Session K2: Carbon Nanostructures I
8:30 AM–9:30 AM, Saturday, October 22, 2011
UA Student Union Room: Ventana

Chair: Brian LeRoy, University of Arizona

Abstract: K2.00002 : Mechanical and Electrical Properties of Carbon Nanotube Templated Metal Microstructures
8:42 AM–8:54 AM

Preview Abstract

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Our group has used vertically aligned carbon nanotubes as a patterned, three-dimensional microfabrication scaffold to create CNT composite materials through chemical vapor infiltration. This method, termed carbon nanotube templated microfabrication (CNT-M), is a novel approach for creating precise high-aspect-ratio microstructures. In the past, dielectrics (SiO$_2$ and SiN$_x$) and semiconductors (Si and a-C) were the materials deposited on the CNT framework. Production and characterization of metallic microstructures is in its infancy. This study presents electrical, mechanical and structural properties of metallic microstructures made using tungsten and molybdenum carbonyl precursors through the CNT-M process.