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INFLUENCE OF THE PREPARATION METHOD ON STRUCTURAL AND MAGNETIC PROPERTIES OF CoCr₂O₄ OBTAINED BY COPRECIPITATION

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The work presented here shows a study of the structural and magnetic properties of cobalt chromite as a function of the parameters used during the chemical synthesis by coprecipitation. A series of samples oxide in which the flow changes to neutralize the NaOH solution was generated. The samples were divided into three parts and heat treatment performed at 600 ° C, 800 ° C and 1000 ° C to determine the influence of these parameters on the structural and magnetic properties. The treatment was performed at different temperatures in anticipation of changes in voltage network, the crystallite size, etc. It was observed in this case that the change of flow, changing an average particle size, and next to that, the magnetic properties. The change from one sample to another is related to the chromium atoms migrate to the surface effects of the particles and the presence of the secondary phase. We are convinced that the results of our research is an important contribution to the field. In the magnetization as a function of external magnetic field coupled to the soft cobalt chromite layer influences the coercivity. For treatment at 1000 degrees total magnetic moment of the samples has a tendency to stabilize probably due to the lattice parameter convergence. Thus, by controlling the flow of heat treatment and NaOH can obtain parameters such as critical magnetic coercivity for certain applications.