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MultiProbe Electrical Measurements of Carbon Nanotubes With On-line Raman Scattering DALIA YABLON, SurfaceChar, TALIA YESHUA, CHRISTIAN LEHMANN, Hebrew University, STEPHANIE REICH, Free University of Berlin, KRISTIN STRAIN, ELEANO CAMPBELL, University of Edinburgh
— A multiprobe scanning probe microscope (SPM) system has been used to perform multiprobe electrical measurement of carbon nanotubes. In this system two probes can be used across an isolated carbon nanotube. A variety of probes have been developed that are compatible with multiprobe operation. These include probes for writing single single walled carbon nanotubes which have a high degree of alignment and this is demonstrated with on-line Raman. The interconnection of the multiprobe system with the Raman System will be described in detail. The combination has the potential to cross the fabrication/measurement gap that will allow for both production and nanocharacterization of such single molecule carbon nanotube molecular devices both with chemically sensitive Raman measurements (with and without plasmonic enhancement) and with on-line electrical transport on isolated carbon nanotubes.

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