TRR 80 Sonderseminar

Am Donnerstag, den 31. Januar um 13:30 Uhr

spricht

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über das Thema

Layered geometrically frustrated $FeTe_2O_5Br$ system – a bundle of remarkable magnetic properties

A geometrically frustrated layered cluster compound $FeTe_2O_5Br$ possesses a number of appealing magnetic properties. Fe^{3+} (S=5/2) magnetic moments order with an incommensurate elliptical modulation below T_N=10.8 K. This state is accompanied by a spontaneous electric polarization associated with the polarizable Te^{4+} lone pair electrons of the Fe-O-Te-O-Fe inter-cluster exchange bridges. The magnetic exchange network in $FeTe_2O_5Br$ consists of alternating Fe^{3+} spin chains coupled by weaker frustrated interactions within the layers. The elliptical magnetic order exists down to 50 mK (T/T_N~1/200), thus only part of Fe moments contributes to long-range order; other part fluctuates leading by persistent spin dynamics at 0 K. Topics of common research: anisotropic magnetic properties of a layered kagome-like system $Cu_3Bi(SeO_3)_2O_2Br$ and spin-liquid in the frustrated diamond lattice antiferromagnet $CoAl_2O_4$ spinel will be also discussed.

Gäste sind herzlich willkommen.
Der Vortrag findet im Seminarraum S-403 / Institut für Physik, Universität Augsburg statt.

Gastgeber: Prof. Dr. Alois Loidl
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