

Supplementary Information for B602349E

Covalently Porphyrin-Functionalized Single-Walled Carbon Nanotubes: A Novel Photoactive and Optical Limiting Donor-acceptor Nanohybrid†

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† Electronic supplementary information (ESI) available: FTIR spectra of SWNTs-TPP, Raman and UV-Vis-NIR spectra of control experiments, fluorescence spectra of TPP and SWNTs-TPP, the absorbance changes of porphyrin moiety after adding HCl. See <http://www.rsc.org/suppdata/>

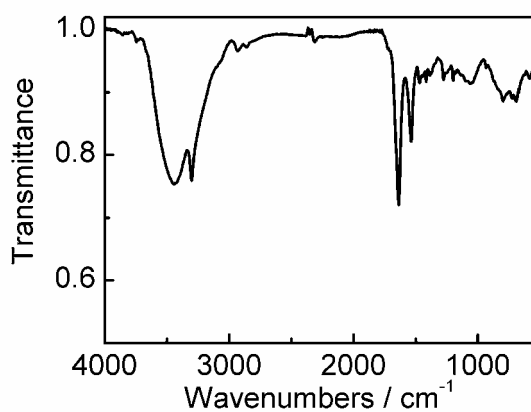


Fig. S1 FTIR spectrum (KBr) of SWNTs-TPP.

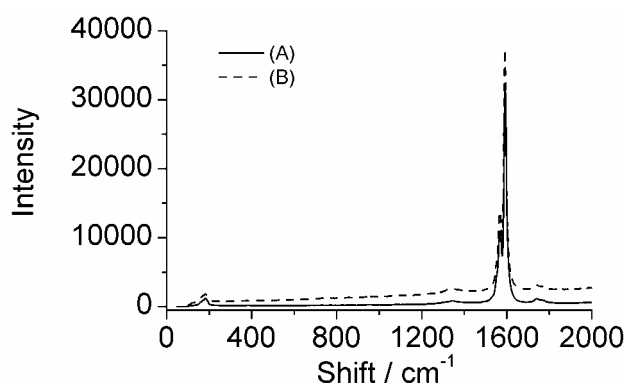


Fig. S2 Raman spectra (514 nm excitation) of SWNTs from control experiments (A) and (B). Both control experiments were carried out in the same manner as described in experimental section.

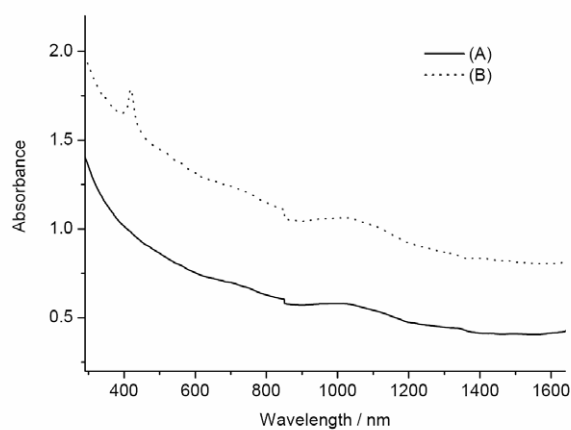


Fig. S3 UV-Vis-NIR spectra of SWNTs from the two control experiments (A) and (B) in DMF.

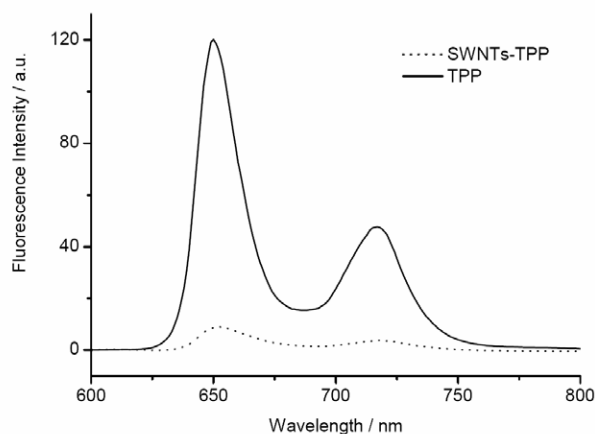


Fig. S4 Fluorescence spectra of DMF solution of TPP (top) and SWNTs-TPP (bottom) with normalized absorbance for porphyrin moiety at the Soret band excitation wavelength, the contribution of SWNTs was subtracted.

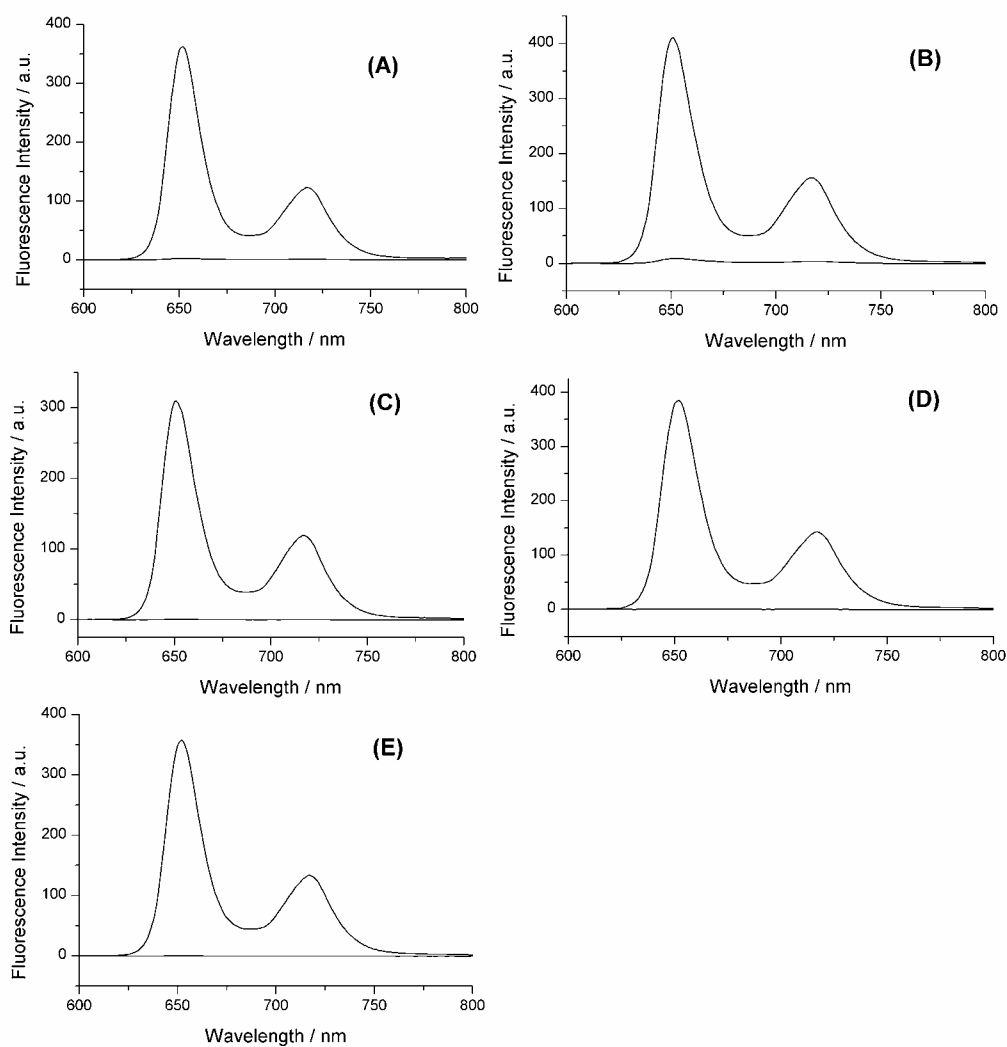


Fig. S5 Fluorescence spectra of DMF solution of TPP (top), SWNTs-TPP (bottom) with normalized absorbance for porphyrin moiety at different excitation wavelength (A) 400nm ($Abs_{TPP}=0.204$), (B) 422nm ($Abs_{TPP}=0.255$), (C) 514nm ($Abs_{TPP}=0.147$), (D) 521nm ($Abs_{TPP}=0.146$), (E) 550nm ($Abs_{TPP}=0.137$).

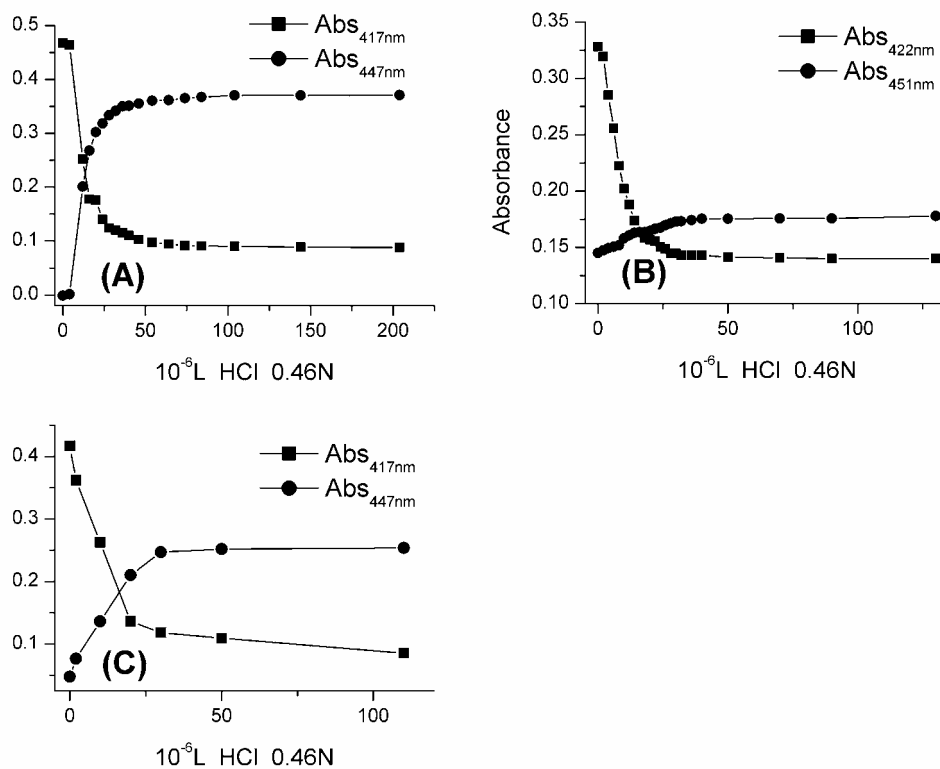


Fig. S6 Absorbance maxima of the porphyrin free base (squares) and protonated diacid (circles) of (A) TPP, (B) SWNTs-TPP and (C) SWNTs/TPP as functions of volume of added acid (0.46 N HCl).