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Green density effects on the structural and magnetic properties of (Cd, Zn)_{0.5}Ni_{0.5}Fe₂O<sub>4</su

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Abstract content
   (Max 300 words)

We present results of structural and magnetic measurements derived from x-ray diffraction, magnetization and Mössbauer spectroscopy for (Cd, Zn)_{0.5}Ni_{0.5}Fe₂O₄ ferrites which were prepared by combustion technique. The evolution of properties is investigated as a function of pressure or green density used to compact the pellets before sintering. Information on lattice parameters, grain sizes, porosity, coercive fields, saturation magnetization, Curie points and hyperfine field distributions are correlated with the pressure effect, bulk densities of the materials and differences in ionic sizes of Cd and Zn atoms. Evidence of trapped porosity and optimum sample preparation conditions are also deduced from the data.

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Primary author: Dr MOYO, Thomas (University of KwaZulu-Natal)

Co-authors: Prof. SAITOVITCH, Henrique (Centro Brasileiro de Pesquisas Fisicas); Dr MSOMI, Justice (University of KwaZulu-Natal); Dr SILVA, Paulo (Centro Brasileiro de Pesquisas Fisicas)

Presenter: Dr MOYO, Thomas (University of KwaZulu-Natal)

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