Élaboration et caractérisation des céramiques supraconductrices YBa2Cu3O7

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Abstract: This work presents bibliographic research and generalities about superconducting materials. The polycrystalline superconducting compound Y123 was developed by solid state reaction (powder metallurgy) from stoichiometric mixtures Y2O3, BaCO3, and CuO. To study the effect of the addition of lanthanum-doped cobalt ferrite (0-5-10%) on magnetic and optical properties, samples of 2g (99.9% Y123 and 0.1% CoFe2O4 (0-5-10%) lanthanumdoped) were prepared, and characterized by VSM and FTIR.

Keywords : cuprates, supraconducter, Y123, YBCO, magnetic