

## Electrical and Rheological Properties of Polycarbonate/Multi-walled Carbon Nanotube Composites

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Electrical and rheological properties of the polycarbonate (PC) / multi-walled carbon nanotube (MWNT) composites were studied. The MWNT was functionalized by treating with the hydrogen peroxide ( $H_2O_2$ ) under the sonication process. For the preparation of the PC/MWNT composites, the PC/MWNT mixture, ranged from 1.0 to 7.0 wt%, was dissolved in tetrahydrofuran (THF) under the sonication process. The  $-COOH$  and  $-OOH$  groups of the MWNT by treating with the  $H_2O_2$  were confirmed by the measurement of FT-IR spectra. For measuring the electrical conductivity, the four-probe method was used to eliminate the contact resistance. From the electrical properties of the PC/MWNT composites, the electrical conductivity of the PC/MWNT ( $H_2O_2$  treated) composites showed higher compared that of the PC/MWNT (untreated) composites.