Tristan J. Horner

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Education

M.Sci. Geology & Geophysics | 2004–2008
Imperial College London
Dissertation: *The Cadmium Isotope Composition of Ferromanganese Crusts*
Advisors: Mark Rehkämper & Maria Schönbächler

D.Phil. Earth Sciences | 2008–2012
University of Oxford
Dissertation: *Cadmium Isotope Fractionation in Seawater: Driving Mechanisms and Palaeoceanographic Applications*
Advisors: Gideon M. Henderson & Rosalind E.M. Rickaby

Professional Experience

Associate Scientist | 2021–present | Tenure awarded 2025
Assistant Scientist | 2016–2021
Woods Hole Oceanographic Institution

***Agouron Institute (Geobiology)* Postdoctoral Fellow** | 2014–2016
Woods Hole Oceanographic Institution
Sponsor: Makoto 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
Agnew Gold Mine, Western Australia, Australia

Health, Safety, Environment, & Communities Assistant | 2006
Rio Tinto Mining & Exploration Ltd.
Chapudi Coal Project, Limpopo Province, South Africa

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 Hawai'i/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 | Life Member

Previous

American Association for the Advancement of Science

American Chemical Society

European Geosciences Union

Geological Society of America

Research Interests

Chemical Oceanography

Earth History

Isotope Geochemistry

Mineral–Fluid Reactions

Ocean Circulation and Productivity Proxies

Trace Metal Cycling

Professional Activities

Service to the wider community

Editorial positions

Co–Editor-in-Chief | *Earth and Planetary Science Letters* | 2024–2026

Associate Editor | *Geochimica et Cosmochimica Acta* | 2022–2024

Guest Editor | *Chemical Geology* for Special Issue titled: *The Cycles of Trace Elements and Isotopes in the Oceans* | 2017–2021

Manuscript and proposal reviewing

Manuscript reviewer for: *Chem. Geol.*; *Chem. Erde*; *Commun. Earth Environ.*; *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. Adv.*; *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), *National Aeronautics and Space Administration* (Solar System Science [SCUBED]), 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 (Exobiology Program), *Natl. Aeronaut. Space Adm.* (via telepresence) | 2025

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

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

External academic evaluations

External Examiner for *Ph.D. Defense* of Chun Fung Chiu, *ETH Zürich* (Zürich, CHE; via telepresence) | 2026

External letter writer for tenure evaluation, Columbia Climate School, Columbia University | 2025

External Examiner for *Ph.D. Defense* of Lena Chen, School of Earth and Environment, University of Leeds (Leeds, UK) | 2024

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

Scientific community leadership and organization

Chair for Theme 12 of the 2024 Goldschmidt Conference: *Chemistry and Physical Processes of the Oceans and Atmosphere* | 2023–2024

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

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' reference standard for cadmium stable isotope studies; see publication #4, Abouchami *et al.* | 2010–2013

Service to WHOI

Institutional governance and faculty service

Chair, two Pre-Tenure Faculty Mentoring Committees, Department of Marine Chemistry & Geochemistry | 2025–present; 2026–present

Steering committee for WHOI Plasma Facility | 2016–present

Member of *Appointments and Promotion Procedures* Working Group | 2024

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

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

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

Postdoctoral Association Treasurer | 2013–2014

Internal funding and proposal review

Ad Hoc Review Committee Member, *Interdisciplinary Awards* | 2026

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

Ad Hoc Review Committee Member, *Independent Study Awards* | 2018

Institutional engagement

Research poster presentation at *OCIA Demo Day Innovation Showcase*, highlighting OCIA-funded research on microbial iron and copper demand | 2026

Invited research presentation and NIRVANA clean laboratory tour for WHOI members (Advancement event) | 2026

Invited NIRVANA laboratory tours and research presentations for WHOI Trustees and Corporation Members | 2019

Organizer of weekly Marine Chemistry & Geochemistry Department Seminars | 2016–2017

Scientific workshops and meetings

Invited participant and poster presenter at *NASA Accelerating Informatics for Earth Science* Workshop (Washington, DC) | 2024

Participant in *Ocean Carbon & Biogeochemistry* Scoping Workshop: *Laying the foundation for a potential future BioGeoSCAPES program* (virtual) | 2021

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

Participant and chalk-talk presenter at *Pump It Up* workshop on the ocean's biological pump (Cape Cod, MA, USA) | 2017

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

Open resources and professional communication

Open-source 3D printing designs for laboratory equipment | Created and shared custom designs developed in my lab (e.g., autosampler cassettes, organizational tools) on Thingiverse | 2025–present

The Clean Lab Chronicles | An occasional newsletter I write with Peter Crockford about how to navigate academia, tailored to researchers in the Earth sciences | 2024–present

Educational outreach and service

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

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

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

Science communication training for informal educators

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 Mass 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

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

Guest lecture for NNOCCI Study Circle participants at *SeaWorld*, San Diego, CA | *An overview of the carbon cycle at Earth's surface* | 2014

Guest lecture for NNOCCI Study Circle participants at *Woods Hole Oceanographic Institution*, Woods Hole, MA | *Isotopic Earth Science: The Confluence of Rock and Heavy Metal* | 2014

Participation in Education Programs

Formal instruction

Graduate-level instruction

Co-instructor, *12.742: Marine Chemistry* | 2025; 2026

Co-instructor, *12.744: Marine Isotope Chemistry* | 2019; 2021

Co-instructor, *12.752/3: Geodynamics* | 2020

Co-instructor, *12.759: Seminar in Oceanography* | 2018; 2020

Guest lecturer, *12.741: Marine Bioinorganic Chemistry* (lecture on isotope fractionation) | 2018; 2020; 2022; 2026

Undergraduate instruction and tutoring

Teaching assistant for courses in *Atmosphere & Hydrosphere*, *Radiogenic Isotope Geochemistry*, *Sedimentary Geology*, and *Stable Isotope Geochemistry* | 2008–2011

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

Field instruction

Demonstrator for undergraduate field courses: *Dorset Field Course* (Mesozoic stratigraphy), *Cornwall Field Course* (Palaeozoic tectonics and metamorphism), and *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), Riss Kell (2019–2022), and Katherine Squires (2024–present)

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), Shawnee Traylor (2021), and Jennifer Necker (2024)

Other educational activities

Academic Advising Committee for Joint Program in Chemical Oceanography | 2021–2022

Guest lecturer for WHOI Summer Student Fellows | 2016

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

Supervision

Postdoctoral Researchers and Research Staff

Georgi Laukert, *Marie Skłodowska-Curie Global [Postdoctoral] Fellow* | Co-advised with Katharine Hendry (British Antarctic Survey) | 2023–2026 | Next position: Postdoctoral Researcher at GEOMAR Helmholtz Centre for Ocean Research Kiel

Pierre Cadeau, *Marie Skłodowska-Curie Global [Postdoctoral] Fellow* | Co-advised with Olivier Rouxel (Ifremer) | 2024–2025 | Next position: Maître de conférences at Sorbonne Université

Margot C.F. Debyser, *Postdoctoral Investigator* | Co-advised with Matthew Charette | 2023–2025 | Next position: *Postdoctoral Researcher* at Institut Universitaire Européen de la Mer

Ichiko Sugiyama, *Postdoctoral Investigator* | Co-advised with Makoto Saito | 2022–2024 | Next position: *Postdoctoral Researcher* at Carleton University

Peter W. Crockford, *WHOI Postdoctoral Scholar* | Co-advised with Ann Dunlea and Scott Wankel | 2021–2023 | Next position: *Assistant Professor* at Carleton University

Emilie Le Roy, *Center for Marine and Environmental Radioactivity WHOI Postdoctoral Scholar* then *Postdoctoral Investigator* | Co-advised with Matthew Charette | 2019–2021 | Next position: *Project Officer* at GEOTRACES International Project Office

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

Ann G. Dunlea, *Postdoctoral Investigator* | Co-advised with Bernhard Peucker-Ehrenbrink | 2018–2019 | Next position: *Assistant Scientist* at Woods Hole Oceanographic Institution

Dalton S. Hardisty, *WHOI Postdoctoral Scholar* | Co-advised with Sune Nielsen and Scott Wankel | 2016–2018 | Next position: *Assistant Professor* at Michigan State University

Maureen E. Auro, *Research Associate II* (until 2020) then *Research Associate III* | Co-advised with Sune Nielsen | 2016–2022

Graduate Students

Jordyn D. Wemhoner, PhD Student, *MIT–WHOI Joint Program* | Sole advisor | 2024–present

Iulia-Mădălina Șteangă, PhD Student, *MIT–WHOI Joint Program* | Co-advised with Daniel Repeta | 2019–2024 | Dissertation: *Marine iodine biogeochemistry: Inorganic speciation, redox dynamics, and organic complexation* | Next position: *Blue Book Traineeship programme* at the European Commission (Brussels, Belgium)

Logan A. Tegler, *Summer Student Fellow* from Arizona State University (2017) then PhD Student, *MIT–WHOI Joint Program* | Co-advised with Sune Nielsen | 2018–2023 | Dissertation: *From the atmosphere to the abyss: Tracing organic carbon deposition, cadmium isotopes, and iron cycling using marine sediments* | Next position: *Postdoctoral Researcher* at University of Hawai'i–Mānoa

Julien T. Middleton, PhD Student, *MIT–WHOI Joint Program* | Sole advisor | 2017–2022 | Dissertation: *Barium isotope cycling in the marine environment: Pathways of fractionation and implications for paleoceanographic applications* | Next position: *Postdoctoral Researcher* at University of California, Santa Barbara

Undergraduate Researchers

Unayza Anika, *Summer Student Fellow* from Kalamazoo College | 2025

Evren Arif, *Summer Student Fellow* from Tufts University | 2024

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

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

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

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

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

Research 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

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

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

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

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

Fieldwork

April–June 2023 | R/V *Atlantis* AT50-10 | Scientist; Golfito (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 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

Refereed Publications

*Student or Postdoctoral Mentee; †corresponding author (if not first author)

59. *Debyser, M.C.F., **T.J. Horner**, D.E. Hammond, P. Henderson, and †M.A. Charette (2026). Boundary controls on radium-223 and radium-228 distributions along GEOTRACES GP17-OCE: implications for trace element transport in the distal South Pacific Ocean, *Global Biogeochem. Cycles*, **40**(10), e2026GB009139, doi:10.1029/2026GB009139.

58. Kell, R.M., A.V. Subhas, N.L. Schanke, L.E. Lees, R.J. Chmiel, D. Rao, M.M. Brisbin, D.M. Moran, M.R. McIlvin, F. Bolinesi, O. Mangoni, R. Casotti, C. Balestra, **T.J. Horner**, R.B. Dunbar, A.E. Allen, G.R. DiTullio, and M.A. Saito (2025). Zinc stimulation of phytoplankton in a low carbon dioxide, coastal Antarctic environment: evidence for the Zn hypothesis, *Biogeosci.*, **22**(20), 5877–5896, doi:10.5194/bg-22-5877-2025

57. *Tegler, L.A., **T.J. Horner**, S.G. Nielsen, A.W. Heard, K. Squires, S. Severmann, B. Peucker-Ehrenbrink, J.S. Blusztajn, and A.G. Dunlea (2025). Evolution of the South Pacific's Iron Cycle over the Cenozoic, *Paleoceanogr. Paleoclimatol.*, **40**(7), e2025PA005149, doi:10.1029/2025PA005149.

56. Macdonald, F.A., E. Renger, A. Tasistro-Hart, B.L. Byerly, M.G. Jackson, K.D. Bergmann, **T.J. Horner**, and *P.W. Crockford (2025). Mantle-like Sr isotopes in a Sturtian cap carbonate in Oman, *Geology*, **53**(9), 753–756, doi:10.1130/G53385.1.

55. Liang, H., **T.J. Horner**, and S.G. John (2025). Modeling the global oceanic barium cycle and implications for paleoceanographic proxies, *Earth Planet. Sci. Lett.*, **658**, 119295, doi:10.1016/j.epsl.2025.119295.

54. *Laukert, G., D. Bauch, B. Rabe, T. Krumpen, E. Damm, M. Kienast, E. Hathorne, M. Vredenborg, S. Tippenhauer, N. Andersen, H. Meyer, M. Mellat, P. Simões Pereira, A. D'Angelo, D. Nomura, **T.J. Horner**, K. Hendry, and S.S. Kienast (2025). Dynamic Ice–Ocean Pathways along the Transpolar Drift Amplify the Dispersal of Siberian Matter, *Nat. Commun.*, **16**, 3172, doi:10.1038/s41467-025-57881-9.

53. *Shu, Y., S.G. Nielsen, V. LeRoux, D. Santiago-Ramos, J.S. Blusztajn, M.E. Auro, P.T. Leat, and **T.J. Horner** (2025). Mélange dehydration and melting beneath South Sandwich Islands arc, *Nat. Commun.*, **16**, 1440, doi:10.1038/s41467-025-56554-x.

52. Kell, R.M., R.J. Chmiel, D. Rao, D.M. Moran, M.R. McIlvin, **T.J. Horner**, N.L. Schanke, *I. Sugiyama, R.B. Dunbar, G.R. DiTullio, and M.A. Saito (2024). High metabolic zinc demand within native Amundsen and Ross Sea phytoplankton communities determined by stable isotope uptake rate measurements, *Biogeosci.*, **21**(24), 5685–5706, doi:10.5194/bg-21-5685-2024.

51. *Mayfield, K.K., †**T.J. Horner**, A. Torfstein, M.E. Auro, *P.W. Crockford, and A. Paytan (2024). Barium Cycling in the Gulf of Aqaba, *Front. Earth Sci.*, **12**, 1178487, doi:10.3389/feart.2024.1178487.

50. *Tegler, L.A., †**T.J. Horner**, V. Galy, S.M. Bent, Y. Wang, H.H. Kim, *Ö.Z. Mete, and S.G. Nielsen (2024). Distribution and Drivers of Organic Carbon Sedimentation Along the Continental Margins, *AGU Adv.*, **5**(4), e2023AV001000, doi:10.1029/2023AV001000.

49. *Le Roy, E., M.A. Charette, P. Henderson, A.M. Shiller, W.S. Moore, N. Kemnitz, D.E. Hammond, and **T.J. Horner** (2024). Controls on dissolved barium and radium-226 distributions in the Pacific Ocean along GEOTRACES GP15, *Global Biogeochem. Cycles*, **38**(6), e2023GB008005, doi:10.1029/2023GB008005.

48. *Tegler, L.A., S.G. Nielsen, Y. Wang; F. Scholz, J.D. Owens, L.C. Peterson, M.E. Auro. P.J. Lam, *C.W. Kinsley, and **T.J. Horner** (2024). Refining the roles of productivity, redox, and remineralization on the cadmium isotope composition of marine sediments, *Geochim. Cosmochim. Acta.*, **372**, 134–153, doi:10.1016/j.gca.2024.03.010.

47. *Șteangă, I.-M., D.J. Repeta, J.S. Blusztajn, and **T.J. Horner** (2024). Speciation and cycling of iodine in the Subtropical North Pacific Ocean, *Front. Mar. Sci.*, **10**, 1272968, doi:10.3389/fmars.2023.1272968.

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** (2023). Iodine-to-calcium ratios in deep-sea scleractinian and bamboo corals, *Front. Mar. Sci.*, **10**, 1264380, doi:10.3389/fmars.2023.1264380.

45. Farmer, J.R., J.S. Fehrenbacher, **T.J. Horner**, and E.R. Kast (2025). Tools to trace past productivity and ocean nutrients. In A. Paytan & A. Turchyn (Volume Eds.), A. Anbar & D. Weis (Eds.-in-Chief), *Treatise on Geochemistry* (3rd ed., Vol. 5, Earth's Surface Envelope: Evolution Over Time, pp. 111–151). Elsevier. doi:10.1016/B978-0-323-99762-1.00039-5. [Invited]

44. *Mete, Ö.Z., A.V. Subhas, H.H. Kim, A.G. Dunlea, L.M. Whitmore, A.M. Shiller, W.D. Leavitt, and †**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.S. 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. [Invited]

34. **Horner, T.J.**, †S.H. Little, †T.M. Conway, †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.

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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. [Invited]

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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.

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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.

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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.

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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.

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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.**, †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.

8. Georgiev, S.V., **T.J. Horner**, H.J. Stein, J.L. Hannah, B. Bingen, and M. Rehkämper (2015). Cad mium-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

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

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

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.

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.

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.

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., 125–154, Springer, Heidelberg, doi: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.

Presentations

Invited seminars and lectures

2025 Department of Earth, Environmental & Planetary Sciences, Northwestern University.

2024 Earth Surface Science Institute, University of Leeds.

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). Part of the *Marine Biogeochemistry Short Course: Application of Isotopes in Ocean, Earth, and Environmental Research*.

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

2024 ‡**Horner, T.J.** (2024) From Data to Discovery: Accelerating Chemical Oceanography with ML, *NASA Accelerating Informatics for Earth Science 2024* (Washington, DC).

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 Paleoceanography: 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 preciptiation 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. Schönbächler, 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

2026 *Laukert, G., K.R. Hendry, and **T.J. Horner** (2026). Stable silicon isotopes as tracers of Arctic sea ice–ocean macronutrient cycling, *EGU General Assembly 2026* (Vienna, AUT).

*Debyser, M.C.F., **T.J. Horner**, D.E. Hammond, P. Henderson, and M.A. Charette (2026). Radium Isotopes Trace Distal Trace Metal Sources to the South Pacific: Insights from GEOTRACES GP17-OCE, *Ocean Sciences Meeting 2026* (Glasgow, GBR).

*Anika, U., P. Cadeau, M.C.F. Debyser, and **T.J. Horner** (2026). Black Sea in Your Backyard: Trace Metal Cycling in a Salt-Stratified Pond, *Ocean Sciences Meeting 2026* (Glasgow, GBR).

2025 *,‡Debyser, M.C.F., **T.J. Horner**, Ö.Z. Mete, P. Henderson, and M.A. Charette (2025). Radium isotopes trace distal trace metal sources to the South Pacific Ocean. *Gordon Research Conference–Chemical Oceanography* (Manchester, NH).

*Cadeau, P., **T.J. Horner**, V. Grossi, and O. Rouxel (2025). The use of traditional and non-traditional stable isotopes to track methanogenesis intensification. *Goldschmidt 2025* (Prague, CZE)

*Ștreangă, I.-M., **T.J Horner**, and D.J. Repeta (2025). Dissolved iodine distributions and speciation across the Eastern Tropical Pacific Oxygen Minimum Zones. *Goldschmidt 2025* (Prague, CZE)

2024 *,‡Arif, E. and **T.J. Horner** (2024). Mapping Dissolved Iodide in Seawater: Insights from a Machine Learning-based Climatology. *AGU Annual Meeting* (Washington, DC).

*,‡Sugiyama, I., M.R. McIlvin, A.E. Santoro, **T.J Horner**, and M.A. Saito (2024). Microbial metal demand in the Eastern Tropical Pacific assessed using iron and copper isotopes. *Ocean Carbon Biogeochemistry Meeting* (Woods Hole, MA).

*,‡Debyser, M.C.F., M.A. Charette, P. Henderson, and **T.J Horner** (2024). A first look at the distribution of barium and radium-226 in the South Pacific (GP17-OCE, GEOTRACES). *Northeastern Geobiology Symposium* (Yale University, CT).

*,‡Ștreangă, I.-M., **T.J Horner**, and D.J. Repeta (2024). Towards the identification of dissolved organic iodine compounds in seawater. *Northeastern Geobiology Symposium* (Yale University, CT).

*Sugiyama, I., M.R. McIlvin, A.E. Santoro, **T.J. Horner**, and M.A. Saito (2024). Microbial metal demand in the Eastern Tropical Pacific assessed using iron and copper isotopes, *Northeastern Geobiology Symposium* (Yale University, CT).

*,‡Ștreangă, I.-M., **T.J Horner**, and D.J. Repeta (2024). Characterization of Organic Iodine Produced by Marine Cyanobacteria. *Ocean Sciences Meeting 2024* (New Orleans, LA).

*Sugiyama, I., M.R. McIlvin, P. Lopez, D. Kelly, A.E. Santoro, **T.J. Horner**, and M.A. Saito (2024). Microbial metal demand in the Eastern Tropical Pacific assessed using iron and copper isotopes. *Ocean Sciences Meeting 2024* (New Orleans, LA).

Saito, M.A., R. Kell, R. Chmiel, D. Rao, N.L. Schanke, L. Lees, M.M. Brisbin, D.M. Moran, M.R. McIlvin, F. Bolinesi, O. Mangoni, R. Casotti, **T.J. Horner**, A.V. Subhas, M. Follows, A.E. Allen, R.B. Dunbar and G.R. DiTullio (2024). The Interactive Influence of the Micronutrients Iron, Zinc, and Vitamin B_{12} on Ross Sea and Amundsen Sea Primary Productivity. *Ocean Sciences Meeting 2024* (New Orleans, LA).

2023 *,‡Debyser, M.C.F., **T.J. Horner**, P. Henderson, and M.A. Charette (2023). A first look at the distribution of ^{226}Ra in the South Pacific (US GEOTRACES GP17-OCE), *Gordon Research Conference–Chemical Oceanography* (Manchester, NH).

*,‡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).

*Ștreangă, 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., **TJ. 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, **TJ. Horner**, B. Peucker-Ehrenrbink, 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, 14th *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).

*,‡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* (virtual).

*Mete, 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* (virtual).

*Ștreangă, 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* (virtual).

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Presentations at WHOI, to WHOI

2025 *Advancement Seminar* (via telepresence)

2024 *Department of Marine Chemistry & Geochemistry Seminar*

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