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**Impedance spectroscopy study of bicovox prepared by the citrate
(pechini)
technique**

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The so-called BIMEVOXs are a group of fast oxide ion conductors at fairly low temperature. They are structurally related to the Aurivillius materials consisting of perovskite blocks sandwiched between fluorite-like (Bi₂O₂)²⁺ sheets. The parent compound Bi₄V₂O₁₁ has three structural domains alpha, beta and gamma, the last one presenting high ionic conductivity between 840 and 1150 K. Here we present results about gamma-Bi₂Co_{0,1}V_{0,9}O_{5,35} (BiCoVO_x) prepared by the citrate technique. That method presents the advantages over solid state reaction of lower processing temperature and obtention of finer grain size. The synthesis of the final materials proceeds through the formation of the intermediate BiVO₄ phase. The physical properties of the Bicovox material prepared by that particular method have been studied using impedance spectroscopy (IS) and compared with results obtained by other methods of synthesis.

**Palavras
chave:**

oxide conductor, BIMEVOX, synthesis, impedance
spectroscopy