

**Effect of Surfactant/Cosurfactant Mixture on Size and Crystallinity of MgO-Grafted Mn Oxide Nanoparticles Prepared by Coprecipitation Method**

권보성, 박준환, 오성근\*  
한양대학교 화학공학과  
(seongoh@hanyang.ac.kr\*)

In this study, MgO-grafted Mn oxide nanoparticles were synthesized through coprecipitation process using surfactant/cosurfactant mixture. For the investigation into the effect of surfactant on size and crystallinity of particles, polyoxyethylenesorbitan monolaurate (Tween 20), cetyltrimethylammonium bromide (CTAB), and sodium dodecyl sulfate (SDS) were used as surfactants. Also, thermodynamically stable reaction medium could be prepared by using tert-butanol as a cosurfactant. In addition, the influence of Mg salt on the formation of particles was studied with the variation of its concentration. The synthesized composite nanoparticles were characterized by using FE-SEM, EDS, TEM, and XRD.