

The THEREDA project

Helge C. Moog (1), Christian Marquardt (2), E. Yalçintaş (2), Vinzenz Brendler (3),
Tres Thoenen (4), Daniela Freyer (5)

- (1) Gesellschaft für Anlagen- und Reaktorsicherheit (GRS), Germany
- (2) Karlsruhe Institute of Technology, Institute for Nuclear Waste Disposal, Karlsruhe,
Germany,
- (3) Helmholtz-Zentrum Dresden-Rossendorf, Institute of Resource Ecology, Dresden,
Germany
- (4) Paul Scherrer Institut, Laboratory for Waste Management (LES), Switzerland (5)
TU Bergakademie Freiberg, Institut für Anorganische Chemie, Freiberg, Germany

Five institutions joined efforts to create a common thermodynamic reference database (THEREDA), dedicated to the calculation of radionuclide solubility in high-saline solutions in underground nuclear disposal sites. The principal output of the project are ready-to-use parameter files for thermodynamic equilibrium codes, among them ChemApp.

The presentation will give an account on the development of the project in the past ten years. Results from recent and upcoming releases will be given. Some emphasis will be given to lessons learnt in recent activities, where redox equilibria were involved.

The presentation will conclude on the long-term perspective of THEREDA and an outlook to the envisaged support of another Gibb energy minimizer.