Conducting Polymer for Flexible Transparent Electrode

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A critical feature in using the conducting polymers as substitutes of metals is device fabrication and reproducible deposition of the conducting polymers using cost effective process. In this presentation, we would like to report a new and simple method for forming transparent electrode using conducting polymer films on polymer substrates for all organic flexible display, LCD and EL devices. To prepare the transparent electrode, an aqueous solution of poly(ethylene-3,4-dioxythiophene) derivatives, prepared from emulsion polymerization, is simply cast on the polymer support for the formation of thin conductive films. The resulting support shows a surface resistance of less than 100 Ohm/sq with 80% of light transmittance. Furthermore, the conductive layer is relatively hard to scratch.