Ultrasound assisted copolymerization of acrylonitrile with N-amino phenyl maleimides and N-amino phenyl ٢,٣ dimethyl maleimides

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The N-amino phenyl maleimide (N-APhM) and N-amino phenyl ٢,٣ dimethyl maleimide (N-APhDiMeM)derivatives were prepared by the condensation of phenyl hydrazine with maleic anhydride and ٢,٣dimethyl maleic anhydride respectively. ^{١٣}C NMR spectroscopy proved the formation of the symmetricamino maleimide structure and not the pyridazinone or aminoisomaleimides.
The copolymerization of acrylonitrile with the (N-APhM) and (N-APhDiMeM) were prepared usingultrasound. The thermal behavior of the prepared copolymers, under nitrogen atmosphere, was investigatedusing thermogravimetry (TG) techniques. The dyeing of the copolymers formed has been studiedusing both conventional and ultrasonic techniques. The effect of dye bath pH, ultrasonic power, dyeingtime and temperature were studied. Color strength values obtained were found to be higher using ultrasoundthan with conventional heating. The results of fastness properties of the dyed copolymers werealso studied.

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