

ANNUAL REPORT ON GEOTRACES ACTIVITIES IN THE NETHERLANDS

May 1st, 2024 to April 30th, 2025

GEOTRACES activities

- 2024 SSC meeting, September 18-20, 2024 at the Royal Netherlands Institute for Sea Research, NIOZ, in Texel (Netherlands), hosted by Rob Middag.

New GEOTRACES or GEOTRACES-relevant publications (published or in press) (If possible, please identify those publications acknowledging SCOR funding)

- Conway, T.M. and Middag, R., 2025. Controls and distributions of trace elements in the ocean. In: A. Anbar and D. Weis (Editors), Treatise on Geochemistry (Third edition). Elsevier, Oxford, pp. 237-284, <https://doi.org/10.1016/B978-0-323-99762-1.00076-0>
- Eich, C., van Manen, M., McCain, J.S.P., Jabre, L.J., van de Poll, W.H., Jung, J., Pont, S.B.E.H., Tian, H.A., Ardiningsih, I., Reichart, G.J., Bertrand, E.M., Brussaard, C.P.D. and Middag, R., 2024. Temperature-enhanced effects of iron on Southern Ocean phytoplankton. Biogeosciences, 21(20): 4637-4663, 10.5194/bg-21-4637-2024
- Dale, D., Christl, M., Vockenhuber, C., Macrander, A., Ólafsdóttir, S., Middag, R. and Casacuberta, N., 2024. Tracing Ocean Circulation and Mixing From the Arctic to the Subpolar North Atlantic Using the 129I–236U Dual Tracer. Journal of Geophysical Research: Oceans, 129(7): e2024JC021211, <https://doi.org/10.1029/2024JC021211>.
- Olivelli, A., Paul, M., Xu, H., Kreissig, K., Coles, B.J., Moore, R.E.T., Bridgestock, L., Rijkenberg, M., Middag, R., Lohan, M.C., Weiss, D.J., Rehkämper, M. and van de Flierdt, T., 2024. Vertical transport of anthropogenic lead by reversible scavenging in the South Atlantic Ocean. Earth and Planetary Science Letters, 646: 118980, <https://doi.org/10.1016/j.epsl.2024.118980>.
- Cloete, R., Planquette, H., van Horsten, N.R., Samanta, S., Chen, X.-G., Achterberg, E.P., Middag, R., Janssen, D.J., Bowie, A.R., van der Merwe, P., Loock, J.C., Mtshali, T.N., Fietz, S. and Roychoudhury, A.N., 2025. Drivers of Nickel Distribution and Seasonality in the Southern Ocean: New Perspectives From the GEOTRACES G1pr07 Transect. Journal of Geophysical Research: Oceans, 130(1): e2024JC021542, <https://doi.org/10.1029/2024JC021542>.
- Shi, X., Annett, A.L., Jones, R.L., Middag, R. and Mason, R.P., 2025. Benthic deposition and burial of total mercury and methylmercury estimated using thorium isotopes in the high-latitude North Atlantic. Geochimica et Cosmochimica Acta, 399: 191-204, <https://doi.org/10.1016/j.gca.2025.04.029>.
- Tian, H.-A., Manen, M.v., Eich, C., Jung, J., Poll, W.H.v.d., Reichart, G.-J., Conway, T.M. and Middag, R., 2025. Dissolved zinc and cadmium isotope systematics in the Amundsen and Weddell coastal Antarctic marginal seas. Geochimica et Cosmochimica Acta, 399: 93-110, <https://doi.org/10.1016/j.gca.2025.04.017>.

GEOTRACES presentations in international conferences

- Laglera, L.M., Sukekava, C., Middag, R. and Gerringa, L., 2025. The Role of Humic Substances in Iron Complexation and Solubilization in the Arctic Ocean and Northwest Atlantic Ocean, Copernicus Meetings (EGU)

- Adler, M.A., Humphreys, M., Middag, R. and Brandon, M., 2025. Processes driving trace metal, nutrient, and dissolved inorganic carbon distributions in the Norwegian Trench, Copernicus Meetings (EGU)
- Halbeisen, D., Yang, S.-C., Bian, X., Liao, W.-H., Ross, A., John, S., Middag, R., Conway, T., Physical and Biogeochemical Controls on the Distribution of Dissolved Nickel and its Isotopes in the Denmark Strait. Poster presentation at the 2024 AGU meeting, 10-12-2024, Washington, USA.
- Conway, T.M., Hunt, H.R., Sieber, M., Tian, H.-a., Summers, B.A., Lanning, N.T., Steffen, J.M., Homoky, W.B., Fitzsimmons, J.N. and Middag, R., 2024. The Fe isotope case for sediments as an important marine Fe source. Oral presentation at the 2024 Goldschmidt Conference, 21-08-2024, Chicago USA.
- Conway, T.M. and Middag, R., 2024. Controls and distributions of trace elements in the oceans: an updated view, 2024 Goldschmidt Conference. GOLDSCHMIDT

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