

WORKSHOP Nano-minerals in Soils – Methods and Concepts

June 29 (13⁰⁰) to June 30 (13⁰⁰) 2007
Göttingen, Germany

Intention

With the advancement in analytical techniques as well as theoretical and modeling approaches, research in understanding surface processes at the nano-scale has increased significantly. The goal of the workshop is to bring together scientists interested in nano-minerals in soils, exchange ideas and exchange analytical approaches. The workshop is designed to share what is state of the art, start a conversation, and determine future directions.

The workshop will focus on poorly-ordered Al-Si-Fe phases in soils including allophane, ferrihydrite, and opal.

The analytical methods to be discussed include XRD, HRTEM, Mössbauer, and XANES. The topics to be discussed include definitions, nomenclature, surface properties, surface charge densities, origins of the different minerals, rates, reaction paths, and limits of identifying semicrystalline to amorphous phases.

**Workshop presenters include: Georg Grathoff (Portland State University),
Hans Ruppert (University of Göttingen)
Helge Stanjek (RWTH University Aachen)**

Tentative schedule

June 29th

- 13:00 Nano-minerals: Definitions and Concepts (Grathoff)
- 14:00 Fe-oxides, surface properties (Stanjek)
- 15:00 Lab exercise on surface properties (Stanjek)
- 16:00 XRD and HRTEM (Grathoff)
- 17:00 Lab exercises on size and structure determinations XRD and HRTEM
- 18:30 Dinner

June 30th

- 9:00 XANES (Ruppert)
- 10:00 Mössbauer (Stanjek)
- 11:00 Discussion

Potential participants include soil scientists, clay mineralogists, sedimentologists and environmental scientists from universities, government institutions, private soil and environmental consultants. Maximum: 15 participants.

Fee: 80 €, for students 40 €

This workshop is supported by the DFG (German Research Foundation) through the Mercator Guest-professor program for Georg Grathoff.

If interested please email Georg Grathoff, GrathoffG@pdx.edu.
Deadline for registration: May 31st 2007.