfeld and P.W. Boyd (2014). Global assessment of ocean carbon export by combining satellite observations and food-web models, *Global Biogeochemical Cycles*, 181-196. DOI: 10.1002/2013GB004743.
41. Kameník, J., H. Dulaiova, K.O. Buesseler, S.M. Pike and K. Šťastná (2013). Cesium-134 and 137 activities in the central North Pacific Ocean after the Fukushima Dai-ichi nuclear power plant accident. *Biogeosciences*, 10, 6045-6052. DOI: 10.5194/bg-10-6045-2013.
42. Povinec, P.P., M. Aoyama, D. Biddulph, R. Breier, K. Buesseler, C.C. Chang, R. Golser, X.L. Hou, M. Jeřkovský, A.J.T. Jull, J. Kaizer, M. Nakano, H. Nies, L. Palcsu, L. Papp, M.K. Pham, P. Steier and L.Y. Zhang (2013). Cesium, iodine and tritium in NW Pacific waters – a comparison of the Fukushima impact with global fallout. *Biogeosciences*, 10, 6377–6416. DOI: 10.5194/bgd-10-6377-2013.
43. Estapa, M.L., K.O. Buesseler, E. Boss and G.P. Gerbi (2013). Autonomous, high-resolution observations of particle flux in the oligotrophic ocean. *Biogeosciences*, 10, 5517-5531. DOI: 10.5194/bg-10-5517-2013.
44. Rypina, I.I., S.R. Jayne, S. Yoshida, A.M. Macdonald, E. Douglass and K. Buesseler (2013). Short-term dispersal of Fukushima-derived radionuclides off Japan: Modeling efforts and model-data intercomparison. *Biogeosciences*, 10, 4973-4990. DOI: 10.5194/bg-10-4973-2013.
45. Casacuberta, N., P. Masqué, J. Garcia-Orellana, R. García-Tenorio and K.O. Buesseler (2013). 90Sr and 89Sr in seawater off Japan as a consequence of the Fukushima Dai-ichi nuclear accident. *Biogeosciences*, 10, 3649-3659. DOI: 10.5194/bg-10-3649-2013.

46. Maiti, K., M.A. Charette, K.O. Buesseler and M. Kahru (2013). An inverse relationship between production and export in the Southern Ocean. *Geophysical Research Letters*, 40, 1-5. DOI: 10.1002/grl.50219.
47. Charette, M.A., C.F. Breier, P.B. Henderson, S.M. Pike, I.I. Rypina, S.R. Jayne and K.O. Buesseler (2013). Radium-based estimates of cesium isotope transport and total direct ocean discharges from the Fukushima Nuclear Power Plant accident. *Biogeosciences*, 10, 2159-2167. DOI: 10.5194/bg-10-2159-2013.
48. Owens, S.A., K.O. Buesseler, C.H. Lamborg, J. Valdes, M.W. Lomas, R.J. Johnson, D.K. Steinberg and D.A Siegel (2013). A new time-series of particle export from neutrally buoyant sediment traps at the Bermuda Atlantic time-series study site. *Deep-Sea Research I*, 72, 34-47.
49. Tumey, S.J., T.P. Guilderson, T.A. Brown, T. Broek, K.O. Buesseler (2012). Input of I-129 into the Western Pacific Ocean Resulting from the Fukushima Nuclear Event. *Journal of Radioanalytical and Nuclear Chemistry*, 296, 957-962. DOI: 10.1007/s10967-012-2217-9.
50. Pike, S.M., K.O. Buesseler, C.F. Breier, H. Dulaiova, K. Stastna, and F. Sebesta (2012). Extraction of cesium in seawater off Japan using AMP-PAN resin and quantification via gamma spectroscopy and inductively coupled mass spectrometry. *Journal of Radioanalytical and Nuclear Chemistry*, 296(1), 369-374. DOI: 10.1007/s10967-012-2014-5.
51. Maiti, K., K.O. Buesseler, S.M. Pike, C. Benitez-Nelson, P. Cai, W. Chen, K. Cochran, M. Dai, F. Dehairs, B. Gasser, R.P. Kelly, P. Masque, L.A. Miller, J.C. Miquel, S.B. Moran, P.J. Morris, F. Peine, F. Planchon, A.A. Renfro, M. Rutgers van der Loeff, P.H. Santschi, R. Turnewitsch, J.T. Waples, and C. Xu (2012). Intercalibration studies of short-lived thorium-234 in the water column and marine particles. *Limnology and Oceanography Methods*, 10(9), 631-644.
52. McDonnell, A.M.P, and K.O. Buesseler (2012). A new method for the estimation of sinking particle fluxes from measurements of particle size distribution, sinking velocity, and carbon density. *Limnology and Oceanography Methods*, 10(5), 329-346.
53. Buesseler, K.O., S.R. Jayne, N.S. Fisher, I.I. Rypina, H. Baumann, Z. Baumann, C.F. Breier, E.M. Douglass, J. George, A.M. Macdonald, H. Miyamoto, J. Nishikawa, S.M. Pike and S. Yoshida (2012). Fukushima-derived radionuclides in the ocean and biota off Japan. *PNAS*, 109(16), 5984-5988. DOI: 10.1073/pnas.1120794109.
54. Buesseler, K., M. Aoyama, and M. Fukasawa (2011). Impacts of the Fukushima nuclear power plants on marine radioactivity. *Environmental Science & Technology*, 45, 9931-9935.
55. Baeyens, W., A.R. Bowie, K. Buesseler, M. Elskens, Y. Gao, C. Lamborg, M. Leermakers, T. Remenyi and H. Zhang (2011). Size-fractionated labile trace elements in the Northwest Pacific and Southern Oceans. *Marine Chemistry*, 126, 108-113.
56. Owens, S.A., Buesseler, K.O., and K.W.W. Sims (2011). Re-evaluating the <sup>238</sup>U-salinity relationship in seawater: Implications for the <sup>238</sup>U- <sup>234</sup>Th disequilibrium method. *Marine Chemistry*, 127, 31-39.
57. Buesseler, K. O., A.M.P. McDonnell, O.M.E. Schofield, D.K. Steinberg, and H.W. Ducklow (2010). High particle export over the continental shelf of the west Antarctic Peninsula. *Geophysical Research Letters*, 37, L22606. DOI: 10.1029/2010GL045448.
58. McDonnell, Andrew M.P., and Ken O. Buesseler (2010). Variability in the average sinking velocity of marine particles. *Limnology and Oceanography*, 55(5), 2085-2096.

59. Maiti, Kanchan, Claudia R. Benitez-Nelson and Ken O. Buesseler (2010). Insights into particle formation and remineralization using the short-lived radionuclide, thorium-234. *Geophysical Research Letters*, 37, L15608. DOI: 10.1029/2010GL044063.
60. Burd, Adrian B., Dennis A. Hansell, Deborah K. Steinberg, Thomas R. Anderson, Javier Arístegui, Federico Baltar, Steven R. Beupré, Ken O. Buesseler, Frank DeHairs, George A. Jackson, David C. Kadko, Rolf Koppelman, Richard S. Lampitt, Toshi Nagata, Thomas Reinthaler, Carol Robinson, Bruce H. Robison, Christian Tamburini and Tsuneo Tanaka (2010). Assessing the apparent imbalance between geochemical and biochemical indicators of meso- and bathypelagic biological activity: What the @!\$ is wrong with present calculations of carbon budgets? *Deep-Sea Research II*, 57(16), 1429-1592.
61. Pike, S.M., H. Dulaiova, K.O. Buesseler (2009). Assessment of size-fractionated species of curium-244 via alpha spectroscopy in groundwater. *Journal of Radioanalytical and Nuclear Chemistry*, 282, 1009. DOI: 10.1007/s10967-009-0214-4.
62. Buesseler, K.O., S. Pike, K. Maiti, C.H. Lamborg, D.A. Siegel and T.W. Trull (2009). Thorium-234 as a tracer of spatial, temporal and vertical variability in particle flux in the North Pacific. *Deep-Sea Research I*, 56 (1143-1167) DOI: 10.1016/j.dsr.2009.04.001.
63. Buesseler, Ken O., and Philip W. Boyd (2009). Shedding light on processes that control particle export and flux attenuation in the twilight zone of the open ocean. *Limnology and Oceanography*, 54(4), 1210-1232.
64. Buesseler, Ken O., Daniel I. Kaplan, Min Han Dai and Steven Pike (2009). Source-Dependent and Source-Independent Controls on Plutonium Oxidation State and Colloid Associations in Groundwater. *Environ. Sci. Technol.* 2009, 43 (5), 1322-1328 DOI: 10.1021/es8028318.
65. Trull, T.W., S. Bray, K.O. Buesseler, C. Lamborg, S. Manganini, C. Moy, and J. Valdes (2008). In-situ measurement of mesopelagic particle sinking rates and the control of carbon transfer to the ocean interior during the Vertical Flux in the Global Ocean (VERTIGO) voyages in the North Pacific. *Deep-Sea Research II*, 55(14-15), 1684-1695.
66. Dehairs, F., S. Jacquet, N. Savoye, B.A.S. Van Mooy, K.O. Buesseler, J.K.B. Bishop, C.H. Lamborg, M. Elskens, W. Baeyens, P.W. Boyd, K.L. Casciotti and C. Monnin (2008). Barium in twilight zone suspended matter as a potential proxy for particulate organic carbon mineralization: Results for the North Pacific. *Deep-Sea Research II*, 55(14-15), 1673-1683.
67. Elskens, M., N. Brion, K.O. Buesseler, B.A.S. Van Mooy, P. Boyd, F. Dehairs. N. Savoyes and W. Baeyens (2008). Primary, new and export production in the NW Pacific Subarctic Gyre during the VERTIGO K2 experiments. *Deep-Sea Research II*, 55(14-15), 1594-1604.
68. Wilson, S.E., D.K. Steinberg, and K.O. Buesseler (2008). Changes in fecal pellet characteristics with depth as indicators of zooplankton repackaging of particles in the mesopelagic zone. *Deep-Sea Research II*, 55(14-15), 1636-1647.
69. Lamborg, C.H., K.O. Buesseler, and P.J. Lam (2008). Sinking fluxes of minor and trace elements in the North Pacific Ocean measured during the VERTIGO program. *Deep-Sea Research II*, 55(14-15), 1564-1577.
70. Lamborg, C. et al. (2008). The flux of bio- and lithogenic material associated with sinking particles in the mesopelagic "Twilight Zone" of the northwest and north central Pacific Ocean. *Deep-Sea Research II*, 55(14-15), 1540-1563.
71. Buesseler, K.O., T.W. Trull, D.K. Steinberg, M.W. Silver, D.A. Siegel, S.-I. Saitoh, C.H. Lamborg, P.J. Lam, D.M. Karl, N.Z. Jiao, M.C. Honda, M.Elskens, F. Dehairs, S.L. Brown,

- P.W. Boyd, J.K.B. Bishop and R.R. Bidigare (2008b). VERTIGO (VERTical Transport In the Global Ocean): a study of particle sources and flux attenuation in the North Pacific. *Deep-Sea Research II*, 55(14-15), 1522-1539.
72. Buesseler, K.O. and R.S. Lampitt (2008). Introduction to Understanding the Ocean's Biological Pump: results from VERTIGO. *Deep-Sea Research II*, 55(14-15), 1519-1521.
  73. Buesseler, K.O., C. Lamborg, P. Cai, R. Escube, R. Johnson, S. Pike, P. Masque, D. McGillicuddy and E. Verdeny (2008). Particle fluxes associated with mesoscale eddies in the Sargasso Sea. *Deep-Sea Research II*, 55, 1426-1444.
  74. Steinberg, D.K., B.A.S. Van Mooy, K.O. Buesseler, P.W. Boyd, T. Kobari and D.M. Karl (2008). Bacterial vs. zooplankton control of sinking particle flux in the ocean's twilight zone. *Limnology and Oceanography*, 53(4), 1327-1338.
  75. Andrews, J.E., C. Hartin, and K.O. Buesseler (2008). Beryllium-7 analyses in seawater by low background gamma spectroscopy. *Journal of Radioanalytical and Nuclear Chemistry*, 277(1), 253-259.
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