

Abstract

Using the exotic pairing model, the jump in the specific heat $\Delta C/T_c$ in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$, for both breathing mode and buckling mode has been calculated. Its value was compared with the experimental values and it has been found that the specific heat jump in superconductor and the density of states were one fifth of the earlier reported values. This is indicative of the small fraction of carriers close to the Fermi level, which are paired and exotic pairing due to anharmonic perturbation of the apical oxygen ions leads to a lowering of $\Delta C/T_c$.