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The Rate of Grafting and Some Kinetic Parameters of the Graft Copolymerization of Methacrylic Acid on Poly (Ethylene Terephthalate) Fibers with Azobisisobutyronitrile

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Abstract: In this study the rate of grafting and some kinetic parameters of the graft copolymerization of methacrylic acid on poly(ethylene terephthalate) fibers with azobisisobutyronitrile was investigated. The rate of grafting was found to be proportional to the 0.94 and 1.22 powers of initiator and monomer concentrations, respectively. By carrying out the graft copolymerization reaction at four different temperatures ranging from 70 °C to 90 °C, the overall rate activation energy of the reaction was found to be 130.4 kJ/mol. The overall rate constants were also calculated.



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