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**Synthesis and some physical properties of conducting polymer poly(o- toluidine) doped with dodecylbenzene sulphonic acid (POT-DBSA)**

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**Abstract**

Poly(o-toluidine) (POT) doped with dodecylbenzene sulphonic (DBSA) was prepared by chemical methods and then dried in an oven at 50 °C for a period of 48 hrs. Powder of the doped polymer was dissolved in suitable solution in the concentration of 10 mg.ml<sup>-1</sup>. These films were prepared by spin coating method on glass substrate . Thin films were then placed on a hotplate with temperature of 90°C for a period of 15 min for drying. The Fourier Transform Infrared (FTIR) spectra and ultraviolet visibility (UV- VIS. absorption) spectra, were used to characterize the structures of (POT-DBSA). The optical absorbance and transmitted are used to calculated the optical parameter and the indicated that the transition was direct transition ,with direct energy gap about 2.5 eV . Current- voltage characteristic of AL/POT-DBSA/AL is also investigated .and show ohmic behaviour .

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Keyword: poly(o- toluidine),DBSA, chemical polymerization ,optical properties.