ABSTRACT

Aromatic polyetherimide is well known as one of the good materials for use in high temperature applications due to its aromatic and heterocyclic structure. The incorporation of flexible aromatic ether linkages in polymer chains provide for lower softening and improved solubility. General Electric has been reported the new convenient synthetic method for preparation of polyetherimides by nitro displacement of activated aromatic nitro groups from disubstituted bisimides with dianion of bisphenols. Soluble polyetherimides synthesized by direct solution polymerization of bisnitroimide monomer and bisphenolates were obtained. Bisnitroimide monomer was prepared in three steps reactions started from phthalic acid. High aspect ratio TABPA and AsyBPA were used to prepare the bisphenolate. The monomers were characterized by their percentage yield, melting points, FTIR and NMR spectra. The thermal behavior of the synthesized polymers was evaluated by deferential scattering calorimetry.