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Making Carbon Nanotubes with an Underwater Arc. GARY HUNTER, LEE CULVER, ELIZABETH NELSON, JAMES ESPINOSA, BOB POWELL, University of West Georgia — The Physics Experimental Nanotechnology Group at the University of West Georgia has produced carbon nanotubes via the electric arc method. The apparatus consists of a low D.C. voltage, variable current power supply, two carbon electrodes, and a water reservoir. The arc was sustained for ten seconds, producing a carbonaceous residue on the cathode. This buildup was removed from the electrode and examined under a transmission electron microscope. Samples of nanotubes were produced in electric arcs that had direct currents ranging from 30 amps to 150 amps for a fixed voltage of 25 volts. Typical samples were 10-15 nanometers in diameter and lengths ranging up to hundreds of nanometers.

James Espinosa
University of West Georgia

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