



Leibniz-Institut
für Festkörper- und
Werkstoffforschung
Dresden

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Einladung zum

ITF-Seminar

Dr. Sergey Grigoriev

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Magnetic structures of cubic ferromagnets with Dzyaloshinskii-Moriya interactions

The magnetic structures of the noncentrosymmetrical cubic ferromagnets with Dzyaloshinskii-Moriya interactions $Mn_{1-y}Fe_ySi$ and $Fe_{1-x}Co_xSi$ have been studied by means of polarized small-angle neutron scattering (SANS). These compounds are shown to be ordered magnetically with a helical structure below the critical temperature T_C . The H-T (magnetic field - temperature) phase diagrams for each compound can be interpreted taking into account the Bak-Jensen hierarchical model of the principal interactions. The problems of (i) the purely chiral fluctuating phase above T_C in $MnSi$, (ii) the k-flop phase observed below T_C , and (iii) the relation of crystallographic and magnetic chiralities of these compounds are presented, discussed and interpreted.

Donnerstag, 15. April 2010

13:00 Uhr

D2.E.27

IFW Dresden
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Eingeladen von Prof. Alexei Bogdanov