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Raman Line Mapping on Melt Spun Polycarbonate/MWNT Fiber-Based Nanocomposites

Authors : Poonam Yadav, Dong Bok Lee

Abstract : Raman spectroscopy was used for characterization of multi-wall carbon nanotube (MWNT) and Polycarbonate/multi-wall carbon nanotube (PC/MWNT) based fibers with 0.55% and 0.75% of MWNT (PC/MWNT55 and PC/MWNT75). PC/MWNT55 and PC/MWNT75 fibers was prepared by melt spinning device using nanocomposites made by two different route, viz., solvent casting and melt extrusion. Fibers prepared from melt extruded nanocomposites showed smooth and uniform morphology as compared to solvent casting based nanocomposites. The Raman mapping confirmed that the melt extruded based nanocomposites had better dispersion of MWNT in Polycarbonate (PC) than solvent casting carbon nanotube.

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