**ABSTRACT**

In the field of nanotechnology, polymer matrix based nano composites have become a prominent area of current research and development. By inserting the nanometric inorganic compounds, the properties of polymers improve and hence this has a lot of applications depending upon the inorganic material present in the polymers. Synergistic improvements in the composite properties were achieved and are superior to those of the individual components. Keeping this view in mind, we have synthesized novel polyester - MMT Clay composite. The polymer has been synthesized by condensation of a synthesized diol with diacid chloride. The synthesized polymers and composites were characterized by infrared spectra, proton magnetic spectra, scanning electron microscope, thermogravimetry and X-ray diffraction analysis. The results indicate that silicate layers are intercalated in the polyester matrix. The polymer composite is found to be crystalline and dense. The thermal stability of the novel hybrid material is higher compared to that of polymer