

## CHRISTOPHER M. MARSAY, PH.D.

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## Education

- 2009-2012 PhD Oceanography – University of Southampton  
Thesis title: *“Particulate trace metals, carbon and nitrogen in the mesopelagic”*  
Advisors: Prof. Eric Achterberg and Dr. Richard Sanders
- 2001-2002 MSc Oceanography – University of Southampton  
Dissertation title: *“The role of particles in the cycling and fate of phosphorus in estuarine waters”*
- 1997-2001 MChem(Hons) Chemistry with Study in Industry – University of Sheffield

## Employment

- 2015-present Postdoctoral Research Associate, Skidaway Institute of Oceanography, University of Georgia. Advisor: Dr. Clifton Buck.
- 2013-2015 Postdoctoral Research Associate, Department of Earth & Ocean Sciences, University of South Carolina. Advisor: Dr. Seth John.
- 2012-2013 Postdoctoral Research Associate, Department of Ocean, Earth & Atmospheric Sciences, Old Dominion University. Advisor: Dr. Peter Sedwick.
- 2003-2008 Research Technician, Bermuda Institute of Ocean Sciences.

## Teaching and mentoring experience

- 2015 Earth and Ocean Sciences, University of South Carolina  
• Instructor for *MSCI313 – Chemistry of the Sea* (undergraduate)
- 2009-2012 Ocean and Earth Sciences, University of Southampton  
• Teaching assistant for *Introduction to Ocean Biogeochemistry* (undergraduate)  
• Laboratory and fieldwork-based teaching assistant for *Coastal and Estuarine Oceanography, Environmental Analytical Chemistry, Applied Biogeochemistry and Pollution* (undergraduate and graduate level courses).
- Various Supervision and/or training of students and visiting scientists using clean room facilities at Bermuda Institute of Ocean Science, National Oceanography Centre Southampton, University of South Carolina, Skidaway Institute of Oceanography.

## Research interests

- Marine biogeochemistry of iron and other trace elements
- Atmospheric deposition of trace elements and nutrients to the surface ocean
- Composition and biogeochemistry of marine particles
- Factors influencing the strength and efficiency of the biological carbon pump
- Biogeochemical cycling of trace elements in high-latitude marine environments

## Peer-reviewed publications (*h-index* 12; 527 citations – Google Scholar, 07/07/17)

1. **Marsay, C.M.**, P.J. Lam, M.I. Heller, J. Lee, S.G. John (2017). Distribution and isotopic signature of ligand-leachable particulate iron along the GEOTRACES GP16 East Pacific Zonal Transect. Accepted by *Marine Chemistry*, doi:10.1016/j.marchem.2017.07.003.
2. John, S.G., J. Helgøe, E. Townsend, T. Weber, T. DeVries, A. Tagliabue, K. Moore, P. Lam, **C.M. Marsay**, C. Till (2017). Biogeochemical cycling of Fe and Fe stable isotopes in the Eastern Tropical South Pacific. Accepted by *Marine Chemistry*, doi:10.1016/j.marchem.2017.06.003.
3. Fitzsimmons, J.N., S.G. John, **C.M. Marsay**, C. Hoffman, S. Nicholas, B.M. Toner, C.R. German, R.M Sherrell (2017). Reversible scavenging supports persistent iron in a distal hydrothermal plume. *Nature Geoscience*, 10(3), 195-201, doi:10.1038/ngeo2900.
4. Giering, S.L.C., R. Sanders, A.P. Martin, S.A. Henson, J.S. Riley, **C.M. Marsay**, D. Johns (2017). Particle flux in the oceans: challenging the steady state assumption. *Global Biogeochemical Cycles*, 31(1), 159-171, doi:10.1002/2016GB005424.
5. Ceballos-Romero, E., M. Villa-Alfageme, F.A.C. Le Moigne, S. Henson, **C.M. Marsay**, R.J. Sanders, R. Garcia-Tenorío (2016). Influence of bloom dynamics on particle export efficiency in the North Atlantic: a comparative study of radioanalytical techniques and sediment traps. *Marine Chemistry*, 186, 198-210, doi:10.1016/j.marchem.2016.10.001.
6. Rogan, N., E.P. Achterberg, F.A.C. Le Moigne, **C.M. Marsay**, A. Tagliabue, R.G. Williams (2016). Volcanic ash as an oceanic iron source and sink. *Geophysical Research Letters*, 43, doi:10.1002/2016GL067905.
7. **Marsay, C.M.**, R.J. Sanders, S.A. Henson, K. Pabortsava, E.P. Achterberg, R.S. Lampitt (2015). Attenuation of sinking particulate organic carbon flux through the mesopelagic ocean. *PNAS*, 112(4), 1089-1094, doi:10.1073/pnas.1415311112.
8. McGillicuddy, D.J., P.N. Sedwick, M.S. Dinniman, K.R. Arrigo, T.S. Bibby, B.J.W. Greenan, E.E. Hofmann, J.M. Klinck, W.O. Smith, S.L. Mack, **C.M. Marsay**, B.M. Sohst, G.L. van Dijken (2015). Iron supply and demand in an Antarctic shelf ecosystem. *Geophysical Research Letters*, 42(19), 8088-8097, doi:10.1002/2015GL065727.
9. Zhang, R., S.G. John, J. Zhang, J. Ren, Y. Wu, Z. Zhu, S. Liu, X. Zhu, **C.M. Marsay**, F. Wenger (2015). Transport and reaction of iron and iron stable isotopes in glacial meltwaters on Svalbard near Kongsfjorden: from rivers to estuary to ocean. *Earth and Planetary Science Letters*, 424, 201-211, doi:10.1016/j.epsl.2015.05.031.
10. 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, J.K.B. Bishop (2015). The oceanic toolbox for the collection of sinking and suspended marine particles. *Progress in Oceanography*, 133, 17-31, doi:10.1016/j.pocean.2015.01.007.
11. **Marsay, C.M.**, P.N. Sedwick, M.S. Dinniman, P.M. Barrett, S.L. Mack, D.J. McGillicuddy (2014). Estimating the benthic efflux of dissolved iron on the Ross Sea continental shelf. *Geophysical Research Letters*, 41(21), 7576-7583, doi:10.1002/2014GL061684.
12. Giering, S.L.C., R. Sanders, R.S. Lampitt, T.R. Anderson, C. Tamburini, M. Boutrif, M.V. Zubkov, **C.M. Marsay**, S.A. Henson, K. Saw, K. Cook, D.J. Mayor (2014). Reconciliation of the carbon budget in the ocean's twilight zone. *Nature*, 507, 480-483, doi:10.1038/nature13123.

13. Achterberg, E.P., C.M. Moore, S.A. Henson, S. Steigenberger, A. Stohl, S. Eckhardt, L.C. Avendano, M. Cassidy, D. Hembury, J.K. Klar, M.I. Lucas, A.I. Macey, **C.M. Marsay**, T.J. Ryan-Keogh (2013). Natural iron fertilization by the Eyjafjallajökull volcanic eruption. *Geophysical Research Letters*, 40, 921-926, doi:10.1002/grl.50221.
14. Le Moigne, F.A.C., M. Villa-Alfageme, R.J. Sanders, **C. Marsay**, S. Henson, R. Garcia-Tenorío (2013). Export of organic carbon and biominerals derived from  $^{234}\text{Th}$  and  $^{210}\text{Po}$  at the Porcupine Abyssal Plain. *Deep-Sea Research Part I*, 72, 88-101, doi:10.1016/j.dsr.2012.10.010.
15. Shelley, R.U., P.N. Sedwick, T.S. Bibby, P. Cabedo-Sanz, T.M. Church, R.J. Johnson, A.I. Macey, **C.M. Marsay**, E.R. Sholkovitz, S.J. Ussher, P.J. Worsfold, M.C. Lohan (2012). Controls on dissolved cobalt in surface waters of the Sargasso Sea: comparisons with iron and aluminum. *Global Biogeochemical Cycles*, 26, GB2020, doi:10.1029/2011GB004155.
16. Riley, J.S., R. Sanders, **C. Marsay**, F.A.C. Le Moigne, E.P. Achterberg, A.J. Poulton (2012). The relative contribution of fast and slow sinking particles to ocean carbon export. *Global Biogeochemical Cycles*, 26, GB1026, doi:10.1029/2011GB004085.
17. Sedwick, P.N., **C.M. Marsay**, B.M. Sohst, A.M. Aguilar-Islas, M.C. Lohan, M.C. Long, K.R. Arrigo, R.B. Dunbar, M.A. Saito, W.O. Smith, G.R. DiTullio (2011). Early season depletion of dissolved iron in the Ross Sea polynya: implications for iron dynamics on the Antarctic continental shelf. *Journal of Geophysical Research – Oceans*, 116, C12019, doi:10.1029/2010JC006553.
18. Sedwick, P.N., N.S. Garcia, S.F. Riseman, **C.M. Marsay**, G.R. DiTullio (2007). Evidence for high iron requirements of colonial *Phaeocystis antarctica* at low irradiance. *Biogeochemistry*, 83, 83-97, doi:10.1007/s10533-007-9081-7.
19. Sedwick, P.N., T.M. Church, A.R. Bowie, **C.M. Marsay**, S.J. Ussher, K.M. Achilles, P.J. Lethaby, R.J. Johnson, M.M. Sarin, D.J. McGillicuddy (2005). Iron in the Sargasso Sea (Bermuda Atlantic Time-series Study region) during summer: eolian imprint, spatiotemporal variability, and ecological implications. *Global Biogeochemical Cycles*, 19, GB4006, doi:10.1029/2004GB002445.

## Publications in review/in preparation

1. **Marsay, C.M.**, P.M. Barrett, D.J. McGillicuddy, P.N. Sedwick. Distributions, sources and transformations of dissolved and particulate iron on the Ross Sea continental shelf during summer. *Revisions submitted to Journal of Geophysical Research – Oceans* (07/2017).
2. Achterberg, E.P., S. Steigenberger, **C.M. Marsay**, F.A.C. Le Moigne, S.C. Painter, A.R. Baker, D.P. Connelly, C.M. Moore, A. Tagliabue, T. Tanhua. Iron biogeochemistry in the High Latitude North Atlantic Ocean. *Submitted to Scientific Reports* (07/2017).
3. Gomez-Saez, G.V., A.M. Pohlabeln, A. Stubbins, **C.M. Marsay**, T. Dittmar. Photochemical alteration of dissolved organic sulfur from sulfidic porewater. *Submitted to Environmental Science & Technology* (07/2017).
4. **Marsay, C.M.**, J.N. Fitzsimmons, M. Hatta, L. Jensen, S. John, D. Kadko, W. Landing, N.T. Lanning, P.L. Morton, A. Pasqualini, A.M. Shiller, B.S. Twining, L. Whitmore, R. Zhang, C.S. Buck. Dissolved and particulate trace metals in Arctic melt ponds. *In preparation for submission to Limnology and Oceanography by the end of July 2017*.

5. Marsay, C.M., E.P. Achterberg, P. Statham, R. Sanders and members of the IBIS science team. Particulate trace metal in the high latitude North Atlantic. *Manuscript in preparation for submission to Deep Sea Research I.*

## Invited seminars and public presentations

- 2016 From Antarctic shelf seas to Arctic melt ponds: insights into iron cycling in the polar regions. Department of Earth and Environmental Sciences Seminar Series, Rutgers University (28<sup>th</sup> September).
- 2016 US Arctic GEOTRACES 2015: oceanography at the North Pole. Rotary Club of Savannah Sunrise, Hilton Garden Inn, Savannah, GA (28<sup>th</sup> April).
- 2014 Dissolved iron supply to surface waters of the Ross Sea. SkIO Seminar Series, Skidaway Institute of Oceanography, University of Georgia (15<sup>th</sup> October).
- 2014 Processes regulating dissolved iron supply in the Ross Sea. MSCI Departmental Seminar, School of the Earth, Ocean and Environment, University of South Carolina (10<sup>th</sup> October).

## Fieldwork experience

- 2015 US Arctic GEOTRACES (GN01), *USCGC Healy*. Aerosol, precipitation and melt pond sampling for trace element and isotopes analysis.
- 2011/2012 PRISM-RS, Ross Sea, *RV Nathaniel B Palmer*. Seawater sampling; analysis of dissolved iron.
- 2010 Irminger Basin Iron Study (July-August), *RRS Discovery*. Sampling marine particles for trace metal, organic carbon and biomineral analysis, using sediment traps and in situ pumps; aerosol sampling.
- 2010 Extended Ellet Line, North Atlantic, *RRS Discovery*. Sampling marine particulate material for trace metal analysis using in situ pumps; aerosol sampling.
- 2010 Irminger Basin Iron Study (April-May), *RRS Discovery*. Sampling marine particulate material for trace metal analysis using in situ pumps; aerosol sampling.
- 2009 Porcupine Abyssal Plain, North Atlantic, *RRS Discovery*. Sampling sinking particulate material using sediment traps for organic carbon and biomineral analysis.
- 2009 Extended Ellet Line, North Atlantic, *RRS Discovery*. Sampling marine particulate material for trace metal analysis using in situ pumps.
- 2009 Faroe Islands, *RV Magnus Heinason*. Underway sampling of seawater samples for dissolved iron analysis.
- 2008 FeAST project (4 cruises), Sargasso Sea, *RV Atlantic Explorer*. Seawater and atmospheric sampling for trace metal analysis.
- 2007 FeAST project (3 cruises), Sargasso Sea, *RV Atlantic Explorer*. Seawater and atmospheric sampling for trace metal analysis.
- 2006 CORSACS-2, Ross Sea, *RV Nathaniel B Palmer*. Seawater sampling for trace metal analysis.
- 2005/2006 CORSACS-1, Ross Sea, *RV Nathaniel B Palmer*. Seawater sampling for trace metal analysis.
- 2004 FeATMISS project (2 cruises), Sargasso Sea, *RV Weatherbird II*. Seawater and atmospheric sampling for trace metal analysis.
- 2003 FeATMISS project, Sargasso Sea, *RV Weatherbird II*. Seawater and atmospheric sampling for trace metal analysis.

2003-2008      Tudor Hill Marine Atmospheric Observatory, Bermuda: collection of precipitation and bulk and/or size fractionated aerosol samples for trace metal, major ion, Be-7 analysis; collection of air samples for greenhouse gas analysis; maintenance of ozone detector, meteorological equipment and observatory infrastructure.

Miscellaneous estuarine and near-shore small boat fieldwork: 2001-2002, 2009-2012.

## Laboratory/analytical experience

- Extensive experience of working in, managing and/or maintaining clean laboratories in several different institutions.
- Familiar with established methods for processing particulate material for analysis of trace metals, organic carbon and biominerals.
- ICP-MS (Thermo-Scientific Element II sector field, Perkin Elmer NexION 300D quadrupole, Thermo-Scientific Neptune multi-collector) analysis of trace metals in natural samples, including method development.
- Use of flow-injection analysis for determination of dissolved iron.

## Conference presentations and posters (presenter underlined)

- Buck, C.S., W. Landing, A. Aguilar-Islas, **C. Marsay**, D. Kadko (upcoming, 2017). Aerosol deposition and fractional solubility of trace elements in the remote ocean. Goldschmidt Conference, Paris, France.
- **Marsay, C.M.**, W.M. Landing, P.L. Morton, B. Summers, C.S. Buck (2017). Dissolved and particulate trace elements in Arctic meltponds. (poster) Southeastern Biogeochemistry Symposium, Athens, GA, USA.
- Buck, C.S., **C. Marsay**, A. Ebling, P. Morton, B. Summers, W. Landing (2017). Aerosol concentration, composition, and fractional solubility on the US GEOTRACES Western Arctic cruise. ASLO Aquatic Sciences Meeting, Honolulu, HI, USA.
- **Marsay, C.M.**, W.M. Landing, P. Morton, B. Summers, S. Rauschenberg, B. Twining, J. Fitzsimmons, N. Lanning, C.S. Buck (2017). Dissolved and particulate trace elements in Arctic melt ponds. ASLO Aquatic Sciences Meeting, Honolulu, HI, USA.
- Mukherjee, P., Y. Gao, **C. Marsay**, C. Buck, W. Landing (2017). Characterization of the water-soluble inorganic and organic species on aerosols in the Arctic troposphere during summer. (poster) ASLO Aquatic Sciences Meeting, Honolulu, HI, USA.
- Summers, B.A., P.L. Morton, V.J. Salters, W.M. Landing, C.S. Buck, **C.M. Marsay** (2017). A comparison of extremes: Pb isotopic composition in Arctic and Indian aerosols. ASLO Aquatic Sciences Meeting, Honolulu, HI, USA.
- John, S.G., J.N. Fitzsimmons, **C.M. Marsay**, C.R. German, R.M. Sherrell (2016). Sinking feelings: iron isotope and global circulation model evidence for the fate of Fe from the East Pacific Rise hydrothermal system. Goldschmidt Conference, Yokohama, Japan.
- Gao, Y., C. Buck, **C. Marsay**, P. Mukherjee, W. Landing (2016). Mass-size distribution of selected nutrient elements in aerosols and their air-to-sea fluxes to the Arctic Ocean: preliminary results from the US GEOTRACES Arctic cruise in summer 2015. (poster) Ocean Sciences Meeting, New Orleans, LA, USA.

- **Marsay, C.M.**, C. Buck, W. Landing, N. Wyatt (2016). Atmospheric deposition to the Arctic Ocean: concentrations of dissolved trace metals elements in melt ponds during US GEOTRACES Western Arctic section. (poster) Ocean Sciences Meeting, New Orleans, LA, USA.
- **McGillicuddy, D.J.**, P.N. Sedwick, M.S. Dinniman, K. Arrigo, T.S. Bibby, B.J. Greenan, E.E. Hofmann, J.S. Klinck, W.O. Smith, S. Mack, **C.M. Marsay**, B.M. Sohst, G. van Dijken (2016). Iron supply and demand in an Antarctic shelf ecosystem. Ocean Sciences Meeting, New Orleans, LA, USA.
- **Ceballos-Romero, E.**, M. Villa-Alfageme, F. Le Moigne, S. Henson, **C.M. Marsay**, R. Garcia-Tenorio (2015). On the use of PELAGRA sediment traps and radionuclides ( $^{234}\text{Th}$ ,  $^{210}\text{Po}$ ) for estimating particle export efficiency. Goldschmidt Conference, Prague, Czech Republic.
- **Ceballos-Romero, E.**, M. Villa-Alfageme, F. Le Moigne, S.A. Henson, **C.M. Marsay** (2015). Comparison of PELAGRA sediment traps and radioactive as proxies for the estimation of export efficiency. ASLO Aquatic Sciences Meeting, Grenada, Spain.
- **Sanders, R.J.**, S.A. Henson, **C.M. Marsay** (2015). Controls over mesopelagic mineralisation. ASLO Aquatic Sciences Meeting, Grenada, Spain.
- **Ussher, S.J.**, M. Fishwick, **C. Marsay**, P.N. Sedwick (2015). Soluble and colloidal iron fractionation following aerosol dissolution in the surface Atlantic Ocean. ASLO Aquatic Sciences Meeting, Grenada, Spain.
- **Marsay, C.M.**, S.G. John (2014). Distribution and isotopic signature of “ligand-leachable” particulate iron in the eastern tropical South Pacific: initial results from US GEOTRACES EPZT. (poster) AGU Fall Meeting, San Francisco, CA, USA.
- **Sanders, R.S.**, R.S. Lampitt, S.L.C. Giering, T.R. Anderson, C. Tamburini, M. Boutrif, M.V. Zubkov, **C.M. Marsay**, S.A. Henson, K.A. Saw, K. Cook, D. Mayor (2014). The mesopelagic carbon budget at the PAP site. IMBER Open Science Conference, Bergen, Norway.
- **Ussher, S.J.**, M.P. Fishwick, **C.M. Marsay**, P.N. Sedwick (2014). Soluble and colloidal iron fractionation following aerosol dissolution in the surface Atlantic Ocean. (poster) International Conference on Atmospheric Dust, Castellaneta Marina, Italy.
- **Marsay, C.M.**, R.J. Sanders, K. Pabortsava, S.A. Henson, K. Saw, E. Achterberg (2014). Mesopelagic carbon flux attenuation in the North Atlantic. (poster) 1<sup>st</sup> Annual Southeastern Biogeochemistry Symposium, Atlanta, GA, USA.
- **Sedwick, P.N.**, D.J. McGillicuddy, M.S. Dinniman, T.S. Bibby, B.J.W. Greenan, E.E. Hofmann, J.S. Klinck, **C.M. Marsay**, W.O. Smith, B.M. Sohst (2014). Importance of sea-ice derived iron for primary production in the Ross Sea Polynya: results from the PRISM project. International Symposium on Sea Ice in a Changing Environment, Hobart, Australia.
- **Marsay, C.M.**, P.N. Sedwick, M.S. Dinniman, B.M. Sohst, D. McGillicuddy (2014). An assessment of benthic iron efflux on the Ross Sea continental shelf and its contribution to surface water dFe supply. (poster) Ocean Sciences Meeting, Honolulu, HI, USA.
- **McGillicuddy, D.J.**, P.N. Sedwick, M.S. Dinniman, K.R. Arrigo, and members of the PRISM science team (2014). Iron supply and demand in an Antarctic shelf ecosystem. Ocean Sciences Meeting, Honolulu, HI, USA.
- **Sanders, R.**, S.L. Giering, J.S. Riley, **C. Marsay**, S. Henson (2013). Balancing the midwater carbon budget, non steady state processes and slow sinking material in the oceans interior. Challenger Society for Marine Science, Marine Biogeochemistry Forum, Leeds, UK.

- Marsay, C.M., P.N. Sedwick, M. Dinniman, D. McGillicuddy (2013). Assessing the benthic source of dissolved iron on the Ross Sea continental shelf. (poster) Gordon Research Conference in Chemical Oceanography, Biddeford, ME, USA.
- Achterberg, E.P., C.M. Moore, S. Steigenberger, **C.M. Marsay**, N. Rogan, S. Henson, R. Sanders (2013). Iron biogeochemistry in the high latitude North Atlantic Ocean. ASLO Aquatic Sciences Meeting, New Orleans, LA, USA.
- Giering, S.L., R. Sanders, R.S. Lampitt, T.R. Anderson, **C.M. Marsay**, C. Tamburini, M. Boutrif, K. Cook, S.A. Henson, D.J. Mayor (2013). Balancing the carbon budget in the twilight zone. ASLO Aquatic Sciences Meeting, New Orleans, LA, USA.
- Sedwick, P.N., D.J. McGillicuddy, M.S. Dinniman, T.S. Bibby, B.J. Greenan, E.E. Hofmann, J.S. Klinck, **C.M. Marsay**, W.O. Smith, B.M. Sohst (2013). An assessment of iron sources on the Ross Sea continental shelf: initial results from the PRISM project. ASLO Aquatic Sciences Meeting, New Orleans, LA, USA.
- Ussher, S.J., **C.M. Marsay**, P.N. Sedwick, E.P. Achterberg, P.J. Worsfold (2012). Spatial and temporal trends in soluble, colloidal and labile particulate iron in the Atlantic Ocean. (poster) Ocean Sciences Meeting, Salt Lake City, UT, USA.
- Giering, S.L.C., R. Sanders, R.S. Lampitt, **C.M. Marsay**, K. Cook, D.J. Mayor (2011). Mesoplankton diel migration balances twilight zone carbon budgets. 3<sup>rd</sup> GEOTRACES Data-Model Synergy Workshop, Barcelona, Spain.
- **Marsay, C.M.**, E. Achterberg, R. Sanders, S. Ward, P. Statham (2011). Fe:C ratios of sinking particulate material in the upper mesopelagic: measurements from drifting sediment traps and in-situ pumps in the Irminger and Iceland Basins. (poster) 3<sup>rd</sup> GEOTRACES Data-Model Synergy Workshop, Barcelona, Spain.
- Sanders, R., J. Riley, F. Le Moigne, S. Giering, **C. Marsay**, A. Martin, R.S. Lampitt (2011). Lessons learned from sediment traps and other strategies about organic C fluxes – challenges and questions for the TEI community. 3<sup>rd</sup> GEOTRACES Data-Model Synergy Workshop, Barcelona, Spain.
- Riley, J. S., R. Sanders, **C. Marsay**, F.A.C. Le Moigne, E.P. Achterberg, A.J. Poulton (2011). The relative contribution of fast and slow sinking particles to ocean carbon export. (poster) Challenger Society for Marine Sciences, Marine Biogeochemistry, Portsmouth, UK.
- Giering, S.L.C., R. Sanders, R.S. Lampitt, C. Marsay, D.J. Mayor (2011). Mesozooplankton demands exceed carbon flux in the twilight zone. 5<sup>th</sup> International Zooplankton Production Symposium, Pucón, Chile.
- **Marsay, C.M.**, E.P. Achterberg, R.J. Sanders, P.J. Statham, R.S. Lampitt (2011). Mesopelagic-depth measurements of POC, biominerals and particulate trace metals in the North Atlantic, using neutrally buoyant, free-drifting sediment traps (2011). ASLO Aquatic Sciences Meeting, San Juan, Puerto Rico.
- **Marsay, C.M.**, R. Sanders, E.P. Achterberg, P.J. Statham, R.S. Lampitt (2010). Mesopelagic-depth measurements of sinking carbon and nitrogen fluxes at the Porcupine Abyssal Plain (PAP) site, using neutrally buoyant PELAGRA traps. Challenger Conference for Marine Sciences, Southampton, UK.
- **Marsay, C.M.**, R. Sanders, K. Saw, S. Ward, P. Statham (2010). Sinking carbon and nitrogen fluxes at the Porcupine Abyssal Plain (PAP) site: measurements at mesopelagic depths using neutrally buoyant PELAGRA traps. (poster) COCOS Workshop, Bergen, Norway.

- Lohan, M.C., P.N. Sedwick, **C.M. Marsay**, A.M. Aguilar-Islas, Y. Feng, D.A. Hutchins, G.R. DiTullio (2010). The impacts of increased ice cover, CO<sub>2</sub> and light on iron speciation in the Ross Sea. Ocean Sciences Meeting, Portland, OR, USA.
- Lohan, M.C., P.N. Sedwick, **C.M. Marsay**, A.M. Aguilar-Islas, Y. Feng, C. Hare, D.A. Hutchins, G.R. DiTullio (2009). The effects of increased CO<sub>2</sub> and light on Fe speciation in the Ross Sea. ASLO Aquatic Sciences Meeting, Nice, France.
- Sedwick, P.N., **C.M. Marsay**, A.R. Bowie, T.M. Church, J. Cullen, T. Giesbrecht, R. Johnson, M. Lohan, D. McGillicuddy, S. Ussher (2008). Dynamics and speciation of dissolved iron in the Sargasso Sea (BATS region). AGU Fall Meeting, San Francisco, CA, USA.
- **Marsay, C.M.**, P.N. Sedwick, R.J. Johnson, M.C. Lohan, D.J. McGillicuddy, T.M. Church, the FeAST science team (2008). Pronounced temporal and mesoscale variability of dissolved iron in the Sargasso Sea (BATS region). Ocean Sciences Meeting, Orlando, FL, USA.
- Sedwick, P.N., **C.M. Marsay**, A.M. Aguilar-Islas, M.C. Lohan, G.R. DiTullio, CORSACS science team (2008). Early and pervasive iron limitation in the Ross Sea polynya. Ocean Sciences Meeting, Orlando, FL, USA.
- Sedwick, P.N., T.M. Church, A.R. Bowie, **C.M. Marsay**, K.M. Achilles, S.J. Ussher, P.J. Lethaby, R.J. Johnson, D.J. McGillicuddy (2005). Iron in the Sargasso Sea during summer: Aeolian imprint, spatiotemporal variability, and ecological implications. ASLO Aquatic Sciences Meeting, Salt Lake City, UT, USA.
- Bowie, A.R., P.N. Sedwick, S. Ussher, **C.M. Marsay**, T.M. Church (2004). Effect of mineral dust deposition on iron(II) distribution in the Sargasso Sea. ASLO/TOS Ocean Research Conference, Honolulu, HI, USA.

## Workshops attended

- Arctic GEOTRACES Early Career Workshop, Aquatic Sciences meeting, Honolulu, HI, USA. February 2017.
- US GEOTRACES EPZT data workshop, Catalina Island, CA, USA. November 2015.
- 3<sup>rd</sup> GEOTRACES Data-Model Synergy Workshop, Barcelona, Spain. November 2011.
- Coordination Action Carbon Observation System (COCOS) Workshop, Bergen, Norway. June 2010.
- Aerosol Iron Solubility Meeting, Norwich, UK. February 2009.

## Professional service

- Reviewer for *Biogeosciences*, *Antarctic Science*, *Journal of Marine Systems*.
- Student presentation judge at:
  - 2017 4<sup>th</sup> Annual Southeastern Biogeochemistry Symposium, Athens, GA
  - 2016 Ocean Sciences meeting, New Orleans, LA

## Awards

- UGA Office of the Vice Provost for Research Travel Assistance Award (2016)
- Challenger Society for Marine Science Travel Award (2011)
- NOCS Studentship (co-funded by University of Southampton and NERC) (2009-2011)

## **Professional affiliations**

Association for the Sciences of Limnology and Oceanography  
American Geophysical Union