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Electronic transport in single-walled nanotubes of known chiral indices R. CALDWELL, Columbia University, F. WANG, Y. WU, M. HUANG, L. HUANG, S. O'BRIEN, T.F. HEINZ, J. HONE — By measuring the Rayleigh scattering spectra of individual single-walled carbon nanotubes, we are able to measure the optical transition energies and therefore deduce the chiral indices (n,m). Using a simple mechanical transfer process, we can transfer the optically characterized tubes to a substrate. Following fabrication of metallic leads using e-beam lithography, the electrical transport properties of these tubes can be probed. We will present data on semiconducting, chiral metal and armchair metal SWNTs.

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