

Structure and spectral-optical characteristics of Se, Se/CdS, and Se/Cd_{0.5}Zn_{0.5}S nanoparticles, stabilized in polymer-containing media

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Abstract

A method was proposed for the production of colloidal nanoparticles of selenium stabilized by polymers and surfactants, and their structural and optical characteristics were studied. It was shown that during the deposition of CdS and Cd_{0.5}Zn_{0.5}S on the surface of the Se nanoparticles followed by dissolution of the selenium with sodium sulfite it is possible to obtain network "nanoframeworks" with size 30-50 nm, formed by CdS or Cd_{0.5}Zn_{0.5}S particles measuring 3-5 nm. © Springer Science+Business Media, Inc. 2007.

Author Keywords

Cd_xZn_{1-x}S; CdS; Optical characteristics; Selenium nanoparticles; Sodium selenosulfate