

PC/MWCNT composites by solution mixing using Horn and Bath type ultrasound method

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Electrical, Morphological, and rheological properties of polycarbonate (PC)/ multi-walled carbon nanotube (MWCNT) composites were studied. We prepared three types of MWCNTs by process temperature. The MWCNTs were treated with tetrahydrofuran (THF) under types of the sonication method such as bath, horn and horn & bath. The electrical conductivity and electromagnetic interference (EMI) shielding efficiency showed higher values for horn & bath type sonicated PC/MWCNT composites than bath type sonicated and horn type sonicated. The higher values of the results of morphological studies of horn & bath type ultrasound treated PC/MWCNT composites support the improved dispersion of the MWCNTs and this result is consistent with the results of the electrical conductivity and EMI shielding efficiency of the horn and bath type ultrasound treated PC/MWCNT composites.

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