

# BayCEER Kolloquium

Lectures in Ecology and  
Environmental Research

Summer 2017



UNIVERSITÄT  
BAYREUTH

Thursday

**01.06.2017**

**10:00 in H14, NW I**

## Dr. Martin Obst

Experimental Biogeochemistry,  
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# How to take a close look at redox-processes

In the first part of the presentation I will explain the basics of synchrotron-based X-ray absorption spectro(micro)scopy (XAS). This includes how (spatially resolved) information on chemical speciation that is obtained by XAS, can be used to derive information on environmental processes and reaction mechanisms.

In the second part I will explain what kind of research I have planned during my Heisenberg-Professorship. In the proposed projects, I would like to apply – amongst others – the previously mentioned approaches to understand so-called cryptic redox cycles on the  $\mu\text{m}$ -scale, and how they affect element cycling in the environment. Thereby I will focus on representative model systems such as biofilms, sediments and water-saturated soils.