



**CARBON NANOTUBE CONDUCTIVE NETWORKS THROUGH THE DOUBLE PERCOLATION CONCEPT  
IN POLYPROPYLENE-CYCLIC BUTYLENE TEREPHTHALATE COMPOSITE BLENDS**

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Cyclic oligomers inherently have low molecular weights and therefore display very low viscosities in contrast to the high molecular weight polymers. This characteristic is very appealing to the area of polymer composites and nanocomposites. The effect of selective location of carbon nanotubes and the double percolation phenomenon on the electrical conductivity of the nanocomposites was investigated on blends of cyclic butylene terephthalate (CBT) with PP/MWCNT nanocomposites containing different nanotube loadings at various CBT compositions. Nanocomposite samples were prepared using a twin screw operating at 185 °C and 200 RPM to minimize residence time and the possible polymerization of CBT. The electrical properties of MWCNT-filled PP/CBT blends were studied in relation to the morphology developed. The results of this investigation will be presented and discussed.