Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Air assisted growth of long aligned carbon nanotube films XIANFENG ZHANG, RAKESH SHAH, SAIKAT TALAPATRA, Department of Physics, Southern Illinois University Carbondale — We report on air assisted growth of ultra long aligned bundles of multiwall carbon nanotubes. We found that the growth rate of carbon nanotubes is highly enhanced by introducing a small mount of oxygen during the catalytic decomposition of ferrocene-xylene mixture at 790°C. Millimeter long aligned carbon nanotube films were easily synthesized on silicon dioxide as well as metal substrates by controlling the air flow. Electron microscopy investigations reveal that the films are composed of dense aligned multi-wall CNTs with the diameters ranging from about 30-100 nm. We will also present our preliminary results on the electrical transport measurement performed on these long nanotube bundles.

Xianfeng Zhang
Department of Physics, Southern Illinois University Carbondale

Date submitted: 12 Dec 2007 Electronic form version 1.4