

Invitation

Neutron Scattering Applications to Hydrogen Storage Materials

**7th-17th of August 2017 at Helmholtz-Zentrum Berlin
Hahn-Meitner Platz 1, 14109 Berlin, Germany**

SCOPE

Energy research is an important scientific area today and hydrogen is one of the most promising sources of energy due to its highest energy density by weight. The efficient hydrogen storage depends on development of the new materials. Neutron scattering and -diffraction are powerful, non-destructive tool for the analysis of structure and dynamics in matter in a broad space and time domain. High sensitivity to hydrogen makes neutron scattering techniques ideally suitable to study the process in hydrogen storage systems. The goal of this school is to introduce participants to basics of neutron scattering techniques and show how these techniques can be applied for exploration of hydrogen storage materials.

We kindly invite you to the upcoming Neutron School 2017 “*Neutron Scattering Applications to Hydrogen Storage Materials 2015*”. The school is organized jointly by University of Potsdam, Germany and University of Tartu, Estonia. It will be held from 7th – 17th of August 2017 at the Helmholtz-Zentrum Berlin (HZB), Berlin, Germany.

The lectures and practical exercises will give basics to:

- *Hydrogen economy and hydrogen storage technologies*
- *Fundamentals of the gas storage*
- *Basics of the neutron scattering and in particular in-situ neutron diffraction and neutron spectroscopy*
- *Characterizing sorption behavior of porous materials by ab-initio and crystal structure refinements*
- *Characterization of gas diffusion and mass transfer properties*

Lectures: M. Russina (HZB), H. Kurig (University of Tartu, Estonia), D. Többens (HZB), D. Wallacher (HZB) and M.C. Schlegel (BAM)

TARGET GROUP

The course is primarily aimed at early stage researchers with basics knowledge in Thermodynamics and Solid State Physics. It is part of the curriculum of the Faculty of Mathematics and Sciences at the University of Potsdam, Modul 741A and is credited with 4 credit points.

REGISTRATION

If you are interested in attending the school, please contact school organizer at margarita.russina@helmholtz-berlin.de.

The register due date is June, 15th, 2017.