

Secondary Electron Emission from Carbon Nanotubes forest of smaller dimension.

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EXTENDED ABSTRACT: Experimentally it is not possible to construct well aligned vertical carbon nano tubes forest (CNTF) of smaller dimension and hence cannot study the electron- CNTF interaction. With the aim of solving this limitation in experimental calculation during interaction of electrons with CNTF of smaller dimension we performed theoretical calculations for a series of CNTF having CNTs of fixed outer diameter and different number of walls. Secondary electron yield (SEY) calculations were carried out using Monte Carlo simulation taking into account the cascade secondary electron process, our calculation provide the relation between the SEY and sidewall thickness of CNTs. The effect of sidewall thickness on the SE line scan was also investigated. Change of density of CNTs for different number of Walls was taken into account during our calculations. The effect of incident angle on SEY was investigated. It was found that SEY increase with increase of the incident angle of primary electrons. While side walls escape also plays an important role at higher energies. The secondary electron yields (SEY) are calculated at different incident energies ranging up-to 10keV. In case of CNT forest the SEY increase with increasing the incident angle as well as increasing the sidewall thickness of CNTs used to construct the forest.

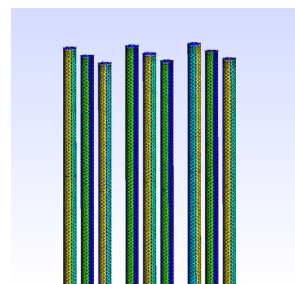
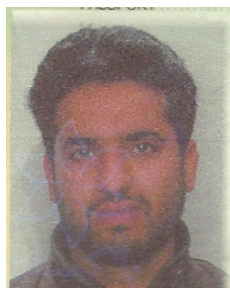


Figure 1.Gmesh structure of CNTF.

Keywords: CNTF; SEY; MC;

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BIOGRAPHY

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