



OP-A-481

Thursday, May 12, 2011, 05:40-06:00 pm
Room: Fez 1

PREPARATION OF CONDUCTIVE FLEXIBLE TRANSPARENT POLYMER ELECTRODES USING SPINS COATING METHOD

S. Shokatian^{a,*}, H. Salar Amoli^b, M. Abdouss^a

^a Dep of Chemistry, Amirkabir University of Technology, Tehran, I.R. Iran and ^b Faculty of Chemical Industry, Iranian Research Organization For Science and Technology, No 71, Forsat Ave, Enghelab St, Tehran, I. R. Iran.

**Corresponding author: phdabdouss44@aut.ac.ir*

We designed a spin coater device for this experiment. In this experiment first we prepared a solution of ITO and using the sonicator device the solution was dispersed. Then using spin coating and sputtering device ITO was coated on transparent flexible polymers. Thickness of layer was approximately 300 nm and less than 100 nm in the spin coating and sputtering mode respectively. After the coating process the polymers became conductive, considering the critical temperature of polymers annealing process using heat and laser was conducted for crystallizing the ITO and a significant improvement in electrical conductivity was observed. Moreover, the effect of layer thickness on conductivity and transparency of electrode were studied and it was observed that an increase in thickness would lead to an increase in conductivity and a decrease in transparency.