Supporting Information

Immobilizing NIR Absorbing Azulenocyanines onto Single Wall Carbon Nanotubes – From Charge Transfer to Photovoltaics

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Figure S1. ¹H-NMR (d₈-THF)spectrum for Zn(II)azulenocyanine 1



Figure S2. MS spectrum for Zn(II)azulenocyanine 1



Figure S3. HRMS spectrum for Zn(II)azulenocyanine 1



Figure S4. ¹H-NMR (d₈-THF) spectrum for Zn(II) azulenocyanine-pyrene 2



Figure S5. MS spectrum for Zn(II)azulenocyanine-pyrene 2



Figure S6. HRMS spectrum for Zn(II)azulenocyanine-pyrene 2



Figure S7. ¹H-NMR (d₈-THF) spectrum for Zn(II)azulenocyanine-hydroxymethyl 3



Figure S8. MS spectrum for Zn(II)azulenocyanine-hydroxymethyl 3



Figure S9. HRMS spectrum for Zn(II)azulenocyanine-hydroxymethyl 3



Figure S10: Room temperature absorption spectrum of **1** (black spectrum) (10^{-6} M) in 25% THF / 75% DMF and differential absorption spectra (from gray to magenta) of suspended SWNTs titrated with increasing amounts of **1** illustrating the shift of absorption bands upon addition of **1**. The differential absorption spectra were calculated by subtracting the initial SWNT spectrum from the spectra recorded after addition of **1** – see Figure 4.



Figure S11: Room temperature fluorescence spectra of **1** (black spectrum) in 25% THF / 75% DMF titrated with increasing amounts of SWNTs (gray and brown spectra) – see text for details on the procedure. Fluorescence spectra recorded upon photoexcitation at 910 nm and 120 s integration time.



Figure S12: Room temperature fluorescence spectra of **2** (black spectrum) in 25% THF / 75% DMF titrated with increasing amounts of SWNTs (gray and brown spectra) – see text for details on the procedure. Fluorescence spectra recorded upon photoexcitation at 910 nm and 120 s integration time.



Figure S13: Room temperature fluorescence spectra of SWNT / 1 (black spectrum) and SWNT / 2 (red spectrum) upon photoexcitation at 730 nm.

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Figure S14: Room temperature absorption spectra of SWNT / 1 (black spectrum) and SWNT / 2 (red spectrum) films.