

Abstract Submitted
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Modeling electron transport in metallic single wall carbon nanotubes RONALD COSBY, EVAN WILSON, Ball State University — First principles atomistic calculations of electrical conductance for single-wall metallic carbon nanotubes on copper electrodes are described. Density functional theory and a non-equilibrium Green's function technique are used to calculate electronic structure and current-voltage characteristics. The computed effects of selected impurities and nanotube strains on the conductance are displayed and discussed. Progress in studying the impacts of copper-nanotube interface characteristics on the electrical properties is reported.

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