Blucher Physics Proceedings
Janeiro de 2015, Número 3, Volume 1

HEAT TREATMENT ON THE STRUCTURAL AND MICRO-STRUCTURAL PROPERTIES IN Ni-Zn FERRITES SYNTHESIZED BY COMBUSTION REACTION

da Cunha, F.A.P; Sales, L.L.M.; Fregolente, D.; Silva, J. M.; Wanderley, A. F.

Centro de Formação de Professores, Universidade Federal de Campina Grande, Cajazeiras/PB, Brazil

***b.**jesana_moura@hotmail.com*

Ceramic materials formed by complex metal oxides are assuming a very important role on the scientifically and technological development. The synthesis by reaction of combustion is of particular interest once it is a very quick and cheap method to obtain products with both levels of purity and excellent reproducibility. The method is based on a highly exothermic reaction that provides the necessary energy for the chemical transformation and the obtaining of reasonable ceramic products. This result must be confirmed by JCPDF 52-0279 chart, obtained products are monophasic. The present work aims to synthesize and characterize the $Zn_{0,5}Ni_{0,5}Fe_2O_4$ in order to relate the micro-structural properties. The analysis of the thermal treatment effect generates a duplication of the crystallinity values related to material. The thermal treatment leading to a rising of the crystallinity of sample confirmed by the crystallite size of 422.4nm.