

# FEM ASSESSMENT OF THE MECHANICAL PROPERTIES OF SINGLE WALL CARBON NANO TUBES

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In the work a Finite element model concerning the mechanical behaviour of single wall carbon nano tubes (SWCNTs) is proposed. The simulation approach is based on the assumption of spring forces-like interaction between two neighbouring atoms. Applying this model, the mechanical properties of SWCNTs under uniaxial tensile loading of different types of chirality and the tube diameters are assessed. The calculated numerical results are compared with existing numerical and experimental ones found in the literature.