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Education

- 25/01/2021 **PhD** in Ocean and Earth Science, University of Southampton (UK)
'Biogeochemical cycling of iron and chromium in the North Atlantic Ocean: insights from stable iron and chromium isotopes'
- 18/11/2016 **MPhil** in Marine Environmental Science, The Hong Kong University of Science and Technology (HK, China)
'Geochemical behaviour of trace metals in a contaminated estuary: phase partitioning, porewater dynamics and anthropogenic impacts'
- 30/06/2014 **BSc** in Oceanographic Science, Nanjing University (China)
'Dynamic mechanism analysis of deposition rates on tidal flat, central Jiangsu coast'

Professional experience

- 09/2024 to present Associate Professor, Sun Yat-sen University (China)
 - Member of Marine Trace Element Geochemistry group
- 07/2022 to 06/2024 Marie Skłodowska-Curie postdoctoral fellow, University of Vienna (Austria)
 - Leading H2020 funded project *'Mobilization of chromium by organic matter in reduced systems'*
- 12/2020 to 06/2022 Postdoctoral research associate, Royal Holloway University of London (UK)
 - Participated in NERC funded project *'Rhenium isotopes to track carbon dioxide emissions by oxidative weathering'*
 - Collecting and analysing samples spanning from igneous rocks to groundwaters to establish a new weathering proxy
- 10/2016 to 09/2020 PhD research student in Geochemistry Group, University of Southampton (UK)
 - Partly involved in NERC funded project *'The impact of mid-ocean ridges on the ocean's iron cycle'*
 - Broad experience in preparing (sea)water, sediment and hydrothermal fluid samples for trace metal and isotope analysis, with expertise in using multi-collector ICP-MS for high-precision measurements
- 09/2014 to 08/2016 Postgraduate research student in Metal Ecotoxicology and Biogeochemistry Laboratory, The Hong Kong University of Science and Technology (HK, China)
 - Partly involved in NSFC funded project *'Biokinetics and toxicity of heavy metals in Southern China estuaries'* and a range of environmental risk assessment projects

Research interests

Non-traditional stable isotopes (chromium, iron, rhenium), Trace analysis and metal pollution, Biogeochemistry and redox processes, Hydrothermal systems.

Granted funding

- 07/2022 to 06/2024 H2020 Marie Skłodowska-Curie Actions: Individual Fellowship (based at Department of Environmental Geosciences, University of Vienna, funded €174,167)
Project link: <https://cordis.europa.eu/project/id/101031974>
- 10/2016 to 09/2020 Research Training and Support Grant (Graduate School of National Oceanography Centre Southampton, funded £7,600)
- 06/2013 to 06/2014 Undergraduate Research Innovation Project (National level 201310284007Y, funded ¥20,000, the report of this project was awarded Excellent)

Publications in peer-reviewed journals

- Mellett T., Albers J.B., Santoro A.E., Salaun P., Resing J., **Wang W.**, Lough A.J.M., Tagliabue A., Lohan M., Bundy R.M., Buck K.N. (In preparation) *Organic iron-binding ligands mediate dissolved-particulate exchange in hydrothermal vent plumes along the mid-Atlantic Ridge*. Global Biogeochemical Cycles.
- **Wang W.**, Lough A.J.M., Resing J., Lohan M., Tagliabue A., James R.H. (In preparation) *Iron isotopes constrain the cycling of dissolved iron in the North Atlantic Ocean*. Geochimica et Cosmochimica Acta.
- **Wang W.**, Chrástný V., Hettler, J., Kistler A., Yadav A., Šebek O., Kumar N., Kraemer S. (In preparation) *Chromium mobilisation by ligand complexation: the isotopic fingerprint as process tracer in oxic and anoxic environments*. Communications Earth & Environment.
- Dickson A.J., Hilton R.G., Prytulak J., Minisini D., Eldrett J.S., Dellinger M., Stow M.A., **Wang W.** (In press) *Rhenium isotopes record oxidative weathering intensity in sedimentary rocks*. Geochemistry, Geophysics, Geosystems.
- **Wang, W.**, Dickson, A.J., Dellinger, M., Burton, K., Clark, D., Helgi Eggertsson, G., Einarsdóttir, Í.E., Ingimarsson, H., Gebrehiwot Mesfin, K., Hilton, R.G., Prytulak, J. (2024) *Rhenium isotope variations in Icelandic groundwaters and hydrothermal systems*. Earth and Planetary Science Letters, 119046.
- **Wang, W.**, Dickson, A.J., Stow M.A., Dellinger, M., Burton K., Savage, P.S., Hilton, R.G., Prytulak, J. (2024) *Rhenium elemental and isotopic variations at magmatic temperatures*. Geochemical Perspective Letters, 28, 48-53.
- **Wang W.**, Lough A.J.M., Goring-Harford H., Flanagan O., Gonzalez-Santana D., Resing J., Lohan M., Connelly D.P., Tagliabue A., James R.H. (2023) *Fractionation of iron and chromium isotopes in hydrothermal plumes from the northern Mid-Atlantic Ridge*. Earth and Planetary Science Letters, 624, 118468.
- **Wang W.**, Goring-Harford H., Kunde K., Woodward E.M.S., Lohan M., Connelly D.P., James R.H. (2023) *Biogeochemical cycling of chromium and chromium isotopes in the sub-tropical North Atlantic Ocean*. Frontiers in Marine Science, 10, 933.
- **Wang W.**, Lough A.J.M., Lohan M., Connelly D.P., Cooper M., Milton J.A., Chavagnac V., Castillo A., James R.H. (2021) *Behavior of iron isotopes in hydrothermal systems: Beebe and Von Damm vent fields on the Mid-Cayman ultraslow-spreading ridge*. Earth and Planetary Science Letters, 575, 117200.
- **Wang W.**, Chen M., Guo L., Wang W.-X. (2017) *Size partitioning and mixing behavior of trace metals and dissolved organic matter in a South China estuary*. Science of the Total Environment, 603-604: 434-444.
- **Wang W.**, Wang W.-X. (2017) *Trace metal behavior in sediments of Jiulong River Estuary and implication for benthic exchange fluxes*. Environmental Pollution, 225: 598-609.
- **Wang W.**, Wang W.-X. (2016) *Phase partitioning of trace metals in a contaminated estuary influenced by industrial effluent discharge*. Environmental Pollution, 214: 35-44.
- **Wang W.**, Gao S., Xu Y., Xu Q., Yu Q., Zhao Y. (2014) *Numerical experiments for the characteristic deposition rates over the tidal flat, central Jiangsu coast*. Journal of Nanjing University (Natural Science), 5: 656-665. [In Chinese, with English abstract]
- Xu Q., Gao S., **Wang W.**, Gao J., Yang Y., Yu Q. (2014) *Simulation and analysis of the tidal control mechanism of suspended sediment concentrations in a typical tidal channel*. Journal of Nanjing University (Natural Science), 5: 646-655. [In Chinese, with English abstract]

Conference abstracts

- Wang, W., Chrástný, V., Hettler, J., Kumar, N., Kraemer, S.M. (2024). *Isotope fingerprinting of organically complexed chromium—the natural story of a pollutant*. EGU General Assembly Conference, Vienna, Austria.
- **Wang, W.**, Kistler, A., Yadav, A., Kumar, N., Kraemer, S.M. (2023) *Remobilization of chromium by organic ligands in paddy soils*. Goldschmidt Conference, Lyon, France.
- **Wang W.**, Dickson A., Dellinger M., Burton K., Clark D., Einarsdóttir I.E., Eggertsson G.H., Hilton R., Ingimarsson H., Mesfin K.G., Prytulak J. (2022) *Fractionation of stable rhenium isotopes in terrestrial hydrothermal systems*. EGU General Assembly Conference (hybrid).
- **Wang W.**, Dickson A., Prytulak J., Savage P., Nisbet E., Dellinger M., Hilton R. (2021) *Behavior of stable rhenium isotopes during magmatic processes and implications for the composition of the bulk silicate Earth*. Goldschmidt Conference (virtual).
- **Wang W.**, Goring-Harford H., Kunde K., Lohan M., Connelly D.P., James R.H. (2020) *Biogeochemical cycling of chromium and chromium isotopes in the sub-tropical North Atlantic Ocean*. Goldschmidt Conference (virtual).
- Lough A.J.M., **Wang W.**, James R.H., Lohan M., Tagliabue A. (2020) *Constraining the oceanic hydrothermal iron flux using iron isotopes*. Ocean Sciences Meeting, San Diego, US.

- **Wang W.**, James R.H., Lough A.J.M., Goring-Harford H., Lohan M., Connelly D.P., Tagliabue A. (2019) *Impact of hydrothermal venting on iron and chromium supply to the North Atlantic Ocean*. Goldschmidt Conference, Barcelona, Spain.
- **Wang W.**, Lough A.J.M., Lohan M., Connelly D.P., James R.H. (2018) *Behaviour of iron isotopes in hydrothermal systems*. The 18th Biennial Challenger Conference, Newcastle, UK. [Honourable mention]
- Xu Q., Gao S., **Wang W.**, Gao J., Yang Y., Xu Y. (2013) *Simulation and analysis of the tidal control mechanism of suspended sediment concentrations in a typical tidal channel*. The 6th National Undergraduate Innovation Annual Meeting, Changsha, China.

Mentoring and teaching

- 11/2022 Guest lecturer for MSc course (MA-ERD-W-4.7) *Methods in Environmental Chemistry and Biogeochemistry*, University of Vienna
- 01/2017 to 07/2020 Mentor for FutureLearn (MOOC) *Exploring Our Oceans* and *Beneath the Blue: The Importance of Marine Sediments*, University of Southampton
- 10/2018 to 12/2018 Demonstrator for MSc course (SOES6015) *Introduction to Chemical Oceanography*, University of Southampton
- 09/2014 to 08/2016 Teaching assistant for UG course (ENVS4964) *Environmental Science Capstone Project Research* and PG course (ENVS4001) *Environmental Impact and Risk Assessment*, The Hong Kong University of Science and Technology

Expedition, training and outreach

- 07/2022 Invited speaker for the 2nd International Symposium on Marine Science and Technology for Young Scientists and Postgraduates, Hong Kong Branch of the Southern Marine Science and Engineering Guangdong Laboratory
- 12/2017 to 02/2018 RSS James Cook JC156 research expedition / GEOTRACES section study GA13
Link: <https://www.southampton.ac.uk/news/2017/12/new-year-new-horizons.page>
- 08/2017 The 1st GEOTRACES Summer School, Brest, France
- 10/2012 The 2nd rank for both individuals and team of Nanjing University at the 5th National Marine Knowledge Competition for College Students (Nanjing heats, China)

Services, membership and qualifications

- Reviewer for Communications Earth & Environment, Geochimica et Cosmochimica Acta, ACS Earth and Space Chemistry
- Member of Challenger Society for Marine Science, European Association of Geochemistry, Marie Curie Alumni Association
- Member of Equality, Diversity and Inclusivity Committee (2018-2020, School of Ocean & Earth Science, University of Southampton)

References

Available on request.