

## Functionalization of Single-Walled Nanotubes by Synthesied Pigments

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**Abstract :** Water soluble compoundes were attached to single-walled carbon nanotubes (SWNTs) to form water-soluble nano pigments. functionalized SWNTs were then characterized by Fourier Transform Infrared spectroscopy (FT-IR), Raman spectroscopy, UV analysis, Transmission electron microscopy (TEM) and defunctionalization test and Representative results concerning the solubility. The product can be dissolved in water and High-resolution transmission electron microscope images showed that the SWNTs were efficiently functionalized, thus the p-stacking interaction between aromatic rings and COOH of SWNTs was considered responsible for the high solubility and High transmission electron in singlewall nanotubes.

**Keywords :** functionalized CNTs, singlewalled carbon nanotubes, water soluble compoundes, nano pigments

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