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## Dielectric and Microwave Properties of Fullerenes Containing Natural Rubber-based Nanocomposites

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### FULLERENES NANOTUBES AND CARBON NANOSTRUCTURES

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### Abstract

In this study, the influence of fullerenes in concentrations from 0.5 to 1.5 phr on the dielectric (dielectric permittivity, dielectric loss angle tangent) and microwave (reflection coefficient, attenuation coefficient, shielding effectiveness) properties of nanocomposites on the basis of natural rubber has been investigated in the 1-12 GHz frequency range. Some additional investigations on the morphology and microstructure of the studied composites have been carried out by scanning electron microscopy and transmission electron microscopy. To confirm to the high purity of the fullerene used Raman spectra and X-ray diffraction analysis were carried out.

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