عنوان مقاله:

Can only rheology be used to determine the phase separation mechanism in dynamically asymmetric polymer blends ((PS/PVME

محل انتشار:

یازدهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1393)

تعداد صفحات اصل مقاله: 2

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خلاصه مقاله:

We investigated theoretically and experimentally the correlation between the time evolution of different phaseseparating morphologies and corresponding linear and transient rheological behaviors for the dynamically asymmetric PS/PVME (polystyrene/polyvinyl methyl ether) blend in which there is a large difference between theglass transition temperatures of the pure components (about 125 oC). The sensitivity of different rheological analyseswas examined to distinguish different phase separation mechanisms from each other, including nucleation and growth(NG), spinodal decomposition (SD), and viscoelastic phase separation (VPS). We found that a combination of experimental and theoretical studies of the linear and nonlinear rheology could provide satisfactory criteria to distinguish effectively samples phase separating by different mechanisms

کلمات کلیدی:

Rheology, Morphology, Phase separation Mechanisms, Yziquel model