

INORGANIC NANO FILLER IN POLYMER NANOCOMPOSITES AND ITS THERMAL BEHAVIOURS

Gautam Jaiswar

Dr Bhimrao Ambedkar University, India

Thermal analysis is one of the oldest technique for the analysis of materials for the test of materials to be genuine or fake, on the basis of simple heat test. Due to enormous advances in material sciences and day by day new materials are added up to the life of human being. So the quality and perfection is highly in need with features such as low weight, high tensile strength, excellent physical and chemical properties. Therefore, thermal characterization is an ideal tool for the determination of these parameter as well as other transition and materials properties. In this presentation, various research work performed on polymer nanocomposites of nano particles filler such as Calcium, barium, zinc, tin, silver were highlighted taking matrix as polymer. Research work performed by various scientists in polymer nanocomposites for material development using thermal analysis tool will also be discussed. Its future aspect, behaviors of T_g and T_d with the increase in nanoparticles loadings in polymer matrix will also be highlighted. Various analytical tool such as XRD, FTIR, SEM, EDS, and UV-Vis spectrum of polymeric films of nano composites will also be used for correlation and characterization of materials.

gjaiswar@hotmail.com