SFB 767
Seminar

Universität Konstanz

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Structural and magnetic properties of inverse opal-like crystals

Inverse opals can be produced by filling the voids of a template crystal, formed by close-packed spherical particles with a diameter of about several hundred nanometers. The non-trivial geometry and periodicity of such structures can give rise to new fascinating properties. We deal with ferromagnetic inverse opals and study their structural and magnetic properties by small-angle diffraction of synchrotron radiation and neutrons. Additionally, we perform micromagnetic simulations in order to understand the distribution of the magnetization in inverse opal at different stages of the magnetizing process. Some details and results of the investigation will be presented in the talk.

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