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Precision Cutting of Nanotubes with a Low-Energy Electron Beam THOMAS YUZVINSKY, ADAM FENNIMORE, WILLI MICKELSON, CRISTIAN ESQUIVIAS, ALEX ZETTL, Department of Physics, University of California at Berkeley, and Materials Sciences Division, Lawrence Berkeley National Laboratory — We report on a method to locally remove material from carbon and boron nitride nanotubes using the low-energy focused electron beam of a scanning electron microscope (SEM). Using this method, clean, precise cuts can be made into nanotubes, either part-way through (creating hinge-like geometries) or fully through (creating size-selected nanotube segments). The SEM cutting mechanism involves foreign molecular species and differs from electron beam induced knock-on damage in transmission electron microscopy.

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