



EINLADUNG zum IFP-SEMINAR

Spin excitations in multiferroic $\text{Mn}_2\text{Mo}_3\text{O}_8$

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Host: David Szaller
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Ort: Institut für Festkörperphysik, TU Wien
Wiedner Hauptstraße 8-10, 1040 Wien
Seminarraum DC rot 07 (roter Bereich, 7. OG)

Abstract:

Recently, it was found that the polar ferrimagnet $\text{Mn}_2\text{Mo}_3\text{O}_8$ shows large diagonal magnetoelectric effect [1]. However, the magnetic structure of this compound is not fully understood. The family of polar ferrimagnets $\text{M}_2\text{Mo}_3\text{O}_8$ with $\text{M} = \text{Mn}, \text{Fe}, \text{Co}$ or Ni are excellent materials to investigate the role of different magnetic ions in the microscopic origin of magnetoelectric effect.

In this talk I will summarize the so far obtained magnetic and magnetoelectric properties of this material, and present our results of high field far infrared spectroscopy measurements. This measurement method is very powerful to unveil the magnetic field dependence of the spin excitations, wherewith we aim to determine the most important exchange and anisotropy parameters. By means of these parameters it is possible to construct a microscopic spin model which can bring us closer to understand the magnetoelectric properties of this material at microscopic level.

[1] T. Kurumaji et al.: PRB 95, 045142 (2017).