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【843】Numerical Studies of Skyrmion Lattices

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Magnetic skyrmions are topologically non-trivial spin textures, which hold big promise for their use in potential spintronic devices. We have performed real time and real space investigations on skyrmion lattices (SkL) in Cu2OSeO3 using Lorentz microscopy to study magnetic field induced melting of the SkL and its heat-induced rotation. We particularly highlight the methods we use for the analysis of these phenomena, i.e. the algorithms we have developed to routinely identify skyrmion positions in our data in order to study defects in the lattice, spatial and temporal correlation functions and local orientation maps.

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