





# Tristan J. Horner

Associate Scientist  
Department of Marine Chemistry & Geochemistry  
Woods Hole Oceanographic Institution  
Woods Hole, MA 02543

 +1 (508) 289-3825  
 [Tristan.Horner@whoi.edu](mailto:Tristan.Horner@whoi.edu)  
 [nirvana.whoi.edu](http://nirvana.whoi.edu)  
 0000-0003-1784-0391

## Education

**M.Sci. Geology & Geophysics** (2004–2008)  
IMPERIAL COLLEGE LONDON  
Dissertation: *The Cadmium Isotope Composition of Ferromanganese Crusts*  
Advisors: Mark Rehkämper & Maria Schönbacher

**D.Phil. Earth Sciences** (2008–2012)  
UNIVERSITY OF OXFORD  
Dissertation: *Cadmium Isotope Fractionation in Seawater*  
Advisors: Gideon M. Henderson & Rosalind E.M. Rickaby

## Professional Experience

**Associate Scientist** (2021–present)  
**Assistant Scientist** (2016–2021)  
WOODS HOLE OCEANOGRAPHIC INSTITUTION

**Agouron Institute (Geobiology) Postdoctoral Fellow** (2014–2016)  
WOODS HOLE OCEANOGRAPHIC INSTITUTION  
Sponsor: Mak A. Saito

**Doherty Foundation Postdoctoral Scholar** (2012–2014)  
WOODS HOLE OCEANOGRAPHIC INSTITUTION  
Sponsors: Phoebe J. Lam & Sune G. Nielsen

**Exploration Geoscientist** (2007)  
GOLD FIELDS AUSTRALIA

**Health, Safety, Environment, & Communities Assistant** (2006)  
RIO TINTO MINING & EXPLORATION LTD.

## Awards

**Early Career Award** | 2022 | WOODS HOLE OCEANOGRAPHIC INSTITUTION

**Outstanding Contribution in Reviewing** | 2018 | CHEMICAL GEOLOGY

**Science Fellow** | 2014 | NATIONAL NETWORK FOR OCEAN AND CLIMATE CHANGE INTERPRETATION

**Geobiology Postdoctoral Fellowship** | 2014 | AGOURON INSTITUTE

**DISCO XXIII** | 2012 | UNIVERSITY OF HAWAII/NSF/NOAA

**Doherty Postdoctoral Scholarship** | 2012 | WOODS HOLE OCEANOGRAPHIC INSTITUTION

**NERC Studentship** | 2008 | UNIVERSITY OF OXFORD/NERC/NU INSTRUMENTS

**Ernest Edward Glorney Scholarship** | 2008 | IMPERIAL COLLEGE LONDON

**Watts Medal** | 2008 | IMPERIAL COLLEGE LONDON

**H.H. Read Scholarship** | 2004 | IMPERIAL COLLEGE LONDON

## Professional Affiliations

### *Current*

**American Geophysical Union** | Life Member

**Geochemical Society** | Courtesy membership due to position on GCA Editorial Board

### *Previous*

**American Association for the Advancement of Science**

**American Chemical Society**

**European Geosciences Union**

**Geological Society of America**

## Professional Activities

### *Service to WHOI*

Steering committee for WHOI Plasma Facility | 2016–present

Ad Hoc Review Panelist, *Ocean and Climate Innovation Accelerator Program* | 2022

Ad Hoc Committee for faculty promotion to *Associate Scientist* | 2022

Counsel to the COVID-19 *Re-Opening Oversight Team* | 2020–2021

Ad Hoc Review Panelist, *Independent Study Awards* | 2018

Faculty search committee for *Open-Rank Scientist* position | 2017

Organizer of weekly Department Seminars | 2016–2017

Guest lecture for Summer Student Fellows (undergraduate students) | 2016

Science Fellow for *National Network for Ocean and Climate Change Interpretation* (Fall 2014A Study Circle) | 2014–2015

Guest lecture for NNOCCI Study Circle Fall 2014A Participants (informal science educators) *Isotopic Earth Science: The confluence of Rock and Heavy Metal* | 2014

Discussion leader for Academic Programs Office workshop on *Responsible Conduct in Research* (for Summer Student Fellows and Woods Hole Partnership in Educational Program Summer Science Interns) | 2014

Postdoctoral Association Treasurer | 2013–2014

### Service to the wider community

Theme Chair for 2024 Goldschmidt Conference: *Chemistry and Physical Processes of the Oceans and Atmosphere* | 2023–2024

[Associate Editor](#) at *Geochim. Cosmochim. Acta* | 2022–present

Manuscript reviewer for: *Chem. Geol.*; *Earth Planet. Sci. Lett.*; *Environ. Sci. Technol.*; *Geochim. Cosmochim. Acta*; *Geochem. Geophys. Geosys.*; *Geochem. Perspect. Lett.*; *Geology*; *Geophys. Res. Lett.*; *Global Biogeochem. Cycles*; *J. Geophys. Res.: Oceans*; *Mar. Chem.*; *Nat. Commun.*; *Nat. Geosci.*; *Paleoceanogr.*; *Proc. R. Soc. London, Ser. A*; *Science*; *Sci. Total Environ.*; and, *Treatise Geochem.* | 2013–present

Mail reviewer for *American Chemical Society* (Doctoral New Investigator and New Directions Programs), *GAČR* (Czech Science Foundation), and *National Science Foundation* (Chemical Oceanography, Major Research Instrumentation, Marine Geology and Geophysics, and Ocean Sciences Postdoctoral Fellowship Programs) | 2013–present

Ad Hoc Review Panelist (Chemical Oceanography Program), *Natl. Sci. Found.* (Alexandria, VA, USA) | 2022

External Examiner for *Ph.D. Defense* of Yang Yu, *GEOMAR Helmholtz Center for Ocean Research* (Kiel, GER; via telepresence) | 2021

Organizing Committee and *Biological Productivity Working Group* co-Chair for joint PAGES–GEOTRACES Synthesis Workshop: *Trace Element and Isotope Proxies in Paleoceanography* (Aix-Marseille, FRA); see workshop report by [Tachikawa et al.](#) | 2018

Guest Editor for *Chem. Geol.* [Special Issue](#): *The Cycles of Trace Elements and Isotopes in the Oceans* (Woods Hole, MA) | 2017–2019

Ad Hoc Review Panelist (Marine Geology & Geophysics Program), *Natl. Sci. Found.* (Alexandria, VA, USA) | 2017

Session Organizer and Convener (Non-Conventional Stable Isotopes in the Ocean: Novel Applications, Technological Advances, and Future Applications) *Goldschmidt 2017* (Paris, FRA) | 2017

Session Organizer (Oceanic Cycling of Trace Elements Using Elemental, Isotopic, and Modeling Approaches) *Goldschmidt 2016* (Yokohama, JPN) | 2016

Session Convener (Paleoclimatology/Paleoceanography) *Geological Society of America Annual Meeting* (Vancouver, BC, CAN) | 2014

Establishing a 'delta-zero' isotopic reference standard for cadmium; see publication #4. by [Abouchami et al.](#) | 2010–2013

### Workshop participation

Workshop Panelist and Invited Speaker at Marine Biogeochemistry Short Course: *Application of Isotopes in Ocean, Earth, and Environmental Research* (Centro de Ciências do Mar, Faro, PRT) | 2021

Discussion Leader at Chemical Oceanography Gordon Research Conference: *Chemical Signatures Across Space and Time* (Holderness, NH, USA) | 2019

Participant in COME ABOARD Perspective Meeting (Honolulu, HI, USA); see publication #16. by [Fassbender et al.](#) | 2016

Rapporteur for *Ocean–Sediment boundary* break-out group, *Royal Society ‘Theo Murphy’ meeting: Quantifying fluxes and processes in trace-metal cycling at ocean boundaries* (Chicheley Hall, UK) | 2015

Participant in *Ocean Carbon & Biogeochemistry Scoping Workshop: Improving predictive biogeochemical models through single cell-based analyses of marine plankton physiological plasticity, genetic diversity and evolutionary processes* (Bigelow Laboratory for Ocean Sciences, ME, USA) | 2014

Participant in *GEOTRACES* workshop and intercalibration for: *Stable isotopes of biologically important trace metals* (Imperial College London, UK) | 2012

### Outreach activities

Workshop at *Massachusetts Environmental Education Society Annual Conference, Worcester, USA* (co-presented with A. MacBlane) **Integrating Climate Literacy into Existing Curricula** | 2016

Workshop at *AGU Fall Meeting 2015, San Francisco, USA* (co-presented with J. Sweetland) **Climate Communications: A Strategic Science Translation Approach** | 2015

Guest lecture at *Wellfleet Bay Wildlife Sanctuary, Cape Cod, USA*, **Earth’s Carbon Cycle: Past, Present, Future**, presented as part of Climate Change Education and Outreach Training for MA Audubon Science Educators | 2015

Guest lecture (*Webinar*), **Freshwater Q&A: Does “ocean” acidification also affect bodies of fresh water, like lakes?** Presented for Alumni of the National Network for Ocean and Climate Change Interpretation | 2015

Judge for **Falmouth Public Schools Science & Engineering Fair**, *Lawrence (Middle) School, USA* | 2015, 2016, 2017, 2018, 2020

Guest lecture at *Boston Nature Center, USA*, **Earth’s Carbon Cycle: Past, Present, Future**, presented as part of a workshop on Climate Change Education and Outreach Training for MA Audubon Science Educators) | 2015

Guest lecture at *SeaWorld, San Diego, CA*, **An overview of the carbon cycle at Earth’s surface**, presented as part of NNOCCI Study Circle Fall 2014A) | 2014

Tutoring of Sixth Form (12<sup>th</sup> Grade) students through Earth Sciences **UNIQ Summer School** at the *University of Oxford* on topics such as sea-level, salinity, and heat transport | 2012

## Participation in Education Programs

### Formal instruction

#### In the Classroom

Co-instructor for graduate-level classes 12.759: *Seminar in Oceanography* (2018; 2020), 12.744: *Marine Isotope Chemistry* (2019; 2021), and 12.752/3: *Geodynamics* (2020)

Guest lecture on *Isotope fractionation* for graduate-level class 12.741: *Marine Bioinorganic Chemistry* (2018; 2020; 2022)

Teaching assistant for undergraduate-level classes on: *Atmosphere & Hydrosphere, Radiogenic Isotope Geochemistry, Sedimentary Geology, & Stable Isotope Geochemistry* | 2008–2011

Tutor for *Stable Isotope Geochemistry & UNIQ Earth Science Summer School* | 2010–2012

**In the Field**

Demonstrator for undergraduate field trips: *Dorset Field Course* (Mesozoic stratigraphy), *Cornwall Field Course* (Palaeozoic tectonics and metamorphism), & *Spain Field Course* (Miocene tectonics and volcanism) | 2009–2012

*Committees and suchlike*

**Doctoral Thesis Committee** for Jennifer Kenyon (2019–2022), Lydia Babcock-Adams (2019–2022), and Riss Kellogg (2019–2022)

**Doctoral Thesis Defense Chair** for Nicholas Hawco (2017), Gabriela Farfan (2018), and Jingxuan ‘Jay’ Li (2023)

**Doctoral Thesis Proposal Defense Chair** for Kevin Sutherland (2016), Tianyi Huang (2018), Jennifer Kenyon (2019), Jessica Dabrowski (2019), and Shawnee Traylor (2021)

**Academic Advising Committee** (2021–2022)

## Supervision

*Postdoctoral Researchers and Technical Staff*

**Georgi Laukert**, *Marie Skłodowska-Curie Global [Postdoctoral] Fellow* | 2023–present

**Ichiko Sugiyama**, *Postdoctoral Investigator* | 2022–present

**Margot Debyser**, *Postdoctoral Investigator* | 2022–present

**Peter W. Crockford**, *WHOI Postdoctoral Scholar* | 2021–2023 | On to: *Assistant Professor* at Carleton University

**Emilie Le Roy**, *Center for Marine and Environmental Radioactivity WHOI Postdoctoral Scholar then Postdoctoral Investigator* | 2019–2021 | On to: *Project Officer* at GEOTRACES International Project Office

**Elizabeth K. King**, *WHOI Postdoctoral Scholar* | 2018–2019 | On to: *Program Manager (Environmental Chemistry)* at Army Research Office

**Ann G. Dunlea**, *Postdoctoral Investigator* | 2018–2019 | On to: *Assistant Scientist* at Woods Hole Oceanographic Institution

**Dalton S. Hardisty**, *WHOI Postdoctoral Scholar* | 2016–2018 | On to: *Assistant Professor* at Michigan State University

**Maureen E. Auro**, *Research Associate II then Research Associate III* | 2016–2022

*Graduate Students*

**Iulia-Madalina Streanga**, *MIT–WHOI Joint Program Graduate Student* | 2019–present

**Logan A. Tegler**, *Summer Student Fellow* from Arizona State University (2017) then *MIT–WHOI Joint Program Graduate Student* | 2018–2023 | On to: *Postdoctoral Researcher* at University of Hawai‘i–Mānoa

**Jule T. Middleton**, *MIT–WHOI Joint Program Graduate Student* | 2017–2022 | On to: *Postdoctoral Researcher* at University of California, Santa Barbara

*Summer Student Fellows*

**Ökyü Z. Mete**, *Summer Student Fellow* from Dartmouth College | 2021

**Evan M. Paris**, *Summer Student Fellow* from Vassar College | 2020

**Benjamin M. Geyman**, *Summer Student Fellow* from Bowdoin College | 2016

*Visitors*

**Yun-Ju 'Lorena' Sun**, *Guest Student* from University of Bristol | 2022

**Tarun K. Dalai**, *Mary Sears Guest Investigator* from Indian Institute of Science Education and Research Kolkata | 2019

**Elywn de la Vega**, *WHOI/NOCS Exchange Student* from University of Southampton | 2016–2017

**Jamie L. Ptacek**, *Guest Student* from Bowdoin College | 2016–2017

**Allyson Tessin**, *Guest Student* from University of Michigan | 2016

**Helena V. Pryer**, *Guest Student* from University College London | 2015–2016

**Kimberley K. Mayfield**, *Guest Student* from University of California Santa Cruz | 2015–2020

**Stephanie L. Bates**, *Guest Student* from Bristol University | 2015

**Christopher W. Kinsley**, *General Exam Project (MIT-WHOI Joint Program)* | 2014–2015

## Fieldwork

April–June 2023 | R/V *Atlantis* AT50-10 | Scientist; Golfo (Costa Rica)–San Diego CA (USA) | **CliOMZ: Connections between macro- and micro-nutrients in oxygen minimum zones**

October 2018; September 2019 | Siders Pond | Scientist; Falmouth MA–Falmouth MA

January–February 2016 | R/V *Falkor* FK160115 | Scientist; Hawai'i–Tahiti: **ProteOMZ: Proteomics in an Oxygen Minimum Zone**

August 2015 | R/V *Blue Heron* BH15-11 | Co-Chief Scientist; Duluth MN–Duluth MN (USA) | **UNOLS Chief Scientist Training Cruise Program**

March–May 2010 | *Fieldwork* | Geologist; Baja California Sur (Mexico) | **Landscape evolution at a young rifted margin**

August 2010 | R/V *Calanus* | Scientist; Oban–Oban (Scotland) | **Using the radium quartet to estimate water mixing** | 2010

## Publications in Refereed Journals and Books

\*NIRVANA team member; †corresponding author (if not first author)

## Published or In Press

46. Sun, Y.-J., L.F. Robinson, I.J. Parkinson, J.A. Stewart, W. Lu, D.S. Hardisty, Q. Liu, J. Kershaw, M. LaVigne, and **T.J. Horner** (in press). **Iodine incorporation in deep-sea scleractinian and bamboo corals**, *Front. Mar. Sci.*, **10**, doi:10.3389/fmars.2023.1264380.
45. Farmer, J.R., J.S. Fehrenbacher, **T.J. Horner**, and E.R. Kast (in press). **Tools to Trace Past Productivity and Ocean Nutrients**, *Treatise on Geochemistry*, volume on *Oceans and Marine Geochemistry*.
44. \*Meté, Ö.Z., A.V. Subhas, H.H. Kim, A.G. Dunlea, L.M. Whitmore, A.M. Shiller, W.D. Leavitt, and <sup>†</sup>**T.J. Horner** (2023). **Barium in seawater: Dissolved distribution, relationship to silicon, and barite saturation state determined using machine learning**, *Earth Syst. Sci. Data*, **15**(9), 4023–4045, doi:10.5194/essd-15-4023-2023.
43. \*Middleton, J.T., A. Paytan, \*M.E. Auro, M.A. Saito, and **T.J. Horner** (2023). **Barium isotope signatures of barite–fluid ion exchange in Equatorial Pacific sediments**, *Earth Planet. Sci. Lett.*, **612**, 118150, doi:10.1016/j.epsl.2023.118150.
42. \*Middleton, J.T., W.-L. Hong, A. Paytan, \*M.E. Auro, E.M. Griffith, and **T.J. Horner** (2023). **Barium isotope fractionation in barite–fluid systems at chemical equilibrium**, *Chem. Geol.*, **627**, 121453, doi:10.1016/j.chemgeo.2023.121453.
41. Ostrander, C.M., S.G. Nielsen, H.J. Gadol, L. Villarroel, S.D. Wankel, **T.J. Horner**, J. Blusztajn, and C.M. Hansel (2023). **Thallium isotope cycling between waters, particles, and sediments across a redox gradient**, *Geochim. Cosmochim. Acta*, **348**, 397–409, doi:10.1016/j.gca.2023.03.028.
40. Tiwari, R.K., T.K. Dalai, S. Samanta, W. Rahaman, S.K. Singh, and **T.J. Horner** (2022). **Geochemistry of uranium in the Ganga (Hooghly) River estuary, India: The role of processes in the water column and below the sediment-water interface**, *Mar. Chem.*, **247**, 104173 doi:10.1016/j.marchem.2022.104173.
39. Saunders, J.K., M. McIlvin, C.L. Dupont, D. Kaul, D. Moran, **T.J. Horner**, A.E. Santoro, E. Webb, T. Bosak, and M.A. Saito (2022). **Microbial functional diversity across biogeochemical provinces in the central Pacific Ocean**, *Proc. Natl. Acad. Sci.*, **119**(37), e2200014119, doi:10.1073/pnas.2200014119.
38. Whitmore, L.M, A.M. Shiller, **T.J. Horner**, Y. Xiang, \*M.E. Auro, D. Bauch, F. Dehairs, P.J. Lam, J. Li, M.T. Maldonado, C. Mears, R. Newton, A. Pasqualini, H. Planquette, R. Rember, and H. Thomas (2022). **Strong Margin Influence on the Arctic Ocean Barium Cycle Revealed by Pan-Arctic Synthesis**, *J. Geophys. Res. Oceans*, **127**(4), e2021JC017417, doi:10.1029/2021JC017417.
37. Cohen, N.D, A.E. Noble, D.M. Moran, M.R. McIlvin, T.J. Goepfert, N.J. Hawco, C.R. German, **T.J. Horner**, C.H. Lamborg, J.P. McCrow, A.E. Allen, and M.A. Saito (2021). **Hydrothermal trace metal release and microbial metabolism in the northeastern Lau Basin of the South Pacific Ocean**, *Biogeosci.*, **18**(19), 5397–5422 doi:10.5194/bg-18-5397-2021.
36. Farrell, U. . . . **T.J. Horner**, . . . et al. containing 104 co-authors (2021). **The Sedimentary Geochemistry and Paleoenvironments Project**, *Geobiology*, **19**(6), 545–556, doi:10.1111/gbi.12462.
35. Conway, T.M., **T.J. Horner**, Y. Plancherel, and A.G. González (2021). **A decade of progress in understanding cycles of trace elements and their isotopes in the oceans**, *Chem. Geol.*, **580**, 120381, doi:10.1016/j.chemgeo.2021.120381.

34. **Horner, T.J.**, <sup>†</sup>S.H. Little, <sup>†</sup>T.M. Conway, <sup>†</sup>J.R. Farmer, J.E. Hertzberg, D.J. Janssen, A.J. Lough, J. McKay, A. Tessin, S.J.G. Galer, S.L. Jaccard, F. Lacan, A. Paytan, K. Wuttig, and GEOTRACES–PAGES Biological Productivity Working Group Members (2021). **Bioactive trace metals and their isotopes as paleoproductivity proxies: An assessment using GEOTRACES-era data**, *Global Biogeochem. Cycles*, **35**(11), e2020GB006814, doi:10.1029/2020GB006814.
33. Farmer, J.R., J.E. Hertzberg, D. Cardinal, S. Fietz, K. Hendry, S. L. Jaccard, A. Paytan, P.A. Rafter, H. Ren, C. J. Somes, J.N. Sutton, and **GEOTRACES–PAGES Biological Productivity Working Group Members** (2021). **Assessment of C, N, and Si Isotopes as Tracers of Past Ocean Nutrient and Carbon Cycling**, *Global Biogeochem. Cycles*, **35**(7), e2020GB006775, doi:10.1029/2020GB006775.
32. Roca-Martí, M., C.R. Benitez-Nelson, B.P. Umhau, A.M. Wyatt, S.J. Clevenger, S. Pike, **T.J. Horner**, M.L. Estapa, L. Resplandy, and K. Buesseler (2021). **Concentrations, ratios, and sinking fluxes of major bioelements at Ocean Station Papa**, *Elem. Sci. Anth.*, **9**(1), 00166, doi:10.1525/elementa.2020.00166.
31. \*Dunlea, A.G., \*L.A. Tegler, B. Peucker-Ehrenbrink, A.D. Anbar, S.J. Romaniello, and **T.J. Horner** (2021). **Pelagic clays as archives of marine iron isotope chemistry**, *Chem. Geol.*, **575**, 120201, doi:10.1016/j.chemgeo.2021.120201.
30. **Horner, T.J.** and P.W. Crockford (2021). *Barium Isotopes: Drivers, Dependencies, and Distributions through Space and Time*, Elements in Geochemical Tracers in Earth System Science, Cambridge University Press, doi:10.1017/9781108865845.
29. Hardisty, D.S., **T.J. Horner**, N. Evans, R. Moriyasu, A.R. Babbin, S.D. Wankel, J.W. Moffett, and S.G. Nielsen (2021). **Limited iodate reduction in shipboard seawater incubations from the Eastern Tropical North Pacific Oxygen Deficient Zone**, *Earth Planet. Sci. Lett.*, **554**, 116676, doi:10.1016/j.epsl.2020.116676.
28. Mayfield, K.K., A. Eisenhauer, D. Santiago Ramos, J.A. Higgins, **T.J. Horner**, \*M.E. Auro, T. Magna, N. Moosdorf, M.A. Charette, M.E. Gonnee, C.E. Brady, N. Komar, B. Peucker-Ehrenbrink, and A. Paytan (2021). **Groundwater Discharge Impacts Marine Isotope Budgets of Li, Mg, Ca, Sr, and Ba**, *Nat. Commun.*, **12**, 148, doi:10.1038/s41467-020-20248-3.
27. Martinez-Ruiz, F., A. Paytan, M.T. Gonzalez-Muñoz, F. Jroundi, M.M. Abad, P.J. Lam, **T.J. Horner**, and M. Kastner (2020). **Barite precipitation on suspended organic matter in the mesopelagic zone**, *Front. Earth Sci.*, **8**, 567714, doi:10.3389/feart.2020.567714.
26. Fan, H., S.G. Nielsen, J.D. Owens, \*M.E. Auro, \*Y. Shu, D.S. Hardisty, **T.J. Horner**, C.N. Bowman, S.A. Young, and H. Wen (2020). **Constraining oceanic oxygenation during the Shuram excursion in South China using thallium isotopes**, *Geobiology*, **18**(3), 348–365 doi:10.1111/gbi.12379.
25. Nielsen, S.G., \*Y. Shu, \*M.E. Auro, G. Yogodzinski, R. Shinjo, T. Plank, S. Kay, and **T.J. Horner** (2020). **Barium isotope systematics of subduction zones**, *Geochim. Cosmochim. Acta*, **275**, 1–18, doi:10.1016/j.gca.2020.02.006.
24. \*Hardisty, D.S., **T.J. Horner**, S.D. Wankel, J. Blusztajn, and S.G. Nielsen (2020). **Experimental observations of marine iodide oxidation using a novel sparge-interface MC-ICP-MS technique**, *Chem. Geol.*, **532**, 119360, doi:10.1016/j.chemgeo.2019.119360.
23. \*Geyman, B.M., J.L. Ptacek, <sup>†</sup>M. LaVigne, and <sup>†</sup>**T.J. Horner** (2019). **Barium in deep-sea bamboo corals: Phase associations, barium stable isotopes, and prospects for paleoceanography**, *Earth Planet. Sci. Lett.*, **525**, 115751, doi:10.1016/j.epsl.2019.115751.



22. Hodgskiss, M.S.W., P.W. Crockford, Y. Peng, B.A. Wing, and **T.J. Horner** (2019). **A productivity collapse to end Earth's Great Oxidation**, *Proc. Natl. Acad. Sci.*, **116**(35), 17207–17212, doi:10.1073/pnas.1900325116.
21. Crockford, P.W., B.A. Wing, A. Paytan, A., M.W.S. Hodgskiss, K.K. Bitterwolf, J.A. Hayles, J.E. Middleton\*, A.-S. Ahm, D.T. Johnston, F. Caxito, G. Uhlein, G.P. Halverson, B. Eickmann, M. Torres, and **T.J. Horner** (2019). **Barium-isotopic constraints on the origin of post-Marinoan barites**, *Earth Planet. Sci. Lett.*, **519**, 234–244, doi:10.1016/j.epsl.2019.05.018.
20. Martinez-Ruiz, F., A. Paytan, M.T. Gonzalez-Muñoz, F. Jroundi, M.M. Abad, P.J. Lam, J.K.B. Bishop, **T.J. Horner**, P.L. Morton, and M. Kastner (2019). **Barite formation in the ocean: origin of amorphous and crystalline precipitates**, *Chem. Geol.*, **511**, 441–451, doi:10.1016/j.chemgeo.2018.09.011.
19. Wu, F., J.D. Owens, T. Huang, A.R. Sarafian, K-F. Huang, I. Sen, **T.J. Horner**, J. Blusztajn, P. Morton, and S.G. Nielsen (2019). **Vanadium Isotope Composition of Seawater**, *Geochim. Cosmochim. Acta*, **244**, 403–415, doi:10.1016/j.gca.2018.10.010.
18. Nielsen, S.G., **T.J. Horner**, \*H.V. Pryer, J. Blusztajn, \*Y. Shu, M.D. Kurz, and V. Le Roux (2018). **Barium isotope evidence for pervasive sediment recycling in the upper mantle**, *Sci. Adv.*, **4**(7), eaas8675, doi:10.1126/sciadv.aas8675.
17. Schlitzer, R., ... **T.J. Horner**, ... et al. containing 284 co-authors (2018). **The GEOTRACES Intermediate Data Product 2017**, *Chem. Geol.*, **493**, 1210–223 doi:10.1016/j.chemgeo.2018.05.040.
16. Fassbender, A.J., H.I. Palevsky, T.R. Martz, A.E. Ingalls, M. Gledhill, S.E. Fawcett, J.A. Brandes, L.I. Aluwihare, **the participants of COME ABOARD**, 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**, *Mar. Chem.*, **196**, 181–190, doi:10.1016/j.marchem.2017.09.002.
15. **Horner, T.J.**, \*H.V. Pryer, S.G. Nielsen, P.W. Crockford, J.M. Gauglitz, B.A. Wing, and R.D. Ricketts (2017). **Pelagic barite precipitation at micromolar ambient sulphate**, *Nat. Commun.*, **8**, 1342, doi:10.1038/s41467-017-01229-5.
14. Serrato Marks, G., M. LaVigne, T.M. Hill, W. Sauthoff, T.P. Guilderson, E.B. Roark, R.B. Dunbar, and **T.J. Horner** (2017). **Reproducibility of Ba/Ca variations recorded by northeast Pacific bamboo corals**, *Paleoceanogr.*, **32**, 966–979, doi:10.1002/2017PA003178.
13. Owens, J.D., S.G. Nielsen, **T.J. Horner**, C.M. Ostrander, and L.C. Peterson (2017). **Thallium-isotopic compositions of euxinic sediments as a proxy for global manganese-oxide burial**, *Geochim. Cosmochim. Acta*, **213**, 291–307, doi:10.1016/j.gca.2017.06.041.
12. Bates, S.L., †K.R. Hendry, \*H.V. Pryer, \*C.W. Kinsley, K.M. Pyle, E.M.S. Woodward, and **T.J. Horner** (2017). **Barium isotopes reveal role of ocean circulation on barium cycling in the Atlantic**, *Geochim. Cosmochim. Acta*, **204**, 286–299, doi:10.1016/j.gca.2017.01.043.
11. Nielsen, S.G., J.D. Owens, and **T.J. Horner** (2016). **Analysis of high-precision vanadium isotope ratios by medium resolution MC-ICP-MS**, *J. Anal. At. Spectrom.*, **31**, 531–536, doi:10.1039/C5JA00397K.
10. **Horner, T.J.**, \*C.W. Kinsley, and S.G. Nielsen (2015). **Barium-isotopic fractionation in seawater mediated by barite cycling and oceanic circulation**, *Earth Planet. Sci. Lett.*, **430**, 511–522, doi:10.1016/j.epsl.2015.07.027.

9. **Horner, T.J.**, <sup>†</sup>H.M. Williams, J.R. Hein, M.A. Saito, K.W. Burton, A.N. Halliday, and S.G. Nielsen (2015). **Persistence of deeply sourced iron in the Pacific Ocean**, *Proc. Natl. Acad. Sci.*, **112**(5), 1292–1297, [doi:10.1073/pnas.1420188112](https://doi.org/10.1073/pnas.1420188112).
8. Georgiev, S.V., **T.J. Horner**, H.J. Stein, J.L. Hannah, B. Bingen, and M. Rehkämper (2015). **Cadmium -isotopic evidence for increasing primary productivity during the Late Permian anoxic event**, *Earth Planet. Sci. Lett.*, **410**, 84–96, [doi:10.1016/j.epsl.2014.11.010](https://doi.org/10.1016/j.epsl.2014.11.010)
7. Hermoso, M., **T.J. Horner**, F. Minoletti, and R.E.M. Rickaby (2014). **Constraints on the vital effect in coccolithophore and dinoflagellate calcite by oxygen isotopic modification of seawater**, *Geochim. Cosmochim. Acta.*, **141**, 612–627, [doi:10.1016/j.gca.2014.05.002](https://doi.org/10.1016/j.gca.2014.05.002)
6. Xue, Z., M. Rehkämper, **T.J. Horner**, W. Abouchami, R. Middag, T. van de Flierdt, and H.J.W. de Baar (2013). **Cadmium isotope variations in the Southern Ocean**, *Earth Planet. Sci. Lett.*, **382**, 161–172, [doi:10.1016/j.epsl.2013.09.014](https://doi.org/10.1016/j.epsl.2013.09.014)
5. **Horner, T.J.**, R.B.Y. Lee, G.M. Henderson, and R.E.M. Rickaby (2013). **Nonspecific uptake and homeostasis drive the oceanic cadmium cycle**, *Proc. Natl. Acad. Sci.*, **110**(7), 2500–2505, [doi:10.1073/pnas.1213857110](https://doi.org/10.1073/pnas.1213857110).
4. Abouchami, W., S.J.G. Galer, **T.J. Horner**, M. Rehkämper, Z. Xue, M. Lambelet, F. Wombacher, M. Schönbächler, M. Gault-Ringold, C. Stirling, A. Shiel, D. Weiss, and P.F. Holdship (2013). **A common reference material for cadmium isotope studies – NIST SRM 3108 Cd**, *Geostand. Geoanal. Res.*, **37**(1), 5–17, [doi:10.1111/j.1751-908X.2012.00175.x](https://doi.org/10.1111/j.1751-908X.2012.00175.x).
3. **Horner, T.J.**, R.E.M. Rickaby, and G.M. Henderson (2011). **Isotopic fractionation of cadmium into calcite**, *Earth Planet. Sci. Lett.*, **312**(1-2), 243–253, [doi:10.1016/j.epsl.2011.10.004](https://doi.org/10.1016/j.epsl.2011.10.004).
2. Rehkämper, M., F. Wombacher, **T.J. Horner**, and Z. Xue (2011). **Natural and anthropogenic Cd isotope variations**, in *Handbook of Environmental Isotope Geochemistry, Adv. Isot. Geochem.*, vol. 1, edited by M.M. Baskaran, 1st ed., pp. 125–154, Springer, Heidelberg, [doi:10.1007/978-3-642-10637-8\\_8](https://doi.org/10.1007/978-3-642-10637-8_8).
1. **Horner, T.J.**, M. Schönbächler, M. Rehkämper, S.G. Nielsen, H. Williams, Z. Xue, A.N. Halliday, and J.R. Hein (2010). **Ferromanganese crusts as archives of deep-water Cd isotope compositions**, *Geochem. Geophys. Geosyst.*, **11**, Q04001, [doi:10.1029/2009GC002987](https://doi.org/10.1029/2009GC002987).

## Presentations

### *Invited seminars*

2023 *School of Earth Sciences, University of Bristol*

2022 *Ocean & Climate Change Innovation Accelerator Consortium (via telepresence)*

*School of Earth Sciences, University of Bristol (via telepresence)*

*Exploring Ocean Iron Solutions Forum (via telepresence)*

2021 *Centro de Ciências do Mar, Faro, Portugal (via telepresence)*

2020 *Department of Earth Sciences, Dartmouth College*

2019 *Earth History and Paleobiology Seminar, Harvard University*

2018 *School for Marine Science & Technology, UMass Dartmouth*

2017 *Earth and Oceanographic Science, Bowdoin College*

*Darling Marine Center, University of Maine*

*School of Earth and Climate Sciences, University of Maine*

2014 *Institute of Marine and Coastal Sciences, Rutgers University*

*School of GeoSciences, University of Edinburgh*

*Graduate School of Oceanography, University of Rhode Island*

*Bigelow Laboratory for Ocean Sciences*

*Ocean Sciences, University of California Santa Cruz*

2013 *Institute of Geochemistry and Petrology, ETH Zürich*

2012 *Ocean and Earth Science, National Oceanography Centre (UK)*

#### *Invited abstracts*

‡poster

2021 ‡**Horner, T.J.** (2021) **Barium in seawater: An isotopic perspective**, *American Geophysical Union Fall Meeting* (New Orleans, USA).

**Horner, T.J.**, S.H. Little, T.M. Conway, J.R. Farmer, D.J. Janssen, and GEOTRACES–PAGES Biological Productivity Working Group Members (2021) **Putting productivity proxies to the test with GEOTRACES data**, *American Geophysical Union Fall Meeting* (New Orleans, USA).

2018 **Horner, T.J.** (2018) **Barium-isotopic Proxies in Paleooceanography: Progress, Potential, and Pitfalls**, *Geological Society of America Annual Meeting* (Indianapolis, USA).

**Horner, T.J.**, \*H.V. Pryer, S.G. Nielsen, and P.J. Lam (2018) **Controls on the barium-isotopic composition of marine particles**, *Goldschmidt 2018, Boston*

2017 **Horner, T.J.**, \*M.E. Auro, A. Paytan, and S.G. Nielsen (2017) **What the flux? Isotopic constraints on the marine barium budget**, *Goldschmidt 2017, Paris*.

**Horner, T.J.**, S.F. Eltgroth, G.M. Henderson, R.E.M. Rickaby, and J.F. Adkins (2017) **Reconstructing ocean circulation using paired measurements of Cd/Ca and Cd-isotopic compositions of deep-sea corals**, *PAGES Open Science Meeting, Zaragoza*.

2015 **Horner, T.J.** (2015) Authigenic Trace Metal–Nutrient Interactions: **Barium Transformations in Seawater and Their Isotopic Consequences**, *Gordon Research Conference–Chemical Oceanography, Holderness, NH*.

2014 **Horner, T.J.**, S.V. Georgiev, H.J. Stein, J.L. Hannah, B. Bingen, and M. Rehkämper (2014) **Cadmium-isotopic evidence for increasing primary productivity during the Late Permian anoxia**, *Geological Society of America Annual Meeting* (Vancouver, CAN).

‡**Horner, T.J.**, S.N. Burgess, Y.-T. Hsieh, P.J. Lam, and S.G. Nielsen (2014) **The barium-isotopic composition of the pelagic barite flux**, *Goldschmidt, Sacramento*.

2012 **Horner, T.J. (2012) Cadmium isotope fractionation in seawater: Driving mechanisms and palaeoceanographic applications**, *DISCO XXIII, Lihue, Kaua'i*.

**Horner, T.J., R.B.Y. Lee, G.M. Henderson and R.E.M. Rickaby (2012) A novel methodology to investigate isotopic biosignatures**, *EGU General Assembly, Vienna*.

*Contributed abstracts: Presenting author*

2018 **Horner, T.J., \*C.W. Kinsley, S.G. Nielsen, and P.J. Lam (2018) Authigenic and Biogenic Controls on Metal Isotope Fractionation in the Southern Ocean**, *2018 Ocean Sciences Meeting, Portland*.

2017 **Horner T.J., \*B.M. Geyman, J.L. Ptacek, \*M.E. Auro, T. Hill, and M. LaVigne (2017) Barium in deep-sea bamboo corals: Phase relationships, stable isotopic distributions, and prospects for paleoceanography**, *PAGES Open Science Meeting, Zaragoza*.

2016 **Horner, T.J., \*H.V. Pryer, S.G. Nielsen, and R.D. Ricketts (2016) Biogenic barite precipitation at micromolar ambient sulfate**, *AGU Fall Meeting 2016, San Francisco*.

‡**Horner, T.J. and \*H.V. Pryer (2016) Microbially-mediated barite formation in the water column at micromolar sulfate**, *Northeastern Geobiology Symposium, Harvard University*.

2015 **Horner, T.J., H.M. Williams, J.R. Hein, M.A. Saito, K.W. Burton, A.N. Halliday, and S.G. Nielsen (2015) Tracing Iron Sources to the Pacific Ocean over the Cenozoic**, *Northeastern Geobiology Symposium, Princeton University, USA*.

2014 **Horner, T.J., H.M. Williams, J.R. Hein, K.W. Burton, A.N. Halliday, and S.G. Nielsen (2014) Dominance of deeply sourced iron in the Pacific Ocean**, *Goldschmidt 2014, Sacramento*.

2013 **Horner, T.J., W.B. Homoky, S.V. Georgiev, H.J. Stein, J.L. Hannah, R.A. James, M. Rehkämper, and G.M. Henderson (2013) Suboxic sediments as an oceanic sink of isotopically-light Cd**, *Goldschmidt 2013, Firenze*.

‡**Horner, T.J., W.B. Homoky, S.V. Georgiev, H.J. Stein, J.L. Hannah, R.A. James, M. Rehkämper, and G.M. Henderson (2013) A balanced isotopic budget for cadmium in the oceans**, *Gordon Research Conferences—Chemical Oceanography, Biddeford, ME*.

2012 **Horner, T.J., R.B.Y. Lee, G.M. Henderson, and R.E.M. Rickaby (2012) The subcellular isotopic perspective on global Cd cycling**, *GEOTRACES Workshop: Stable isotopes of biologically important trace metals, Imperial College London*.

‡**Horner, T.J., G.M. Henderson, R.E.M. Rickaby, and J.F. Adkins (2012) Reconstructing deep-ocean nutrients with paired Cd/Ca and Cd isotopes in deep-sea corals**, *Goldschmidt 2012, Montreal*.

2011 ‡**Horner, T.J., R.B.Y. Lee, G.M. Henderson, and R.E.M. Rickaby (2011) Intracellular cadmium isotope fractionation**, *AGU Fall Meeting 2011, San Francisco*.

**Horner, T.J., R.E.M. Rickaby, and G.M. Henderson (2011) Isotopic fractionation of cadmium into calcite**, *Goldschmidt 2011, Prague*.

2009 ‡**Horner, T.J. (2009) Cadmium isotopes in the marine environment – A new tool in the study of present and past nutrient cycling**, *Gordon Research Conferences—Chemical Oceanography, Tilton, New Hampshire*.

2008 **Horner, T.J., M. Schönbacher, M. Rehkämper, H. Williams, S.G. Nielsen, A.N. Halliday, and J.R. Hein (2008) The Cadmium Isotope Composition of Ferromanganese Crusts**, *Research in Progress Meeting (Geochemistry Group), The Geological Society of London*.

## Contributed abstracts: Non-presenting author

§invited

- 2023 \*,<sup>‡</sup>Debyser, M.C.F., **T.J. Horner**, P. Henderson, and M.A. Charette (2023). **A first look at the distribution of <sup>226</sup>Ra in the South Pacific (US GEOTRACES GP17-OCE)**, *Gordon Research Conference–Chemical Oceanography* (Manchester, NH).
- \*,<sup>‡</sup>Middleton, J.T., A. Payan, \*M.E. Auro, M.A. Saito, and **T.J. Horner** (2023). **Barium isotope signatures of barite-fluid exchange in Equatorial Pacific sediments**, *Gordon Research Conference–Chemical Oceanography* (Manchester, NH).
- \*Streanga, I.-M. D.J. Repeta, and **T.J. Horner** (2023). **Distribution, chemical speciation, and biological cycling of iodine in the surface ocean around Station ALOHA**, *Goldschmidt 2023* (Lyon, FRA).
- Liang, H., **T.J. Horner**, and S.G. John (2023). **Origin and dissolution of barite in the oceans: Insights from a global ocean dissolved Ba model**, *Goldschmidt 2023* (Lyon, FRA).
- \*Tegler, L.A., S.G. Nielsen, **T.J. Horner**, B. Peucker-Ehrenbrink, S. Severmann, and A.G. Dunlea (2023). **From Hydrothermalism to Dust Deposition: Tracing the Sources of Fe to the South Pacific Ocean over the Cenozoic**, *AGU Chapman Conference on Hydrothermal Circulation and Seawater Chemistry* (Agros, CYP).
- 2022 Ostrander, C.M., S.G. Nielsen, E. Swanner, H.J. Gadol, L. Villarroel, S.D. Wankel, A. Heard, Y. Shu, H. Schulz-Vogt, M. Voss, **T.J. Horner**, and C. Hansel (2022). **Towards a better understanding of thallium isotope cycling in modern redox-stratified settings**, *AGU Fall Meeting* (Chicago, USA).
- Martinez-Ruiz, F., A. Paytan, M.T. Gonzalez-Muñoz, F. Jroundi, M.M. Abad, P.J. Lam, T.J. Horner, and M. Kastner (2022). **Organomineralization of barium in seawater: Implications for reconstructing the marine carbon cycle**, *14<sup>th</sup> International Conference on Paleoceanography* (Bergen, NOR).
- \*Laukert, G., S.S. Kienast, **T.J. Horner**, K. Doering, P. Grasse, D. Bauch, M. Frank, O. Huhn, and C. Mertens (2022). **East Greenland's rising impact on the marine silicon cycle constrained by silicon isotopes**, *Goldschmidt 2022* (Honolulu, HI).
- \*Middleton, J.T., A. Payan, and **T.J. Horner** (2022). **Barium isotope fractionation during ion exchange at the barite–fluid interface: Implications for barium cycling in seawater**, *Goldschmidt 2022* (Honolulu, HI).
- \*Tegler, L.A., **T.J. Horner**, S.G. Nielsen, S. Severmann, B. Peucker-Ehrenbrink, and A.G. Dunlea (2022). **Iron Sources and Cycling over the Cenozoic: Evolution of the Iron Cycle in the South Pacific and Southern Ocean**, *Goldschmidt 2022* (Honolulu, HI).
- Saunders, J.K., M. McIlvin, C.L. Dupont, D. Kaul, D. Moran, **T.J. Horner**, A.E. Santoro, E.A. Webb, T. Bosak, and M.A. Saito (2022). **Microbial Functional Diversity across Biogeochemical Provinces in the Central Pacific Ocean**, *American Society for Mass Spectrometry Annual Conference* (Minneapolis, USA).
- Martinez-Ruiz, F., A. Paytan, M.T. Gonzalez-Muñoz, F. Jroundi, M.M. Abad, P.J. Lam, **T.J. Horner**, and M. Kastner (2022). **Barite Precipitation on Suspended Organic Matter in the Ocean Water Column**, *EGU General Assembly* (Vienna, AUS).
- \*,<sup>‡</sup>Mete, Ö.Z., A.G. Dunlea, H.H. Kim, A.V. Subhas, and **T.J. Horner** (2022). **Dissolved distribution of barium in seawater and its relationship to silicon**, *Northeastern Geobiology Symposium* (MIT, USA).

Martinez-Ruiz, F., A. Paytan, M.T. Gonzalez-Muñoz, F. Jroundi, M.M. Abad, P.J. Lam, **T.J. Horner**, and M. Kastner (2022) **Pathways to the formation of crystalline barite in the ocean water column: role of transient amorphous precursor phases**, *Ocean Sciences Meeting* (Honolulu, USA).

\*Metz, Ö.Z., H.H. Kim, A.G. Dunlea, L.M. Whitmore, A.M. Shiller, and **T.J. Horner** (2022). **Dissolved distribution of barium in seawater and its relationship to silicon**, *Ocean Sciences Meeting* (Honolulu, USA).

\*Streanga, I.M. D.J. Repeta, and **T.J. Horner** (2022). **Distribution, chemical speciation and biological cycling of iodine in the surface ocean around Station ALOHA**, *Ocean Sciences Meeting* (Honolulu, USA).

\*Tegler, L.A., **T.J. Horner**, Y. Wang, F. Scholz, J.D. Owens, L.C. Peterson, W. Lu, and S.G. Nielsen (2022). **What controls the cadmium isotope composition of organic-rich sediments—Redox or productivity?** *Ocean Sciences Meeting* (Honolulu, USA).

\*‡Streanga, I.M. D.J. Repeta, and **T.J. Horner** (2022). **Speciation and cycling of iodine in the subtropical North Pacific Ocean** *Simons Foundation SCOPE Meeting* (Virtual).

2021 Dunlea, A.G., \*L.A. Tegler, B. Peucker-Ehrenbrink, S. Severann, and **T.J. Horner** (2021) **Cenozoic Evolution of the Iron Cycle across the South Pacific and Southern Ocean**, *American Geophysical Union Fall Meeting* (New Orleans, USA).

Martinez-Ruiz, F., A. Paytan, M.T. Gonzalez-Muñoz, F. Jroundi, M.M. Abad, P.J. Lam, **T.J. Horner**, and M. Kastner (2021) **The role of P-rich precursors in barite formation in the ocean**, *American Geophysical Union Fall Meeting* (New Orleans, USA).

\*Le Roy, E., M.A. Charette, P.B. Henderson, A. Shiller, W. Moore, R. Lawrence, A. Shrikumar, K.L. Casciotti, P. van Beek, M. Souhaut, \*M.E. Auro, and **T.J. Horner** (2021) **Controls on barium and radium-226 distributions along GEOTRACES GP15**, *Goldschmidt 2021, Lyon*.

Martinez-Ruiz, F., A. Paytan, P.J. Lam, M.T. Gonzalez-Muñoz, F. Jroundi, M.M. Abad-Ortega, **T.J. Horner**, and M. Kastner (2021) **Factors controlling pelagic barite distribution across the ocean water column: new insights from the Great Calcite Belt**, *Goldschmidt 2021, Lyon*.

\*Middleton, J.E., A. Paytan, M.A. Saito, and **T.J. Horner** (2021) **Barium Isotope Signatures of Barite Diagenesis**, *Goldschmidt 2021, Lyon*.

Ostrander, C.M., S.G. Nielsen, H.J. Gadol, **T.J. Horner**, and C.M. Hansel (2021) **Thallium isotope cycling in a manganese-rich brackish meromictic pond**, *Goldschmidt 2021, Lyon*.

\*Tegler, L.A., S.G. Nielsen, C.M. Ostrander, A.D. Anbar, B. Kendall, J.D. Owens, L.C. Peterson, F. Scholz, and **T.J. Horner** (2021) **Redox and productivity controls on the cadmium isotope composition of organic-rich sediments**, *Goldschmidt 2021, Lyon*.

2020 ‡Schaal, I.V., \*E.M. Paris, **T.J. Horner**, and A.G. Dunlea (2020) **Source-to-sink micronutrient cycling between seawater, sediment, and nodules in the South Pacific**, *AGU Fall Meeting 2020, San Francisco*.

‡Dalai, T.K. and **T.J. Horner** (2020) **Barium Stable Isotopes in the Ganga (Hooghly) River Estuary, India**, *Goldschmidt 2020, Hawaii, HI*.

\*‡Tegler, L.A., C. Ostrander, A.D. Anbar, B. Kendall, S.G. Nielsen, and **T.J. Horner** (2020) **Minimal Cadmium-Isotopic Variations during a 'whiff' of O<sub>2</sub> at 2.5 Ga**, *Goldschmidt 2020, Hawaii, HI*.

\*‡Middleton, J.E., A. Paytan, and **T.J. Horner** (2020) **Barium-Isotopic Signatures of Barite Diagenesis**, *Goldschmidt 2020, Hawaii, HI*.

Martinez-Ruiz, F., A. Paytan, M.T. Gonzalez-Muñoz, F. Jroundi, M.M. Abad, P.J. Lam, **T.J. Horner**, and M. Kastner (2020) **Role of Exopolymers in Pelagic Barite Precipitation in the Ocean**, *Goldschmidt 2020, Hawaii, HI*.

‡Whitmore, L. M., **T.J. Horner**, R. Rember, Y. Xiang, P.J. Lam, F. Dehairs, H. Thomas, A.M. Shiller, and C. Mears (2020) **To the North Pole and Back: A Pan-Arctic Barium Synthesis**, *Ocean Sciences Meeting 2020 (San Diego, USA)*.

\*‡Le Roy, E., M.A. Charette, **T.J. Horner**, P. Henderson, P. van Beek, and M. Souhaut (2020) **Dissolved And Particulate  $^{226}\text{Ra}$  Along GEOTRACES Pacific Meridional Transect**, *Ocean Sciences Meeting 2020 (San Diego, USA)*.

Hardisty, D, R. Moriyasu, Z. Evans, **T.J Horner**, A.R. Babbin, S.D. Wankel, J.W. Moffett, and S. Nielsen (2020) **Constraints on marine ODZ iodine cycling and implications for paleoredox proxy applications**, *Ocean Sciences Meeting 2020 (San Diego, USA)*.

‡Gadol, H., **T.J. Horner**, S.D. Wankel, and C.M. Hansel (2020) **Light-mediated and particle-associated manganese oxide formation in the photic zone of a meromictic, manganese-rich pond**, *Gordon Research Conference–Geobiology, Galveston, TX*.

2019 \*‡Tegler, L.A., C.M. Ostrander, A.D. Anbar, S.G. Nielsen, and T.J. Horner (2019) **Exploring cadmium as a proxy for primary productivity before the Great Oxidation Event**, *Geological Society of America Annual Meeting (Phoenix, USA)*.

\*‡King E.K., **T.J. Horner**, and M.A. Charette (2019) **Subterranean Estuarine Influence on Molybdenum Isotope Cycling**, *Goldschmidt 2019, Barcelona*.

Crockford P.W., M. Hodgskiss, Y. Peng, B.A. Wing, and **T.J. Horner** (2019) **Feast Then Famine: Exiting the GOE and Setting the Stage for a Billion Years of Environmental Stability**, *Goldschmidt 2019, Barcelona*.

Martinez-Ruiz F, A. Paytan, M.T. Gonzalez-Muñoz, F. Jroundi, M.M. Abad, P.J. Lam, J.K.B. Bishop, **T.J. Horner**, P.L. Morton, and M Kastner (2019) **Mechanisms of Pelagic Barite Precipitation**, *Goldschmidt 2019, Barcelona*.

§Saunders J.K., McIlvin M., Moran D., Held N., Santoro A.E., Dupont C., **Horner T.J.**, Webb E., and Saito M.A. (2019) **Tracking Microbial Bioenergetic Enzymes in Sub-Environments of Pelagic OMZs**, *Gordon Research Conference–Chemical Oceanography, Holderness, NH*.

\*§Dunlea, A.G., \*L.A. Tegler, B. Peucker-Ehrenbrink, A.D. Anbar, S.J. Romaniello, and **T.J. Horner** (2019) **Relating Multi-Metal Patterns in Seawater and Sediment Across the South Pacific Gyre**, *Gordon Research Conference–Chemical Oceanography, Holderness, NH*.

\*‡Middleton, J.E., E.M. Griffith, A. Paytan, and **T.J. Horner** (2019) **Equilibrium and kinetic controls on barium-isotopic fractionation into barite**, *Gordon Research Conference–Chemical Oceanography, Holderness, NH*.

Whitmore, L.M, **T.J. Horner**, P.J. Lam, C. Mears, R. Rember, F. Dehairs, H. Thomas, Y. Xiang, and A.M. Shiller (2019) **To the North Pole and back: a pan-Arctic barium synthesis**, *Ocean Carbon Biogeochemistry Meeting (Woods Hole, USA)*.

- 2018 <sup>§</sup>Nielsen, S.G., **T.J. Horner**, V. Le Roux, M.D. Kurz, and J.S. Blusztajn (2018) **Barium isotope evidence for global sediment recycling in the upper mantle**, *Geological Society of America Annual Meeting* (Indianapolis, USA).
- Crockford, P.W., B.A. Wing, A. Paytan, G.P. Halverson, M. Torres, J. Hayles, F. Caxito, G. Uhlein, and **T.J. Horner** (2018) **Insights into the Genesis of post-Marinoan Barite Using Ba Isotopes**, *Goldschmidt 2018, Boston, MA*.
- Nielsen, S.G., **T.J. Horner**, \*H.V. Pryer, J. Blusztajn, \*Y. Shu, M. Kurz, and V. Le Roux (2018) **Barium Isotope Evidence for Global Sediment Recycling in the Upper Mantle**, *Goldschmidt 2018, Boston, MA*.
- ‡Crockford, P.W., B.A. Wing, A. Paytan, G.P. Halverson, and **T.J. Horner** (2018) **On the formation of post-Marinoan Barites: new insights from Ba isotopes**, *Northeastern Geobiology Symposium, WHOI*.
- \*‡Hardisty, D.S., **T.J. Horner**, S.D. Wankel, J. Blusztajn, and S.G. Nielsen (2018) **Experimental constraints on the rates and mechanisms of iodine redox transformations in seawater**, *Northeastern Geobiology Symposium, WHOI*.
- \*‡Middleton, J.E., \*M.E. Auro, E.M. Griffith, and **T.J. Horner** (2018) **Controls on barium-isotope fractionation during barite precipitation**, *Northeastern Geobiology Symposium, WHOI*.
- \*‡Middleton, J.E., \*M.E. Auro, E.M. Griffith, and **T.J. Horner** (2018) **Controls On Barium-Isotope Fractionation During Barite Precipitation**, *2018 Ocean Sciences Meeting, Portland, OR*.
- \*‡Tegler, L.A., \*A.G. Dunlea, S.J. Romaniello, A.D. Anbar, and **T.J. Horner** (2018) **More Clear than Mud: Dating Deep-Sea Clays with Osmium Isotopes to Unravel Seawater Metal Cycling through the Cenozoic**, *2018 Ocean Sciences Meeting, Portland, OR*.
- Saito, M.A., M.R. McIlvin, D.M. Moran, A.E. Santoro, E.A. Webb, M.D. Lee, C.L. Dupont, **T.J. Horner**, and N. Held (2018) **Surveying Metalloproteins in the Euphotic Zone and Oxygen Minimum Zone of the Central Pacific Ocean and Their Influence on Biogeochemical Cycles**, *2018 Ocean Sciences Meeting, Portland, OR*.
- 2017 \*Hardisty, D.S., **T.J. Horner**, S.D. Wankel, Z. Lu, T.W. Lyons, S.G. Nielsen (2017) **Modern and ancient geochemical constraints on Proterozoic atmosphere-ocean redox evolution**, *AGU Fall Meeting 2017, New Orleans, LA*.
- ‡Bates, S.L., K.R. Hendry, \*H.V. Pryer, L.F. Robinson, and **T.J. Horner** (2017) **Barium Isotope Ratios in Planktic Foraminifera and Seawater**, *Goldschmidt 2017, Paris*.
- ‡Bitterwolf, K.K., **T.J. Horner**, \*M.E. Auro, B. Peucker-Ehrenbrink, and A. Paytan (2017) **The barium isotopic composition of the global groundwater flux**, *Goldschmidt 2017, Paris*.
- \*‡Hardisty, D.S., **T.J. Horner**, S.D. Wankel, J. Blusztajn, and S.G. Nielsen (2017) **A novel tracer method to provide principle constraints on iodine redox chemistry**, *Goldschmidt 2017, Paris*.
- \*‡Geyman, B.M., **T.J. Horner**, J.L. Ptacek, \*M.E. Auro, , T. Hill, and M. LaVigne (2017) **Prospects for Bamboo Corals as Barium-based Archives of Bathypelagic Ocean Circulatory Structure**, *Northeastern Geobiology Symposium, University of Connecticut*.
- ‡Bitterwolf, K.K., **T.J. Horner**, \*M.E. Auro, B. Peucker-Ehrenbrink, and A. Paytan (2017) **Non-traditional stable isotopes in submarine groundwater**, *ASLO Aquatic Sciences Meeting 2017, Honolulu, HI*.



- 2016 \*‡Geyman, B.M., \*M.E. Auro, M. LaVigne, J.L. Ptacek, and **T.J. Horner** (2016) **North Pacific barium isotope distributions illustrate importance of ocean mixing in controlling barium distributions despite weak regional circulation**, *AGU Fall Meeting 2016, San Francisco*.
- ‡Ptacek, J.L., \*B.M. Geyman, **T.J. Horner**, \*M.E. Auro, T.M. Hill, and M. LaVigne (2016) **Identification of Phase Relationships and Incorporation Mechanisms of Barium in Calcite Internodes of Deep-Sea Bamboo Corals**, *AGU Fall Meeting 2016, San Francisco*.
- Hendry, K.R., S.L. Bates, \*H.V. Pryer, L.F. Robison, and **T.J. Horner** (2016) **Barium isotopes reveal role of ocean mixing on Ba cycling in the Atlantic**, *Goldschmidt 2016, Yokohama*.
- 2015 \*‡Kinsley, C.W., **T.J. Horner**, S.G. Nielsen, and P.J. Lam (2015) **Barium-isotopic cycling in Southern Ocean particulate matter**, *Goldschmidt 2015, Prague*.
- 2014 Georgiev, S.V., **T.J. Horner**, H.J. Stein, J.L. Hannah, and M. Rehkämper (2014) **Cadmium isotope stratigraphy of Upper Permian shales**, *Goldschmidt 2014, Sacramento*.
- 2012 §Rickaby, R.E.M., **T.J. Horner**, R.B.Y. Lee, G.M. Henderson, and R.J.P. Williams (2012) **Tight coupling of life and metals throughout evolution**, *Goldschmidt 2012, Montreal* (Paul W. Gast Lecture).
- 2010 Abouchami, W., M. Rehkämper, S.J.G. Galer, **T.J. Horner**, Z. Xue, G.M. Henderson, F. Wombacher, M. Schönächler, M. Gault-Ringold, and C. Stirling (2010) **In search of a common reference material for cadmium isotope studies**, *Goldschmidt 2010, Knoxville*.
- 2008 **Horner, T.J.**, M. Schönächler, M. Rehkämper, H.M. Williams, S.G. Nielsen, A.N. Halliday, and J.R. Hein (2008) **Ferromanganese Crusts as Archives of Deep-Water Cd Isotope Compositions**, *Goldschmidt 2008, Vancouver*.

*Presentations at WHOI, to WHOI*

- 2022 *Department of Marine Chemistry & Geochemistry Seminar*
- 2017 *Department of Marine Chemistry & Geochemistry Seminar*
- 2015 §*Department of Marine Chemistry & Geochemistry Seminar*  
*Annual Postdoctoral Symposium*
- 2014 *Annual Postdoctoral Symposium*
- 2013 *Climate and Paleo Seminar Series*  
*Annual Postdoctoral Symposium*  
*Department of Marine Chemistry & Geochemistry Seminar*