Temperature Dependent Structure of BiFeO₃: Probing For Spin Lattice Correlations

TREVOR TYSON, TIAN YU, HAN ZHANG, NJIT, MILINDA ABAYKOON, Photon Sciences, Brookhaven National Laboratory — The local structure of BiFeO₃ has been measured over a broad range of temperatures and in magnetic fields. This detailed study explores the nature of the coupling of magnetism and with the lattice on crossing magnetic transitions. Estimates on the structural changes are given. This work is supported by DOE Grant DE-FG02-07ER46402.