

617th ASRC Seminar

Date: 14:55 ~ 15:25 Friday, February 26

Location: Conference Hall, ASRC Building

Speaker: Dr. Horst Geckeis
(Karlsruhe Institute of Technology)

Title: Fundamental scientific aspects of radionuclide behavior in the environment

Abstract: Remediation of contaminated sites as well as assessment of nuclear waste disposal concepts require fundamental insight into the interaction of radionuclides with the constituents of environmental compartments. Due to the fact that implementation time scales for remediation as well as nuclear waste disposal projects usually cover decades and in view of the high societal attention of such undertakings, it is mandatory to continue and to develop respective research on a highest level within international efforts. Knowledge of typical chemical properties and speciation of radionuclides under given geochemical conditions is one prerequisite for understanding their environmental relevance as well as for planning remediation measures. The availability of advanced sensitive analytical and spectroscopic methods as well as theoretical approaches allows gaining insight into the chemical state of radionuclides as regards to redox state, complexation speciation and binding modes to mineral and colloidal surfaces. The outcome of such experimental studies is considered indispensable input for the development of geochemical models. This talk will discuss fundamental aspects of radionuclide chemistry and application to the big challenges of environmental radionuclide chemistry.

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