$SrSnO_3$ Obtained by Solid State Reaction

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Alkaline-earth stannates ($ASnO_3$, where A = Sr, Ba, Mg) are important materials for electronic industry due to their dielectric properties. Some of their applications are thermally stable capacitors, humidity sensors, gas sensors, etc. The interest in perovskite-type oxides is mainly due to easy modification of electric properties by the selection of an adequate cation and also due to their stability at high temperatures. $SrSnO_3$ is very promising material to detect gases at high temperature. In this work, we will present the structural, optical and electrical characterizations of $SrSnO_3$ powders obtained by a solid state reaction. The resulting powders calcined at different temperatures have been characterized by XRD, Raman and SEM. The use of the material with electronic ceramic was evaluated. According to XRD analysis, were obtained single-phase powders and stables up to 1000°C.

Keywords: stannate perovskite, solid state reaction, perovskite, electronic ceramic.

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