



INVITATION

for a

VERA - SEMINAR

with

**Daniel Glückman**

Karlsruhe Institute of Technology, Institute for Nuclear Waste Disposal  
Karlsruhe, Germany

**Investigation of the diffusion  
of U(VI) and Am(III) through Opalinus Clay  
with AMS down to ultra-trace levels**

Clay rocks, such as Opalinus Clay (OPA), are considered as potential host rocks for the final disposal of high-level nuclear waste. In the scenario of ground water ingress into the emplacement chambers, possibly released actinides would be transported through the clay mainly by diffusion. The diffusion of U through OPA has not been investigated below concentrations of  $\approx 5 \times 10^{19}$  atoms per  $\text{m}^3$  of clay. In the present study, diffusion profiles of U(VI) and Am(III) were determined with AMS at unprecedented ultra-trace levels down to  $\approx 5 \times 10^{14}$  atoms/ $\text{m}^3$ , allowing for the exploration of potential differences in the diffusion behavior of U(VI) and Am(III) at ultra-trace concentrations compared to higher concentrations.

Thursday, 01.12.2022, 16:30 o'clock

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",  
1. Stock, Victor-Franz-Hess Hörsaal**