

Wintersemester 2010/2011

Gebäude GEO I
Hörsaal H6

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung

Donnerstag 18.11.2010, 16:15 Uhr, H6

Anschließend Postkolloquium mit Bier und Brezeln im Foyer H6

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Impact of microbial activity on arsenic reduction, mobilization and sequestration at the mineral-solution interface

The interaction of arsenic with mineral surfaces strongly influences its mobility in soil-water systems. Microbial reduction of arsenate (As(V)) to arsenite (As(III)) may not only increase the mobility but also the toxicity of arsenic in the environment. While previous studies indicated that an uptake by mineral surfaces may slow down microbial As(V) reduction, detailed data on this effect is still lacking. Therefore, we investigated the influence of As(V) adsorption to ferrihydrite, goethite and boehmite on the kinetics of As(V) reduction by *Shewanella putrefaciens* CN-32 and *Shewanella ANA-3* in incubation experiments. The presence of minerals apparently decreased the microbial As(V) reduction kinetics. Increasing amounts of minerals in suspension substantially decreased As(V) reduction rates. The data presented highlights the important role of microorganisms in the speciation and mobility of As at the mineral-solution interface.

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

Gäste sind herzlich willkommen