

PC/PMMA/MWCNT Hybrid Films and Their Phase Behavior

배도영, 이현상*
동아대학교
(heonlee@dau.ac.kr*)

The blends of polycarbonate (PC) and poly(methyl methacrylate) (PMMA) are well known to be miscible around room temperature and be partially miscible at the temperature higher than a critical point. This behavior is well known as a lower critical solution temperature (LCST) behavior. We prepared transparent PC-PMMA films and obtained LCST curve. We calculate binodal and spinodal phase separation by Flory-Huggins theory. The cloud points are well consistent with the spinodal phase separation curve calculated by F-H theory as reported elsewhere. We demonstrated the phase behavior of PC-PMMA blends are changed by adding a small amount of multiwall carbon nanotube. Model calculations are also performed to analysis the change of phase behavior.