Abstract

The Transport of Ions in Matter (TRIM) program was used to calculate the Stopping power, the energy loss and range of ions associated with the target damage, sputtering, ionization, and phonon production of Yttrium barium copper oxide superconductor material. It is well known that, superconductors are capable of carrying current without loss. It was found that, superconductivity is being applied to many diverse areas such as: medicine, theoretical and experimental science, the military, transportation, power production, electronics, as well as many other areas. In this study, the physics properties of $YBa_2Cu_3O_7$ materials were investigated. The obtained results indicate that angles probably have little influence on the uniformity of the ion beam. The intensity of ions beam changed with the lattice thickness. This change depends on the angle of ions beams. This investigation confirmed that TRIM is useful technique for simulation measurement. Details of simulation methods and results are given and discussed.