

Hierarchical conjugated polymer Composite Materials

Nanocoating nanostrands with conjugated polymers

Coaxial cables composite of several nanometer conductive polymer shells and 2.5 nm copper hydroxide cores were prepared through a solution chemical process. These cables further formed porous thin films for separating proteins with different size. After removing the copper hydroxide nanostrands cores, conductive polymer nanotubes were obtained. These polypyrrole (PPy) and polyaniline (PANI) nanostructures might be desirably used as sensors, electronic devices in nanoscale. The process described here is simple and can be extended to prepare more composite coaxial nanocables and nanotubes in molecular diameters.

