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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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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

Abdul Kareem Dahash Ali is an Assistant Professor at Department of Physics, College of Education for Pure Sciences, University of Tikrit, Iraq.

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