

## Electrical Properties of Transparent Single-Walled Carbon Nanotube Network Films

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Random networks of single-walled carbon nanotubes(SWNTs) have been received significant attention for applications such as transparent electrodes for flat panel displays, various sensors, solar cells, field-effect transistors. In this study, we compare the electrical behavior of network films of as-prepared, purified, cut SWNTs and hybrid of SWNT networks and gold nanoparticles as a function of transmittance under mediation of defects. SWNT network films in the range of 40~99% transmittance were prepared on glass substrate by vacuum filtration methods. SWNTs were characterized by TGA, Raman spectroscopy, and properties of SWNT network films were measured by scanning electron microscopy, UV/VIS/NIR spectra photometer and sheet resistance.