

Abstract Submitted  
for the MAR12 Meeting of  
The American Physical Society

**Synthesis and Characterization of Carbon Nanotubes Produced From Thermal Decomposition of Nickelocene** HERBERT VINSON, BALEESWARAIAH MUCHHARLA, X. ZHANG, Southern Illinois University, Carbondale, AMELIA CHURCH, Rice University, Houston, VAIVA KRUNGLEVICIUTE, Southern Illinois University, Carbondale, S. KAR, Northeastern University, Boston, ALDO MIGONE, SAIKAT TALAPATRA, Southern Illinois University, Carbondale, SOUTHERN ILLINOIS UNIVERSITY, CARBONDALE COLLABORATION, NORTHEASTERN UNIVERSITY, BOSTON COLLABORATION — We have employed a direct thermal deposition technique, which used Nickelocene both as the catalyst as well as the carbon source, to grow films of carbon nanotubes (CNT). The CNT films obtained using this procedure were characterized using Transmission Electron Microscopy which indicated the presence of thin diameter carbon nanotubes as well as single walled CNT ropes. Volumetric adsorption measurements were performed to determine the porosity and specific surface areas of these samples. Electrical transport measurements performed on long ropes of CNTs extracted from these bulk films will be presented and will be discussed in the framework of transport theories of quasi-one dimensional systems.

Herbert Vinson  
Southern Illinois University, Carbondale

Date submitted: 16 Nov 2011

Electronic form version 1.4