# 투명전도막을 위한 용해 처리된 단일막 탄소나노튜브

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# Solution Processed Single Walled Carbon Nanotubes Transparent Conducting Films

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**Abstract :** In recent years, new materials and technology has been developed using single-walled carbon nanotubes (SWCNTs) as an alternative to indium tin oxide (ITO) to fulfil the requirements towards novel technological drive. These technologies offer products having a broad range of conductivity, excellent transparency, neutral color tone, good adhesion, abrasion resistance as well as mechanical robustness. In addition, SWCNTs can be solution processed to replace the sophisticated vacuum techniques at high temperatures. In the present work, transparent conducting films were fabricated from the purified SWCNTs. Dispersion of purified SWCNTs was accomplished in 1,2-dichlorobenzene without using surfactants or polymers following ultrasonic process. We achieved coating of nanotubes film on polyether sulphone (PES) for an average sheet resistance ~110 Ω/□ of optical transmittance 80% at 550 nm. Conventional spin coating method was followed to fabricate films from the purified and dispersed nanotubes solution. The results will be presented.

**Key Words :** Carbon nanotube, Solution processed SWCNT, TCF, SWCNT