

Elaboration et Caractérisation des Cuprates Supraconducteurs de type YBCO

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Abstract: In this work, we prepared YBCO samples by sol-gel process and the gel decomposition studied by TG/DSC, which shows the X-ray diffraction due to the fact that the samples contained a preponderant phase (YBa₂Cu₃O₇). SEM images showed the polycrystalline structure of samples with grain size between 2 and 3 μm and high porosity rate. Longitudinal and transverse ultrasonic velocity and attenuation measurements were performed on 3 mm thick samples. The experiments were performed at room temperature (300 K). The objective of this technique is ultrasonic characterization.

Keywords : YBCO, sol-gel, XRD, DTA, Ultrasound