

## Electrical conductive polymer composite based on Polycarbonate by dispersion of conductive fillers

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In recent years, a great deal of attention has been paid to the electrical properties of such polymers composites, given the great promises that these materials hold as multifunctional materials in the area of electronics, sensors, and actuators.

To make good conductive polymer composite and also to get a uniform resistance value on all surfaces of polymer composite, dispersion of filler is important. The formation of channels through which electricity can flow is evenly spread so that there is no difference in resistance value by matrix materials, filler contents and injection condition.

Dispersion of fillers must be good for uniformity of products. However, in order to control the content of the conductive fillers makes the dispersion goes to not good. In this study, the polycarbonate-based experiment is to find the midpoint of dispersion. A total of three additives were used to improve the dispersion of the conductive polymer composite. It is an olefin based polymer, flame retardant and compatibilizer. The physical properties and electrical conductivity of the polymers were measured using the additives listed above and compared.