

## HITEC Theme Day

**Title:** Energy technology IV – Nuclear waste disposal and reactor safety

**Date:** 13 December 2012

**Time:** 9:00 – 15:45 o'clock  
afterwards *get together* with snacks and drinks

**Location:** ► **RWTH Aachen University, Super C, Templergraben 57**

The worldwide operation of nuclear power plants means that the state of the art must be continuously updated with respect to the safety of reactor operation and final disposal of radioactive waste. In nuclear waste management, new disposal concepts are being developed on the basis of new materials which are intended to ensure safe disposal for up to one million years. In close interaction between experiments and simulation, accident scenarios are analysed in reactor safety research and the effectiveness of safety measures evaluated.

### You will learn:

Acquiring basic knowledge of nuclear waste management and safety research in the field of reactor technology and fundamental principles of radioactivity and nuclear fission.

### This information day will provide an overview of

- radioactivity and nuclear fission
- objectives of reactor safety
- current knowledge on the Fukushima reactor accident
- materials development for nuclear waste management
- characterization of materials for nuclear waste management
- strategies for nuclear waste management

### Contents:

- 1) Introduction to reactor technology, A. Schulze, RWTH
- 2) Aims and principles of reactor safety research, Prof. H.-J. Allelein, RWTH/Jülich
- 3) Reactor safety research in Aachen and Jülich, Dr. E.-A. Reinecke, Jülich
- 4) The reactor accident in Fukushima (time for discussions and questions), S. Struth, Jülich - Prof. H.-J. Allelein, RWTH/Jülich
- 5) The scientific basis for the safe management of nuclear waste, Prof. D. Bosbach, Jülich
- 6) Safeguards Research & Development in Support of the International Atomic Energy Agency, Dr. I. Niemeyer, Jülich
- 7) Ceramic Waste Forms for the Conditioning of Minor Actinides, Dr. S. Neumeier, Jülich
- 8) Characterisation and management of residues from nuclear operations and decommissioning, Dr. M. Rossbach, Jülich

### Who should attend:

HITEC Ph.D.-fellows;

Postgraduate-, Ph.D. and postdoctoral fellows from the fields of energy and climate research

### HITEC Days

HITEC Days are an inherent part of the graduate school Helmholtz Interdisciplinary Doctoral Training in Energy and Climate Research (HITEC). They devote a whole day to a method or a scientific topic with lectures and discussions. The methodological days serve to encourage scientific interdisciplinarity and will enable the PhD students to extend their range of methods with respect to their own scientific work. HITEC Days always end with a 'Get together', some snacks and drinks. HITEC Days are open for HITEC Ph.D. students and other interested young scientists.