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# Preparation of Pb Doped 110 K Phase BiSrCaCuO Thick Films by Screen Printing

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**Abstract:** Thick Films of $Bi_2Sr_2Ca_2Cu_3O_x$ were obtained on cleaved MgO (100) substrates from a component gel of stoichiometric composition with partial Pb substitution of Bi. Formation employeed screen printing method. Films were subjected two step annealing at temperatures above 850$^o$C and 880 \oC for the formation of the crystal structure and to attain superconducting properties. X-ray diffraction patterns and R-T measurements showed coexistence of the (2212) and (2223) phases for most of the films. Metallic behaviour in resistance and 110 K onset temperature were observed for good quality films with a completed superconducting transition between 78-103 K. Critical current densities were found in the range 3-5 A/cm$^2$ at 80 K from current-voltage measurements.

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