



EINLADUNG zum IFP-SEMINAR

The langasite $A_3BC_3Si_2O_{14}$ with A or C magnetic ions on a triangle-based lattice: a play ground for magnetic frustration, chirality and multiferroicity

Sophie De Brion,

Institut NEEL, Grenoble, France

Host: Anna Pimenov
Termin: Mittwoch, 7. Juni 2017, 16:00 Uhr
Ort: Institut für Festkörperphysik, TU Wien
Wiedner Hauptstraße 8-10, 1040 Wien
Seminarraum DC rot 07 (roter Bereich, 7. OG)

Abstract:

In the langasites $A_3BC_3Si_2O_{14}$, both the A and C sites present the same network based on triangles where magnetic frustration may occur. Additional ingredients are at play depending on the nature of the magnetic ions. In this talk I will review the properties of two families. The first one deals with a 3d ion and strong magnetic interactions: the iron langasite where a chiral magnetic structure occurs. This compound shows also multiferroic properties as well as an original THz magneto-elastic response. In the case of Nd and Pr langasites, no long range order is detected and I will discuss possible spin liquid behavior and effects of crystal field excitations.