عنوان مقاله:

Hydrothermal Synthesis of Polystyrene-ZnS Core Shell Nanoparticles

محل انتشار:

سومین کنگره بین المللی رنگ و پوشش (سال: 1388)

تعداد صفحات اصل مقاله: 10

نویسندگان:

A.M Arabi - *Materials and Energy Research Center of Iran,Tehran,Iran Institute for Color Science and Technology, Tehran,Iran*

T Ebadzadeh - *Materials and Energy Research Center of Iran,Tehran,Iran*

A.A Yousefi - *Institute for Color Science and Technology, Tehran,Iran*

M Pishvaei - *Institute for Color Science and Technology, Tehran,Iran*

خلاصه مقاله:

In this paper, synthesis of Polystyrene-ZnS core-shell nanoparticles in the presence of anionic surfactant and poly (vinyl pyrrolidone) (PVP) have been investigated. The hydrothermal method results in the formation of sphallerite phase on the surface of polystyrene. SEM images indicate that using different amount of surfactant, the size of core-shell particle changes from 400-700 nm to 70-100 nm. FTIR spectra reveal complete coverage of polystyrene surface by ZnS shell. The broadening of different ZnS diffraction peaks can be related to crystallite size and the degree of .crystallinity decrease with increasing of surfactant content

کلمات کلیدی:

Polystyrene- ZnS core-shell, Nanoparticles, Surfactant