



WAYNE STATE
UNIVERSITY

Earth and Environmental Science Seminar Series

Jointly hosted by the Department of Geology and the Environmental Science Program

Investigating the Fate and Transport of Environmental Contaminants using Compound-Specific Isotope Analysis

Dr. Scott Mundle, PhD

Assistant Professor

Great Lakes Institute for Environmental Research

University of Windsor

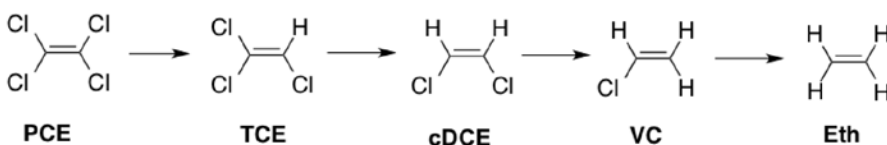
Wednesday January 31st at 3pm | Biological Sciences Room 1167

Reception and refreshments to precede 40 – 50 min seminar followed by time for questions

Abstract: Compound-specific isotope analysis (CSIA) has been used in both laboratory and field studies to identify the sources, migration pathways, and biogeochemical processes that affect contaminant dynamics in the environment. A key limitation to predicting sources is the lack of baseline data and often knowledge on how to reliably measure the baseline concentrations and isotope values in the environment. The seminar will discuss applications of CSIA to evaluate baseline conditions and track the fate and transport of contaminants from a number of applications in the oil/gas and environmental sectors.



Biography: Scott completed a PhD in physical organic chemistry and a postdoctoral fellowship in isotope geochemistry at the University of Toronto. In 2013, Scott launched an independent consulting firm focused on using geochemical techniques to address environmental issues in the oil and gas sector. He developed techniques to characterize baseline gases and fluids from deep drilling operations as investigative tools to identify stray gas sources leaking from conventional and unconventional oil/gas operations. In 2017, he joined the faculty at the Great Lakes Institute for Environmental Research (University of Windsor). His research investigates



the dynamic relationships between contaminant degradation and nutrient cycles to characterize the fate, transport, and impacts of multiple interacting stressors on the environment.