

Article Abstract

Title:	Cation distribution of Ni _{0.5} Zn _{0.5} Fe ₂ O ₄ nanoparticles
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Journal:	<i>International Journal of Engineering, Science and Technology</i> , Vol. 2, No. 8, 2010, pp. 104-109.
Abstract:	A set of Ni _{0.5} Zn _{0.5} Fe ₂ O ₄ samples were prepared by citrate precursor route to investigate the growth mechanism and its effect on cationic distribution. Following the information from DTA–TGA analysis, samples were annealed at 550 °C, 700 °C and 750 °C. Magnetization and Mössbauer studies suggest that initially the cationic distribution deviates from its normal preferences but it gets back to the normal preference at a temperature around 675 °C. It has been found that size onset for having the bulk cation configuration exclusively depends on the composition.
Keywords:	Mössbauer Spectroscopy; Ferrite; Nanoparticles, Cationic distribution