

Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Fabrication and Chemical Doping of Carbon-based Transparent Electrodes GEORGE TULEVSKI, IBM T.J. Watson Research Center, ALI AFZALI — The use of carbon-based materials (carbon nanotubes and graphene) as transparent electrodes has attracted enormous interest due to their high conductivities, transparency and potential as a lower cost alternative to traditional transparent electrode materials (i.e. Indium Tin Oxide). This talk will focus on using solution processes to suspend both carbon nanotubes and graphene flakes in solution and the fabrication of transparent electrodes from these solutions. Solutions were prepared using both surfactants and organic solvents, followed by purification to remove large aggregates and impurities. A variety of chemical dopants were then employed including metal salts and small organic molecules. The sheet resistance of the resultant films can be significantly reduced with chemical doping.

George Tulevski
IBM T.J. Watson Research Center

Date submitted: 30 Nov 2008

Electronic form version 1.4