

3<sup>rd</sup> International Conference on

# POLYMER SCIENCE AND ENGINEERING

October 02-03, 2017 Chicago, USA

## Development of nano filled PP-PC blends for electrical wiring accessories for the underdeveloped countries

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Nano Clay and Nano Calcium Carbonate particulates were synthesized using the wet chemical process. The crystallite size of the Nano powders was determined using XRD. The particle size distribution of the Nano fillers in the polymer matrix was determined using the SEM analysis. Chemistry and purity of the samples was determined using EDS analysis. These Nano powders were incorporated into PP-PC blend in proportions of 1, 3 and 5 wt% Mixing was carried out using a Brabender plasticoder followed by fabrication of Nano composites using hot press method. These Nano composites were tested for electrical and mechanical properties. The results were compared with the unfilled polymer and the properties were found to exhibit significant improvement suggesting application of these Nano composites in a variety of electrical applications such as wiring accessories like plugs, switch body, basal plates, fan regulator bodies etc.

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