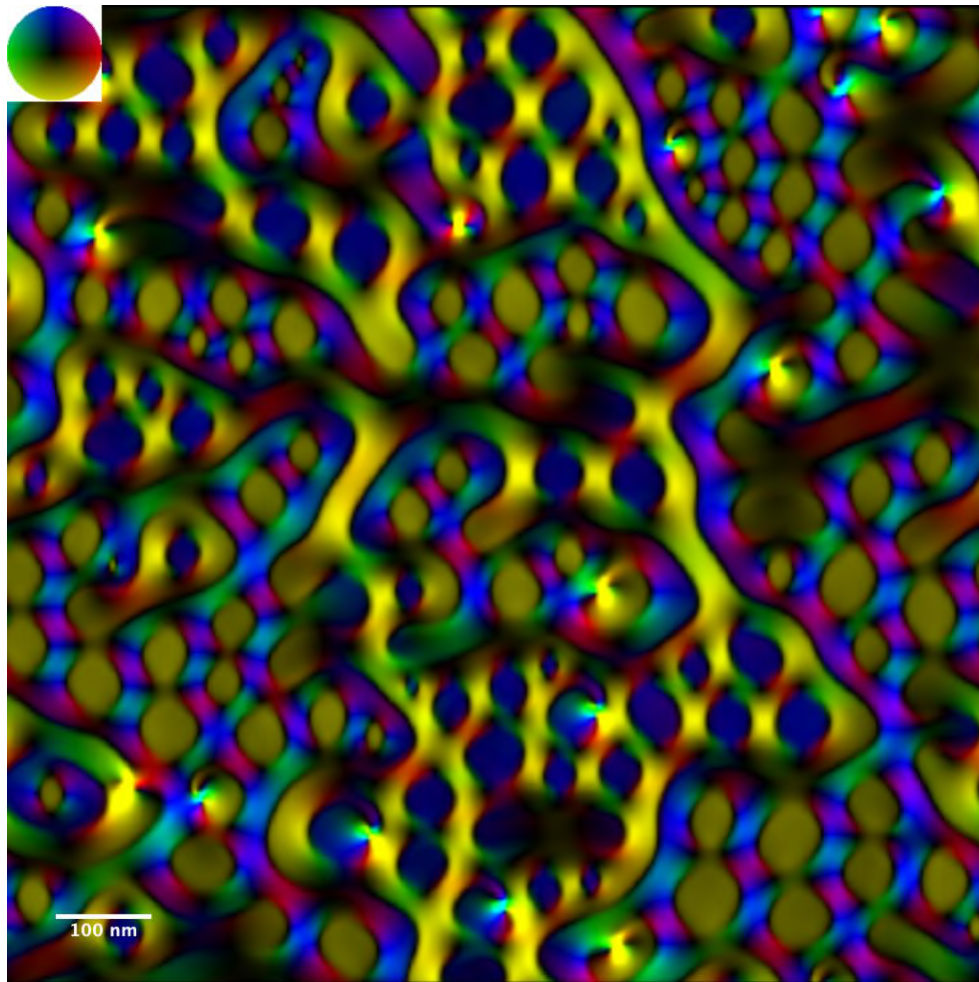


## Title: Simulation of Fresnel-mode Lorentz Transmission Electron Microscopy (LTEM) Images

### Description:

This image is a simulation of the reconstructed magnetic induction map for a labyrinth magnetic structure tilted by 15 degrees. The domain structure was simulated using MuMax3[1]. LTEM is extensively used for quantitatively analyzing magnetic domain structures, and its Fresnel-mode images can be simulated by calculating the electron wave phase shift caused by electrostatic and magnetic potentials and the objective lens aberrations. A through-focal series of Fresnel-mode images can then be used to reconstruct the magnetic induction map of the sample. This method can be applied to research on magnetic domain structures and help researchers interpret experimentally observed image features.



### Reference:

[1] A. Vansteenkiste, J. Leliaert, M. Dvornik, M. Helsen, F. Garcia-Sanchez and B. Van Waeyenberge, AIP Advances 4, (2014).