Utilizing Carbon Nanotubes for 1-D Mass Transport

GAVI BEGTRUP, A. ZETTL, University of California, Berkeley — Precision control of the size and placement of materials on the nanoscale creates many opportunities for customizable materials. Recent reports have shown that carbon nanotubes act as efficient one-dimensional mass transport platforms. We have designed nanotube devices on custom fabricated electron transparent substrates compatible with transmission electron microscopy in order to study mass transport mechanisms and applications in situ. Here we report the results of these studies.