

عنوان مقاله:

Evaluation of Shape Memory Properties of PTHF-HDI based Polyurethanes Nanocomposite

محل انتشار:

دوازدهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1395)

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خلاصه مقاله:

Shape Memory Materials are a broad class of smart materials which are capable of holding a temporary shape until a suitable stimulus is applied after which they regain their original permanent shape. SMPs have numerous advantages like high recoverable strain, low cost, easy formability and response to a wide range of stimuli. Polyurethane shows shape memory properties because of its soft segments and hard segments. In this study, Polyurethane prepare by in situ polymerization of poly tetrahydrofuran (PTHF), 1,6-hexamethylene diisocyanate (HDI) and butane diol. PTHF provide excellent resistance to hydrolysis and it can crystallize. In this work, the effects of nanoclay and hard segment content on improvement shape memory parameters are investigated by dynamic mechanical thermal analysis technique

کلمات کلیدی:

Shape Memory- Polyurethane- Nanocomposites - DMTA

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