

Decay of helical magnons and spectral weight transfer in ferrates

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A theoretical description of the helical magnetic order and spin dynamics in 3D is discussed. Inelastic neutron scattering intensity as a function of wave vector and energy is calculated and compared with the experimental data in SrFeO_3 and CaFeO_3 . Spectral weight transfer due to coupling of single magnon excitations to two magnon continuum is found.