

Rachel H. R. Stanley

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Education

Massachusetts Institute of Technology and Woods Hole Oceanographic Institution Joint Program,
Ph.D. Chemical Oceanography Cambridge and Woods Hole, MA
Thesis Title: "A Determination of Air-Sea Gas Exchange and Upper Ocean Biological Production from Five Noble Gases and Tritogenic Helium-3" August, 2007. Advisor: Dr. William J. Jenkins.

Massachusetts Institute of Technology Cambridge, MA
B.S. Chemistry with a Minor in Earth Sciences, 2000. GPA 5.0/5.0

Research Positions

Assistant Professor, Department of Chemistry, Wellesley College, Wellesley, MA. Jan 2015 to present.

Adjunct Scientist, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution, Woods Hole, MA. May 2016 to 2021.

Assistant Scientist, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution, Woods Hole, MA. July 2009 to Dec 2014.

NOAA Climate Change and Hess Postdoctoral Fellow, Department of Geosciences, Princeton University, Princeton NJ. Aug 2007 to June 2009

Graduate Student Fellow and Research Assistant, MIT-WHOI Joint Program in Chemical Oceanography, Woods Hole, MA. June 2001 to Aug 2007

Fulbright Fellow, National Oceanography Centre, Southampton, United Kingdom. September 2000 to June 2001.

Summer Student Fellow, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution, Woods Hole, MA. June 1999 to September 1999.

Undergraduate Research Assistant, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, Cambridge, MA January 1997 to June 2000.

Fellowships and Awards

United States Representative to SOLAS, 2016 - present
NOAA Climate and Global Change Postdoctoral Fellowship, 2007-2009
Hess Postdoctoral Fellow (Princeton University), 2007-2009
Best Student Poster at International SOLAS conference, 2004
National Defense Science and Engineering Fellowship, 2001-2003
National Science Foundation Fellowship, 2001 (declined)
Fulbright Fellowship to the United Kingdom, 2000
Elected to Phi Beta Kappa, MIT chapter, 2000
American Chemical Society Award for Excellence in Analytical Chemistry, 2000

Best Undergraduate Student Advisor, MIT, 1999
Barry Goldwater Scholar, 1998
Westinghouse "Top 40" Finalist, 1996

Research Interests

Environmental inorganic chemistry
Gas biogeochemistry
Air-sea gas exchange
Carbon and nutrient cycling
Coastal and upper ocean productivity

Teaching and Mentoring

Graduate Student Advisor, MIT/WHOI Joint Program:

Evan Howard (2011-2016)
Cara Manning (2011-2016)

Postdoctoral Advisor/Co-Advisor:

Dave Nicholson (2009-2011)

Undergraduate Student Advisor (* denotes undergraduate honors thesis):

Paul Roman, Melika Uter (Summer, 2010)
Zoe Sandwith (Spring 2011)
Alexandra Dunn, Jen Karolewski (Summer, 2014)
Oana Diaconescu, Kanupriya Gupta, (Summer 2015)
Katherine Chan*, Brenda Ji* (Summer, 2015 to spring 2018)
Karley Bussow, Emily Neel (Fall 2015 to Spring 2016)
Elle Friedberg (Fall 2015 to Spring 2017)
Alice Zhou *, Haley Pleskow (Spring 2016 to Spring 2017)
Yetunde Oyenuga (Summer 2016)
Emma Van Scoy (Summer 2016 to Spring 2017)
Charli Klein (Fall 2016 to Spring 2017)
Anna Garcia (Spring 2017)
Helene Alt (Fall 2016 to present)
Callie Krevanko* (Summer 2017 to Spring 2018)
Marissa Menzel (Spring 2017 to Fall 2018)
Elizabeth Lambert (Spring 2017 to present)
Lumi Kinjo*, Danielle Aldrett (Fall 2017 to present)
Emily Kopp (Summer 2018 to present)
Katherine Muniz (Spring 2019 to present)

High School Student Mentor:

Kim Johansson (2009-2010)
Aoife Callinan (Summer, 2012)

Thesis Committee:

Carly Buchwald (2010 to 2012) (PhD)
Alexandra Dunn (2015) (undergraduate)
Fides Nyaisonga, Sarah Lee, Rosalie Sharp, and Helena McMonagle (2016) (undergraduate)
Jean Huang and Katrina Montales (2018) (undergraduate)
Erika Kusaka, Lucy Wanzer, Juyoung Kwag, Cristina Buffo (2019) (undergraduate)

Teaching at Wellesley College:

Inorganic Chemistry (Chem 341): Spring 2015, 2016, 2017, 2019

Chemical Analysis and Equilibrium (Chem 205): Spr 2015, 2016, 2017. Fall 2015, 2016, 2017.
Aquatic Chemistry Seminar (Chem 306): Fall, 2015.
Communicating and Teaching Chemistry (Chem 306): Fall 2017
Elements and the Environment (Chem 103): Spring 2019
Graduate Teaching in MIT/WHOI Joint Program:
Marine Chemistry Seminar (course 12.759). Spring 2011 and Spring 2013.
Communicating Ocean Science (course 12.755), Spring 2014
Graduate teaching assistant: MIT/WHOI: Marine Chemistry (course 12.742). Fall 2003.
Undergraduate teaching assistant: MIT: Thermodynamics (course 5.60). Spring 2000.
Undergraduate advisor for freshmen seminar on global change: MIT. Fall 1998 and 1999.

Publications

(underlined names represent undergraduate student co-authors. papers denoted by * are authored by current or former supervised graduate students of Stanley)

*Manning, C.C., **R. H. R. Stanley**, D. P. Nicholson, B. Loose, A. Lovely, P. Schlosser, and B. G. Hatcher. “Changes in gross primary production, net community production, and air-water gas exchange during seasonal ice melt in the Bras d’Or Lake, a Canadian estuary” submitted to Biogeosciences.

Ji, B.Y., Z. O. Sandwith, W. J. Williams, O. Diaconescu, R. Ji, Y. Li, E. Van Scoy, M. Yamamoto-Kawai, S. Zimmermann, **R. H. R. Stanley**. “Variations in Rates of Biological Production in the Beaufort Gyre as the Arctic Changes: Rates from 2011 to 2016” in press in Journal of Geophysical Research: Oceans.

Vonk, J.E., Drenzek, N.J., Hughen K.A., **Stanley, R.H.R.**, McIntyre, C., Montlucon, D.B., Giosan, L., Southon, J.R., Santos, G. M., Druffel, E. R., Andersson A A., Skold, M., Eglinton, T.I. “Temporal deconvolution of vascular plant signatures exported from terrestrial watersheds.” *Geochimica et Cosmochimica Acta* 244. 502–521. (2019).

Stanley, R. H. R., Ocean thermometer from the past. *Nature* 553, 30-31 (2018).

*Howard, E. M., I. Forbrich, A. E. Giblin, D. E. Lott III, K. L. Cahill, **R. H. R. Stanley**, “Using Noble Gases to Compare Parameterizations of Air-Water Gas Exchange and to Constrain Oxygen Losses by Ebullition in a Shallow Aquatic Environment.” *Journal of Geophysical Research: Biogeosciences*. 123, 2711–2726. doi: 10.1029/2018JG004441 (2018).

Nicholson, D. P., **Stanley, R.H.R.**, and Doney, S.C. “A Phytoplankton Model for the Allocation of Gross Photosynthetic Energy Including the Trade-offs of Diazotrophy”, *Journal of Geophysical Research Biogeosciences*, (2018).

Stanley, R. H. R., D. J. McGillicuddy, Jr., Z. O. Sandwith, and H. *Pleskow. “Submesoscale Hotspots of Productivity and Respiration: Insights from High-Resolution Oxygen and Fluorescence Sections”, *Deep Sea Research I*, 130, 1-11. (2017).

*Howard, E. M., C.A.Durkin, G.M.M. Hennon, F. Ribalet, and **R.H.R. Stanley**. “Biological production, export efficiency, and phytoplankton communities across 8000 km of the South Atlantic: Basin scale similarity with mesoscale variability”. *Global Biogeochemical Cycles*. 31, 1066-1088, doi: doi:10.1002/2016GB005488. (2017)

- *Manning, C. C., E. M. *Howard, D. P. Nicholson, B. Ji, Z. O. Sandwith, and **R. H. R. Stanley**, “Revising estimates of aquatic gross oxygen production by the triple oxygen isotope method to incorporate the local isotopic composition of water.” *Geophysical Research Letters*. 2017. 44. doi: 10.1002/2017GL074375 (2017).
- Spivak, A. C., K. Gosselin, E. M. Howard*, G. Mariotti, I. Forbrich, **R. H. R. Stanley**, S. P. Sylva. “Shallow ponds are heterogeneous habitats that impact salt marsh ecosystem functioning” *Journal of Geophysical Research: Biogeosciences*. 122, 1371–1384, doi:10.1002/2017JG003780. (2017).
- Haskell, W. Z., M. G. Prokopenko, D. E. Hammond, Z. O. Sandwith, and **R. H. R. Stanley**. “Annual Cyclicity in Export Efficiency in the Inner Southern California Bight”. *Global Biogeochemical Cycles*. 31, doi:10.1002/2016GB005561. (2017).
- Manning*, C. C., **R. H. R. Stanley**, D. P. Nicholson, J. M. Smith, J. Timothy Pennington, M. R. Fewings, M. E. Squibb, and F. P. Chavez. “Impact of recently upwelled water on productivity investigated using in situ and incubation-based methods in Monterey Bay” *Journal of Geophysical Research: Ocean*. 122, 1901–1926, doi:10.1002/2016JC012306. (2017).
- Haskell, W. Z., M. G. Prokopenko, **R. H. R. Stanley**, W. Berelson, L. Aluqihare, J. C. Fleming, and J. J. Baronas. “An Organic Carbon Budget for Coastal Southern California Determined By Estimates of Vertical Nutrient Flux, Net Community Production and Export” *Deep-Sea Research Part I*. 116: 49-76 (2016).
- Kearns, P. K., J. H. Angell, E. M. Howard*, L. A. Deegan, **R. H. R. Stanley**, and J. L. Bowen. “Nutrient enrichment induces high rates of dormancy and decreases diversity of active bacterial taxa.” *Nature Communications*. 7, doi: 10.1038/ncomms12881 (2016).
- Haskell, W. Z., M. G. Prokopenko, and **R. H. R., Stanley**, “Estimates of vertical turbulent mixing used to determine a vertical gradient in net and gross oxygen production in the oligotrophic South Pacific Gyre”. *Geophysical Research Letters*. 43, 7590–7599, doi:10.1002/2016GL069523. (2016).
- Manning*, C. C., **R. H. R. Stanley**, and D. E. Lott, III. “Continuous measurement of dissolved Ne, Ar, Kr and Xe ratios with a field-deployable gas equilibration mass spectrometer.” *Analytical Chemistry*. 88:3040-3048. DOI: 10.1021/acs.analchem.5b03102. (2016).
- Manning*, C.C., **R. H. R. Stanley**, D. P. Nicholson, M. E. Squibb, Quantifying air-sea gas exchange using noble gases in a coastal upwelling zone, in: Asher, W.E., Jessup, A. (Eds.), *Proceedings of the 2015 Gas Transfer Water Surfaces Conference*. (2016).
- Siegel, D., K. Buesseler, M. Behrenfeld, C. Benitez-Nelson, E. Boss, M. Brzezinski, A. Burd, C. Carlson, E. D’Asaro, S. Doney, M.J. Perry, **R. Stanley**, D. Steinberg . “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 (2016).
- Buchwald, C., A. E. Santoro, **R. H. R. Stanley**, and K. L. Casciotti, “Nitrogen cycling in the secondary nitrite maximum of the Eastern Tropical North Pacific off Costa Rica”. *Global Biogeochemical Cycles*. 29: 2061-2081. doi: 10.1002/2015GB005187 (2015).
- Estapa M. L., D. A. Siegel, K. O. Buesseler, **R. H. R. Stanley**, M. W. Lomas, and N. B. Nelson

“Decoupling of net community production and export production at submesoscale fronts in the Sargasso Sea” *Global Biogeochemical Cycles*. 29:1266-1282. doi:10.1002/2014GB004913. (2015).

Stanley, R. H. R., W. J. Jenkins, S. C. Doney, and D. E. Lott, III “The ³He Flux Gauge in the Sargasso Sea: a Determination of Physical Nutrient Fluxes to the Euphotic Zone at the Bermuda Atlantic Time Series Site.” *Biogeosciences*. 12, 5199-5210. doi: 10.5194/bg-12-5199-2015 (2015).

Stanley, R. H. R., Z. O. Sandwith, and W. J. Williams. “Rates of summertime biological productivity in the Beaufort Gyre: A comparison between record-low and more typical ice conditions” *Journal of Marine Systems*. 147, 29-44. (2015).

Goldman, J., S. Kranz, J. Young, P. Tortell, **R. H. R. Stanley**, M. L. Bender, F. Morel. “Gross and net production during the spring bloom along the Western Antarctic Peninsula” *New Phytologist*, 205. 182-191. (2015).

*Nicholson, D. P., **Stanley, R. H. R.**, and Doney, S. C. “The triple oxygen isotope tracer of primary productivity in a dynamic ocean.” *Global Biogeochemical Cycles*. 28, 538–552, doi:10.1002/2013GB004704. (2014).

Stanley, R. H. R., and E. Howard*, “Quantifying rates of benthic microalgal photosynthesis using the triple-isotope composition of dissolved oxygen.” *Limnology and Oceanography Methods*. 11 360-373. (2013).

Stanley, R.H.R. and W. J. Jenkins “Noble gases in seawater as tracers for physical and biogeochemical ocean processes” in *The Noble Gases as Geochemical Tracers*, Ed. P. Burnard. Springer Verlag. Berlin. pp.55-80. (2013)

Stanley, R.H.R., S.C. Doney, W. J. Jenkins, and D.E. Lott III, “Apparent oxygen utilization rates calculated from tritium and helium-3 profiles at the Bermuda Atlantic Time-series Study site.” *Biogeosciences*. doi:10.5194/bg-9-1969-2012:9977-10015. (2012)

*Nicholson, D. P., **Stanley, R. H. R.**, Barkan, E., Karl, D. M., Luz, B., Quay, P.D., and Doney, S.C. “Evaluating triple oxygen isotope estimates of gross primary production at the Hawaii Ocean Time-series and Bermuda Atlantic Time-series Study sites.” *J Geophys Res-Oceans* 117:C05012 doi:10.1029/2010JC006856. (2012).

Stanley, R.H.R., J.B. Kirkpatrick, N. Cassar, B.A. Barnett, and M.L. Bender. Net community production and gross production rates in the Western Equatorial Pacific. *Global Biogeochemical Cycles*. doi:10.1029/h2009GB003651. (2010).

Stanley, R.H.R., W. J. Jenkins, S. C. Doney, and D. E Lott III. “Noble Gas Constraints on Air-Sea Gas Exchange and Bubble Fluxes.” *Journal of Geophysical Research - Oceans*, 114 doi:10.1029/2009JC005396. (2009).

Stanley, R.H.R., B. Baschek, D.E. Lott III, and W.J. Jenkins. “A new method for measuring five noble gases using stainless steel cryogenic trapping and quadrupole mass spectrometry.” doi:10.1029/2009GC002429. (2009).

Stanley, R.H.R., W.J. Jenkins and S.C. Doney. “Quantifying seasonal air-sea gas exchange processes using noble gas time-series: A design experiment.” *Journal of Marine Research*. 64: 267-295. (2006).

Stark, S., P.J. Statham, **R.H.R. Stanley**, and W.J. Jenkins. "Using tree ring cellulose as a tool to estimate past tritium inputs to the ocean." *Earth Planet. Sci. Lett.* 237: 341-353. (2005).

Stanley, R.H.R., K.O. Buesseler, S.J. Manganini, D.K. Steinberg and J.R. Valdes. "A comparison of major and minor elemental fluxes collected in neutrally buoyant and surface-tethered sediment traps." *Deep Sea Research I.* 51: 1387-1395. (2004).

Brabander, D.J., N. Keon, N., **R.H.R. Stanley**, and H.F. Hemond. "Intra-ring variability of Cr, As, Cd, and Pb in red oak revealed by secondary ion mass spectrometry: Implications for environmental biomonitoring." *Proceedings of the National Academy of Sciences of the United States of America*, 96(25): 14635-14640. (1999) .

Stanley, R.H.R., N.V. Dokholyan, S.V. Buldyrev, S. Havlin and H.E. Stanley. "Clustering of identical oligomers in coding and noncoding DNA sequences." *Journal of Biomolecular Structure & Dynamics*, 17(1): 79-87. (1999).

Buldyrev, S.V. N.V. Dokholyan, S. Havlin, H.E. Stanley, and **R.H.R. Stanley**. "Expansion of tandem repeats and oligomer clustering in coding and noncoding DNA sequences." *Physica A-Statistical Mechanics and Its Applications*, 273(1-2): 19-32. (1999).

Selected Presentations

* denotes invited presentation

Stanley, R. H. R., L. Kinjo, A. Wyatt-Smith, C. Krevanko, H. Alt, E. Kopp, D. Aldrett, and B. K Haus. "Relating air-sea gas fluxes to bubble distributions at high wind speeds." Oral presentation at the 2019 SOLAS Open Science Meeting (2019) Hokkaido, Japan

Stanley, R. H. R. "Noble gases quantify air-sea gas exchange at high wind speeds in a wind-wave tank." Invited departmental seminar at the University of New Hampshire. (2019) Durham, NH

Stanley, R.H.R., B.Y. Ji, Z. O. Sandwith, and W. J. Williams. "Variability in rates of gross primary production and net community production as deduced from gas tracers in the Beaufort Sea". Oral presentation at 2018 Ocean Sciences Meeting. (2018). Portland, OR

Stanley, R. H. R.. "The carbon cycle in the Arctic Ocean: What is changing and by how much?" Invited seminar in the Chemical Oceanography, Geography and Geochemistry Seminar series at MIT. (2017) Cambridge, MA

Stanley, R.H.R., B. Y. Ji, Z. O. Sandwith, and W. J. Williams. "Gas tracers reveal changes in biological production in the coastal Beaufort Sea." Invited talk at the Coastal Estuarine Research Federation semi-annual conference. (2017). Providence, RI

Stanley, R. H. R., B. Ji, O. Diaconescu, Z. O. Sandwith and W. J. Williams. "Multiyear record of rates of Arctic biological production yield possible response to ice cover." Oral presentation at the 2016 Ocean Sciences Meeting. (2016) New Orleans, LA

Stanley, R. H. R., C. C. Manning, and D. Nicholson, “Noble Gases: Tracers of air-sea gas exchange”.
Keynote speaker at the International Gas Transfer at Water Surfaces Meeting (2015). *
Seattle, WA

Stanley, R. H. R., “Inorganic clues for quantifying biogeochemical cycles: Noble Gases and Triple
Oxygen Isotopes”. Oral presentation at the Boston Regional Inorganic Conference (2015). *
Worcester, MA

Stanley, R. H. R. “The Interplay between Biological Productivity and Sea Ice in the Changing Arctic
Ocean: A Geochemical Perspective”. Earth and Planetary Sciences Department Seminar. University of
California, Berkeley. (2014). *
Berkeley, CA

Stanley, R. H. R. “Biological Productivity in the Changing Arctic Ocean: Insights from Triple Oxygen
Isotopes.” Earth and Planetary Sciences Department Seminar. Harvard University. (2013). *
Cambridge, MA

Stanley, R. H. R. “Estimates of rates of biological productivity at BATS: Is there convergence?” Ocean
Carbon and Biogeochemistry Annual Summer ScienceWorkshop. (2013).*
Woods Hole, MA

Stanley, R. H. R. “Net Community Production and Gross Primary Production from Dissolved Gas
Tracers.” EXPORTS workshop. (2013).*
Santa Barbara, CA

Stanley, R.H.R., Z.O. Sandwith, and W.J. Williams, “Rates of Summertime Biological Productivity
in the Beaufort Gyre: A Comparison between the Record-Low Ice Conditions of August 2012 and
Typical Conditions of August 2011”. Liege Colloquium on Ocean Productivity. (2013)
Liege, Belgium

Stanley, R.H.R., Z.O. Sandwith, and W.J. Williams, “The Effect of Sea Ice on Gross Primary Production
and Net Community Production: a Study in the Canada Basin.” SOLAS Open Science Conference.
(2012).
Cle Elum, WA

Stanley, R.H.R. “Oxygen, Oxygen Isotopes, and Argon as Tracers for Submesoscale Variations in
Biological Productivity.” Marine Geology and Geophysics Seminar. University of Rhode Island,
Graduate School of Oceanography. (2011).*
Narragansett, RI

Stanley, R.H.R. “Submesoscale Variations in Biological Productivity: Insights from Dissolved Gases”.
Department of Marine Sciences Seminar. University of Connecticut (2011).*
Groton, CT

Stanley, R.H.R. “New observations of variability in biological production: Insights from gas tracers.”
SMASST Seminar. University of Massachusetts, Dartmouth (2011). *
Dartmouth, MA

Stanley, R.H.R. “Submesoscale NCP and GPP rates from Underway O₂/Ar and Triple Oxygen Isotope
Measurements.” Presentation at ACE Ocean Productivity and Carbon Cycle Workshop. (2011)*
Santa Barbara, CA

Stanley, R.H.R. “Variability in Biological Production: Insights from Dissolved Oxygen.” Chemical
Oceanography and Biogeochemistry Seminar. Massachusetts Institute of Technology. (2011)*

Cambridge, MA

Stanley, R.H. R. "Dissolved oxygen in the ocean: Why is it changing and what can it tell us about biological productivity?" Environmental Science and Engineering Seminar. Caltech. (2011)*
Pasadena, CA

Stanley, R.H.R., Jenkins, W.J., Doney, S.C., and Lott, D.E. "Export production quantified by apparent oxygen utilization rates at the Bermuda Atlantic Time-series Study site." ASLO meeting. (2011).
San Juan, PR

Stanley, R.H.R. "Air Air-sea gas exchange and bubble fluxes: Constraints from noble gases." Departmental Seminar at the University of Delaware. (2010)*
Newark, DE

Stanley, R.H.R. "Towards an improved understanding of biological production and air-sea gas exchange." Departmental Seminar at the University of Washington. (2010)*
Seattle, WA

Stanley, R.H.R. "Air-sea gas exchange and biological production: Insights from dissolved gases." Departmental Seminar at the University of Victoria. (2010)*
Victoria, Canada

Stanley, R.H.R. and R. Ferrari "The dissolved gas toolbox for quantifying biological production" Ocean Sciences Meeting (2010)*
Portland, OR

Stanley, R.H.R.,and M. L. Bender "The triple isotopic signature of oxygen in the Equatorial Pacific." Goldschmidt Conference. (2009)
Davos, Switzerland

Stanley, R.H.R. "The Marine Carbon Cycle: New Insights from Dissolved Gases." Departmental seminar at Princeton University (2009)*
Princeton, NJ

Stanley, R.H.R. "The Marine Carbon Cycle: New Insights from Dissolved Gases." Departmental seminar at University of Chicago (2009) *
Chicago, IL

Stanley, R.H.R. "Investigating the Carbon Cycle in the Equatorial Pacific Ocean." (2008). Departmental seminar at Woods Hole Oceanographic Institution. *
Woods Hole, MA

Stanley, R.H.R., J.B. Kirkpatrick, N. Cassar, and M.L. Bender. "Towards a mechanistic understanding of carbon cycling in the equatorial Pacific Ocean." CLIMECO workshop. (2008)
Brest, France

Stanley, R.H.R., J.B. Kirkpatrick, N. Cassar, and M.L. Bender. "Towards a mechanistic understanding of carbon cycling in the equatorial Pacific." Leverhulme Climate Symposium. (2008)
Cambridge and London, UK

Stanley, R.H.R., W. J. Jenkins, S. C. Doney, D.E. Lott III. "A time-series of five noble gases and tritiogenic helium-3 as tracers for biogeochemical cycles." Ocean Sciences Meeting. (2008)
Orlando, FL

Stanley, R.H.R. "The noble gas toolbox for air-sea gas exchange and biological production." The MIT Department Lecture Series. (2007)*
Cambridge, MA

Stanley, R.H.R. “Noble gases as tracers for biogeochemical cycles.” DISCO symposium. (2006)
Honolulu, HI

Stanley, R.H.R., W.J. Jenkins, and S.C. Doney. “Noble gases: A toolbox for quantifying air-sea gas exchange.” SOLAS Summer School, (2005)
Cargese, France

Stanley, R.H.R., W.J. Jenkins and S.C. Doney. “Quantifying air-sea gas exchange processes with a noble gas time-series.” Gordon Conference on Chemical Oceanography. (2005)
Tilton, NH

Stanley, R.H.R, W.J. Jenkins and S.C. Doney. “The noble gas toolbox for air-sea gas exchange.” SOLAS Open Science Conference, (2004) Won Best Student Poster award for this presentation. Halifax, Canada.

Stanley, R.H.R., and W.J. Jenkins. “Noble gas measurements as tools for investigating air-sea gas exchange.” Eos. Trans. AGU 84(52), Ocean Sci. Meet. Suppl., Abstract OS421-05 (2003). Portland, OR

Stanley, R.H.R., K.O. Buesseler, D.K. Steinberg, J.E. Andrews, S.J. Manganini, J.R. Valdes, and J.F. Price. “Understanding upper ocean particle flux: neutrally buoyant sediment traps and standard surface-tethered sediment traps.” Eos. Trans. AGU, 83(4), Ocean Sciences Meet. Suppl., Abstract OS11B-24 (2002)
Honolulu, HI

Stanley, R.H.R., D.J. Brabander, N.K. Keon and H.F. Hemond. “Arsenic and lead in soils and riverine sediments of the Aberjona Valley” Presented to the Environmental Protection Agency and to the town of Winchester, MA. (1999) *
Boston, MA

Skills

Isotope Ratio Mass Spectrometry
Quadrupole Mass Spectrometry
Magnetic Sector Mass Spectrometry
Ultra-High Vacuum Techniques
Numerical Modeling