



# TRR 80 Sonderseminar

Am Donnerstag, den 01. Dezember um 13:30 Uhr

spricht

***Dr. Dmytro Kamenskyi***

**High Field Magnet Laboratory, Radboud University, Nijmegen**

über das Thema

***Infrared spectroscopy in high magnetic fields***

The High Field Magnet Laboratory (HFML) at Radboud University (Nijmegen, Netherlands) is dedicated to materials research in the highest continuous magnetic fields, up to 37.5 T, generated with resistive magnets. Far infrared spectroscopy is one of the hot items at HFML. We have Bruker Fourier Transform Spectrometer coupled with 33-Tesla magnet allowing infrared studies in the 10–2500  $\text{cm}^{-1}$  range of wavenumbers, important for low-energy excitations in e.g. magnetic materials and semiconductors. Recently, spectroscopic capabilities of HFML extended by the construction of a beamline which couples the HFML to the infrared free electron laser (FEL) facility FELIX. This unique combination allows for large variety of the experiments ranging from simple transmission measurements (EPR, CR) to sophisticated time resolve techniques such as pump-probe and spin-echo over a broad range of frequencies (6 – 3600  $\text{cm}^{-1}$ , 2000 – 3 micron), radiation power (upto 200  $\text{W}/\text{cm}^2$ ) and magnetic fields (up to 33 T).

In the talk I'm going to discuss experimental possibilities at HFML. Results of pioneering experiments performed using combinations of high magnetic fields and FEL radiation source are going to be presented. Also I'll show a few examples of the high field FIR studies performed on frustrated magnetic systems ( $\text{Cs}_2\text{CuBr}_4$ , azurite) using Bruker spectrometer.

Gäste sind herzlich willkommen.

Der Vortrag findet im Seminarraum S-403, Institut für Physik, Universität Augsburg statt.

Gastgeber: Dr. Zhe Wang

[www.trr80.de](http://www.trr80.de)