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Contribution of polarized neutron diffraction to the study of magneto-structural relationships of molecular magnetic compoundslk

Thursday, 27 April 2023 11:15 (30 minutes)

PND has proved to be particularly suitable for the study of magnetic molecular compounds and the determination of the spin density. This provides unique information on the paths of magnetic interactions and the nature of magnetic intra-or intermolecular coupling [1]. In this talk, we show on several examples how we can go beyond the spin density reconstruction and use the local susceptibility tensor approach [2] and study the magnetic anisotropy in molecular compounds (Figure 1) [3-6].
This makes PND an excellent tool to help in the design of molecular-based magnets and especially single-molecule magnets for which strong uniaxial magnetic anisotropy is required.

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