Abstract Submitted
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Mössbauer and magnetic studies of $(Ni_{0.6-x}Co_x)Zn_{0.4}Fe_2O_4$ nanoparticles J.C. HO, Wichita State University, M.M. EL-TABEY, Menoufia University, H.H. HAMDEH, R. ASMATULU, Wichita State University, S.H. WU, Y.Y. CHEN, Academia Sinica — Mixed-ferrites $(Ni_{0.6-x}Co_x)Zn_{0.4}Fe_2O_4$ with x = 0, 0.1, 0.2, 0.3, 0.4, 0.5 and 0.6 were synthesized by co-precipitation of Ni-, Co-, Zn- and Fe-sulfates. Structural characterization of the approximately 10-nm particles was made by x-ray powder diffraction. Through Mössbauer spectroscopic measurements, the composition- and temperature-dependence of magnetic blocking temperature and anisotropic constant were obtained. SQUID data yielded corroborative results, in addition to magnetization and saturation values.

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