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April 2018 Nanolecture Series Event

Vulnerability of ground water resources regarding emerging contaminants and nanoparticles



Thilo Hofmann

*Professor of Environmental Geosciences
University of Vienna, Austria*

Date: April 5th, 2018

Time: 1:00-2:00 pm

Location: 665 Huntington Ave, Building 1, Room 1302
Boston, MA, 02115

Abstract: The production and use of emerging contaminants inevitably leads to the release, among others, of engineered nanoparticles (ENPs) into aquatic environments. Concerns, therefore, arise over the possibility that ENPs might pose a threat to drinking water supplies. The eventual fate of ENPs in the natural environment and in processes that are important for drinking water production are currently being investigated through laboratory-based experiments and modelling. Although the information obtained from these studies may not yet be sufficient to allow comprehensive assessment of the complete life-cycle of ENPs, it does provide a valuable starting point for predicting the relevance of ENPs to drinking water supplies. On the other side, emerging contaminants might also be of "benefit" to understanding groundwater flow and infiltration patterns. This talk will address specific aspects of groundwater vulnerability including trace contaminants and nanoparticles. Besides classical hydrogeological approaches, including the usage of emerging contaminants and groundwater modelling to understand subsurface flow, possible threats from nanoparticles will be addressed.

Biographical Sketch: Professor Hofmann received his Ph.D. in aquatic geochemistry from Bremen University in 1998. From 1999 he was first a post-doctoral scholar, and then Assistant Professor at Mainz University. Since 2005 Prof. Hofmann has been Full Professor and Chair for Environmental Geosciences at the University of Vienna. His group works in nanogeosciences, environmental impact of nanotechnology, investigates trace contaminants and sorption to carbonaceous materials and microplastic, and in hydrogeology, including vulnerability analysis. Prof. Hofmann served as Vice Dean of the Faculty for Earth Sciences, Geography and Astronomy from 2006 to 2012 and then as Dean of the Faculty until 2016, and the director of the University of Vienna's Environmental Research Network. In 2017, he was appointed Adjunct Full Professor in the Department of Civil and Environmental Engineering at Duke University (NC). Prof. Hofmann has published more than 130 peer-reviewed papers over the last 10 years.

Light lunch will be provided

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