

## عنوان مقاله:

Influence of maleated polyethylene on morphology and thermal degradation behavior of PE based nanocomposites

## محل انتشار:

کنفرانس بین المللی فرآورش پلیمرها (سال: 1390)

تعداد صفحات اصل مقاله: 5

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## خلاصه مقاله:

In this study, polyethylene (PE)/nano-clay, PE-g-MAH/ nano-clay and PE/PE-g-MAH/ nano-clay nanocomposites with 0, 3 and 5 wt% of organically modified montmorillonite (OMMT) were prepared. The morphological and thermal degradation behavior and kinetic of thermal degradation of the neat and filled samples in non-isothermal condition have been investigated. X-ray diffractometry results revealed that the polymer chains resided between OMMT layers and formed intercalated and intercalated/exfoliated structures. Thermogravimetric analysis (TGA) results indicated that the systems with the better nano-clay dispersion in polymer matrix has better thermal stability as compared to the systems with a poor state of nano-clay dispersion. Kinetic analysis based on Flynn-Wall-Ozawa (FWO) and Kissinger-Akahira-Sunose (KAS) methods, which is used for calculating the activation energys (Ea), revealed that Ea is higher .for the systems with good state of nano-clay dispersion

## کلمات کلیدی:

Morphology, thermal degradation, nanocomposites, polyethylene

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/134128>

