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Combined electrical transport and STM of carbon nanotubes B.J. LEROY, I. HELLER, V.K. PAHILWANI, C. DEKKER, S.G. LEMAY, Kavli Institute of Nanoscience, Delft University of Technology — We have performed simultaneous electrical transport and scanning tunneling spectroscopy measurements on suspended carbon nanotubes. By combining these two measurement techniques we are able to probe the electronic states involved in transport through the nanotube. The spectroscopy shows peaks due to Coulomb blockade, which split and change energy as a function of the source-drain voltage across the nanotube. These peaks track the Fermi level of the source and drain electrodes. Unexpectedly, the strength of the peaks also depends on position along the tube.

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