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Suspended bridges of individual multiwalled carbon nanotubes were fabricated inside a scanning electron microscope by soldering the nanotube onto microelectrodes with highly conducting gold-carbon material. By the decomposition of organometallic vapor with the electron beam, metal-containing solder bonds were formed at the intersection of the nanotube and the electrodes. Current-voltage curves indicated metallic conduction of the nanotubes, with resistances in the range of 9-29 kΩ. Bridges made entirely of the soldering material exhibited resistances on the order of 100 Ω, and the solder bonds were consistently found to be mechanically stronger than the carbon nanotubes.
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