

## TRR Guest Scientist Lecture / Seminar

Date/Time: 09.12.2016 / 3pm  
Location: TU-Do / CP-01-186

**Prof. Roman Pisarev**

*Laboratoire PhLAM, Villeneuve d'Ascq*

### Close relations between magnetic and optical phenomena in a complex multisublattice antiferromagnet **CuB2O4**

**Abstract:**

Copper metaborate  $\text{CuB}_2\text{O}_4$  crystallizes in a tetragonal noncentrosymmetric space group  $I-4_2d$  (#122,  $Z=12$ ). Magnetic  $\text{Cu}^{2+}$  ions ( $S=1/2$ ) occupy in the unit cell two crystallographically distinct positions 4f and 8d. Below the antiferromagnetic Néel temperature  $T_N = 21$  K several interesting magnetic and optical phenomena are observed. In this talk, we discuss unusually rich optical absorption spectra, antiferromagnetic linear dichroism, second harmonic generation, and some other optical phenomena.

Contact: Apl. Prof. Dr. Dmitri Yakovlev  
[Dmitri.Yakovlev@tu-dortmund.de](mailto:Dmitri.Yakovlev@tu-dortmund.de)