## EG0700274

## 8th ARAB INTERNATIONAL CONFERENCE ON POLYMER SCIENCE & TECHNOLOGY

27 – 30 November 2005, Cairo-Sharm El-Shiekh, EGYPT

Modeling of Thermally Stimulated Depolarization Current (TSDC) Theory Using Dipole-Dipole interaction Concept.

A. E. Kotp. and M. D. Migahed Physics Dept., Faculity of Science, Mansoura University

Investigation of Thermally Stimulated Depolarization Current (TSDC) using the dipole-dipole interaction model which was proposed by the authors in previous work is revisited in this work to show the assumptions and mathematical background of the model. Dipole-dipole interaction model describe the (TSDC) peak successfully since it was made and it gives a significant peak parameters (i.e. Activation energy (#EPSILON#) and the pre-exponential factor (#tau#) in addition to the dipole-dipole interaction strength parameter (#RHO#). Application of this model to determine the peak parameters of different polymer and polymer blends were presented.