

Corrigendum to “Dielectric relaxation of near-percolated carbon nanofiber polypropylene composites” [Physica B: Phys. Condens. Matter 516C (2017) 41–47]

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The authors have found an error in the FTIR analysis of our paper. The corrected Fig. 2 and its new discussion are provided in this corrigendum. References 30 and 31 remain unaltered and they can be consulted in the original paper. The authors would like to apologise for any inconvenience caused.

Infrared spectroscopy is a widely used characterization technique to elucidate the structure and interactions in different materials, including polymer composites. Fig. 2 presents the spectra of PP in comparison with the samples filled with 0.9, 1.4 and 1.9 vol % of CNF. Neat PP spectrum shows the characteristic bands assigned to asymmetric and symmetric stretching vibrations of methyl and methylene groups in the 3000–2750 cm^{-1} region and to the CH_3 asymmetric and symmetric bending between 1455 and 1375 cm^{-1} [30]. Other noticeable bands are located at 1166 cm^{-1} and 1044 cm^{-1} assigned to CH_2 twisting and CH wagging vibration and to C–C chain stretching vibration, respectively. The bands at 998 cm^{-1} and 973 cm^{-1} are assigned to CH bending and wagging vibration and CH_3 rocking vibration and to CH_3 rocking, CH_2 wagging and CH bending vibrations, respectively. Finally, the band at 898 cm^{-1} is assigned to C–C chain symmetric stretching vibration, the band at 840 cm^{-1} to CH_2 rocking and C– CH_3 stretching vibrations and the band at 809 cm^{-1} to C–C chain symmetric stretching vibration and CH_2 rocking vibration [31]. After the addition of the CNF to the system is possible to confirm that the peaks previously described and assigned to the polypropylene remain unchanged after the addition of CNF in 0.9, 1.4 and 1.9 vol % PP/CNF composites, though it is possible to observe a decreasing of their intensity peaks as function of CNF loading.

Furthermore, another decreasing of transmittance in the region from 750 to 500 cm^{-1} is found for PP/CNF composites, thus indicating the contribution from the CNF.

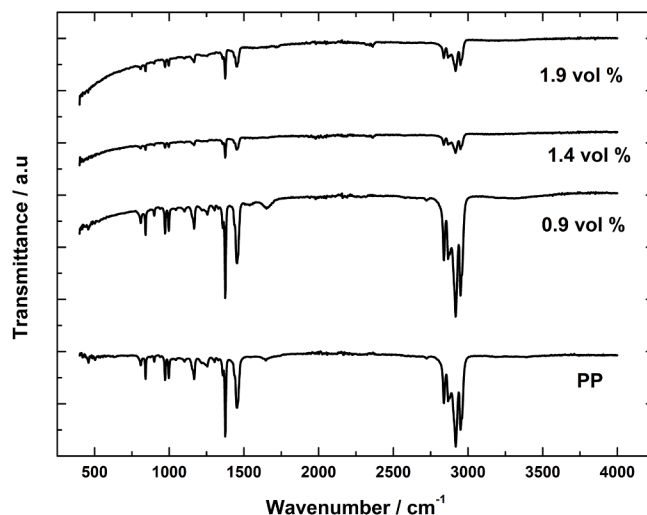


Fig. 2. (Corrected) Infrared spectra of PP and PP/PR 25 PS XT composites.

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