

## Study of the ZnO Effect on the Properties of HDPE/ ZnO Nanocomposites

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**Abstract :** A HDPE/ZnO nano composites have been successfully performed using the co-mixing. The ZnO was first co-mixed with the stearic acid then added to the polymer in the plastograph. The nano composites prepared with the co-mixed ZnO were compared to those prepared with the neat TiO<sub>2</sub>. The nano composites were characterized by different techniques as the wide-angle X-ray scattering (WAXS). The micro and nano structure/properties relationships were investigated. The present study allowed establishing good correlations between the different measured properties.

**Keywords :** exfoliation, ZnO, nano composites, HDPE, co-mixing

**Conference Title :** ICACCE 2015 : International Conference on Applied Chemistry and Chemical Engineering

**Conference Location :** Istanbul, Türkiye

**Conference Dates :** August 17-18, 2015