UNIVERSITÄT BAYREUTH

Bayceer
Bayreuther Zentrum für Ökologie und Umweltforschung

Sommersemester / ***Summer Term 2016***

Do. /*Thu.* 12 st
Gebäude/*Building*
GEO
Hörsaal/*Lecture hall*
H6

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung
Lecture series in Ecology and Environmental Research

Donnerstag 12.05.2016, 12:00 Uhr, H6

Anschließend Postkolloquium mit Mittagsimbiss im Foyer H6

Prof. Jon Petter Gustafsson

Soil and Groundwater Chemistry, KTH Stockholm / SLU Uppsala

Speciation and bioavailability of trace metals and phosphorus in soil systems

Accurate knowledge of trace metal speciation is important for many reasons. First, it greatly affects bioavailability and hence uptake/toxicity in organisms. Second, the speciation determines the mobility of the trace metal in the environment. Our mission is to combine state-of-the-art characterization methods (such as synchrotron-based X-ray methods) with geochemical modelling and toxicity studies to arrive at improved understanding of trace metal behavior in soils. Vanadium will be taken as an example of a trace metal for which speciation is key to understanding both the chemical reactivity and biological uptake.

For phosphorus in agricultural soils, the speciation is rather complex and includes a variety of inorganic P forms as well as organic P. We show how the speciation changes in response to long-term fertilization as well as with depth within a soil profile. From these studies it is clear that adsorbed Al and Fe phases play a crucial role in determining the phosphorus dynamics over a time scale from years to decades; however, in some cases Ca-P phases may also form after heavy fertilization, at least temporarily. Moreover these studies show the dramatic changes that occur in P speciation during soil development.

Die Vortragsreihe ist eine interdisziplinäre Plattform zur Information und Diskussion für Studierende, Forschende und Lehrende

Gäste sind herzlich willkommen

The lecture series serves as an inter-disciplinary platform for students, junior and senior scientists.

Guests are cordially invited!

Kurzfassungen und weitere Infos / *Abstracts and further information*:
www.bayceer.uni-bayreuth.de/kolloquium/

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