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Effect of Metal-Carbon Nanotube Interface in Carbon Nanotube

Devices¹ ZHENGFAN ZHANG, Department of Physics and Astronomy, Northwestern University, Evanston, IL 60208, VENKAT CHANDRASEKHAR, Department of Physics and Astronomy, Northwestern University, Evanston, IL 60208 — The fourterminal contact resistance of individual multiwalled carbon nanotubes with Au/Ti electrodes was measured at low temperature. The contact resistance as a function of bias voltage showed large asymmetric behavior. At zero bias, the contact resistance showed large variations with gate voltage. The origin of this asymmetric behavior and the the correlation between nanotube device resistance and contact resistance will be discussed.

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