JESSICA N. FITZSIMMONS, PH.D.

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EDUCATION

2008 - 2013 **Ph.D. in Chemical Oceanography**
Massachusetts Institute of Technology/Woods Hole Oceanographic MIT/WHOI Joint Program
Dissertation: "The marine biogeochemistry of dissolved and colloidal iron"
Committee: Edward Boyle (Chair), Phoebe Lam, Carl Lamborg, Mark Wells

2004 - 2008 **B.A. in Chemistry *and* Biology with a Specialization in Marine Science**
Boston University, *summa cum laude, with Distinction and College Honors*, Advisor: Andrew Kurtz
Thesis: "Development of Calcium Isotope Methodology using Thermal Ionization Mass Spectrometry"

APPOINTMENTS

2025-current *Professor*, Texas A&M University, Department of Oceanography

2020-2025 *Associate Professor* with Tenure, Texas A&M University, Department of Oceanography

2015-2020 *Assistant Professor,* Texas A&M University, Department of Oceanography

2014-2015 *Postdoctoral Research Associate,* Rutgers University; Advisor: Robert Sherrell

2013 *Postdoctoral Research Associate,* MIT; Advisor: Edward Boyle

2008-2013 *Ph.D. student,* MIT/WHOI Joint Program in Chemical Oceanography; Advisor: Edward Boyle

2006 *Hollings Scholar Intern,* NOAA, Atlantic Oceanographic and Meteorological Laboratories
Advisor: Peter Ortner. "Nutrient dynamics of the Southwest Florida Shelf as they relate to the Comprehensive Everglades Restoration Plan"

HONORS AND AWARDS

2025 Chancellor's EDGES Fellow, Texas A&M University

2024 Kavli Fellow, National Academy of Sciences U.S. Kavli Frontiers of Science, the Academy's premiere venue for distinguished young scientists

2024 Distinguished Achievement in Graduate Mentoring Award, Texas A&M College of Arts & Sciences

2023 Research Impact Award, Associate Professor Level, Texas A&M College of Arts & Sciences

2021 International Association for the Physical Sciences of the Ocean (IAPSO) Early Career Scientists Medal in Chemical Oceanography

2020 Dean's Distinguished Award for Faculty Service, Texas A&M College of Geosciences

2019 National Academy of Sciences Gulf Research Program Early Career Fellowship ($75,000)

2014 Rossby Award for Best Dissertation in the MIT Programs in Atmospheres, Oceans, & Climate

2011 - 2012 MIT Martin Family Society Fellowship for Sustainability

2009 - 2012 NSF Graduate Research Fellowship

2008 - 2009 MIT Presidential Fellowship

2008 Boston University College Prize for Excellence in Chemistry (top Chemistry graduate)

2008 Inducted into Phi Beta Kappa, Massachusetts Epsilon Chapter

GRANTS *(all PIs at Texas A&M University unless otherwise indicated)*

2024 **JN Fitzsimmons** (lead PI), James Moffett (USC), and Nicholas Hawco (U. Hawaii). Collaborative Research: Collection, Testing, and Intercalibration of New Trace Metal Consensus Seawater Samples. NSF-OCE 2421791. $1,096,360 ($847,493 TAMU portion), *1 Sept 2024 – 31 Aug 2027.*

2023 **JN Fitzsimmons** (lead PI) & D Henrichs (Co-PI). REU Site: Observing the Ocean. NSF-OCE 2244555.

$420,946 ($371,446+$49,500), *1 Nov 2023 – 31 Oct 2026.*

2022 **JN Fitzsimmons**. Characterization of the water column environment in relation to the testing of a prototype deep-sea mining vehicle in the eastern CCZ (NORI-D). The Metals Company (formerly DeepGreen Metals, Inc.). $542,138, *Aug 2022 – Dec 2023.*

2021 TM Conway (Lead PI, USF), **JN Fitzsimmons** (Co-PI), and SG John (Co-PI, USC). Collaborative Research: U.S. GEOTRACES GP17-ANT: Dissolved concentrations, isotopes, and colloids of the bioactive trace metals. NSF-OCE 2123333. $1,205,652 ($410,163 TAMU portion), *Oct 2021 – Sept 2026.*

2021 Yager, P (Lead PI, U Georgia), P Madeiros (Co-PI, U Georgia), RM Sherrell (Co-PI, Rutgers), **JN Fitzsimmons** (Co-PI), P St-Laurent (Co-PI, VIMS), SE Stammerjohn (Co-PI, U Colorado Boulder). NSFGEO-NERC: Collaborative Research: Accelerating Thwaites Ecosystem Impacts for the Southern Ocean (ARTEMIS). NSF OPP-ANT O&E 1941308. $1,864,037 ($252,830 TAMU portion). *Aug 2021 – July 2026.*

2020 **JN Fitzsimmons** (Lead PI), TM Conway (Co-PI, USF), and SG John (Co-PI, USC). Collaborative Research: U.S. GEOTRACES GP17-OCE: Dissolved concentrations, isotopes, and colloids of the bioactive trace metals. NSF-OCE 2049241. $1,177,457 ($456,770 TAMU portion), *Jul 2021 – Aug 2026.*

2020 **JN Fitzsimmons** (Lead PI), F Marcantonio (Co-PI), and J Kaihatu (Co-PI). Tracing Texas freshwaters into the coastal Gulf of Mexico using isotopes. Texas A&M University T3 Triad. $34,000, *Jan 2021 – Dec 2022.*

2020 BS Twining (Lead PI, Bigelow), **JN Fitzsimmons** (Co-PI), G Cutter (Co-PI, ODU), C Wiederwohl (Co-PI). Collaborative research: Management and implementation of the US GEOTRACES GP17 Section: South Pacific and Southern Ocean (GP17-OCE). NSF-OCE 2023206, $1,951,183 ($502,824 TAMU portion), *Oct 2020 – Sept 2026.*

2020 J Drazen (Lead PI, U. Hawaii), G Carter (Co-PI, UH), A White (Co-PI, UH), S Ferron (Co-PI, UH), **JN Fitzsimmons** (Co-PI), E Goetze (Co-PI, UH), M Hatta (Co-PI, UH), D Lindsay (Co-PI, JAMSTEC), CI Measures (Co-PI, UH), B Popp (Co-PI, UH). Characterization and monitoring of the water column ecosystem in the eastern CCZ (NORI-D). Deep Green Metals, Inc. $3,350,971 ($469,297 TAMU portion), *Jul 2020 – Dec 2023.*

2019 CR German (Lead PI, WHOI), **JN Fitzsimmons** (Co-PI), BM Toner (Co-PI, U.Minn), JA Breier (Co-PI, UTRGV), and G Xu (Co-PI, APL-UW). Collaborative Research: Hydrothermal Estuaries: What sets the hydrothermal flux of Fe and Mn to the oceans? NSF-OCE-1851078, $1,658,407 ($399,558 TAMU portion), *Jun 2019 – Sept 2025.*

2019 L Campbell (Lead PI) and **JN Fitzsimmons** (Co-PI). REU Site: Observing the Ocean. NSF-OCE-1849932, $418,547. *Mar 2019 – Feb 2022.*

2019 A Brandon (Lead PI, U. Houston) and **JN Fitzsimmons** (Co-PI). Lead (Pb) isotopes and heavy metal concentrations in Galveston Bay waters, sediments, and oysters. Galveston Bay Estuary Program, TCEQ. $133,688 ($26,439 TAMU portion), *Sept 2019-Aug 2021.*

2018 **JN Fitzsimmons** (Lead PI), G Gold-Bouchot (Co-PI), and K-H Chu (Co-PI). Fate of chemical pollutants in a local Texas Anthropogenic Estuary. Texas A&M University T3 Triad. $34,000. *Apr 2018-Mar 2020.*

2017 **JN Fitzsimmons** (Lead PI) and C Till (Co-PI, Humboldt State University). Collaborative Research: U.S. GEOTRACES PMT: Dissolved trace metal distributions and size partitioning (Fe, Mn, Zn, Cu, Cd, Ni, Pb, & Sc). NSF-OCE-1737167, $580,976 ($464,498 TAMU portion), *Nov 2017 – Oct 2022*.

2016 EB Roark (Lead PI), **JN Fitzsimmons** (Co-PI), F Marcantonio (Co-PI), BV Miller (Co-PI), DJ Thomas (Co-PI). MRI: Acquisition of a Multicollector Inductively Coupled Plasma Mass Spectrometer and Laser Ablation System for Investigating the Evolution of the Earth's Climate, Oceans, and Tectonics at Texas A&M University. NSF-MRI-1626244, $1,428,910, *Sept 2016 – Oct 2021.*

2015 **JN Fitzsimmons** (PI). Colloidal iron distribution and bioavailability along the West Antarctic Peninsula. Antarctic Science International Bursary, $7500.

2015 **JN Fitzsimmons** (Lead PI) and RM Sherrell (Co-PI, Rutgers). GEOTRACES Arctic section: Dissolved

micronutrient trace metal distributions and size partitioning (Fe, Mn, Zn, Cu, Cd, and Ni). NSF-OCE-1434493, $497,314 ($326,183 TAMU portion), *Jan 2015 - Dec 2019*.

2014 M Wells (Lead PI, U. Maine) and **JN Fitzsimmons** (Co-PI). Collaborative Research: Assessment of the colloidal Fe size spectrum in coastal and open ocean waters. NSF-OCE-1558722, $468,081 ($198,737 TAMU portion), *Sept 2014 - Aug 2019.*

PUBLICATIONS (* indicates TAMU graduate student author, ‡ indicates TAMU undergrad author)

Total citations = 4203, with an H-index of 36 (Google Scholar).

MANUSCRIPTS IN REVIEW

*Gunnells, SA, Morton, PL, *Lanning, NT, Summers, B, Adams, HM, Kübler-Dudgeon, Lee, J-M, Schartup, AT, Barbero, L, Drazen, JC, Hatta, M, Measures, CI, and **Fitzsimmons, JN**. Pelagic chemical baselines in the NORI-D mining lease region of the eastern Clarion-Clipperton Zone prior to deep-sea mining. *In review at Elementa: Science of the Anthropocene, Special Issue on Deep-Sea Mining (12/2025).*

Herbert, LC, St-Laurent, P, Oliver, H, *Steffen, JM, Cohen, C, **Fitzsimmons, JN**, Wellner, J, Yager, PL, Sherrell, RM. Benthic iron fluxes from decaying algal matter on the seafloor fuel an Antarctic ecosystem. *In revision for Nature Geoscience (8/2024).*

Krisch, S, Achterberg, E, Biester, H, Boyle, EA, Colombo, M, Cullen, J, **Fitzsimmons, JN**, van de Flierdt, T, Heimburger-Boavida, L-E, Hopwood, M, *Jensen, L, Lodeiro, P, Middag, R, Myers, P, Olivelli, A, Rehkamper, M, Rember, R, Rijkenberg, M, Rogalla, B, Rutgers van der Loeff, M, De Vera, J. Closing the Arctic lead budget: A review. *In 2nd review for Nature Reviews Earth & Environment (9/2025).*

*Lanning, NT, *Steffen, JM, Sieber, M, Bian, X, Yang, S-C, Weiss, G, ‡Halbeisen, D, Hatta, M, John, SG, Conway, TM, **Fitzsimmons, JN**. The influence of biological uptake and chemical scavenging on dissolved iron isotope ratios in the Pacific Ocean. *In revision for Geophysical Research Letters (3/2025).*

Matzen, S, Steiner, Z, Stewart, B, Schuler, C, Kang, K, Chen, X, Marcus, MA, Ditter, A, Shapiro, D, **Fitzsimmons, JN**, Achterberg, EP, German, CR, Toner, BM. Evolution of nanoparticulate iron oxyhydroxides in the dispersing Rainbow hydrothermal plume. *Submitted to Geochimica et Cosmochimica Acta (12/2025).*

*Steffen, JM, Summers, BA, Conway, TM, Thyng, KM, Sherrell, RM, German, CR, and **Fitzsimmons, JN.** Short residence times for hydrothermally-sourced dissolved iron in the deep ocean. *In revision for Nature Geoscience.*

Yonkos, L, Zabel, FQ, Kinter, K, Vichi, R, St. Michelle, E, *Gunnells, SA, **Fitzsimmons, JN**, Leitner, A, Eidam, E, Drazen, JC, Sackett, DK. Investigating toxicity of deep-sea mining effluent and potential ecotoxicological effects in the eastern Clarion Clipperton Zone of the Pacific Ocean. *In revision for Elementa: Science of the Anthropocene, Special Issue on Deep-Sea Mining (10/2025).*

Zabel, FQ, Kinter, K, Vichi, R, Chapman, J, Drazen, JC, *Gunnells, SA, **Fitzsimmons, JN**, Goetze, E, Yonkos, L, Sackett, DK. Characterizing baseline open ocean toxicity and its implications for deep-sea mining in the Clarion Clipperton Zone. *In 2nd review at Elementa: Science of the Anthropocene, Special Issue on Deep-Sea Mining (12/2025).*

PEER-REVIEWED BOOK CHAPTERS

1. German, CR, Lang, SQ, **Fitzsimmons, JN.** (2024) Hydrothermal Processes. In: *Treatise on Geochemistry, Third Edition.* Editors: Ariel Anbar and Dominique Weis. Elsevier Science. https://doi.org/10.1016/B978-0-323-99762-1.00048-6

PEER-REVIEWED PUBLICATIONS

74. Chinni, V, *Steffen, JM, Stammerjohn, SE, St-Laurent, P, Yager, PL, Conway, TM, **Fitzsimmons, JN**, and Sherrell, RM (in press). Glacial meltwater iron is dominated by anoxic subglacial hydrologic source in the Amundsen Sea, Antarctica. *Nature Communications Earth & Environment*

73. Albers, E, Genske, F, Seewald, JS, Walter, M, Mette, J, Wegener, G, Molari, M, Klaembt, C, Gallucci, Isler, T, Bohringer, L, **Fitzsimmons, JN**, *Gunnells, SA, Schlindwein, V, German, CR. (2025) Enigmatic H_2- and CH_4-rich hydrothermal plumes at the ultramafic-hosted Lucky B site, 81°N on Lena Trough, Arctic Ocean. *Nature Scientific Reports*, 15: 35912. https://doi.org/10.1038/s41598.-025-19746-5.

72. Thomson, C, Lough, A, Moorkens, J, Liu, T, *Gunnells, SA, **Fitzsimmons, JN**, Steiner, Z, Dunlea, A, Woulds, C, Homoky, W, Wang, M, Qiao-Guo, T, Liu, F. (2025) Ecological impacts of deep-sea mining waste on marine algae and copepods. *Environmental Science & Technology*. https://doi.org/10.1021/acs.est.5c06113
71. Hawco, NJ, Conway, TM, Coesel, SN, Barone, B, Seelan, EA, Yang, S-C, Bundy, RM, Pinedo-Gonzalez, P, Bian, X, Sieber, M, *Lanning, NT, **Fitzsimmons, JN**, Foreman, RK, König, D, Groussman, RD, Allen, JG, Juranek, LW, White, AE, Karl, DM, Armbrust, EV, John, SG. (2025) Anthropogenic iron alters the spring phytoplankton bloom in the North Pacific Transition Zone. *Proceedings of the National Academy of Sciences (PNAS)*, 122 (23) e2418201122. https://doi.org/10.1073/pnas.2418201122
70. Jones, RL, Hawkings, J, Meredith, MP, Lohan, MC, Moore, OW, Sherrell, RM, **Fitzsimmons, JN**, Kazieman, M, Araki, T, Kaulich, B, Annett, AL. (2025) Antarctic glaciers export carbon-stabilised iron(II)-rich particles to the surface Southern Ocean. *Nature Communications*, 16:5015. https://www.nature.com/articles/s41467-025-59981-y.
69. Whitmore, LM, *Jensen, LT, Granger, J, Xiang, Y, Kipp, LE, Pasqualini, A, Newton, R, Agather, AM, Anderson, RF, Black, EE, Bowman, KL, Bourbonnais, A, Brzezinski, MA, Bundy, RM, Charette, MA, Edwards, RL, **Fitzsimmons, JN**, Hansell, DA, Lam, PJ, Morton, P, Saito, M, Scholsser, P, Shiller, AM, Smethie, WM, Twining, BS, Woosley, RJ, Zhang, R. (2025) Multi-elemental tracers in the Amerasian Basin reveal interlinked biogeochemical and physical processes in the Arctic Ocean Upper Halocline. *Global Biogeochemical Cycles*, 39, e2024GB008342. https://doi.org/10.1029/2024GB008342.
68. Jiang, S, *Lanning, NT, Boyle, EA, **Fitzsimmons, JN**, Ramezani, J, Wang, AG, Zhang, J. (2025) Meridional central Pacific Ocean depth section for Pb and Pb isotopes (GEOTRACES GP15, 156°W, 56°N to 20°S) including shipboard aerosols. *Journal of Geophysical Research: Oceans*, 130, e2024JC021674. https://doi.org/10.1029/2024JC021674.
67. Laubach, A, Lee, J-M, Sieber, M, *Lanning, NT, **Fitzsimmons, JN**, Conway, TM, Lam, PJ. (2025) Particulate cadmium accumulation in the mesopelagic ocean. *Global Biogeochemical Cycles*, 39, e2024GB008281. https://doi.org/10.1029/2024GB008281.
66. Albers, E, Diehl, A, **Fitzsimmons, JN**, *Jensen, LT, Klein, F, McDermott, J, Purser, A, Seewald, JS, Walter, M, Wegener, G, Bach, W, Boetius, A, German, CG. (2025) Ultramafic-influenced submarine venting on basaltic seafloor at the Polaris site, 87°N, Gakkel Ridge. *Earth & Planetary Science Letters,* 651: 119166. https://doi.org/10.1016/j.epsl.2024.119166.
65. Sieber, M, *Lanning, NT, *Steffen, JM, Bian, X, Yang, S-C, Lee, JM, Weiss, G, Hunt, HR, Charette, M, Moore, WS, Hautala, SL, Hatta, M, Lam, PJ, John, SG, **Fitzsimmons, JN**, Conway TM. (2024) Long distance transport of subsurface sediment-derived iron from Asian to Alaskan Margins in the North Pacific Ocean. *Geophysical Research Letters*, e2024GL110836. https://doi.org/10.1029/2024GL110836.
64. Li, J, Babcock-Adams, L, Boiteau, RM, McIlvin, MR, Manck, LE, Sieber, M, *Lanning, NT, Bundy, RM, Bian, X, Streanga, I-M, Granzow, BN, Church, MJ, **Fitzsimmons, JN**, John, SG, Conway, TM, Repeta, DJ. (2024) Microbial iron limitation in the ocean's twilight zone. *Nature*, 633: 823-827. doi: 10.1038/s41586-024-07905-z.
63. Bian, X, Yang, S-C, Raad, RJ, Odendahl, CE, *Lanning, NT, Sieber, M, Huang, K-F, **Fitzsimmons, JN**, Conway, TM, John, SG. (2024) Distribution and cycling of nickel and nickel isotopes in the Pacific Ocean. *Geophysical Research Letters,* 51, e2024GL111115. doi: 10.1029/2024GL111115.
62. Xiang, Y, *Steffen, JM, Lam, PJ, Gartman, A, Mizell, K, **Fitzsimmons, JN**. (2024) Metal release from manganese nodules in anoxic seawater and implications for deep-sea mining dewatering operations. *Environmental Science & Technology Water*. https://doi.org/10.1021/acsestwater.4c00166.
61. **Fitzsimmons, JN** and *Steffen, JM. (2024) The "net" impact of hydrothermal venting on oceanic elemental inventories: Contributions to plume geochemistry from the International GEOTRACES Program. *Oceanography*, 37(2):102-115, https://doi.org/10.5670/oceanog.2024.421. (invited)
60. Conway, TM, **Fitzsimmons, JN**, Middag, R, Noble, TL, and Planquette, HF (2024) Introduction to the Special Issue: Twenty years of GEOTRACES, an international study of the marine biogeochemical cycles of trace elements and isotopes. *Oceanography*, 37 (2):6-7, https://doi.org/10.5670/oceanog.2024.415.
59. Basak, C, Wu, Y, Haley, B, Muratli, J, Pena Gonzalez, L, Bolge, L, **Fitzsimmons, JN**, Sherrell R, Goldstein, S.

(2024) Suspended particulate matter influence on dissolved Nd concentration and isotopic composition along GEOTRACES section GP16. *Earth and Planetary Science Letters*, 635: 118692. https://doi.org/10.1016/j.epsl.2024.118692.

58. Buckley, NR, Black, EE, Kenyon, JA, *Lanning, NT, Sieber, M, Conway, TM, **Fitzsimmons, JN**, and Cutter, GA. (2024) Revaluating hydrogen sulfide as a sink for Cd and Zn in the Oceans. *Global Biogeochemical Cycles,* 38 (3): e2023GB007881. https://doi.org/10.1029/2023GB007881.
57. *Lanning, NT, Jiang, S, Amaral, VJ, Mateos, K, *Steffen, JM, Lam, PJ, Boyle, EA, and **Fitzsimmons, JN**. (2023) Isotopes illustrate vertical transport of anthropogenic Pb by reversible scavenging within Pacific Ocean particle veils. *Proceedings of the National Academy of Sciences*, 120 (23): e2219688120. https://doi.org/10.1073/pnas.2219688120.
56. Sieber, M, *Lanning, NT, Bian, X, Yang, S-C,Takano, S, Sohrin, Y, Weber, T, **Fitzsimmons, JN**, John, SG, and Conway, TM. (2023) The importance of reversible scavenging for the marine Zn cycle evidenced by the distribution of zinc and its isotopes in the Pacific ocean. *Global Biogeochemical Cycles*, 128 (4), e2022JC019419. doi: 10.1029/2022JC019419.
55. **Fitzsimmons, JN** and Conway, TM. (2023) Novel insights into marine iron biogeochemistry from iron isotopes. *Annual Reviews of Marine Science*, 15: 383-406*.* doi: 10.1146/annurev-marine-032822-103431. (invited review)
54. Sieber, M, *Lanning, NT, Bunnell, ZB, Yang, S-C, Marsay, CM, Landing, WM, Buck, CS, **Fitzsimmons, JN**, John, SG, and Conway, TM. (2023) Biological, physical, and atmospheric controls on the distribution of cadmium and its isotopes in the North Pacific Ocean. *Journal of Geophysical Research-Oceans* 37, e2022GB007441, doi: 10.1029/2022GB007441.
53. *Hicks, TL, Shamberger, KEF, **Fitzsimmons, JN**, Jensen, CC, DiMarco, SF. (2022) Tropical cyclone-induced coastal acidification. *Nature Communications Earth & Environment*, 3(297). doi: 10.1038/s43247-022-00608-1.
52. *Williford, T, Amon, RMW, Benner, R, Kaiser, K, Stedmon, C, Bauch, D, **Fitzsimmons, JN**, Gerringa, LJA, Newton, R, Hansell, DA, Granskog, MA, *Jensen, LT, Laglera, LM, Pasqualini, A, Rabe, B, Reader, H, Rutgers van der Loeff, M, Yan, G. (2022) Spatial complexity in dissolved organic matter and trace elements driven by hydrography and freshwater input across the Arctic Ocean during 2015 Arctic GEOTRACES expeditions. *Journal of Geophysical Research – Oceans,* 127 (11), e2022JC018917. doi: 10.1029/2022JC018917.
51. John, SG, Kelley, RL, Bian, X, Y, S-C, Fu, F, Smith, MI, *Lanning, NT, Liang, H, Pasquier, B, Seelen, E, Holzer, M, Conway, TM, **Fitzsimmons, JN**, and Hutchins, DA. (2022) The biogeochemical balance of oceanic nickel cycling. *Nature Geoscience*, 15: 906-912. doi: 10.1038/s41561-022-01045-7.
50. Marsay, CM, Landing, WM, Umstead, D, Till, CP, Freiberger, R, **Fitzsimmons, JN**, *Lanning, NT, Shiller, AM, Hatta, M, Saito, M, Chmiel, R, Buck, CS. (2022) Does sea-spray aerosol contribute significantly to aerosol trace element loading? A case study from the US GEOTRACES Pacific Meridional Transect (GP15). *Global Biogeochemical Cycles*, 36, e2022GB007416. doi: 10.1029/2022GB007416
49. *Jensen, LT, Cullen, JT, Gerringa, L, Bauch, D, Middag, R, Sherrell, RM, and **Fitzsimmons, JN**. (2022). A refinement of the processes controlling dissolved copper and nickel biogeochemistry: insights from the pan-Arctic. *Journal of Geophysical Research: Oceans Special Issue on Arctic Ocean*, 127, e2021JC018087. doi: 10.1029/2021JC018087.
48. Chmiel, R, *Lanning, NT, Laubach, A, Lee, J-M, **Fitzsimmons, JN,** Hatta, M, Jenkins, WJ, Lam, PJ, McIlvin, M, Tagliabue, A, Saito, MA. (2022). Major processes of the dissolved cobalt cycle in the North and equatorial Pacific Ocean. *Biogeosciences*, 19, 2365-2395. doi: 10.5194/bg-19-2365-2022.
47. *Lopez, AM, **Fitzsimmons, JN**, ‡Adams, HM, Dellapenna, TM, and Brandon, AD (2022). A time-series of heavy metal geochemistry in sediments of Galveston Bay estuary, Texas, 2017-2019. *Science of the Total Environment*, 806 (3): 150446*.* doi: 10.1016/j.scitotenv.2021.150446.
46. Zhang, R, *Jensen, LT, **Fitzsimmons, JN**, Sherrell, RM, Lam, PJ, Xiang, Y, and John, SG. (2021) Iron isotope biogeochemical cycling in the western Arctic Ocean. *Global Biogeochemical Cycles*, 35, e2021GB006977. doi: 10.1029/2021GB006977.
45. *Jensen, LT, *‡Lanning, NT, Marsay, CM, Buck, CS, Aguilar-Islas, A, Rember, R, Landing, WJ, Sherrell, RM, and

Fitzsimmons, JN (2021). Biogeochemical cycling of colloidal trace metals in the Arctic cryosphere. *Journal of Geophysical Research: Oceans, Special Issue on Arctic Ocean.* 126, e2021JC0177394. doi: 10.1029/2021JC017394.

44. *Lopez, AM, Brandon, AD, Ramos, RC, **Fitzsimmons, JN**, Dellapenna, TM, and ‡Adams, HM (2021) Lead geochemistry of sediments in Galveston Bay, Texas. *Environmental Advances*, 4: 100057 doi: 10.1016/j.envadv.2021.100057.
43. Hoffman, CL, Schladweiler, C, Seaton, NCA, Nicholas, SL, **Fitzsimmons, JN**, Sherrell, RM, German, CR, Lam, PJ, and Toner, BM (2020). Diagnostic morphology and solid-state chemical speciation of hydrothermally derived particulate Fe in a long-range dispersing plume. *ACS Earth & Space Chemistry,* Special Issue on Marine Particles. 4: 1831-1842. doi: 10.1021/acsearthspacechem.0c00067.
42. *Jensen, LT, Morton, P, Twining, BS, Heller, MI, Hatta, M, Measures, CI, John, SG, Zhang, R, Sherrell, RM, and **Fitzsimmons, JN** (2020). A comparison of marine Fe and Mn cycling: U.S. GEOTRACES GN01 Western Arctic case study. *Geochimica et Cosmochimica Acta.* 288: 138-160. doi: 10.1016/j.gca.2020.08.006.
41. Jenkins, WJ, Hatta, M, **Fitzsimmons, JN**, Schlitzer, *Lanning, NT, R, Shiller, A, Buckley, NR, German, CR, Lott III, DE, Weiss, G, Whitmore, L, Casciotti, K, Lam, PJ, Cutter, GA, Cahill, KL (2020). An intermediate-depth source of hydrothermal ^{3}He and dissolved iron in the North Pacific. *Earth and Planetary Science Letters*, 539: 116223. doi: 10.1016/j.epsl.2020.116223.
40. Charette, MA, Kipp, LE, *Jensen, LT, Dabrowski, JS, Whitmore, LM, **Fitzsimmons, JN**, Williford, T, Ulfsbo, A, Jones, E, Bundy, RM, Vivancos, SM, Pahnke, K, John, SG, Xiang, Y, Hatta, M, Petrova, M, Heimburger-Bovaida, L-E, Bauch, D, Newton, R, Pasqualini, A, and more than 40 other authors listed alphabetically (2020). The Transpolar Drift as a source of riverine and shelf-derived trace elements to the Central Arctic Ocean. *Journal of Geophysical Research: Oceans*, 125: e2019JC015920. doi: 10.1029/2019JC015920.
39. Kadko, D, Aguilar-Islas, A, Buck, C, **Fitzsimmons, JN**, Landing, WJ, Shiller, A, Till, CP, Bruland, KW, Boyle, EA, and Anderson, RF (2020). Sources, fluxes, and residence times of trace elements measured during the U.S. GEOTRACES East Pacific Zonal Transect. *Marine Chemistry*, 222: 103781. doi: 10.1016/j.marchem.2020.103781.
38. Hayes, CT, **Fitzsimmons, JN**, *Jensen, LT, ‡**Lanning, NT, Hatta, M, McGee, D, and Boyle, EA. (2020) A Lagrangian view of trace elements and isotopes in the North Pacific. *Journal of Geophysical Research: Oceans*, 125, e2019JC015862. doi: 10.1029/2019JC015862.
37. *Jensen, LT, Wyatt, NJ, Landing, WM, and **Fitzsimmons, JN**. (2020) Assessment of the stability, sorption, and exchangeability of marine colloidal metals. *Marine Chemistry*, 220: 103754. doi: 10.1016/j.marchem.2020./103754.
36. Carvalho, F, **Fitzsimmons, JN**, Couto, N, Gorbunov, M, Kohut, J, Oliver, MJ, Sherrell, RM, and Schofield, O. (2020) Testing the Canyon Hypothesis: Evaluating light and nutrient controls of phytoplankton growth in penguin foraging hotspots along the West Antarctic Peninsula. *Limnology & Oceanography,* 65:455-470. doi: 10.1002/lno.11313.
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13. **Fitzsimmons, JN,** Carrasco, GG, Wu, J, Hatta, M, Measures, CI, Conway, TM, John, SG, & Boyle, EA. (2015). Size partitioning of dissolved iron and iron isotopes along the U.S. GEOTRACES North Atlantic transect. *Deep-Sea Research II,* 116: 130-151. doi: 10.1016/j.dsr2.2014.11.014.
12. Measures, CI, Hatta, M, **Fitzsimmons, JN**, and Morton, P. (2015). Dissolved Al in the zonal North Atlantic section of the U.S. GEOTRACES 2010/2011 cruises. *Deep-Sea Research II*, 116: 176-186. doi: 10.1016/j.dsr2.2014.07.006.
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10. **Fitzsimmons, JN**, Bundy, RM, Al-Subiai, SN, Barbeau, KA, & Boyle, EA. (2015). The composition of dissolved iron in the dusty surface ocean: An exploration using size-fractionated iron-binding ligands. *Marine Chemistry,* 173: 125-135. doi: 10.1016/j.marchem.2014.09.002.
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7. **Fitzsimmons, JN** & Boyle, EA (2014). Both soluble and colloidal iron phases control dissolved iron variability in the tropical North Atlantic Ocean. *Geochimica et Cosmochimica Acta,* 125: 539-550. doi: 10.1016/j.gca.2013.10.032.
6. **Fitzsimmons, JN**, Zhang, R, & Boyle, EA (2013). Dissolved iron in the tropical North Atlantic Ocean. *Marine Chemistry*, 154: 87-99. doi: 10.1016/j.marchem.2013.05.009.
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2. Schacter, CR, Albright, LB, Dubofsky, EA, **Fitzsimmons, JN**, Focht, R, Nadler, LE, Sandercock, M, Taylor, L, Walfoort, D, Whitten, T, Williams, LJ, Rosenthal, GG (2013). Risk-sensitive resource defense in a territorial reef fish. *Environmental Biology of Fishes,* 96(9). doi: 10.1007/s10641-013-0181-z.
1. Rosenthal, GG, **Fitzsimmons, JN**, Karl, K, Gerlach, G, & Fisher, HS (2011). Tactical release of a sexually-selected pheromone in a swordtail fish. *PLos One*, 6(1):e16994. doi: 10.1371/journal.pone.0016994.

NON-REFEREED PUBLICATIONS AND LAB PRESS

Hawkins, G. (2025) Texas A&M Oceanography & the Blue Economy: Part 3 – Energy Resources. *Q&A with Fitzsimmons about deep-sea mining environmental cimpacts.* Texas A&M ArtSci News.

Shah, S. (2025) What to Know About Trump's Push to Boost Deep-Sea Mining. *Policy and environmental impact news including Fitzsimmons quotes on environmental impacts of mining*. TIME.

Hauser, E. (2024) Deep sea mining may be coming to the Texas coastal – but at what cost? *Policy news including Fitzsimmons quotes regarding environmental impacts of mining.* Deceleration News.

GEOTRACES (2023) Pulling back the veil on reversible scavenging of lead. *Press for Lanning et al. 2023 PNAS.* GEOTRACES Science Highlights (and newsletter).

Rodriguez, H. (2022) Trace Elements, Huge Impact. *Press for Fitzsimmons & Wiederwohl leadership on U.S. GEOTRACES GP17-OCE expedition.* Texas A&M ArtSci News.

Agan, J. (2021) Texas A&M Graduate Student Spends Fifty-one Days At Sea Studying Hydrothermal Vents. *Press for Fitzsimmons PhD student Nathan Lanning's research cruise experience.* Texas A&M Geoscience News.

Agan, J. (2021) New study: Galveston Bay's lead levels are low, 25% human-sourced. *Press for Fitzsimmons' new publication Lopez et al. 2021 on lead isotopes.* Texas A&M Geoscience News.

Catania, G., Hayhoe, K., and 57 other Texas Scientists (2021) Texas scientists: Power outages show why Texas must prepare for climate change. *Opinion piece for* The Dallas Morning News.

Agan, J. (2020) Texas A&M Oceanographer Joins Deep-Sea Mining Environmental Impact Assessment. *Press for Fitzsimmons' deep-sea mining grant from DeepGreen Metals.* Texas A&M Geoscience News.

Lee, L. (2020) Texas A&M scientists find trace elements increasing in rapidly changing Arctic Ocean. *Press for Fitzsimmons' coauthored publication Charette et al. 2020.* Texas A&M Today and Texas A&M Geosciences News.

Wheeling, K. (2020). Tracking trace elements across the Arctic Ocean. *Press for Fitzsimmons' coauthored publication Charette et al. 2020.* EOS.

Kim, B. (2019). Oceanography graduate students attended the International GEOTRACES Summer School. *Press for Fitzsimmons' graduate student international experiences.* Texas A&M Geosciences News.

Lee, L. (2019). Jessica Fitzsimmons awarded Early-Career Research Fellowship by National Academies Gulf Research Program. *Press for Fitzsimmons' national award.* Texas A&M Geosciences News.

Ketterer, S, Dempsey, M. & Hensley, N. (2019). Spill from ITC Deer Park plant fire threatening vulnerable marsh. *Press for Fitzsimmons-led sampling of Deer Park ITC impact on Galveston Bay.* Houston Chronicle.

Rice, J (2019). Texas A&M water researchers find waxy residue near Deer Park disaster. *Press for Fitzsimmons-led sampling of Deer Park ITC impact on Galveston Bay.* Houston Public Media.

Rodriguez, M (2019). Texas A&M researchers help test water affected by ITC chemical spill. *Press for Fitzsimmons-led sampling of Deer Park ITC impact on Galveston Bay.* KBTX, CBS College Station.

Lee, L. (2019). Is the ITC Deer Park incident affecting Galveston Bay? Texas A&M scientists analyze initial samples. *Press for Fitzsimmons-led sampling of Deer Park ITC impact on Galveston Bay*. Texas A&M Today.

Swindell, R. (2019). Oceanography graduate makes waves in colloid research, and now at Texas Sea Grant. *Spotlight on Fitzsimmons lab alumna.* Texas A&M Geosciences News.

Kim, B. (2018). Returning to Galveston Bay, Texas A&M Oceanographers continue studying Post-Harvey coast. *Press for Fitzsimmons' High Impact Learning Experience day-cruise.* Texas A&M Geosciences News.

Fuechec, T (2017). "Where I feel like I belong:" New degree draws ocean-minded Aggies. *Press for Fitzsimmons' High Impact Learning Experience expeditions and their role in student satisfaction.* Texas A&M Geosciences News.

Deville, T (2017). Reaching ocean depths. *Press for Fitzsimmons et al. 2017, Nature Geoscience.* The Battalion.

Bogan, R. (2017). Pacific Ocean iron particles can travel thousands of miles, study finds. *Press for Fitzsimmons et al. 2017, Nature Geoscience.* Fox News National.

Fitzsimmons, JN (2014). Autobiographical Sketch. In: Women in Oceanography: A decade later. *The Oceanography Magazine*, 109.

GEOTRACES Electronic Atlas

CRUISE PARTICIPATION (447 DAYS TOTAL)

Mar 2026	R/V *Pelican* (6 days). Gulf cruise for archive seawater collection for Trace Metal Consensus Seawater Project. Chief Scientist. Cocodrie-Cocodrie, LA.
Sept 2025	R/V *Kilo Moana* (5 days). 'ALOHA-1' cruise for archive seawater collection for Trace Metal Consensus Seawater project. Chief Scientist. Honolulu-Honolulu.
Apr 2025	R/V *Atlantic Explorer* (0 days). Constraining air-sea exchange of mercury species with high-resolution spatial and temporal measurements in the Sargasso Sea. Mobilized and demobilized Fitzsimmons Lab trace metal CTD system that was lent to PI Robert Mason for the expedition, Bermuda-Bermuda.
Aug-Sept 2023	R/V *Atlantis* (23 days). Hydrothermal Estuaries cruise to Endeavor segment of Juan de Fuca Ridge with AUV *Sentry*. Trace metal team lead. Astoria, Oregon – Astoria.
Dec 22 – Jan 23	R/V *Revelle* (55 days). US GEOTRACES GP17-OCE. Co-Chief Scientist. Papeete, Tahiti – Punta Arenas, Chile. Lead for the trace metal sampling team.
July 2019	R/V *Pelican* (3 days). REU Ocean Observing Cruise. Chief Scientist. Cocodrie-Cocodrie (LUMCON).
June 2019	R/V *Trident* (1 day). Hurricane Harvey Galveston Bay Research cruise. Chief Scientist. Galveston.
March 2019	R/V *Trident* (1 day). Hurricane Harvey Galveston Bay Research cruise. Chief Scientist. Galveston.
Nov 2018	R/V *Trident* (1 day). Hurricane Harvey Galveston Bay Research cruise. Chief Scientist. Galveston.
Sept 2018	R/V *Trident* (1 day). Hurricane Harvey Galveston Bay Research cruise. Chief Scientist. Galveston.
June 2018	R/V *Trident* (1 day). Hurricane Harvey Galveston Bay Research cruise. Chief Scientist. Galveston.
June 2018	R/V *Pelican* (3 days). REU Ocean Observing Cruise. Cocodrie-Cocodrie (LUMCON).
March 2018	R/V *Trident* (1 day). Hurricane Harvey Galveston Bay Research cruise. Chief Scientist. Galveston.
Nov 2017	R/V *Trident* (1 day). Hurricane Harvey Galveston Bay Research. Chief Scientist. Galveston.
Oct 2017	R/V *Point Sur* (3 days). Hurricane Harvey Rapid Response Cruise, Gulf of Mexico. Trace metal team lead. Galveston-Galveston.
Jan-Feb 2016	R/V *Gould* (46 days). Palmer Long-Term Ecosystem Research cruise along the West Antarctic Peninsula. Team leader for the trace metal sample/incubation group. Punta Arenas – Punta Arenas.
Aug-Oct 2015	USCGC *Healy* (64 days). Arctic GEOTRACES cruise. Dutch Harbor, AK, to the North Pole and back. Trace metal sampling and ultrafiltration.
Jan-Feb 2015	R/V *Gould* (43 days). Palmer Long-Term Ecosystem Research cruise along the West Antarctic Peninsula. Dissolved/particulate trace metal sampling and incubations. Punta Arenas - Punta Arenas.
July 2014	R/V *Melville* (24 days). Bruland California Current cruise. Trace metal sampling for iron isotopes and colloids, trace metal clean incubations. San Diego - San Diego.
Sept 2013	R/V *Kilo Moana* (12 days). HOE-PhoR II cruise, Center for Microbial Oceanography: Research & Education. Trace metal sampling. Station ALOHA.
Jul 2012	R/V *Kilo Moana* (21 days). HOE-DYLAN V cruise, Center for Microbial Oceanography: Research & Education. Served as Junior Chief Scientist. Station ALOHA.
Nov-Dec 2011	R/V *Knorr* (36 days). GEOTRACES North Atlantic Transect (Leg 2). Co-served as Trace Metal Team Leader. Woods Hole to Praia, Cape Verde Islands.
Apr 2011	R/V *Kilo Moana* (5 days). Hawaii Ocean Time Series cruise, trace metal sampling. Station ALOHA.
Oct-Nov 2010	R/V *Knorr* (21 days). GEOTRACES North Atlantic Transect (Leg 1). Co-served as Trace Metal Team Leader. Lisbon, Portugal, to Mindelo, Cape Verde Islands.
May 2009	R/V *Knorr* (24 days). GEOTRACES Pacific Intercalibration cruise. Honolulu to San Diego.
Aug 2008	R/V *Oceanus* (30 days). Tropical North Atlantic Boyle-lab cruise. Bridgetown, Barbados, to Mindelo, Cape Verde Islands.
June 2008	SSV *Corwith Cramer* (10 days). MIT/WHOI Joint Program orientation cruise. Northwest Atlantic Ocean.
Jul-Aug 2006	R/V *Virginia* (2 x 3 days). Florida Bay water quality cruise.

CONFERENCE PRESENTATIONS – **denotes graduate student advisee, ‡denotes undergraduate advisee*

180. *Bellitto, T, Bunnell, Z, Conway, TM, John, SG, **Fitzsimmons, JN** (2026) Distributions and soluble-colloidal size partitioning of dissolved trace metals on the Amundsen Sea Shelf from GEOTRACES GP17-ANT. Ocean Sciences Meeting, Glasgow, Scotland, UK.
179. *Dick, K, Dineen, MK, German, CR, Moffett, J, Seltzer, AM, Xu, G, Jenkins, WJ, **Fitzsimmons, JN** (2026) A

mesoscale approach to understanding hydrothermal Fe particle dynamics at the Juan de Fuca Ridge. Ocean Sciences Meeting, Glasgow, Scotland, UK.

178. *Gunnells, SA, Morton, PL, ǂStacey, C, ǂBoysen, I, Hatta, M, Kubler-Dudgeon, I, Bowman Adamczyk, K, Larrouilh, C, Toczek, J, Magno, JL, **Fitzsimmons, JN**. (2026) The composition and dispersal of dissolved and particulate elements in deep-sea mining plumes during pilot mining trials. Ocean Sciences Meeting, Glasgow, Scotland, UK.
177. Herbert, L, Ohayon, A, Baco-Taylor, A, St-Laurent, P, *Steffen, JM, **Fitzsimmons, JN**, Oliver, H, Wellner, J, Yager, PL, Sherrell, RM (2026) Ecological controls on sediment geochemistry and trace metal cycling in the Amundsen Sea, West Antarctica. Ocean Sciences Meeting, Glasgow, Scotland, UK.
176. Middleton, JT, Brzezinski, MA, **Fitzsimmons, JN**, Twining, BS, Holzer, M, *Dick, K, Jones, J. (2026) Evidence for the fractionation of silicon isotopes during absorption onto particulate iron from hydrothermal plumes obtained during GEOTRACES GP17$_{OCE}$. (2026) Ocean Sciences Meeting, Glasgow, Scotland, UK.
175. Jenness, SE, Monreal, P, Davis, JE, *Steffen, JM, Chinni, V, Barrett, P, Buck, NJ, Walker, S, van Dijken, G, Arrigo, KR, Baumberger, T, **Fitzsimmons, JN**, Sherrell, RM, Resing, JA, Bundy, RM. (2026) Amphiphilic-type siderophores are widely present in the Southern Ocean and influence productivity and the stabilization of dissolved iron. Ocean Sciences Meeting, Glasgow, Scotland, UK.
174. Odendahl, C, Ross, A, Yang, S-C, *Dick, K, Halbeisen, D, Liang, Z, Mahieu, L, Meyer, A, Buck, KN, Conway, T, **Fitzsimmons, JN**, Knapp, A, Saito, MA, John, S. (2026) Nickel and nickel stable isotopes in the South Pacific subtropical gyre: Data from GP17-OCE. Ocean Sciences Meeting, Glasgow, Scotland, UK.
173. **Fitzsimmons, JN**, *Bellitto, T, Conway, TM, John, SG (2025) Dissolved trace metal distributions and soluble/colloidal partitioning in the Amundsen Sea, West Antarctica: Results from the U.S. GEOTRACES GP17-ANT expedition. Fall AGU Meeting, New Orleans, LA.
172. *Bellitto, T, Sherrell, RM, Meredith, MP, Annett, AL, Palmer LTER Team, **Fitzsimmons, JN** (2025) Tracing "net" elemental fluxes using element-meteoric water relationships in the West Antarctic Peninsula. Fall AGU Meeting, New Orleans, LA.
171. *Kim, Y, *Bellitto, T, **Fitzsimmons, JN**, Marcantonio, F (2025) Assessment of the influence of natural and anthropogenic lead (Pb) in the Amundsen Sea, West Antarctica. Fall AGU Meeting, New Orleans, LA.
170. Chinni, V, *Steffen, JM, Herbert, L, Oliver, H, Stammerjohn, SE, St-Laurent, P, Wellner, J, Yager, PL, Conway, T, **Fitzsimmons, JN,** Sherrell, RM (2025) Iron sources and biogeochemistry in the Amundsen Sea, West Antarctica: Ice shelf processes and glacial meltwater. Fall AGU Meeting, New Orleans, LA.
169. *Gunnells, SA, Morton, PL, ǂStacey, C, ǂBoysen, I, Hatta, M, Kubler-Dudgeon, I, Schartup, AT, Bowman Adamczyk, K, Larrouilh, C, Toczek, J, Magno, JL, **Fitzsimmons, JN**. (2025) Chemical characterization of midwater and benthic plumes created by deep-sea mining of polymetallic nodules. Underwater Minerals Conference, St. Petersburg, FL.
168. Chinni, V, *Steffen, JM, Stammerjohn, SE, St-Laurent, P, Herbert, LC, Yager, PL, Conway, TM, **Fitzsimmons, JN**, Sherrell, RM (2025) Quantification of dissolved iron sources in the Amundsen Sea: Could accelerated glacial melting alleviate the Fe limitation in the Southern Ocean? National Conference on Polar Sciences, Goa, India
167. *Bellitto, T, Sherrell, RM, Annett, A, Meredith, M, Dinniman, M, **Fitzsimmons, JN**. (2025) Linking benthic fluxes and phytoplankton demand: Dissolved trace metal dynamics on the West Antarctic Peninsula. Gordon Research Conference in Chemical Oceanography, Manchester, NH.
166. *Steffen, JM, Chinni, V, Herbert, L, Stammerjohn, S, St-Laurent, P, Oliver, H, Wellner, J, Yager, PL, Conway, TM, Sherrell, RM, **Fitzsimmons, JN**. (2025) Quantifying the sources of dissolved iron in the Amundsen Sea, Antarctica. Gordon Research Conference in Chemical Oceanography, Manchester, NH.
165. *Gunnells, SA, Morton, PL, ǂStacey, C, ǂBoysen, I, Hatta, M, Kubler-Dudgeon, I, Bowman Adamczyk, K, Larrouilh, C, Toczek, J, Magno, JL, **Fitzsimmons, JN**. (2025) The chemical composition and attenuation of deep-sea mining plumes. Gordon Research Conference in Chemical Oceanography, Manchester, NH.
164. *Dick, K, Dineen, MK, Xu, G, Seltzer, AM, German, CR, Jenkins, WJ, Moffett, J, **Fitzsimmons, JN** (2025) Demystifying iron and manganese transformations in hydrothermal plumes: A mesoscale approach. Gordon Research Conference in Chemical Oceanography, Manchester, NH.
163. *Kim, Y, Lanning, NT, *Dick, K, Sheridan, M, Leal, A, Buck, C, Boyle, EA, **Fitzsimmons, JN**, Marcantonio, F

(2025) Tracing the source and sinks of Pb to the relatively 'pristine' Pacific sector of the Southern Ocean using Pb isotopes. Gordon Research Conference in Chemical Oceanography, Manchester, NH.

162. Herbert, LC, Ohayon, A, **Fitzsimmons, JN,** *Steffen, JN, Wellner, J, St-Laurent, P, Oliver, H, Yager, PL, Sherrell, RM. (2025) Phytodetrital and faunal controls on benthic iron fluxes in the iron-limited Amundsen Sea. Gordon Research Conference in Chemical Oceanography, Manchester, NH.
161. **Fitzsimmons, JN**, *Steffen, JN, *Bellitto, T, Chinni, V, Conway, TM, Annett, A, Sherrell, RM. (2025) Benthic sediments are a primary source of dissolved trace metals to Antarctic waters: Case studies from various Antarctic continental shelves. Goldschmidt Meeting, Prague, Czech Republic. https://doi.org/10.7185/gold2025.32276 (invited)
160. *Kim, Y, ‡Ryder, C, Lanning, NT, *Dick, KA, Sheridan, M, Buck, C, Boyle, EA, **Fitzsimmons, JN**, Marcantonio, F. (2025) Does surface seawater actively trace the Pb isotope ratios of aerosol Pb? A case study of the low-dust South Pacific and Southern Oceans. Goldschmidt Meeting, Prague, Czech Republic. https://doi.org/10.7185/gold2025.27684
159. Conway, TM, Hunt, HR, Sieber, M, *Lanning, NT, *Steffen, JM, **Fitzsimmons, JN**, John, SG. (2025) Illuminating the marine sedimentary reductive iron source using iron isotopes. Goldschmidt Meeting, Prague, Czech Republic. https://doi.org/10.7185/gold2025.31738
158. Conway, TM, Tian, H, *Steffen, JM, Bunnell, Z, Chinni, V, **Fitzsimmons, JN**, Middag, R, Sherrell, RM. (2025) Cracking the code: Iron isotopes as source tracers in the Antarctic. Goldschmidt Meeting, Prague, Czech Republic. https://doi.org/10.7185/gold2025.31705 (invited keynote)
157. Kang, K, **Fitzsimmons, JN**, *Jensen, LA, Hoffman, CL, Penn, L, Toner, BM. (2025) Exploring marine iron colloids with Scanning Transmission X-ray Microscopy. Goldschmidt Meeting, Prague, Czech Republic. https://doi.org/10.7185/gold2025.28556
156. Yang, S-C, Bian, X, Raad, RJ, Ross, A, Odendahl, CE, *Lanning, NT, Sieber, M, Huang, K-F, Moffett, J, **Fitzsimmons, JN**, Conway, TM, John, SG. (2025) Dissolved copper concentration and isotopes in a 60°S-60°N meridional transect of the Pacific Ocean. Goldschmidt Meeting, Prague, Czech Republic. https://doi.org/10.7185/gold2025.30196
155. Toner, B, Achterberg, E, Ditter, A, **Fitzsimmons, JN**, German, CR, Kang, K, Marcus, M, Matzen, S, Shapiro, D, Steiner, Z, Stewart, B. (2025) A ptychographic spectromicroscopy workflow for marine nanoparticles. Goldschmidt Meeting, Prague, Czech Republic. https://doi.org/10.7185/gold2025.30244
154. *Steffen, JM, Chinni, V, Herbert, L, Stammerjohn, S, St-Laurent, P, Oliver, H, Wellner, J, Yager, PL, Conway, TM, Sherrell, RM, **Fitzsimmons, JN**. (2025) Impacts of ice shelf systems on the iron cycle in the Amundsen Sea. International Thwaites Glacier Collaborative Annual meeting. Virtual.
153. Yager, PL, Sherrell, RM, **Fitzsimmons, JN**, *Steffen, JM. (2025) ARTEMIS Update. International Thwaites Glacier Collaborative Annual meeting. Virtual.
152. **Fitzsimmons, JN**, *Dick, K, Conway, TM, Halbeisen, D, John, SG, Sohst, BM, Sedwick, P, Weiss, G, Resing, JA, Middleton, JL, Jenkins, WJ, Seltzer, AM, German, CR, Cutter, GA, Twining, BS. (2024) Controls on micronutrient dissolved metal distributions along the U.S. GEOTRACES GP17-OCE section to the South Pacific and Southern Oceans. Fall AGU Meeting, Washington DC.
151. *Dick, K, Seltzer, AM, Jenkins, WJ, Dineen, MK, Moffett, J, Xu, G, German, CR, **Fitzsimmons, JN** (2024). Mesoscale dissolved iron and manganese transformations in hydrothermal plumes. Fall AGU Meeting, Washington DC.
150. *Steffen, JM, Chinni, V, Herbert, L, Stammerjohn, S, Yager, P, Conway, TM, Sherrell, RM, **Fitzsimmons, JN** (2024). Iron isotopes reveal dissolved iron dynamics in the Amundsen Sea, Antarctica. Fall AGU Meeting, Washington DC.
149. *Kim, Y, Lanning, NT, *Dick, K, Boyle, EA, **Fitzsimmons, JN**, Marcantonio, F (2024). Importance of natural lead (Pb) to the Pb isotope signatures of water masses in the Southern Ocean. Fall AGU Meeting, Washington DC.
148. *Bellitto, T, Sherrell, RM, Annett, A, Meredith, M, **Fitzsimmons, JN**. (2024) Dissolved trace metal dynamics on the West Antarctic Peninsula continental shelf: Insights from the 2015 Palmer LTER expedition. Fall AGU Meeting, Washington DC.
147. *Gunnells, SA, Morton, PL, ǂBoysen, I, ǂStacey, C, Hatta, M, Kubler-Dudgeon, I, Schartup, AT, Bowman

Adamczyk, K, Larrouilh, C, Toczek, J, Magno, JL, **Fitzsimmons, JN**. (2024) The composition, intensity, and longevity of deep-sea mining plumes in NORI-D of the eastern Clarion-Clipperton Zone. Fall AGU Meeting, Washington DC.

146. *Lanning, NT, *Kim, Y, *Dick, K, **Fitzsimmons, JN**, Marcantonio, F, Boyle, EA. (2024) Transport of anthropogenic dissolved Pb in the South Pacific Ocean. Fall AGU Meeting, Washington DC.
145. Sedwick, P, Tagliabue, A, Resing, J, Sohst, B, Weiss, G, Conway, TM, Cutter, GC, *Dick, K, **Fitzsimmons, JN**, Halbeisen, D, John, SG, Twining, BS. (2024) Biogeochemical decoupling of dissolved manganese and iron in the Southeast Pacific basin and implications for Southern Ocean micronutrient limitation. Fall AGU Meeting, Washington DC.
144. Twining, BS, Sofen, LE, Mayo, J, Braun, L, **Fitzsimmons, JN**, Cutter, GC. (2024) The US GEOTRACES GP17-OCE section : Establishing the biogeochemical context. Fall AGU Meeting, Washington DC.
143. Dineen, MK, Xu, G, *Dick, K, **Fitzsimmons, JN**, German, CR, Moffett, J. (2024) Iron(II) persistence at the Juan de Fuca Ridge. Fall AGU Meeting, Washington DC.
142. Chinni, V, Bu, K, *Steffen, JM, **Fitzsimmons, JN**, Oliver, H, Bundy, RM, Planquette, H, Yager, PL, Sherrell, RM. (2024) Factors driving the uptake of bioactive trace metals in the Fe-stressed Amundsen Sea, West Antarctica. Fall AGU Meeting, Washington DC.
141. Herbert, LC, Ohayon, A, Lepp, AP, Miller, LE, **Fitzsimmons, JN**, *Steffen, JM, Wellner, J, St-Laurent, P, Oliver, H, Yager, PL, Sherrell, RM. (2024) Benthic iron fluxes and cycling in Antarctic coastal sediments adjacent to the retreating West Antarctic Ice Sheet. Fall AGU Meeting, Washington DC.
140. Ohayon, A, Sherrell, RM, Wellner, J, Yager, PL, *Steffen, JM, **Fitzsimmons, JN**, Baco-Taylor, A, Herbert, LC. (2024) Controlling mechanisms and ecosystem effects of variable sediment redox conditions in the Amundsen Sea, Antarctica. Fall AGU Meeting, Washington DC.
139. Wiederwohl, CL, Bogdanoff, R, Thomas, A, **Fitzsimmons, JN**, Twining, BS, Cutter, GA. (2024) Bringing oceanographic research vessels to the public: Capturing interest in oceanographic biogeochemistry through Virtual Reality. Fall AGU Meeting. Washington DC.
138. Johnson, L, Basak, C, Sherrell, RM, Herbert, LC, *Steffen, JM, **Fitzsimmons, JN**, Chinni, V. (2024) Rare earth elements in the Southern Ocean: The significance of West Antarctic melting. Fall AGU Meeting. Washington DC.
137. *Steffen, JM, Chinni, V, Herbert, LC, Oliver, H, Stammerjohn, SE, Yager, PL, Conway, TM, Sherrell, RM, **Fitzsimmons, JN** (2024). Iron isotopes reveal dissolved iron dynamics in the Amundsen Sea, Antarctica. International Thwaites Glacier Collaborative Annual Meeting, Cambridge, United Kingdom.
136. Stammerjohn, S, St-Laurent, P, Maksym, T, Yager, PL, Sherrell, RM, **Fitzsimmons, JN**, Medeiros, P, *Steffen, JM, Chinni, V, Herbert, LC, Oliver, H, Azarias Utsumi, G, and the TARSAN team. (2024) The marine icescape as modulator of ocean-ice shelf interactions. International Thwaites Glacier Collaborative Annual Meeting, Cambridge, United Kingdom.
135. Sherrell, RM, Chinni, V, Herbert, LC, *Steffen, JM, Oliver, H, Ohayon, A, **Fitzsimmons, JN**, Bundy, R, Stammerjohn, SE, St-Laurent, P, Medeiros, P, Wellner, J, Wahlin, A, Yager, PL. (2024) Iron supplies to the Amundsen Sea: Sediment flux and the Dotson ice shelf meltwater pump. International Thwaites Glacier Collaborative Annual Meeting, Cambridge, United Kingdom.
134. Matzen, SL, Steiner, Z, Ely, T, Breier, J, **Fitzsimmons, JN**, Achterberg, EP, German, CR, Toner, BM. (2024) Carbon matrices support transport of nanoparticulate iron from hydrothermal vents to open ocean waters. Goldschmidt Meeting, Chicago, IL.
133. Boyle, EA, Lanning, NT, **Fitzsimmons, JN**, *Dick, K. Pb and Pb isotopes in the South Pacific Subpolar Ocean. (2024) Goldschmidt Meeting, Chicago, IL.
132. Conway, TM, Hunt, HR, Sieber, M, Tian, H, Summers, BA, *Lanning, NT, *Steffen, JM, Homoky, WB, **Fitzsimmons, JN**, Middag, R, John SG. (2024) The iron isotope case for sediments as an important marine iron source. Goldschmidt Meeting, Chicago, IL.
131. Matzen, S, Steiner, Z, Ely, T, Breier, J, **Fitzsimmons, JN**, Achterberg, EP, German, CR, Toner, B. (2024) Nanoparticulate iron in carbon matrices is a signature of hydrothermal vents regardless of plume chemistry. Astrobiology Science Conference (Abscicon24), Providence, RI.
130. Albers, E, Genske, F, Böhringer, L, Isler, T, **Fitzsimmons, JN**, *Gunnells, SA, Mette, J, Seewald, JS, Walter, M,

Wegener, G, German, CR, Schlindwein, V, and the R/V Polarstern PS137 Science Team. (2024) Discovery of the "Lucky B" ultramafic-hosted hydrothermal field in the ultraslow-spreading Lena Tough, Arctic Ocean. European Geophysical Union General Assembly, Vienna, Austria.

129. **Fitzsimmons, JN**, *Dick, K, Conway, T, Halbeisen, D, John, SG, Sohst, B, Sedwick, P, Weiss, G, Resing, J, Cutter, G, Twining, BS (2024) An overview of the hydrography, macronutrient, and dissolved metal distributions along the U.S. GEOTRACES GP17-OCE section to the South Pacific and Southern Oceans. Ocean Sciences Meeting, New Orleans, LA.
128. *Steffen, J, Oliver, H, Herbert, L, Chinni, V, Wellner, J, Stammerjohn, S, Yager, PL, Sherrell, RM, **Fitzsimmons, JN** (2024) Iron isotope measurements of seawater in the Amundsen Sea reveal sources or iron in the coastal Southern Ocean. Ocean Sciences Meeting, New Orleans, LA.
127. *Dick, K, Halbeisen, D, Sohst, B, Weiss, G, Middleton, J, Winckler, G, German, C, Jenkins, WJ, Resing, J, Sedwick, P, John, SG, Conway, T, **Fitzsimmons, JN** (2024) Flux and transport of hydrothermal iron and manganese from the Pacific Antarctic Ridge. Ocean Sciences Meeting, New Orleans, LA.
126. *Gunnells, SA, Morton, PL, Hatta, M, Kubler-Dudgeon, I, Schartup, AT, Adamczyk, KAB, Larrouilh, C, Toczek, J, Magno, JL, **Fitzsimmons, JN**. (2024) Effects of deep-sea mining plumes on water column chemistry: Results from The Metal Company's pilot mining trials in 2022. Ocean Sciences Meeting, New Orleans.
125. German, CR, Xu, G, **Fitzsimmons, JN**, Breier, JA, Toner, BM, Jenkins, WJ, Gledhill, M, Moffett, JW, Silvia, M, Tagliabue, A, Walker, SL, and the Hydrothermal Estuaries Science & Engineering Team. (2024) Hydrothermal Estuaries: What sets the Fe flux from submarine venting to the oceans? Ocean Sciences Meeting, New Orleans, LA.
124. Hawco, NJ, Conway, TM, Coesel, S, Barone, B, Seelen, E, Yang, S-C, Pinedo-Gonzalez, P, Bian, X, Sieber, M, *Lanning, NT, **Fitzsimmons, JN**, Foreman, R, Groussman, RD, Karl, DM, Armbrust, V, John, SG. (2024) Anthropogenic iron and the spring bloom in the North Pacific Transition Zone. Ocean Sciences Meeting, New Orleans, LA.
123. Landing, WM, Conway, TM, *Dick, K, **Fitzsimmons, JN**, Hawco, NJ, John, SG, Odendahl, C, Resing, J, Sedwick, P. (2024) Decadal changes (2005 vs. 2022) in trace element inventories in the South Pacific and Southern Ocean waters. Ocean Sciences Meeting, New Orleans, LA.
122. Twining, BS, Sofen, LE, **Fitzsimmons, JN**, Cutter, G. (2024) The U.S. GEOTRACES GP17-OCE section: Establishing the biogeochemical context. Ocean Sciences Meeting, New Orleans, LA.
121. Herbert, L, St-Laurent, P, *Steffen, J, Oliver, H, **Fitzsimmons, JN**, Sherrell, RM. (2024) Variable benthic fluxes of iron to a coastal Antarctic ecosystem revealed by a coupled modeling-observation approach (Amundsen Sea, West Antarctica). Ocean Sciences Meeting. New Orleans, LA.
120. Chinni, V, Herbert, L, *Steffen, J, Jenness, S, Bu, K, **Fitzsimmons, JN**, Bundy, RM, Oliver, H, St-Laurent, H, Yager, PL, Sherrell, RM. (2024) Iron sources in the Amundsen Sea: Insights from soluble, colloidal, dissolved, and particulate fractions. Ocean Sciences Meeting. New Orleans, LA.
119. Sedwick, P, Tagliabue, A, Resing, J, Sohst, B, Weiss, G, *Dick, K, Halbeisen, D, Conway, T, John, S, Cutter, G, **Fitzsimmons, JN**, and Twining, B. (2024) Sources and transport of hydrothermal dissolved iron in the ocean interior: Insights from a model-data comparison in the Southeastern Pacific (GEOTRACES GP17-OCE). Ocean Sciences Meeting. New Orleans, LA.
118. Dineen, MK, Moffett, JW, German, CR, **Fitzsimmons, JN**, Lien, R, Branch, A, Walker, SL. (2024) Persistence of Fe(II) in Juan de Fuca hydrothermal plumes is correlated with in situ redox potential sensor measurements. Ocean Sciences Meeting. New Orleans, LA.
117. Wiederwohl, CL, Bogdanoff, R, Thomas, A, **Fitzsimmons, JN**, Twining, BS, Cutter, GA. (2024) From a living to a research vessel: Engaging public interest in oceanographic biogeochemistry through Virtual Reality of the at-sea experience. Ocean Sciences Meeting. New Orleans, LA.
116. Hunt, H, Sieber, M, Takano, S, *Lanning, NT, Bian, X, Yang, S-C, **Fitzsimmons, JN**, John, SG, Obata, J, Nishioka, J, Conway, TM. (2024) Understanding the longevity of North Pacific sedimentary iron sources. Ocean Sciences Meeting. New Orleans, LA.
115. Bian, X, Yang, S-C, Raad, R, *Lanning, NT, Sieber, M, **Fitzsimmons, JN**, Conway, TM, John, SG. (2024) Distribution and cycling of nickel and nickel isotopes in the Pacific Ocean. Ocean Sciences Meeting. New Orleans, LA.

114. Hicks, T, Shamberger, K, **Fitzsimmons, JN**, Yvon-Lewis, S. (2024) Coastal acidification dynamics in Galveston Bay, Texas: Seasonal variability, storm impacts, and implications for calcifying ecosystems. Ocean Sciences Meeting. New Orleans, LA.
113. Bowman Adamczyk, K, *Gunnells, SA, Despins, M, **Fitzsimmons, JN**, Morton, P, Kubler-Dudgeon, I. (2024) Minerology and mercury biogeochemistry in a midwater discharge plume generated during a pilot nodule collection test in the Clarion-Clipperton Zone of the northeast Pacific Ocean. Ocean Sciences Meeting. New Orleans, LA.
112. Jenness, SE, Monreal, PJ, Savoca, MS, Park, J, *Steffen, J, Pallin, LJ, Nichols, RC, Friedlander, A, **Fitzsimmons, JN**, Chinni, V, Sherrell, RM, and Bundy, RM. (2024) Evaluating the sources and identity of iron-binding organic ligands in the Southern Ocean. Ocean Sciences Meeting. New Orleans, LA.
111. **Fitzsimmons, JN,** *Gunnells, SA, Hatta, M, Measures, C, Adamczyk, K, Schartup, A. (2024) Pelagic (water column) chemistry during deep-sea mining. Nauru Ocean Resources Incorporated Deep-Sea Mining Collector Test Synthesis Workshop. National Oceanography Centre, Southampton, UK.
110. *Steffen, J, Oliver, H, Herbert, L, Stammerjohn, S, St-Laurent, P, Wellner, J, Yager, P, Sherrell, RM, and **Fitzsimmons, JN**. (2023) A survey of dissolved iron features in the Amundsen Sea: Preliminary data from the ARTEMIS project. Gordon Research Conference/Seminar in Chemical Oceanography. Manchester, NH.
109. *Lanning, NT, Sieber, M, *Steffen, J, ‡Halbeisen, D, Weiss, G, Bian, X, Yang, S-C, Hatta, M, John, SG, Conway, TM, and **Fitzsimmons, JN**. (2023) The cycling of dissolved iron, iron isotopes, and manganese in the central Pacific Ocean: Insights from the U.S. GEOTRACES Pacific Meridional Transect (GP15). Gordon Research Conference/Seminar in Chemical Oceanography. Manchester, NH.
108. *Gunnells, SA, Morton, PL, Hatta, M, Adams, HM, Kubler-Dudgeon, I, Schartup, AT, ≠Larrouilh, C, Toczek, J, **Fitzsimmons, JN**. (2023) Chemical characterization of plumes generated during deep-sea mining of polymetallic nodules from the eastern Clarion-Clipperon Zone. Gordon Research Conference/Seminar in Chemical Oceanography. Manchester, NH.
107. *Dick, K, Conway, TM, John, SG, Resing, JA, Sedwick, P, Halbeisen, D, Sohst, B, Weiss, G, and **Fitzsimmons, JN**. (2023) Southern Ocean hydrothermal iron and manganese supply from the Pacific Antarctic Ridge. Gordon Research Conference/Seminar in Chemical Oceanography. Manchester, NH.
106. *Kim, Y, **Fitzsimmons, JN**, Marcantonio, F, *Lopez, AM. (2023) Utilization of lead isotopes as a tracer of lead and freshwater inputs to Galveston Bay, Texas. Gordon Research Conference/Seminar in Chemical Oceanography. Manchester, NH.
105. Sherrell, RM, Herbert, L, St-Laurent, P, Oliver, O, **Fitzsimmons, JN**, *Steffen, J, Stammerjohn, S, Yager, P. (2023) High benthic Fe concentrations in the Amundsen Sea shelf (West Antarctica) are not driven by diffusive fluxes. Gordon Research Conference in Chemical Oceanography. Manchester, NH.
104. **Fitzsimmons, JN** and Conway, TM. (2023) A review of novel insights and future challenges presented by oceanic iron isotope analyses. Goldschmidt, Lyon, France.
103. *Gunnells, SA, Morton, PL, Hatta, M, Adams, HM, Kubler-Dudgeon, I, Schartup, AT, ≠Larrouilh, C, Toczek, J, **Fitzsimmons, JN**. (2023) Chemical characterization of plumes generated during deep-sea mining of polymetallic nodules from the eastern Clarion-Clipperon Zone. Goldschmidt, Lyon, France.
102. *Dick, K, Conway, TM, John, SG, Resing, JA, Sedwick, P, Halbeisen, D, Sohst, B, Weiss, G, and **Fitzsimmons, JN**. (2023) Southern Ocean hydrothermal iron and manganese supply from the Pacific Antarctic Ridge. Goldschmidt, Lyon, France.
101. *Lanning, NT Sieber, M, *Steffen, J, Bian, X, Yang, S-C, Weiss, G, German, CR, Seewald, J, Jenkins, WJ, Hatta, M, Tagliabue, A, John, SG, Conway, TM, and **Fitzsimmons, JN**. (2023) The role of shallow intraplate hydrothermal fluxes on the marine dissolved iron inventory and global primary production: A Kama'ehuakanaloa (Lo'ihi) Seamount case study. Goldschmidt, Lyon, France.
100. *Kim, Y, **Fitzsimmons, JN**, Marcantonio, F, *Lopez, AM. (2023) Utilization of lead isotopes as a tracer of lead and freshwater inputs to Galveston Bay, Texas. Goldschmidt, Lyon, France. Poster.
99. Matzen, S, Steiner, Z, Klose, L, Ely, T, **Fitzsimmons, JN**, Koschinsky-Fritsche, A, Achterberg, EP, German, C, Toner, B. (2023) Nanoparticulate iron oxides aggregated in carbon matrices dominate iron speciation in hydrothermal plumes over the 1-100 km distance from vent source. Goldschmidt, Lyon, France.

98. Wiederwohl, CL, *Bogdanoff, R, Thomas, A, **Fitzsimmons, JN**, Twining, BS, Cutter, GA. (2023) Reimagining oceanographic biogeochemistry: bringing the ocean to the community through virtual reality. Goldschmidt, Lyon, France.
97. ǂKaylor, C, *Lanning, NT, **Fitzsimmons, JN.** (2023) Colloidal trace metals in the Central Pacific. ASLO Aquatic Sciences Meeting, Palma de Mallorca, Spain. Poster.
96. Roman, JA, Doyle, SM, Fidler, M, **Fitzsimmons, JN**, Campbell, L, DiMarco, S, Sylvan, JB. (2023) Bacteria and archaeal composition on the Texas coast following Hurricane Harvey. ASLO Aquatic Sciences Meeting, Palma de Mallorca, Spain.
95. Matzen, SL, Steiner, Z, Hoffman, CL, Moore, L, Bundy, RM, Resing, JA, **Fitzsimmons, JN**, Achterberg, EP, German, CR, Toner, BM. (2022) Nanoparticulate iron oxyhydroxides dominate iron speciation in hydrothermal plumes over the 1-100 km distance from vent source. AGU Fall Meeting, Chicago, IL.
94. Boyle, EA, *Lanning, NT, Jiang, S, and **Fitzsimmons, JN** (2022) Reversible scavenging and particle veil transfer of Pb isotopes into the deep Pacific Ocean. Goldschmidt, Hawaii.
93. Matzen, SL, Steiner, Z, Hoffman, CL, Moore, L, Bundy, R, Resing, JA, **Fitzsimmons, JN**, Achterberg, EP, German, CR, Toner, BM. (2022) Changes in hydrothermal plume iron speciation in the 1-100 km distance from vent sources. Goldschmidt, Hawaii.
92. **Fitzsimmons, JN**, ǂSmith, S, *Jensen, LT, Sherrell, RM, *Lanning, NT, *Anderson, KDS (2022) Controls on the composition and distribution of multi-elemental colloidal metals: A synthesis from multiple ocean basins. Ocean Sciences Meeting, Honolulu, Hawaii.
91. *Gunnells, SA, Hatta, M, Adams, H, Schartup, AT, **Fitzsimmons, JN** (2022) Baseline chemical parameters in the water column of the Eastern Clarion-Clipperton Zone before the mining of manganese nodules. Ocean Sciences Meeting, Honolulu, Hawaii.
90. *Lanning, NT, Sieber, M, Weiss, G, Bian, X, Yang, S-C, German, CR, Jenkins, WJ, Hatta, M, John, SG, Conway, TM, **Fitzsimmons, JN** (2022) The cycling of dissolved iron, iron isotopes, and manganese in the Central Pacific Ocean: Insights from the U.S. GEOTRACES Pacific Meridional Transect (GP15). Ocean Sciences Meeting, Honolulu, Hawaii.
89. Boyle, EA, *Lanning, NT, **Fitzsimmons, JN** (2022) Pb and Pb isotopes in the Northern Pacific. Ocean Sciences Meeting, Honolulu, Hawaii.
88. Bian, X, Yang, S-C, Raad, R, *Lanning, NT, Sieber, M, **Fitzsimmons, JN**, Conway, TM, John, SG. (2022) Biogeochemical cycling of nickel in the Pacific Ocean based on seawater Ni isotopes. Ocean Sciences Meeting, Honolulu, Hawaii.
87. Hicks, TL, Shamberger, KEF, **Fitzsimmons, JN**, DiMarco, SF. (2022) A tale of two storms: A comparative study of tropical cyclone-induced acidification in a subtropical estuary (Galveston Bay, TX). Ocean Sciences Meeting, Honolulu, Hawaii.
86. Drazen, J, Popp, B, Goetze, E, Thuesen, E, White, A, Ferron, S, Lindsay, D, **Fitzsimmons, J**, Hatta, M, Carter, G, Assad, V, Cazares, A, Bachtel, T, Dowd, M, van der Grient, J, *Lanning, NT, Miller, E, Montenegro, J, Perelman, J, Salazar-Estrada, A, Selig, G, Stedman, G, Summers, B. (2021) Designing environmental baseline surveys to detect midwater impacts of nodule mining in the eastern CCZ. Deep Sea Biology Symposium, Brest, France.
85. Chmiel, R, Tagliabue, A, Hawco, N, **Fitzsimmons, JN**, *Lanning, NT, Moran, D, McIlvin, M, Saito, M (2021) Pacific cobalt surface stoichiometry in regions of nutrient limitation transition. ASLO Aquatic Sciences Meeting (virtual).
84. *Steffen, JM, Summers, B, Conway, TM, German, CG, Sherrell, RM, and **Fitzsimmons, JN** (2021). Using seawater iron isotopes to characterize the physicochemical speciation and scavenging rates of dissolved iron: Southern East Pacific Rise hydrothermal plume. Goldschmidt (virtual).
83. Flanagan, OG, Annett, A, Sherrell, RM, **Fitzsimmons, JN**, Ohnemus, D, and Lohan, MC (2021). Controls on the distribution of particulate trace metals across the Western Antarctic Peninsula Shelf. Goldschmidt (virtual).
82. Basak, C, Wu, Y, Haley, BA, Mutarli, J, Pena, LD, Bolge, L, **Fitzsimmons, JN**, Sherrell, RM, and Goldstein, SL. (2021). Role of suspended particulate matter in governing dissolved Nd in the Southern East Pacific Rise hydrothermal plume. Goldschmidt (virtual).

81. Annett, A, Jones, R, Lohan, M, Flanagan, O, Cai, P, Sherrell, RM, **Fitzsimmons, JN**, Ohnemus, D, Woodward, M, Williams, J, Vora, M, Roman Gonzalez, A, Scourse, J, Sands, C. (2021) Iron sources along the melting Antarctic Peninsula. UK Antarctic Science Conference, British Antarctic Survey (virtual)
80. *Lopez, AM, Brandon, AD, **Fitzsimmons, JN**, Ramos, FC, and ‡Adams, H. (2020) Lead isotopes and heavy metal concentrations in Galveston Bay, Texas, sediments. Geological Society of America. Virtual.
79. Sieber, M, *Lanning, NT, **Fitzsimmons, JN**, Weiss, G, Hatta, M, John, SG, Conway, TM (2020). Tracing the influence of Fe sources in the North Pacific using Fe isotopes (Preliminary results from GP15). Goldschmidt, Honolulu, Hawaii (moved virtual because of COVID-19).
78. Boyle, EA, Jiang, S, **Fitzsimmons, JN**, and *Lanning, NT (2020). Lead concentration and isotope compositions in the Central Tropical North Pacific Ocean. Goldschmidt, Honolulu, Hawaii (moved virtual because of COVID-19).
77. **Fitzsimmons, JN**, *Lanning, NT, ǂHalbeisen, D, Till, CP, Hatta, M, Weiss, G, Conway, TM, Sieber, M, John, SG, Yang, S-C, Bian, X (2020). A multi-element perspective on Pacific dissolved trace metal cycling from the GEOTRACES GP15 PMT cruise. Ocean Sciences Meeting, San Diego, CA.
76. *Lanning, NT, Sieber, M, *Steffen, JM, Summers, BA, Weiss, G, German, CR, John, SG, Jenkins, WJ, Schlitzer, R, Hatta, M, Tagliabue, A, Conway, TM, and **Fitzsimmons, JN** (2020). Hydrothermal Fe flux analysis of Loihi Seamount using size partitioning and Fe isotopes. Ocean Sciences Meeting, San Diego, CA.
75. *Steffen, JM, Summers, B, Conway, TM, Sherrell, RM, and **Fitzsimmons, JN** (2020). Complete characterization of the physicochemical speciation of hydrothermal dissolved iron, as revealed by iron isotopes: Southern East Pacific Rise (GEOTRACES GP16). Ocean Sciences Meeting, San Diego, CA.
74. ǂAdams, H, *Jensen, LT, ǂFarran, B, *Lanning, NT, and **Fitzsimmons, JN** (2020). Multi-element dissolved trace metal distributions in surface waters of the Texas-Louisiana Shelf: A synthesis from three cruises 2017-2019 showing the influence of rivers, hurricanes, sediments and biology. Ocean Sciences Meeting, San Diego, CA.
73. *Jensen, LT, *Lanning, NT, Sherrell, RM, and **Fitzsimmons, JN** (2020). Biogeochemical speciation of cryospheric trace metals at the seawater-surface interface of the Arctic Ocean. Ocean Sciences Meeting, San Diego, CA.
72. ǂHalbeisen, D, *Lanning, NT, Till, CP, **Fitzsimmons, JN** (2020). A multi-element overview of upper ocean trace metal cycling in the Pacific Ocean: GEOTRACES GP15 PMT demi stations. Ocean Sciences Meeting, San Diego, CA. *Poster.*
71. Hicks, TL, Shamberger, K, Jensen, C, and **Fitzsimmons, JN** (2020). Carbonate chemistry of Galveston Bay Estuary: Impact of Hurricane Harvey and implications for oyster reef health. Ocean Sciences Meeting, San Diego, CA. *Poster.*
70. Freiberger, R, Tusei, C, Begorre, JI, **Fitzsimmons, JN**, Till, CP (2020). Ocean trace metal distributions across basin-scale transects: Patterns from GEOTRACES GP15 and a comparison with GP16 and GA03. Ocean Sciences Meeting, San Diego, CA. *Poster.*
69. John, SG, Pinedo-Gonzalez, P, Hawco, N, Zhang, R, Seelen, E, Kelly, RL, Yang, S-C, Bian, X, **Fitzsimmons, JN**, *Lanning, NT, Conway, TM, Sieber, M (2020). Spatial and temporal distribution of bioactive trace-metals in the North Pacific: MESO-SCOPE, Gradients, and GP15. Ocean Sciences Meeting, San Diego, CA.
68. Weiss, G, Hatta, M, Measures CI, **Fitzsimmons, JN**, *Lanning, NT, Conway, TM, and Sieber, M (2020). Distributions of dissolved iron along the 2018 U.S. GEOTRACES GP15 Pacific Meridional Transect. Ocean Sciences Meeting, San Diego, CA.
67. Hayes, CT, Rosen, J, McGee, D, **Fitzsimmons, JN**, and Sherrell, RM (2019). Tracing continental input and organic matter export using the long-lived thorium isotopes. AGU Fall Meeting, San Francisco, CA.
66. *Jensen, LT, Wyatt, NJ, Landing, WM, and **Fitzsimmons, JN** (2019). The stability, sorption, and exchangeability of marine dissolved and colloidal metals. Gordon Research Seminar/Conference in Chemical Oceanography. Holderness, NH. ***Invited.***
65. *Lanning, NT, Jenkins, WJ, Hatta, M, German, CR, and **Fitzsimmons, JN** (2019). Hydrothermal dissolved iron and ^{3}He from Loihi Seamount along the U.S. GEOTRACES GP15 Pacific Meridional Transect. Gordon Research Seminar/Conference in Chemical Oceanography. Holderness, NH.
64. *Steffen, JM, Conway, TM, Summer, B, Sherrell, RM, and **Fitzsimmons, JN** (2019). Size-fractionated iron

isotopes along the East Pacific Zonal Transect. Gordon Research Seminar/Conference in Chemical Oceanography. Holderness, NH.

63. **Fitzsimmons, JN**, Toner, BM, *Jensen, LT, and Hoffman, CM (2019). Can synchrotron Scanning Tramission X-ray Microscopy be used to chemically image marine colloidal iron? Gordon Research Conference in Chemical Oceanography, Holderness, NH.
62. Yang, S-H, *Jensen, LT, ‡Adams, H, Polis, S, Chu, K-H, Gold-Bouchot, G, **Fitzsimmons, JN** (2019). Toxicity and fate of pollutants in the Galveston Bay anthropogenic estuary following Hurricane Harvey. Texas A&M University President's Excellence Fund Symposium. College Station, TX.
61. *Lopez, AM, Brandon, AD, **Fitzsimmons, JN,** and Ramos, FC (2019). Tracing industrial pollution in Galveston Bay, Texas: Lead isotopes and heavy metal concentrations from surface sediments. Goldschmidt, Barcelona, Spain.
60. **Fitzsimmons, JN** and *Jensen, LT (2019). Toxic and micronutrient metals in waters of Galveston Bay following Hurricane Harvey. Aquatic Sciences Meeting, San Juan, Puerto Rico.
59. ‡Adams, H and **Fitzsimmons, JN** (2019). Natural and toxic heavy metals in sediments of Galveston Bay, Texas, following Hurricane Harvey. Aquatic Sciences Meeting, San Juan, Puerto Rico.
58. Sherrell, RM, **Fitzsimmons, JN**, German, CG (2018). Rare earth element (REE) scavenging in the Southeast Pacific hydrothermal plume: Implications for interpretation of paleo-REE patterns in metalliferous sediments. American Geophysical Union Meeting, Washington DC.
57. **Fitzsimmons, JN**, *Jensen, LT, and ‡Adams, H (2018). The effects of Hurricane Harvey on dissolved and sedimentary toxic metals in Galveston Bay: A time-series analysis. Hurricane Harvey Research Symposium, Port Aransas, TX.
56. **Fitzsimmons, JN**, *De Salvo, K, Wells, M (2018). Sharing analytical techniques across fields: Applying flow-field flow fractionation coupled with ICP-MS to marine samples: Breaking open the dissolved Fe size distribution. Goldschmidt, Boston, MA.
55. **Fitzsimmons, JN**, *Jensen, LT, Sherrell, RM (2018). A comparison of the size partitioning of micronutrient trace metals (Fe, Mn, Cu, Cd, Zn, and Ni) into soluble and colloidal phases in the Atlantic, coastal Pacific, and Arctic Oceans. Ocean Sciences Meeting, Portland.
54. *Jensen, LT, Cullen, JT, Ball, GT, Sherrell, RM, **Fitzsimmons, JN** (2018). Dissolved Fe and Mn along US Arctic GEOTRACES GN01: Effects of scavenging in intermediate and deep waters. Ocean Sciences Meeting, Portland.
53. *De Salvo, K, Wells, M, **Fitzsimmons, JN** (2018). Using Flow Field Flow Fractionation coupled with Inductively Coupled Plasma Mass Spectrometry to examine the physicochemical speciation of marine iron colloids in coastal Maine seawater. Ocean Sciences Meeting, Portland.
52. Annett, A, Sherrell, RM, **Fitzsimmons, JN**, *Jensen, LT (2017). Trace metal supply from the western Antarctic Peninsula Shelf to the open ocean. Advances in Marine Biogeochemistry Conference, Scottish Association for Marine Science, Oban, Scotland.
51. **Fitzsimmons, JN** (2017). In the 'Weeds': How Multi-Element Approaches Have Necessitated a Species-Level Understanding of Marine Chemical Processes. Gordon Research Seminar, New London, NH. ***Invited*.**
50. *Jensen, LT, Sherrell, RM, **Fitzsimmons, JN** (2017). The speciation of trace metals Fe, Cu, Zn, Ni Mn, Co, and Cd into soluble and colloidal phases along the U.S. Arctic GEOTRACES section GN01. Gordon Research Seminar & Conference. New London, NH.
49. *De Salvo, K, Thornton, K, Wells, M, **Fitzsimmons, JN** (2017). Using flow field-flow fractionation to study the colloidal iron phase in seawater: An early progress report. Gordon Research Seminar & Conference, New London, NH.
48. Sherrell, RM, Annett, A, **Fitzsimmons, JN**, Seguret, M, Zurbrick, C, *Jensen, L, Roccanova, VJ, Schofield, O, Meredith, M (2017). Dissolved and particulate Fe, Mn, Zn, Cu, Ni Cd, and Pb on the Western Antarctic Peninsula Shelf: Fe supply and phytoplankton limitation. Gordon Research Conf, New London, NH.
47. Toner, BM, Hoffman, C, *Jensen, LT, Johnston, C, Voelz, J, Penn, RL, **Fitzsimmons, JN** (2017). Spectroscopy of marine colloids: scanning transmission X-ray microscopy (STXM) and synchrotron infrared nano-spectroscopy (SINS). Goldschmidt, Paris, France. ***Invited.***
46. *Jensen, LT, Sherrell, RM, and **Fitzsimmons, JN** (2017). Colloidal trace metals along U.S. Arctic GEOTRACES

GN01. GEOTRACES Summer School, Brest, France.

45. *Jensen, LT, Sherrell, RM, and **Fitzsimmons, JN** (2017). Dissolved trace metal micronutrients Fe, Mn, Zn, Ni, Cu, and Cd in the Western Arctic Ocean (U.S. GEOTRACES GN01). Goldschmidt, Paris, France.
44. **Fitzsimmons, JN**, *Jensen, LT, and Sherrell, RM (2017). Dissolved micronutrient metals Fe, Mn, Zn, Cu, Cd, and Ni along the U.S. GEOTRACES GN01 Western Arctic section: Effects of water masses & freshwater inputs. ASLO Aquatic Sciences Meeting, Honolulu. ***Invited***.
43. Hatta, M, Measures, C, *Jensen, LT, and **Fitzsimmons, JN** (2017). GEOTRACES Arctic section: Shipboard determination of dissolved Fe and Mn concentrations. ASLO Aquatic Sciences Meeting, Honolulu.
42. Hayes, CT, **Fitzsimmons, JN**, Morton, PL, McGee, D, and Boyle, EA (2017). Diel trace metal variations in the North Pacific subtropical gyre. ASLO Aquatic Sciences Meeting, Honolulu.
41. *Jensen, LT, Sherrell, RM, and **Fitzsimmons, JN** (2017). Size partitioning of dissolved trace metals into soluble and colloidal phases in the Western Arctic Ocean: Comparison to Atlantic & Pacific. ASLO Aquatic Sciences Meeting, Honolulu.
40. ‡Lanning, NT, *Jensen, LT, Sherrell, RM, and **Fitzsimmons, JN** (2017). Size partitioning of dissolved trace metals into soluble and colloidal fractions in sea ice, snow, and melt ponds of the Western Arctic Ocean. ASLO Aquatic Sciences Meeting, Honolulu.
39. Sherrell, RM, **Fitzsimmons, JN**, Annett, AL, Roccanova, VJ, Schofield, O, and Meredith, M (2017). Dissolved Fe, Mn, Zn, Cu, Ni Cd, and Pb in the Western Antarctic Peninsula shelf water column: How natural Fe fertilization works and doesn't work. ASLO Aquatic Sciences Meeting, Honolulu.
38. **Fitzsimmons, JN**, Sherrell, RM, and Roccanova, VJ (2016). Biogeochemistry of iron on the West Antarctic Peninsula continental shelf. Goldschmidt, Yokohama, Japan.
37. John, SG, **Fitzsimmons, JN**, Marsay, CM, German, CG, and Sherrell, RM (2016). Sinking feelings: Model and iron isotope evidence for the fate of Fe from the East Pacific Rise. Goldschmidt, Yokohama, Japan.
36. Fröllje, H, Pahnke, K, Scnetger, B, Brumsack, H-J, Dulai, H, **Fitzsimmons, JN** (2016). Hawaiian imprint on dissolved rare earth elements, Nd, and Ra isotopes at Station ALOHA. Goldschmidt, Yokohama, Japan.
35. **Fitzsimmons, JN**, Parker, C, and Sherrell, RM (2016). Partitioning of dissolved metals (Fe, Mn, Cu, Cd, Zn, Ni, and Pb) into soluble and colloidal fractions in continental shelf and offshore waters, Northern California. Ocean Sciences, New Orleans, LA.
34. Boiteau, R, Repeta, D, **Fitzsimmons, JN**, Parker, C, Twining, BS, Baines, S (2016) Revealing sources and chemical identity of iron ligands across the California Current System. Ocean Sciences, New Orleans.
33. Buck, KN, **Fitzsimmons, JN**, Sherrell, RM, Sohst, B, Sedwick, P (2016) Iron-binding ligands in the Eastern Tropical South Pacific: Results from U.S. GEOTRACES cruise GP16. Ocean Sciences, New Orleans, LA.
32. Caprara, S, **Fitzsimmons, JN**, Ohnemus, DC, Twining, BS, Chappell, PD, Sherrell, RM, Marchetti, A, Bruland, KW, Monticelli, D, Buck, KN (2016) Investigating feedbacks between natural metal-binding organic ligands and particle dissolution in central California coast seawater. Ocean Sciences, New Orleans, LA.
31. Cheize, M, Planquette, H, **Fitzsimmons, JN**, Sherrell, RM, Pelleter, E, Lambert, C, Sarthou, G, Boutorh, J, Bucciarelli, E, Le Goff, M, Liorzou, C, Viollier, E, Cheron, S, Gayet, N. (2016) Contribution of resuspended sediments to the dissolved trace metal pools of Fe and Mn in the ocean: An experimental study. Ocean Sciences, New Orleans, LA.
30. Forsch, KO, **Fitzsimmons, JN**, Sherrell, RM, German, CR (2016) Long-range transport of hydrothermal iron facilitated by dissolved-particulate exchange. Ocean Sciences, New Orleans, LA.
29. Maldonado, MT, Duckham, C, Brown, M, Bruland, KW, Buck, KN, Chappell, PD, Coale, T, **Fitzsimmons, JN**, Marchetti, A, Mellett, T, Parker, C (2016). Controls on Fe bioavailability in the Fe limitation mosaic of the California Current System. Ocean Sciences, New Orleans, LA.
28. Sherrell, RM, **Fitzsimmons, JN**, Roccanova, VJ, Scholfield, O, Meredith, M (2016) The 3-D distribution of dissolved and colloidal Fe, Mn, Zn, Cu, Ni, Cd, and Pb in the Western Antarctic Peninsula shelf region: Implications for natural Fe fertilization. Ocean Sciences, New Orleans, LA.
27. Wyatt, NJ, Landing, WM, **Fitzsimmons, JN**, Sherrell, RM (2016) The modification of dissolved zinc distributions along the U.S. GEOTRACES Western Arctic section. Ocean Sciences, New Orleans, LA.
26. Boiteau, RM, Repeta, DJ, **Fitzsimmons, JN**, Hawco, NH, McIlvin, MR, Saito, MA, Suffridge, C, Webb, EA (2015). Investigating marine metal/microbe interactions with LC-ICPMS-ESIMS. AGU Fall Meeting, San

Francisco, CA.

25. *Jensen, LT**, Fitzsimmons, JN**, Field, MP, and Sherrell, RM (2015). Automated offline sample preparation for ICP-MS determination of dissolved trace metals (Fe, Mn, Zn, Cu, Cd, Ni, Co, and Pb) in seawater using the ESI seaFAST pico system. Gordon Research Conference/Seminar. Holderness, NH.
24. **Fitzsimmons, JN**, Roccanova, VJ, Parker, C, and Sherrell, RM (2015). Partitioning of dissolved metals (Fe, Mn, Cu, Cd, Zn, Ni, and Pb) into soluble and colloidal fractions along the California coast. Gordon Research Conference/Seminar. Holderness, NH.
23. Boyle, EA and **Fitzsimmons, JN** (2015). Oceanic distribution, properties, and temporal variability of iron colloids. Goldschmidt Conference, Prague, Czech Republic.
22. Cheize, M, Planquette, HF, **Fitzsimmons, JN**, Sherrell, RM, Sarthou, G, Bucciarelli, E, Lambert, C, Le Goff, M, Viollier, E (2015). Contribution of suspended marine particles to the dissolved trace metals pool: An experimental study with sediments from contrasting environments. ASLO Aquatic Sciences: Granada.
21. **Fitzsimmons, JN**, Forsch, KO, Sherrell, RM, & German, CR. (2014). A 4300-km long particulate hydrothermal plume west of the Southern East Pacific Rise (15°S): Particulate minor and trace elements from the U.S. GEOTRACES Eastern Pacific Zonal Transect. AGU Fall Meeting: San Francisco.
20. Toner, B, Lam, P, Nicholas, S, Ohnemus, D, Hoffman, C, **Fitzsimmons, JN**, Sherrell, RM, & German C (2014). The speciation of particulate iron and carbon in the East Pacific Rise 15°S near-field hydrothermal plume and underlying sediments. AGU Fall Meeting, San Francisco, CA.
19. Morton, PL, Weisend, R, Landing, WM, **Fitzsimmons, JN**, Hayes, CT, Boyle, EA. (2014). Trace element cycling in lithogenic particles at Station ALOHA. AGU Fall Meeting, San Francisco, CA.
18. Weisend, R, Morton, PL, Landing, WM, Fitzsimmons, JN, Hayes, CT, Boyle, EA. (2014). Particulate trace element cycling in a diatom bloom at Station ALOHA. AGU Fall Meeting, San Francisco, CA.
17. **Fitzsimmons, JN**, Carrasco, GG, Wu, J, and Boyle, EA. (2014). Soluble and colloidal iron phases along the U.S. GEOTRACES North Atlantic Transect: A new model of dissolved Fe size partitioning. Goldschmidt Conference, Sacramento, CA.
16. **Fitzsimmons, JN**, Zhang, R, and Boyle, EA. (2014). Short- and long-term temporal variability of iron at Station ALOHA. Ocean Sciences Meeting, Hawaii.
15. Hayes, CT, Boyle, EA, McGee, D, **Fitzsimmons, JN**, and Anderson, RF. (2014). $^{232}Th/^{230}Th$ at the Hawaii Ocean Time-series Station ALOHA: a tool for iron cycling. Ocean Sciences Meeting.
14. Twining, BS, Rauschenberg, S, Sedwick, P, **Fitzsimmons, JN**, and Buck, KN. (2014). Iron quotas of North Atlantic phytoplankton reflect biogeochemical environment. Ocean Sciences Meeting.
13. Boiteau, RM, Repeta, D, **Fitzsimmons, JN**, and Boyle, EA. (2014). Characterization of marine organic trace metal ligands with high pressure liquid chromatography-mass spectrometry. Ocean Sciences Meeting, Hawaii
12. **Fitzsimmons, JN**, Conway, TM, John, SG, and Boyle, EA. (2013). Iron isotopes in seawater from the Southeast Pacific and North Atlantic Oceans. Goldschmidt Conference, Florence, Italy.
11. **Fitzsimmons, JN**, Carrasco, GC, Boyle, EA, Bundy, RM, Wu, J, Conway, TM, and John, SG. (2013). Marine dissolved iron partitioning into soluble and colloidal phases: an updated view. Gordon Research Conference in Chemical Oceanography, Biddeford, Maine.
10. **Fitzsimmons, JN**, Carrasco, GG, Wu, J, and Boyle, EA. (2013). Dissolved iron size partitioning into soluble and colloidal phases along the U.S. GEOTRACES North Atlantic transect. Aquatic Sciences Meeting, New Orleans.
9. Boiteau, R, **Fitzsimmons, JN**, Repeta, D, Boyle, EA, Coe, A, and Chisholm, S. (2013). HPLC-ICP-MS characterization of organic ligands from cyanobacteria laboratory cultures and natural seawater. Aquatic Sciences Meeting, New Orleans.
8. Carrasco, GG, **Fitzsimmons, JN**, Donat, JR, and Boyle, EA. (2013). Assessing zinc and cadmium ligands from hydrothermal plumes and rivers: points sources or global trend-setters? Aquatic Sciences Meeting, New Orleans.
7. **Fitzsimmons, JN**, Jenkins, WJ, Lee, J-M, Kayser, RA, and Boyle, EA. (2012). Distal transport of hydrothermal dissolved Fe in the deep Eastern South Pacific Ocean. AGU Fall 2012 Meeting, San Francisco.
6. **Fitzsimmons, JN**, Lee, J-M, Kayser, RA, and Boyle, EA. (2012). Dissolved iron in the Southeast Pacific

Ocean: OMZ to the gyre. Goldschmidt Conference, Montreal, Canada.

5. Boyle, EA and **Fitzsimmons, JN**. (2012). Aerosol release of Fe into the ocean: the extreme cases. Goldschmidt Conference, Montreal, Canada.
4. **Fitzsimmons, JN** and Boyle, EA. (2012). Iron colloids: intercalibration and tropical North Atlantic distribution. Ocean Sciences Meeting, Salt Lake City.
3. Boiteau, R, **Fitzsimmons, JN**, Repeta, D, Boyle, EA, Waterbury, J, Suffridge, C, Webb, E, Berube, P, Chisholm, S. (2012). Characterization of trace metal organic ligands in cultures and seawater by HPLC-ICP-MS. Ocean Sciences Meeting, Salt Lake City.
2. **Fitzsimmons, JN** and Boyle, EA. (2011). Dissolved iron partitioning between soluble and colloidal fractions in the tropical North Atlantic. Goldschmidt Conference, Prague, Czech Republic.
1. **Fitzsimmons, JN**, Zhang, R, Ito, T, & Boyle, EA. (2010). GEOTRACES dissolved Fe intercalibration and application to the tropical North Atlantic Oxygen Minimum Zone. Ocean Sciences, Portland.

INVITED SEMINARS

2024 Deep-Sea Mining: A review of the minerals, policy, and environmental implications. National Academy of Sciences U.S. Kavli Symposium. Beckman Center, Irvine, CA.

2023 Controls on metal fluxes from hydrothermal systems in the modern ocean and their impact on ocean biogeochemistry. American Geophysical Union Chapman Conference on Hydrothermal Circulation and Seawater Chemistry. Agros, Cyprus (an invited tutorial)

2023 Environmental impacts of deep sea mining of polymetallic nodules on the oceanic water column. MARB/MCES Seminar Series, Texas A&M University Galveston, Galveston, TX.

2023 The fate and transport of iron from hydrothermal vents: A synthesis. Department of Earth & Atmospheric Sciences Seminar, University of Houston, Houston, TX.

2022 Thoughts on the environmental impacts of deep sea mining. Oceanography Seminar, Texas A&M University

2021 Micronutrient trace metal dynamics in the Western Arctic Ocean. IAMAS-IACS-IAPSO Online Seminar Series, Acceptance of IAPSO Early Career Award (virtual).

2021 Iron supply from deep-sea hydrothermal vents: The Southern East Pacific Rise case study. Marine Sciences Seminar, University of Connecticut (virtual).

2021 Iron supply from deep-sea hydrothermal vents: The Southern East Pacific Rise case study. Department of Ocean & Earth Sciences Seminar Series, Old Dominion University (virtual).

2019 The Ocean's Periodic Table: Tracing Mysteries of the Sea Using "Elemental Personalities." First-Year Chemistry Seminar, Texas A&M University. College Station, TX. >2000 undergraduate students attended.

2018 Iron and manganese supply from hydrothermal vents in the deep sea: Transformations and implications for Phytoplankton. Marine Science Department Seminar Series, University of Southern Mississippi. Stennis Space Center, MS.

2018 Iron supply from deep-sea hydrothermal vents: Can it reach surface phytoplankton? Ions@WORK Mass Spectrometry Symposium. Texas A&M University, College Station, TX.

2018 The role of colloidal iron species in the marine environment. College of Marine Sciences Seminar Series, University of South Florida. St. Petersburg, FL.

2016 The persistent oceanic flux of hydrothermal dissolved iron is set by reversible dissolved-particulate exchange. Oceanography Departmental Seminar Series, Texas A&M University.

2015 The role of colloidal iron in the marine environment. Old Dominion University, Nofolk, VA.

2015 Particulate trace metals in a 4300-km hydrothermal plume, East Pacific Rise. Rutgers University Earth & Planetary Sciences seminar, Piscataway, NJ.

2015 The role of colloidal iron in the marine environment. Temple University, Philadelphia, PA.

2014 Distal transport of dissolved hydrothermal iron in the deep South Pacific Ocean: A verification of the "leaky vent" hypothesis. Texas A&M University, College Station, TX.

2014 Distal transport of dissolved hydrothermal iron in the deep South Pacific Ocean: A verification of the "leaky vent" hypothesis. University of California Santa Cruz, Santa Cruz, CA.

2014 Distal transport of dissolved hydrothermal iron in the deep South Pacific Ocean: A verification of the

"leaky vent" hypothesis. Rutgers University IMCS seminar, New Brunswick, NJ.

2013 Hydrothermal vent delivery of dissolved Fe to the deep ocean: the "leaky vent" hypothesis. University of South Carolina CEMSeminar, Columbia, SC.

2012 The marine biogeochemistry of colloidal iron. State Key Laboratory for Estuarine and Coastal Research: East China Normal University, Shanghai, China.

2012 Dissolved iron in the Southeast Pacific Ocean: OMZ to the gyre. State Key Laboratory for Estuarine and Coastal Research: East China Normal University, Shanghai, China.

2012 Dissolved iron partitioning between soluble and colloidal fractions: Intercalibration and tropical North Atlantic distribution. Biogeochemistry Seminar Woods Hole Oceanographic Institution.

2007 Uranium biogeochemistry in contrasting subterranean estuaries, Woods Hole Oceanographic Institution, MA.

2006 Water quality of the Southwest Florida Shelf. Hollings Scholarship Symposium, NOAA Auditorium, Silver Spring, MD.

MENTORSHIP

GRADUATE STUDENT COMMITTEES CHAIRED/CO-CHAIRED (**graduated = 5*) – 11 total

2025-Current Allison Cook – Ph.D. Student (1st year)
- 2025 – Awarded the Texas A&M University Merit Fellowship (4 years of support)

2025-Current Daphne Bailey – Ph.D. Student (1st year)
- 2025 – Awarded the Texas A&M University Merit Fellowship (4 years of support)

2023-Current Teagan Bellitto – Ph.D. Student (3rd year)
- 2023 – Awarded the Texas A&M University Merit Fellowship (4 years of support)

2022-Current Kristie Dick – Ph.D. student (4th year)
- 2022 – Awarded the Texas A&M University Merit Fellowship (4 years of support)

2021-Current Shelby Gunnells – Ph.D. student (5th year)
- 2021 – Awarded the NSF Graduate Research Fellowship (3 years of support)
- 2021 – Awarded the Texas A&M University Merit Fellowship (2 years of support)
- 2025 – Awarded a NOAA Knauss Fellowship in Marine Policy

2021-Current Yerim Kim – Ph.D. student (5th year), co-advised by Dr. Franco Marcantonio (Geology)
- 2022 – Awarded the Texas SeaGrant Grants-in-Aid of Graduate Research ($2500)
- 2022 - Selected as "Trace Metal Super Technician" on the U.S. GEOTRACES GP17-OCE expedition (one of three national positions)
- 2025 - Elected Co-Chair of the 2027 Gordon Research Seminar in Chemical Oceanography

2018-2024 *Janelle Steffen – Ph.D. student. Graduated December 2024.
- Dissertation title: *Iron isotopes in seawater as a tracer of iron provenance and transformation*
- 2018 - Awarded TAMU College of Geosciences Merit Fellowship (4 years of support)
- 2019 – Awarded the Texas SeaGrant Grants-In-Aid of Graduate Research ($2500)
- 2019 - Elected Chair of the 2021/2023 Gordon Research Seminar in Chemical Oceanography (delayed due to pandemic)
- 2020 – Awarded scholarship to attend the Earth Educators' Rendezvous ("Preparing for an Academic Career", SERC)
- Current position: Assistant Research Scientist (Lab Manager), Fitzsimmons Lab, Texas A&M University.

2018-2023 *Nathan Lanning – Ph.D. student. Graduated August 2023.
- Dissertation title: *The biogeochemical cycling of dissolved iron, manganese, and lead in the Equatorial and North Pacific Oceans.*
- 2018 - Awarded the NSF Graduate Research Fellowship (3 years of support)
- 2023 – Awarded the Texas A&M Association of Former Students Distinguished Graduate Student Award

- 2023 – Awarded the Texas A&M College of Arts & Sciences Award for Outstanding Achievement in Graduate Teaching
- 2023 – Awarded the Texas A&M Department of Oceanography Wormuth Award for Graduate Student Teaching
- 2023-2024: Postdoctoral Associate, Massachusetts Institute of Technology
- Current position: Assistant Teaching Professor, University of New England, Biddeford, Maine.

2017-2021 *Amanda Mulcan Lopez – Ph.D. student, University of Houston, "Co-Chaired" by Alan Brandon, Graduated August 2021.

- Dissertation title: *Heavy metal geochemistry of sediments and oysters from Galveston Bay, Texas*
- Strain with her University of Houston advisor led her to collect her samples on my research expeditions, analyze her samples in my laboratory, and write her dissertation and publications through my mentorship, especially during the second half of her Ph.D.
- 2019 – Co-wrote and facilitated the Galveston Bay Estuary Program grant to A. Brandon and J.N. Fitzsimmons that funded her Ph.D. research
- 2021 – Awarded a NASA Postdoctoral Fellowship
- Current position: Technologist, Water and Ecosystems Group, Jet Propulsion Laboratory/CalTech, NASA

2015-2020 *Laramie Jensen – Ph.D. student. Graduated August 2020.

- Dissertation title: *The biogeochemical cycling of dissolved and colloidal trace metal micronutrients in the Western Arctic Ocean (GEOTRACES GN01)*
- 2015 - Awarded Texas A&M University Merit Fellowship (4 years of support)
- 2017 - Elected Chair of the 2019 Gordon Research Seminar in Chemical Oceanography
- 2018 – Awarded Texas SeaGrant Grants-in-Aid of Graduate Research ($1950)
- 2018 - Selected as "Trace Metal Super Technician" on the U.S. GEOTRACES GP15 Pacific Meridional Transect cruise (one of two national positions)
- 2019 - Awarded TAMU Department of Oceanography Chapman Award for Best Graduate Research
- 2020 – Awarded a Postdoctoral Fellowship, Cooperative Institute for Climate, Ocean, and Ecosystem Studies, University of Washington
- Current position: Research Scientist, Polar Science Center, Applied Physics Laboratory, University of Washington

2016-2018 *Kimber De Salvo, Master of Science. Graduated August 2018.

- Thesis title: *Using Flow-Field Flow Fractionation coupled to Inductively Coupled Plasma Mass Spectrometry to study the physicochemical speciation of colloidal iron in seawater*
- Current position: Gulf Program Coordinator, Turtle Island Restoration Network

GRADUATE STUDENT COMMITTEES SERVED (NOT CHAIRED) (**graduated*) – 17 total

2024-Current Cynthia Sun, Department of Oceanography, Texas A&M University (Seeking: PhD)
2024-Current Alexis Adams, Department of Oceanography, Texas A&M University (Seeking: PhD)
2024-Current Yaseen Zaky, Department of Oceanography, Texas A&M University (Seeking: PhD)
2023-Current Antoine Ringard, Ifremer, LEMAR, University of Brest, France (Seeking : PhD)
2020-2025 *Sarah Davis Kopczynski, Department of Marine Biology, TAMU Galveston (PhD)
2020-2024 *Shu Ying Wee, Department of Oceanography, Texas A&M University (PhD)
2018-2023 *Tacey Hicks, Department of Oceanography, Texas A&M University (PhD)
2018-2023 *Alyssa Alsante, Department of Oceanography, Texas A&M University (PhD)
2019-2022 *Sourav Das, Department of Civil Engineering, Texas A&M University (PhD)
2019-2021 Christopher (Ryan) Elmore, Department of Geology & Geophysics, Texas A&M University (Sought: PhD)

2017-2021 *Tatiana Williford, Department of Oceanography, Texas A&M University (PhD)
2020 *David Gonzalez-Santana, Ifremer, LEMAR, University of Brest, France (PhD)
2017-2019 Stanford Goodwin, Department of Oceanography, Texas A&M University (Sought: MS)
2018-2019 *Shannon Andrew, Department of Wildlife & Fisheries Sciences, Texas A&M University (Masters of Natural Resources)
2019 *Thomas Holmes, Institute for Marine & Antarctic Studies, University of Tasmania (PhD)
2018 *Elizabeth Shoenfelt, Columbia University/Lamont Doherty Earth Observatory (PhD)
2015-2018 *Claire McKinley, Department of Oceanography, Texas A&M University (PhD)

UNDERGRADUATE STUDENTS MENTORED (**graduated*) – 24 total

2026-current Sofia Mackin-Plankey, paid undergraduate researcher, Chemistry, Texas A&M University
2025-current Anna Nguyen, paid undergraduate researcher, Chemistry, Texas A&M University
2025 Rey Sanchez, paid undergraduate researcher, Chemistry, Texas A&M University
2024-2025 Sean Rooney, paid undergraduate researcher, Chemistry, Texas A&M University
2024-2025 Dylan Mach, paid undergraduate researcher, Chemistry, Texas A&M University
2023-current *Alyssa Lawton, paid undergraduate researcher and then promoted to Research Assistant post-graduation, Oceanography, Texas A&M. Mentored by Dr. Peter Morton.
2022-24, 2025 *Cameron Stacey, paid undergraduate researcher, Oceanography, Texas A&M
2022, 2024 *Ryan Fallon, paid undergraduate researcher, Chemistry, Texas A&M
2024 summer *Isabelle Boysen – REU summer student, Marymount Manhattan College
2023-2024 *Jasmine Aranda, paid undergraduate researcher, Chemistry, Texas A&M
2022 *Jackson Gomersall, paid undergraduate researcher, Geology & Geophysics, Texas A&M
2021 – 2023 *Catherine Kaylor, undergraduate researcher, Oceanography, Texas A&M
- 2021 awarded a High Impact Learning Experience grant from TAMU Geosciences to give a presentation on her REU research from FIU at a national perfluoroalkyl substances (PFAS) conference.
- 2022 awarded a High Impact Learning Experience grant from TAMU Geosciences to serve as a SEAWATER Intern (peer leader and participant) in the NSF-funded summer REU program. Through this, she gave a poster presentation at the 2023 ASLO Aquatic Sciences Meeting (international conference, Mallorca, Spain)
- Current position: MS student in Ocean Biogeochemistry, University of Florida

2021 summer *Sophia Smith – REU summer student, University of New Hampshire
- Title: *A multi-element analysis of the distribution of colloidal metals in seawater*
- Current position: MS student in Ocean Science at University of Connecticut

2021 *Hanwen Cui, paid undergraduate researcher, Chemistry, Texas A&M
- Graduated to: MS student in Chemical Engineering – Product Development, University of California, Berkeley

2021 *Anna Champ, paid undergraduate researcher, Chemistry, Texas A&M
2021 *Collin Hebner, paid undergraduate researcher, Oceanography, Texas A&M
2019 – 2021 *Dylan Halbeisen, undergraduate researcher, Oceanography, Texas A&M
- Title: *A multi-element overview of upper ocean trace metal cycling in the Pacific Ocean: GEOTRACES GP15 PMT demi stations*
- 2020 awarded a Research Experience for Undergraduates internship at Bigelow Laboratory for Ocean Sciences in Boothbay, Maine
- 2020 awarded a High Impact Learning Experience grant from TAMU Geosciences to give a poster presentation at the 2020 Ocean Sciences Meeting, San Diego, CA
- Current position: PhD student at University of South Florida, College of Marine Sci. Earned a NSF Graduate Research Fellowship.

2019 summer *Brett Farran – REU summer student, Florida State University
- Title: *Dissolved lead in Galveston Bay and the surrounding Gulf of Mexico*
- Current position: PeaceCorps

2018-2020 *Hannah Adams – REU summer student (2018), Gap-Year Technician (2019-2020)
- Title: *Natural and toxic heavy metals in sediments of Galveston Bay, Texas, following Hurricane Harvey in 2017*
- 2019 – Awarded University of Southern California Discovery Scholars Award ($10,000) for research completed in Fitzsimmons lab during 2018 REU
- 2020 – Awarded an Honorable Mention for an NSF Graduate Research Fellowship
- Current position: PhD student at Scripps Institution of Oceanography/UCSD.

2018 *Reagan Lucas, paid undergraduate researcher, Chemistry, Texas A&M

2018 *Alexa Mendoza, paid undergraduate researcher, Chemistry, Texas A&M

2016-2018 *Nathan Lanning – REU summer student, University of New Haven (2016)
- Title: *Size partitioning of trace metal micronutrients in the Western Arctic Ocean*
- Also co-advisor of his Senior Thesis at the University of New Haven (2017-2018).
- Current position: Postdoc in Chemical Oceanography at MIT

2016-2017 *Sarah Berlanga – Undergraduate researcher, Environmental Geosciences, Texas A&M
- Current position: Lawyer, St. Mary's University School of Law graduate

2015 summer *Carolyn Nesbitt – Undergraduate researcher, Environmental Geosciences, Texas A&M

NON-STUDENT RESEARCH STAFF MENTORSHIP – 8 total

2025-Current Dr. Janelle Steffen, Assistant Research Scientist (Lab Manager)

2025 Ryan Fallon, Research Technician and short-term Program Aide

2024-2025 Aggeliki Polymenis, Laboratory Coordinator

2022-Current Dr. Peter Morton, Associate Research Scientist

2022-2023 Dominic Rothrock, Technical Assistant I

2022 Charles Larrouilh, Research Assistant

2021 Brent Summers, Research Associate

2019-2020 Hannah Adams, Research Assistant

FACULTY MENTORSHIP – 2 total

2023-Current Dr. Sarah Hu, Assistant Professor, Department of Oceanography, Texas A&M University

2021-Current Dr. Spencer Jones, ACES Fellow and then Assistant Professor, Department of Oceanography, Texas A&M University

2021-2023 Member of early-career mentoring panel, Department of Oceanography, Texas A&M University, which served Dr. Spencer Jones, Dr. Shuang Zhang, Dr. Darren Henrichs, and Dr. Yina Liu

CLASSROOM TEACHING EXPERIENCE

1. OCNG 251 Oceanography, online, undergraduate core curriculum course for non-majors
   - *Initial online course development in Oceanography department for OCNG 251, including training by Information Technology Services (ITS) on eCampus online course construction and researching and learning to use digital recording software. I have trained the other 2 Oceanography faculty teaching online how to build online courses, based on ITS recommendations.*
   - *Initial recording of all lectures, and development of online assessment materials, including online team homework, in Summer 2016.*
   - *Spring 2018 - new assignment structure created when online team homework requirement removed.*
   - 2018 Summer II: 76 undergraduates.
   - 2018 Spring: 79 undergraduates.
   - 2017 Spring: 100 undergraduates.
   - 2016 Fall: 100 undergraduates.
   - 2016 Summer I: 100 undergraduates.
2. OCNG 453 Hydrothermal Vents & Mid-Ocean Ridges, upper-level undergraduate course

- *New course development for Fall 2019. All new course design, reading assignments, lecture material, assignments, and exams.*
- 2020 Fall: 9 undergraduates. *Taught independently, with course upgrades for 2nd time taught.*
- 2019 Fall: 22 students (mixed grad/undergrad). *Team taught with Jason Sylvan.*

3. OCNG 640 Chemical Oceanography (core graduate course in TAMU Oceanography)
    - *All lectures teleconferenced to students in TAMU Galveston using Zoom and recorded for student review.*
    - *Fall 2018: Major course revision: development of all new course structure, lectures, problem sets, exams.*
    - *Fall 2024: Added online peer review using Perusall and an AI component to the term paper.*
    - 2025 Fall: 12 graduate students.
    - 2024 Fall: 25 graduate students.
    - 2024 Spring: 10 graduate students.
    - 2022 Fall: 5 graduate students.
    - 2021 Fall: 20 graduate students.
    - 2020 Fall: 9 graduate students.
    - 2019 Fall: 14 graduate students.
    - 2018 Fall: 27 graduate students.
4. OCNG 641 Inorganic Aquatic Geochemistry, advanced graduate course
    - *Updated lectures in 2019 from "chalk lectures" to Powerpoint slides with large gaps for recording notes and calculations. This incorporates the figures and definitions with the many calculations for this course.*
    - *Completely new course development in Spring 2017 from a class that hadn't been taught for many years. New course design, new textbooks, all new lectures and activities, assignments (with solutions), exams.*
    - *Lectures teleconferenced to students in TAMU Galveston using Zoom and recorded for student review.*
    - 2026 Spring: 6 graduate students
    - 2019 Spring: 7 graduate students.
    - 2017 Spring: 7 graduate students.

PROFESSIONAL SERVICE

DEPARTMENT OF OCEANOGRAPHY, TEXAS A&M UNIVERSITY

2024-current Chair, Tenure & Promotion Committee

2019-current Member, Qualifying Exam Committee, Department of Oceanography
- Responsibilities: *Develop, administer, and grade the annual Qualifying Exam within the guidelines set by the Curriculum and Advising Committee. All professors teaching the four core Oceanography graduate courses serve on this committee.*

2022-2025 Chair, Qualifying Exam Committee, Department of Oceanography

2022-current Member, Oceanography Department Executive Committee

2019-current Co-Director, Texas A&M Oceanography Research Experience for Undergraduates (REU) program
- 2024-2026 Fitzsimmons lead. Responsibilities: *Lead for program marketing, application design and selection, participant communication, hiring, program design and schedule, program implementation.*
- 2019-2022 site lead: Lisa Campbell (TAMU Oceanography). Fitzsimmons responsibilities: *Lead for fieldwork campaigns and professional development workshops*

2016-current Co-Instructor, Graduate Learning Community workshops for graduate students. TAMU Oceanography.
- Co-creator: Chrissy Wiederwohl (Oceanography)
- Responsibilities: *Creation and manager of an annual series of 8 workshops per year on professional development and writing mentorship. Attendance is mandatory for all first-year Oceanography graduate students for level mentorship and cohort development.*

2023-2024 Member, Tenure & Promotion Committee

2023-2024 Member, Search Committee for Geological Oceanography Assistant Professor, Tenure Track

2021 Chair, Search Committee for Oceanography Assistant Professor, Tenure Track

2021 Member, Search Committee, ACES Fellows

2020 Member of review committee for Joint Appointments
2019-2022 Member, Qualifying Exam Committee, Department of Oceanography
2019-2020 Member, Search Committee for Ocean Data Science Assistant Professor, Tenure Track
2017 Member, Search Committee for Department Head, Department of Oceanography
2015-2021 Member, Curriculum and Advising Committee
- Responsibilities: *Curriculum re-design (e.g. development of new undergraduate Oceanography major at TAMU); new/revised course syllabus approvals; reviews all graduate student progress reports and advises on progress to degree.*

COLLEGE OF ARTS & SCIENCES (AND LEGACY GEOSCIENCES), TEXAS A&M UNIVERSITY

2025-current Co-Director of the R. Ken Williams Radiogenic Isotope Facility, Texas A&M University
- Responsibilities: *Oversee budgeting of the cost center (university rate study); management laboratory renovations, maintenance, and operations; weekly meeting and general management/ evaluation of the lab manager; twice a semester lab group meetings; design of all facility press including website; recruitment of users; and management of facility safety*.

2024-2025 Member, ArtSci Council of Principal Investigators Caucus, Advisory to the Research Deans
2022-2024 Consultant to the Director (Franco Marcantonio, Geology) of the R. Ken Williams Radiogenic Isotope Facility, Texas A&M University
2023 Member of the Search Committee for the Research Development Office Director, College of Arts&Sci
2022-2023 Member of the Research Advisory Council, College of Arts & Sciences, Texas A&M University.
2015-2022 Co-Director, R. Ken Williams Radiogenic Isotope Facility, Texas A&M University.
- Equally share management with Franco Marcantonio (Geology), Brent Miller (Geology), Brendan Roark (Geography), and Lucien Nana-Yobo (Geology)

2020-2022 Member of the Diversity Committee, College of Geosciences, Texas A&M University
- Faculty leader of mentorship initiatives, alongside Associate Dean Casellas-Connors

2020 Member of External Review Team for the Geochemical & Environmental Research Group
- Interview GERG administrators, scientists and tour facilities in order to write external review

2018 Co-hosted a College of Geosciences workshop on "Using a Learning Management System (LMS) to Improve Student Satisfaction (and Faculty Evaluations)" with Jason Sylvan (OCNG) & Lauren Dembrosky (Information Technology Services).

TEXAS A&M UNIVERSITY

2025-current Member (Faculty Representative) of the Facilities SSC Advisory Committee, Texas A&M University
2025-current Member (Faculty Representative) of the Deferred Maintenance Steering Committee, Texas A&M Univ.
2023-2025 Member of Executive Committee, Council of Principal Investigators, Texas A&M University
2019-2025 Council of Principal Investigators, Rep. for College of Geosciences/Arts & Sciences, Texas A&M
2025 Member of the Research Agreement Negotiation Task Force, Sponsored Research Services, Division of Research, Texas A&M University
2023-2024 Member of the 'Defining Core Facilities' Working Group, Division of Research, Texas A&M
2023 Member of the Facilities Review Committee, Office of the President, Texas A&M University
2019-2022 University-National Oceanographic Laboratory System (UNOLS) Representative for Texas A&M University. *Attend annual meeting in Washington DC on behalf of the university.*
2022 Council of Principal Investigators Executive Committee, Representative for College of Geosciences
2016 Graduate Council, Representative for the College of Geosciences, Texas A&M University

EXTERNAL SCIENTIFIC SERVICE

2026-current Committee Member, NASEM National Academies of Science Engineering and Medicine, panel on "A Research Strategy for Seabed Critical Mineral Resources"
2026-current Co-Chair for the International GEOTRACES Scientific Steering Committee
2025 Invited instructor, International GEOTRACES Summer School, Cape Town, South Africa, Nov 17-21.
2024-current Co-Editor for the *Elementa* Special Issue on "Deep-Sea Mining of Polymetallic Nodules: Environmental Baselines and Mining Impacts from the Surface to the Seafloor," with Jeff Drazen (U Hawaii) and Jeroen Ingels (FSU)

2024-current Invited (External) Guest Editor for the *Progress in Oceanography* Special Issue on "South West Indian GEOTRACES Section (SWINGS)"

2022-2025 U.S. Representative for the International GEOTRACES Scientific Steering Committee

2019-current Co-Chief Scientist, GEOTRACES GP17-OCE South Pacific and Southern Oceans

- 2025: Host of the 3-day, 80-participant (65 in-person) Data Synthesis Workshop for GP17-OCE at Texas A&M University

2024 Lead panelist/organizer of the Faculty Applications panel during the 2024 Ocean Sciences Meeting Early Career Workshop, New Orleans.

2024 Invited panelist to consult a group of international deep-sea mining industry representatives on the trace metal sampling required to meet the expectations of the United Nations' International Seabed Authority's environmental monitoring regulations. Southampton, United Kingdom.

2023-2024 Co-Editor for the *Oceanography* Special Issue on "Twenty Years of GEOTRACES: An International Study of the Marine Biogeochemical Cycles of Trace Elements and Isotopes" with Tim Conway (USF), Rob Middag (NIOZ), Taryn Noble (U Tasmania), and Helene Planquette (U of Brest)

2023 Consulted the Waters, Oceans, and Wildlife subcommittee of the U.S. House of Representatives on the environmental impacts of deep-sea mining. Virtual.

2017-2025 Associate Editor, *Marine Chemistry*.

2015 Co-Chair, Inaugural Gordon Research Seminar for graduate students/postdocs in Chemical Oceanography

Current National/international conference sessions convened (15 total):

- 2026, "Environmental impacts of deep-sea mining" session, Ocean Sciences Meeting, Glasgow, Scotland, United Kingdom.
- 2025, "U.S. GEOTRACES GP17-OCE Data Synthesis Meeting", hosted at Texas A&M University for 60 national participants
- 2024, "Trace element distributions and cycling across ocean basins" session, Fall American Geophysical Union (AGU) Meeting, Washington DC.
- 2024, "Heading South: Contrasting Biogeochemical Cycling of Trace Elements and Isotopes from Tropical to Southern Ocean Waters" session, Ocean Sciences Meeting, New Orleans, LA.
- 2024, "Biogeochemical Cycling in the Caribbean Sea, the Gulf of Mexico, and Beyond" session, Ocean Sciences Meeting, New Orleans, LA.
- 2023, invited Discussion Leader for "Emerging anthropogenic impacts on ocean chemistry" session, Gordon Research Conference in Chemical Oceanography, Manchester, NH.
- 2022, "Advances in understanding of the biogeochemical processes shaping the basin-scale distributions of trace elements and their isotopes" session, Ocean Sciences Meeting, Honolulu.
- 2020, "Biological-Chemical Transformations of Trace Elements in the Marine Environment" session, Ocean Sciences Meeting, San Diego, CA.
- 2019, "Oceanic research related to the 2017 Gulf of Mexico and Atlantic Hurricanes" session, Aquatic Sciences Meeting, San Juan, Puerto Rico.
- 2018: "New insights in marine trace element biogeochemistry" session, Goldschmidt Conference, Boston, MA.
- 2018: "Abiotic and biotic retention, recycling, and remineralization of metals in the ocean" session, Ocean Sciences, Portland, OR.
- 2016: "Oceanic cycling of trace elements using elemental, isotopic, and modeling approaches: Geotracers and beyond…" Goldschmidt Conference, Yokohama, Japan.
- 2014: "The Colloidal Phase Contribution to Marine Biogeochemistry," Goldschmidt Conference, Florence, Italy.
- 2012: "Sources, Sinks, and Speciation of Marine Micronutrient Trace Elements," Fall American Geophysical Union Meeting, San Francisco, CA.
- 2011: "The GEOTRACES Program," Goldschmidt Conference, Prague, Czech Republic.

Current Peer reviewer: Deep-Sea Research II, Earth & Planetary Science Letters, Encyclopedia of Geochemistry,

Frontiers in Biogeochemistry, Geochimica et Cosmochimica Acta, Geophysical Research Letters, Global Biogeochemical Cycles, Japanese Journal of Oceanography, Journal of Geophysical Research: Oceans, Limnology & Oceanography, Marine and Freshwater Research, Marine Chemistry, Nature, Nature Communications, Nature Geoscience, Nature Scientific Reports, Oceanography, Proceedings of the National Academy of Sciences.

Current Proposal reviewer: NSF Chemical Oceanography, NSF Marine Geology & Geophysics, NSF Biological Oceanography, NSF Antarctic Programs-Ocean Sciences, NSF Antarctic Programs-Organisms & Ecosystems, NSF Major Research Instrumentation, NSF CAREER, NERC (National Environment Research Council, United Kingdom), Netherlands Polar Programme, DFG (German Research Foundation).

WORKSHOPS ATTENDED

2025 Safeguarding Marine Ecosystems and Local Communities from Potential Deep-Sea mining in U.S. Waters workshop, Arizona State University, Tempe, AZ
2024 From Ice Sheets to the Coast: Sea-Level Rise Impacts meeting, University of Houston, Houston, TX
2024 Deep-Sea Mining Contractor Collaboration Workshop, National Oceanography Centre, Southampton, UK
2023 American Geophysical Union Chapman Conference on Hydrothermal Circulation & Seawater Chemistry, Agros, Cyprus.
2021 University-National Oceanographic Laboratory System (UNOLS) Annual Meeting (virtual)
2020 UNOLS Annual Meeting (virtual)
2019 UNOLS Annual Meeting, Washington DC
2019 Workshop on “Gulf of Mexico RCRV Science” hosted by University of Southern Mississippi, Gulfport, MS
2016 Workshop on “Internal cycling of trace elements in the ocean” hosted by GEOTRACES/OCB, Lamont-Doherty Earth Observatory, Palisades, NY
2014 DISCO DIssertations Symposium in Chemical Oceanography XXIV, Lihue, Kaua’i, Hawai’i
2013 Collaborative on Oceanographic Chemical Analysis (COCA) Workshop, University of Hawaii
2012 Workshop on "Stable isotopes of biologically important trace metals" led by GEOTRACES/SCOR, Imperial College, London, United Kingdom
2012 Path to Professorship Workshop, Massachusetts Institute of Technology, Cambridge, MA
2012 ADVANCE Workshop for Future Faculty, Northeastern University, Boston, MA
2011 SFB 754 retreat on "Tropical ocean oxygen minimum zones," Lübeck, Germany
2010 GEOTRACES Intercalibration Workshop, Old Dominion University, Norfolk, VA

PROFESSIONAL AFFILIATIONS & CERTIFICATIONS

American Geophysical Union, American Society of Limnology and Oceanography, Geochemical Society, AAAS
Scuba Schools International: Open Water Diver certified