

AKE 5: Nuclear Decommissioning and Storage

Zeit: Dienstag 8:30–9:00

Raum: S Aula

Hauptvortrag

AKE 5.1 Di 8:30 S Aula

Research for the safe management of nuclear waste — ●DIRK BOSBACH — Forschungszentrum Jülich, Germany

The safe management of radioactive waste arising from electricity production is one of the great challenges of our times. Technologies for the decommissioning of nuclear facilities and for the safe management of the associated waste have been developed in recent decades. Current R&D activities are focusing on optimization regarding e.g. radiation exposure of personal, economic aspects, etc. Some special waste streams arising from the decommissioning of nuclear installations have not been in the focus of R&D activities in the past, e.g. radioactively contaminated toxic metals such as beryllium, cadmium or

mercury, spent ion-exchange resins, radioactively contaminated NAPL and decontamination fluids, wastes containing asbestos, PCB, etc. and mixed wastes with elevated concentrations of chemotoxic/hazardous constituents. Although the expected volumes of various of these special waste streams will be comparatively small, there are specific challenges linked to their safe management, for example, due to their associated chemotoxicity, potential releases of radionuclides, their incompatibility to established conventional treatment and conditioning techniques, analytical challenges regarding the adequate determination of radioactive and chemotoxic inventories, etc. The presentation will provide an overview of current R&D activities at Forschungszentrum Jülich on waste treatment and waste form development regarding some special wastes.