Study the partial substitution and annealing on structure and electrical properties of compounded $Tl_{2-x}Ag_xSr_2$-$BayCa_2Cu_3O_{10+\&}$ superconductor fabrication by nano-technique

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Abstract

In the present paper, we have prepared samples of high temperature superconductors namely $Tl_{2-x}Ag_xSr_2$-$BayCa_2Cu_3O_{10+\&}$ using solid state reaction, and nano-technique for different concentration of (x, y=0.1 0.2, 0.3, 0.4, 0.5) and compressing by hydraulic at 8 ton/cm^2 also annealing samples at 850 ˚C. The samples have been characterized resistivity measurements using the electrical resistively measurement. At x, y=0.3 ratio of Ag, Be give a best value of T_c=142 K. The morphology of the samples obtained by AFM in three dimensions views four samples after annealing treatment. Also give a best Nano size value is 94.74 nm at x, y=0.3. The structure of surface morphology of the samples was studied by SEM. The results of EDX image demonstrated that there is not unwanted element.

Biography

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