

Thursday, 26th April 2018, 17:00

Campus Schenefeld, main building (XHQ) room E1.172

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Using X-ray absorption spectroscopy for studying magnetism: some risks and opportunities

Magnetism of multicomponent systems is often studied by means of X-ray magnetic circular dichroism (XMCD). The XMCD sum rules are a very powerful tool but they allow for the spin magnetic moment m_{spin} to be determined only in combination with the magnetic dipole term T_z . The talk will present few examples demonstrating that neglecting T_z could in some cases lead to completely wrong conclusions about the trends of m_{spin} with the size of the system or with the magnetization direction. Further, we inspect conditions that have to be met so that eliminating the T_z from XMCD sum rules is possible. Finally, results of a combined study of structure and magnetism of Cu-doped ZnO will be presented to illustrate the power of X-ray absorption spectroscopy as a local probe.

Host: Evgeny Gorelov