

AMERICAN SCIENTIST

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THE COVER

Carbon nanotubes — interlinked carbon atoms that roll up into microscopic cylinders — may be an important material for tomorrow's miniature machines. Sometimes the atoms assemble in more than one layer, forming the multiwalled carbon nanotubes like the one shown in longitudinal section on the cover. At such small scales, gravity has little influence compared to electrostatic effects and what are called Dispersion forces: the attraction between atoms and molecules that are electrically polarized. Usually these forces prevent the layers in a multiwalled nanotubes from moving, which can limit their technological applications. But in "Engines Powered by the Forces Between Atoms" (pages 280-289), Fabrizio Pinto describes how dispersion forces could be harnessed to do useful work, storing energy or providing motive force, on the micro — and possibly the macro — scale. (Image by Dr. Peter Harris/ Science Source.)