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Poster 15

Solid-state NMR Studies of Miscibility and Morphology in Blends of Bisphenol-A type Polycarbonate and Poly(ester-ether) Elastomer

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Solid-state NMR, TEM, and AFM study miscibility and morphology in blends of Bisphenol-A type Polycarbonate and Poly (ester-ether) elastomer with different composition. ^{13}C Solid-state NMR of CPMAS(TOSS)DD, CPMASDELAYDD, Inversion Recovery CPMASDD, and 2D Rotor Driven Spin Diffusion Techniques are used to identify the miscibility, morphology, and transesterification in blends. The blends of PC/PBT elastomer with 15% to 42% of soft segment seem to be miscible and those of PC/PBT and PC/PBT elastomer with 62% of soft segment are not miscible. No significant transesterification reactions are observed in blends with different compositions. The nanometer scale morphology using TEM and AFM also will be discussed