Copolymerization of Acrylonitrile with N-(Substituted phenyl)itaconimide

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ABSTRACT:

Acrylonitrile was copolymerized with fourN-(substituted phenyl)itaconimide in dimethyl formamideusing azobisisobutyronitrile as initiator. The structural characterization of the copolymers was done using FTIR,UV/vis, and elemental analysis. Thermal characterizationof the copolymers was done using thermogravimetry (TG)and differential thermal analysis (DTA) data, whichshowed a remarkable improvement in the thermal behaviorof the investigated copolymers. The acrylonitrile/bromophenylitaconimide copolymer possessed the bestthermal property. The investigation of the dyeing properties of the acrylonitrile-N-(substituted phenyl)itaconimideshowed good affinity toward basic dyes as well as appreciableimprovement in their color fastness toward UV light.

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