

Synthesis of polystyrene carbon black particles with core-shell via dispersion polymerization

의광훈, 권태민, 황홍구, 양주희, 허완수*, 이상원
승실대학교
(wshuh@ssu.ac.kr*)

Inorganic core/organic shell hybrid composite particles with micron or submicron diameter are very attractive in a wide range of industrial fields, such as electronics, toner, and paint applications because of their functionality and dispersion stability properties. Polystyrene/carbon black composite particles with core-shell structure were then obtained by Dispersion Polymerization of styrene on the surface of grafted carbon black nanoparticles. Carbon black dispersed in resin binders should be treated with oleic acid. In this study, the effect of a surface modification in the coating process of dispersion polymerization was experimentally studied. The coating process was analyzed by sampling and checking the morphology of the coated particles at different coating time with TEM and SEM.