

**FOUR-POINT RESISTANCE OF NANOTUBES**

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We have studied the resistance of single-wall carbon nanotubes (SWNT) measured in a four-point configuration with noninvasive voltage electrodes [1]. The voltage drop is detected using multiwalled carbon nanotubes while the current is injected through nanofabricated Au electrodes. The resistance at room temperature is shown to be linear with the length as expected for a classical resistor. This changes at cryogenic temperature; the four-point resistance then depends on the resistance at the Au-SWNT interfaces and can even become negative due to quantum-interference effects.

**Reference:**

[1] B. Gao, Y.F. Chen, M.S. Fuhrer, D.C. Glattli, A. Bachtold, Phys. Rev. Lett. **95**, 196802 (2005).

**Figure:**