

# Jordan University of Science and Technology

## Electrical Impedance Spectroscopic Study of CNT/Ethylene-alt-CO/Propylene-alt-CO Polyketones Nanocomposite

**Authors:** El Ghanem, Hasan M; Abdul Jawad, Saa'di; Al-Saleh, Mohammad H; Hussain, Yazan A; Abu-Surrah, Adnan S

**Abstract:** Impedance spectroscopy was utilized to investigate the dielectric properties, ac conductivity and charge transport mechanisms in propylene-alt-CO/ethylene-alt-CO (EPEC) random terpolymer filled with multi-walled carbon nanotubes (MWCNT) as a function of nanofiller content, frequency and temperature. Equivalent resistor-capacitor (RC) circuit models were proposed to describe the impedance characteristics of the unfilled terpolymer and the nanocomposite at different temperatures. For the nanocomposites, the ac ...