

Characterization of attractively-interacted CdSe-MWNTs composites

김덕은, 고창현¹, 오원태*

동의대학교 공과대학; ¹Green House Gas Research Center, Korea Institute of Energy
Research
(wtoh2005@deu.ac.kr*)

Electrically-charged multi-walled nanotubes (MWNTs) and cadmium selenide (CdSe) nanoparticles have been mixed in aqueous solution to prepare homogeneous composites. The compositions between nanomaterials were controlled by CdSe concentration in solution. Optical properties of these composites were studied by absorption spectroscopy and photoluminescence (PL). The photoluminescence efficiency of CdSe-MWNTs composite depends on the concentration value of the CdSe. X-ray photoelectron spectroscopy (XPS) was employed to investigate the interaction between the MWNTs and CdSe nanoparticles. The detailed structures and optical properties of CdSe-MWNT composites were discussed.