



Contribution ID: 104

Type: Poster

【672】 Crystallite size dependency on magnetic phase diagram of Cu_2OSeO_3

Wednesday 28 August 2019 19:01 (1 minute)

Due to their promising technological applications, magnetic Skyrmions in Chiral magnets, such as Cu_2OSeO_3 , have been the center of attention of the scientific community. By manipulating the crystallite size in the range of a single Skyrmion (62nm), it could be interesting to see if the magnetic phase diagram can be tuned. We have employed solution growth techniques to have controllable size of nanocrystals varying from 35nm to 300nm. The size-specific magnetic phase diagram of nanoparticles has been explored using DC magnetization, AC-susceptibility and Small Angle Neutron Scattering studies. Our experimental results have been further verified using micro-magnetic simulations. We observe a systematical change in the magnetic phase diagram with the change in particle size.

Author: BARAL, Priya Ranjan (EPFL)

Co-authors: UKLEEV, Victor; Dr WHITE, Jonathan (Laboratory for Neutron Scattering and Imaging, Paul Scherrer Institut); YAZYEV, Oleg (EPFL - EPF Lausanne); Prof. RONNOW, Henrik (EPFL); MAGREZ, A. (Crystal Growth Facility, Institut de Physique, École polytechnique fédérale de Lausanne(EPFL), 1015 Lausanne, Switzerland)

Presenter: BARAL, Priya Ranjan (EPFL)

Session Classification: Poster Session

Track Classification: Skyrmions in magnetic materials