

2104 IMMORAD PROJECT MEETING

14th–15th May 2014

Departamento de Geología, Universidad de Oviedo
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Basic research on the immobilization of long-lived radionuclides by interaction with relevant secondary repository- phases.

PROGRAM

Wednesday, 14th May

09:45 – 10:00 Arrival

10:00 – 12:00 Networking

12:00 – 12:45 Lunch

12:45 – 13:00 Opening of the 2014 ImmoRad Meeting

13:00 – 13:20 Investigations on the stability of selenium doted pyrite with variable hydrochemical conditions
Sebastian Potsch (Karlsruhe Institute of Technology, Institute of Mineralogy and Geochemistry, Germany)

13:20 – 13:40 Immobilization of selenium by interaction with iron oxides
Nicolas Börsig (Karlsruhe Institute of Technology, Institute of Mineralogy and Geochemistry, Germany)

14:00 – 14:20 Retention of selenium by cementitious materials under reducing radioactive waste repository Conditions
Henar Rojo (Paul Scherrer Institute, Laboratory for Waste Management, Switzerland)

14:20 – 14:40 On the influence of Se(IV) in CaCO₃ polymorphism
Angeles Fernández-González (Department of Geology, University of Oviedo, Spain)

14:40 – 15:00 Np(V) redox with Fe(II) minerals (siderite/magnetite)
Robin Steudtner (Helmholtz-Zentrum Dresden, Institute of Resource Ecology, Germany)

15:00 – 15:30 Coffee Break

15:30 – 15:50 Anionic influences on the interaction of Ln³⁺/An³⁺ with calcite
Sascha Hofmann (Karlsruhe Institute of Technology, Institute for Nuclear Waste Disposal, Germany)

15:50 – 16:10 Influence of reaction parameters on the nucleation and growth of SrSO₄/SrCO₃ determining the fate of An(III)/Ln(III)
Louis Temgoua (Karlsruhe Institute of Technology, Institute for Nuclear Waste Disposal, Germany)

- 16:10 – 16:30 Thermodynamic/kinetic modeling of trace element uptake into solid solutions: GEMS extensions and test results
Dmitrii Kulik & B. Thien (Paul Scherrer Institute, Laboratory for Waste Management, Switzerland)
- 16:30 – 16:50 "DDM-DFT modelling of mixing and ordering in the BaSO₄-PbSO₄ system
Victor Vinograd (Goethe University of Frankfurt, Institute for Geosciences, Germany)
- 16:50 – 17:10 High pressure experimental and DFT study of coffinite (USiO₄)
by *Johannes Bauer* (Goethe University of Frankfurt, Institute for Geosciences, Germany)
- 17:10 – 17:30 Mechanical properties of monazite ceramics
Anja Thust (Goethe University of Frankfurt, Institute for Geosciences, Germany)
- 17:30 – 18:00 **Invited presentation:** Symmetry-adapted quantum-mechanical modelling of site disorder
Ricardo Grau Crespo (Department of Chemistry, University of Reading, U.K.)
- 18:00 – 18:30 General discussion
- 20:00 – 22:00 Meeting dinner

Thursday, 15th May

- 09:00 – 09:20 Uptake of Ra in the presence of barite under near-to-equilibrium conditions
Felix Brandt (Research Centre Jülich, Department of Nuclear Waste Management and Reactor Safety)
- 09:20 – 09:40 Uptake of Pb²⁺_(aq) by baryte-celestine solid-solution crystals
Rosa M. Rodríguez-Galán (Department of Geology, University of Oviedo, Spain)
- 09:40 – 10:00 The ternary system (Ba,Ra,Sr)SO₄
Juliane Weber (Research Centre Jülich, Department of Nuclear Waste Management and Reactor Safety)
- 10:00 – 10:30 Coffee Break
- 10:30 – 12:00 Future work and management meeting
- 12:00 – 13:00 Lunch
- 13:00 – 15:00 Networking
- 15:00 – 15:30 Coffee Break
- 15:30 – 17:00 Networking (cont.)
- 17:00 – 17:15 Farewell