Abstract

Carbon nanotubes (CNT) are the fantastic nano-material which exhibits a very low thermal expansion and high current capability. It has a wide variety of methods for synthesis. One of the most reliable and best suited is Arc Discharge method. Multi walled CNT (MWCNT) are synthesized in an experimental setup. Soot deposited is in mixture form of nanoparticles and hence it is purified and MWCNT are separated and collected. XRD analysis and TEM images are taken for CNT. MWCNT are coated on the silica substrate through DIP coating. Dispersion of CNT is handled and the resistivity and morphology of cnt dip coated are studied. The change in resistivity is determined by the graph plotted through Four Point Probe method. Investigation concludes that the MWCNT developed is suitable for contacts in transistors and miniature sensors for fabrication due to its low resistivity.

References


**Index Terms**

Computer Science

Applied Sciences

**Keywords**

Carbon nanotubes  Arc discharge method  synthesis  purification  characterization

– XRD  

SEM

TEM.