BayCEER Kolloquium

Lectures in Ecology and Environmental Research

WS 2017/18

UNIVERSITÄT BAYREUTH

Thursday
26.10.2017
12:00 in S 135, NW III

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Electrical imaging of subsurface nano- and micro-scale particle injections

Application of nano and micro-scale particles has emerged as a promising in situ remediation technology for the remediation of contaminated groundwater, particularly for areas difficult to access by other remediation techniques. The performance of nanoparticle injections, as a foremost step within this technology, is usually assessed through the geochemical analysis of soil and groundwater samples. This approach is not well suited for a real-time monitoring, and often suffers from a poor spatio-temporal resolution and only provides information from areas close to the sampling points. The talk will present an alternative method to overcome such limitations based on the application of non-invasive Induced Polarization (IP) imaging, a geophysical method that provides information on the electrical properties of the subsurface. Our results demonstrate the applicability of IP imaging for the real-time monitoring of nano- and micro-scale particle injection, as well as of the accompanying geochemical changes.

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The lectures are an inter-disciplinary platform for students, junior and senior scientists. Abstracts and further information: www.bayceer.uni-bayreuth.de/kolloquium/