



UFZ-Seminar „Water and Environment“

19 June, 3 pm

Seminar Room 1, Brückstr. 3a, Magdeburg or

<https://ufz-de.zoom.us/j/6831992537?pwd=VXZFSmF3ZDZ3ckJ0dEUxNUQzSHR6QT09>

Matthias Schmidt

Department of Isotope Biogeochemistry, UFZ-Leipzig,

will give a talk on

Imaging and Micro-Analytic with Light, Electrons and Ions at ProVIS - Centre for Chemical Microscopy

The ProVIS – Centre for Chemical Microscopy provides various microscopes for micro- and nano-scale structural imaging as well as chemical and isotope analytic. Since its inauguration in 2015 numerous work-flows (that are often correlative) ranging from the preparation of the sample over imaging and micro-analytic to image-processing have been developed at ProVIS. These developments have always been driven by the scientific questions of its users which in turn demand challenging experimental procedures. The range of research questions dealt with extends from microbial ecology, bio-films and bacteriophages, over the characterisation of nano-and micro-particles and their interactions with cells, soil-science and (microbial-)corrosion to surface-analysis of natural and engineered materials.

In the first part of the presentation I will give an overview of the various sample preparation techniques, the light-microscopes, the electron- and the helium-ion microscope and the imaging secondary-ion mass-spectrometers at ProVIS. Thereafter, I will outline selected correlative micro-analytical work-flows and introduce the image-processing software Correlia which has been developed at ProVIS. Finally, I will briefly show the way to run an experiment at ProVIS.