

Electron Transport in Carbon Based Nanostructured Materials

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In recent years there has been a great interest in π -conjugated carbon based systems such as carbon nanotubes and π -stacks. A large part of this work has been focussed on electron transport and molecular electronics. In this contribution we discuss the techniques used in calculations of electron transport in this kind of systems, both in the ballistic regime and in the case of electron localization induced by disorder. Results from studies of the conductance and current distribution in multiwall carbon nanotubes as well as conductance and electron localization in π -stacks and DNA will be presented.