

**Electronic Supplementary Information**

**A simple route to coat mesoporous SiO<sub>2</sub>  
layer on carbon nanotubes**

*Kunlun Ding, Baoji Hu, Yun Xie, Guimin An, Ranting Tao, Hongye Zhang, Zhimin*

*Liu\**

Beijing National Laboratory for Molecular Science (BNLMS), Institute of Chemistry,

Chinese Academy of Sciences, Beijing 100080, China.

E-mail: liuzm@iccas.ac.cn

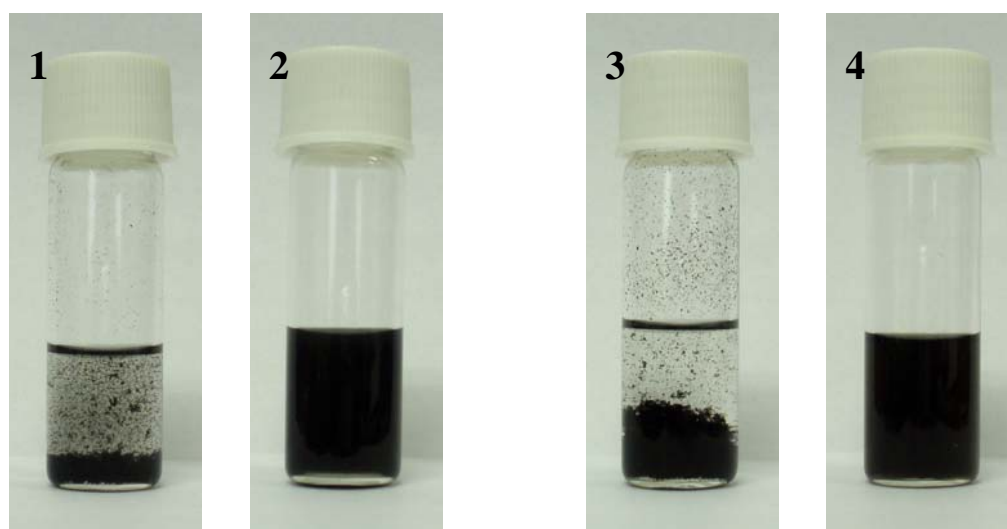


Fig S1 (1) pristine MWNTs in ethanol, 30min after sonication; (2) MWNTs-SiO<sub>2</sub> core-shell structure in ethanol, 6h after sonication; (3) purified SWNTs (Shenzhen) in ethanol, 30min after sonication; (4) SWNTs-SiO<sub>2</sub> core-shell structure in ethanol, 20h after sonication.

The uncoated MWNTs and SWNTs couldn't be dispersed in ethanol even under strong sonication, they precipitated out immediately after sonication. The coated MWNTs and SWNTs could be dispersed in ethanol under mild sonication. About 6h later, precipitates appeared in MWNTs dispersion. It took several days to precipitate all the MWNTs out. The SWNTs dispersion showed superior stability compare with MWNTs, which could be stable for near one day, and it took at least one week to precipitate all the SWNTs out.

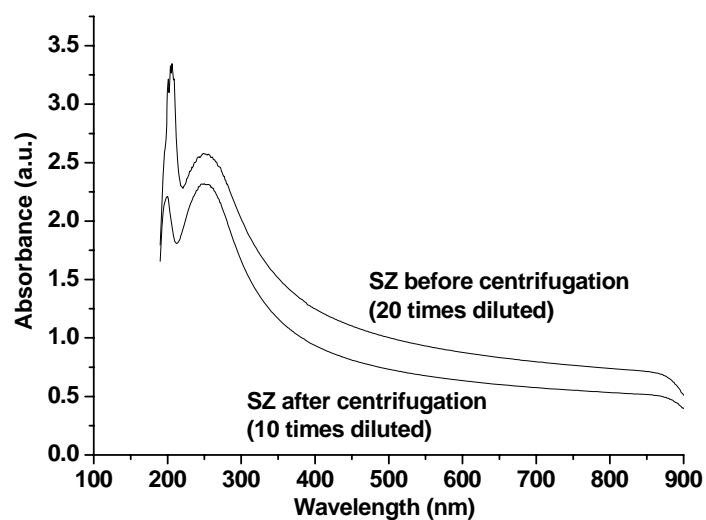


Fig S2 UV-vis spectra of the Shenzhen SWNTs (sz) dispersion before and after centrifugation.

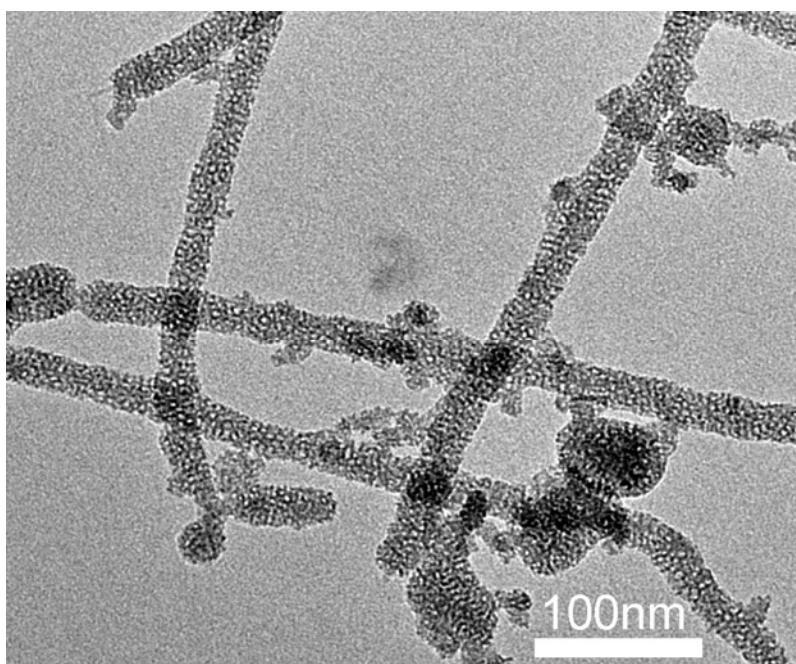


Fig S3 TEM image of the coated product of Shenzhen SWNTs obtained at 10 min.

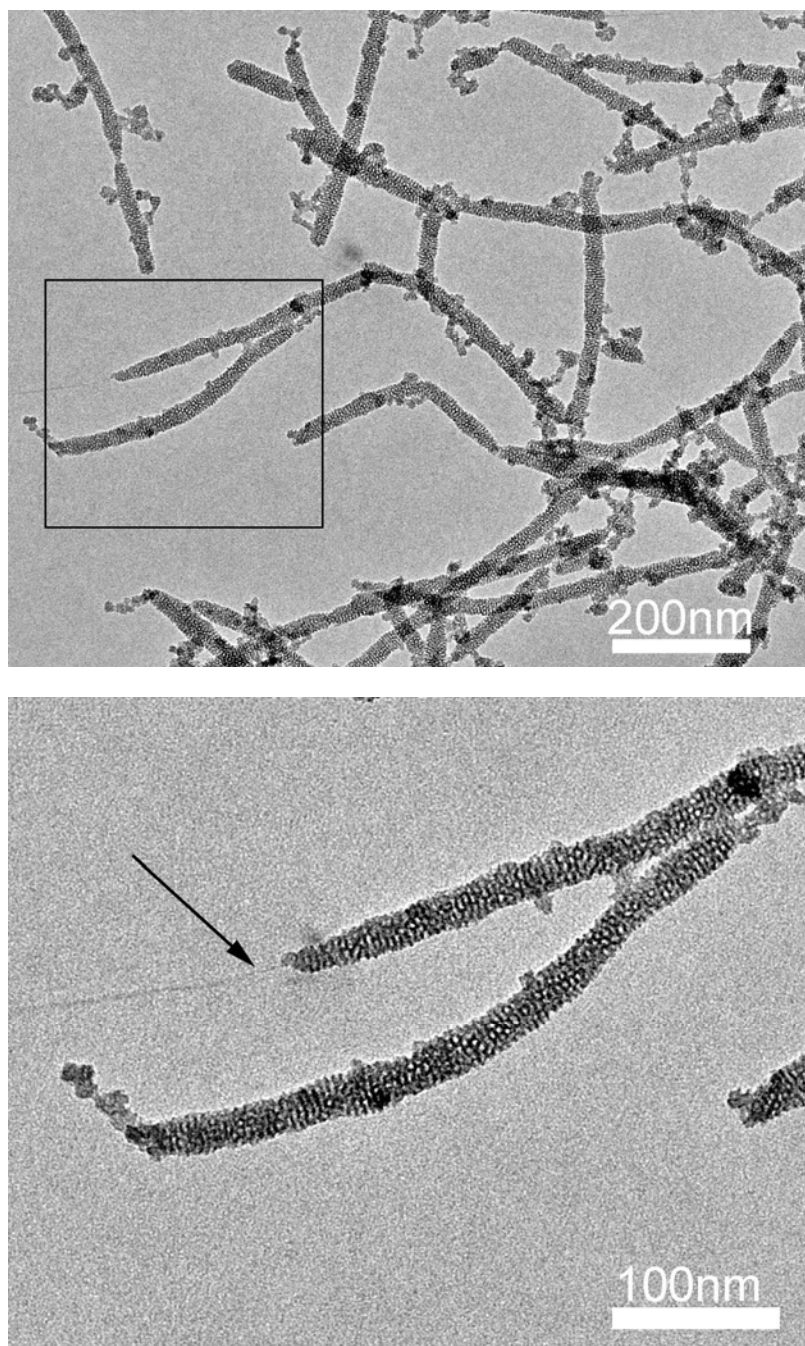


Fig S4 TEM images of the coated product of HiPco SWNTs.