

Prof. Dr. Holger Hintelmann is the Dean of Science and a Professor in the Department of Chemistry and the School of the Environment at Trent University. His research interests include the fate of metals and metal nanoparticles in the environment. This includes the development of novel analytical techniques to use stable isotopes as tracers to examine species interconversions, metal bioavailability or bio-uptake. He has pioneered the use of mercury stable isotopes in environmental research, particularly with respect to the cycling and fate of mercury in aquatic systems. His research group is at the forefront of investigating the fractionation of mercury isotopes in the environment. This technique has proven to be a powerful tool for the characterization of specific environmental processes causing mercury isotope fractionation (e.g., reduction, methylation, volatilization, precipitation). It also has the potential to track mercury source receptor-relationships and differentiate between natural and anthropogenic sources of mercury in nature. Prof. Hintelmann is involved in various national and international field studies including the Mercury Experiment To Assess Atmospheric Loading in Canada and the US (METAALICUS). His expertise covers a range of environments, having worked in diverse ecosystems including estuaries, the boreal forest and polar regions. He served on several Scientific Committees and Advisory Boards for different research networks and is a former Associate Editor for various Journals.