

## THE EFFECT OF SILVER ADDITION ON THE BSCCO SYSTEM

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Samples of the Bi-Pb-Sr-Ca-Cu-O system were prepared, with and without silver, by an amorphous citrate route. After the sintering treatment, the undoped ones consisted of an almost pure 2223 phase (more than 90%) while the others presented a mixture of 2212 and 2223 phases,  $\text{PbCa}_2\text{O}_4$  and metallic silver, as shown by *x*-ray powder diffraction. The resistance versus temperature and critical current density  $J_c$  measurements, made by the four probe method, are reported. The critical temperature at zero resistance ( $T_c(0)$ ) of the samples decreases with increasing sintering times, probably due to the growth of secondary phases on the grain boundaries. It was observed that both  $T_c(0)$  and  $J_c$  increased with silver addition. Typical values of  $T_c(0)$  for the BSCCO/10 wt % Ag samples are around 110 K. The  $J_c$  after 150 hours of sintering was of  $244 \text{ A/cm}^2$ .