

## **H-FIELD INDUCED CHANGES IN Ni-Zn FERRITES BY SINGLE MODE MICROWAVE IRRADIATION**

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$\text{Ni}_{1-x}\text{Zn}_x\text{Fe}_2\text{O}_4$  with “x” values varying from  $x = 0, 0.2, 0.4, 0.6, 0.8$  and  $1.0$  were prepared using high purity NiO, ZnO and  $\text{Fe}_3\text{O}_4$  in stoichiometric proportions. Sintering of these pellets was carried out in a conventional furnace at  $1275^\circ\text{C}$ , for 30 minutes. The sintered samples were post treated in a microwave H-field, and the structural and magnetic property differences between H-field treated and untreated samples were compared. The structural disorder was studied by XRD and Raman spectroscopy, and the magnetic property changes were studied by carrying out B-H measurement. Changes in crystal structure, magnetization, coercivity, and saturation magnetization values were determined. The results are explained based on our current understanding of magnetic decrystallization.