Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting Information

Zn-Porphyrin propped with Hydantoin Anchor: Synthesis, Photophysics and Electron Injection/Recombination Dynamics

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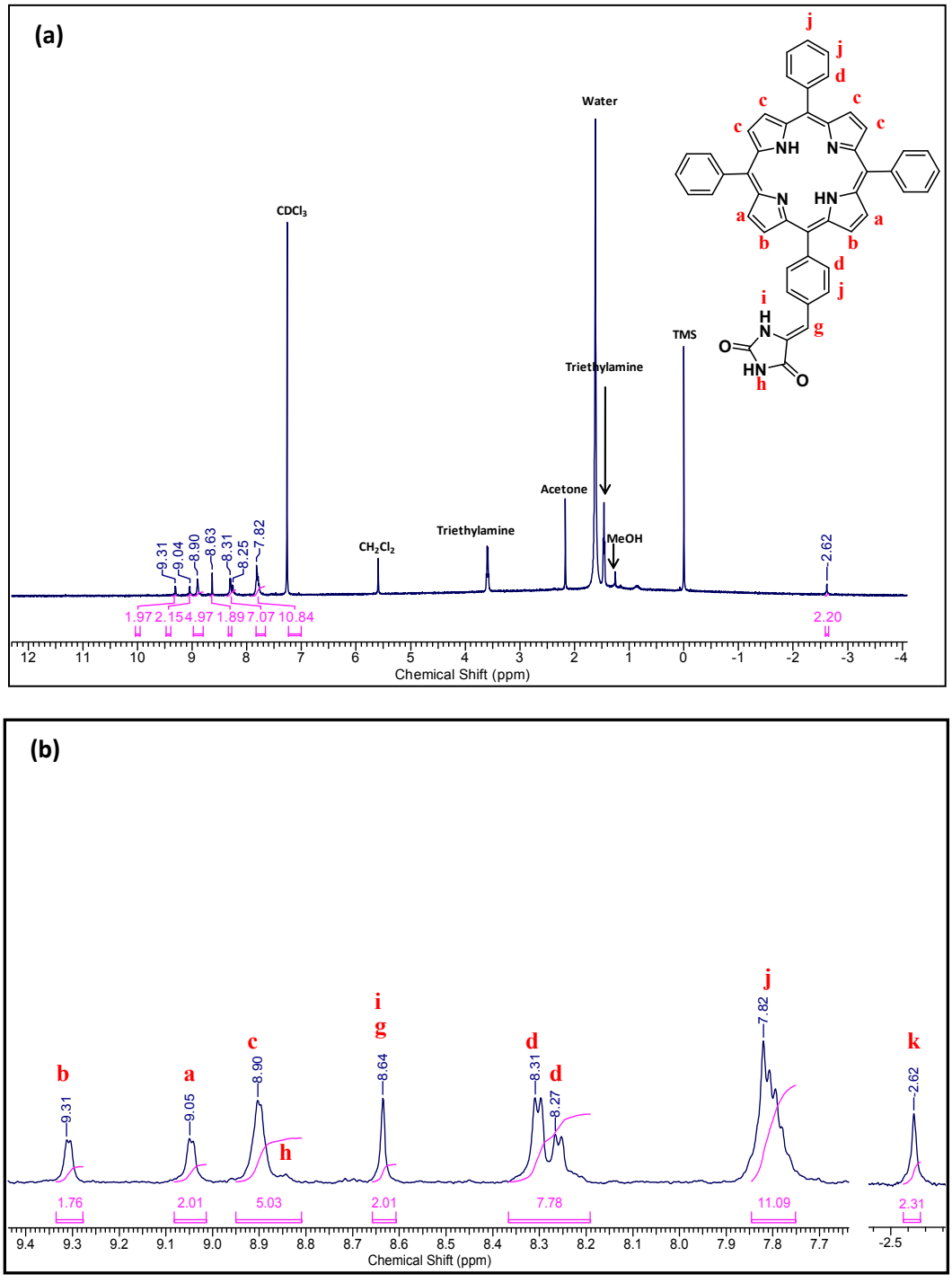

Figure S1: ^{1}H-NMR ($CDCl_3$, 500 MHz) spectrum of free base porphyrin (**PHy**) (a) full spectrum (b) expanded view with proton assignments

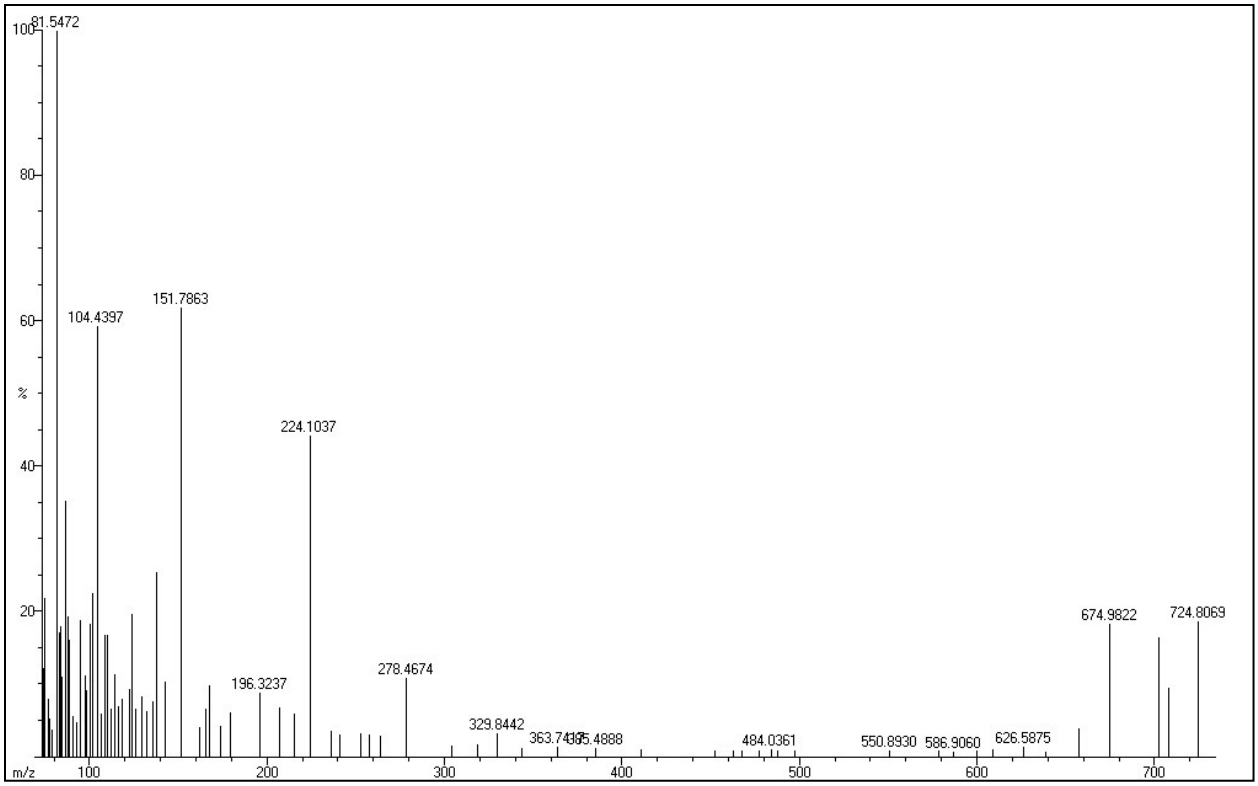

Figure S2: EI-MS spectrum of free base porphyrin (**PHy**)

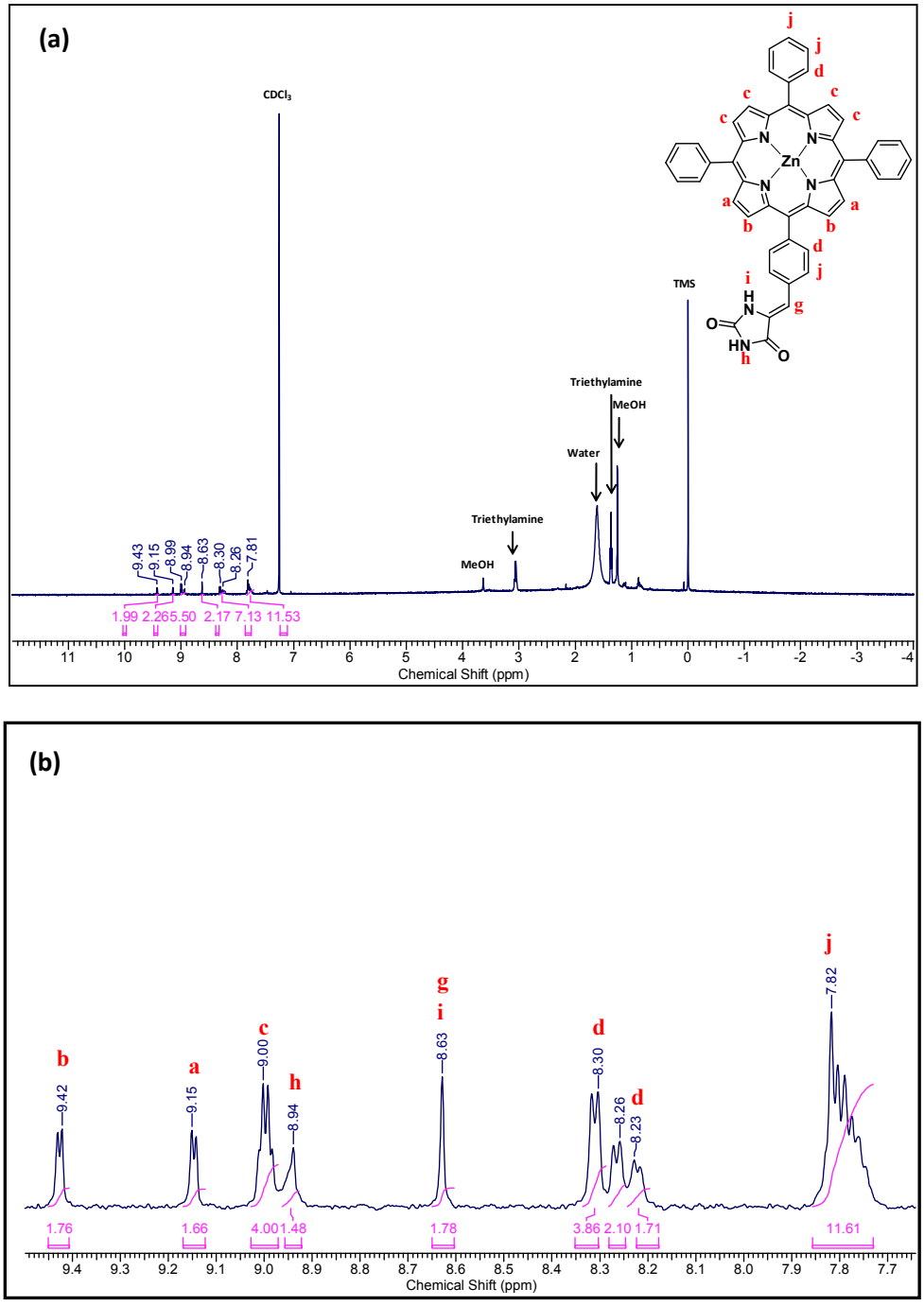

Figure S3: ^{1}H-NMR ($CDCl_3$, 500 MHz) spectrum of zinc porphyrin (**ZnPHy**) (a) full spectrum (b) expanded view with proton assignments

Acquisition Time (sec)	0.5999	***Comment***	Zn-PHY	***Date***	19 Dec 2017 11:03:36			***Date Stamp***	19 Dec 2017 11:03:36
File Name	G:\18122017_Mothi\18122017_Mothi\26\pdata\1\1r			***Frequency (MHz)***	176.05	***Nucleus***	13C	***Number of Transients***	24576
Origin	av700	***Original Points Count***	24997	***Owner***	sr	***Points Count***	131072	***Pulse Sequence***	zgpg
Receiver Gain	3.20	***SW(cyclical) (Hz)***	41666.67	***Solvent***	CHLOROFORM-d			***Spectrum Offset (Hz)***	19609.0293
Spectrum Type	STANDARD	***Sweep Width (Hz)***	41666.35	***Temperature (degree C)***	25.000				

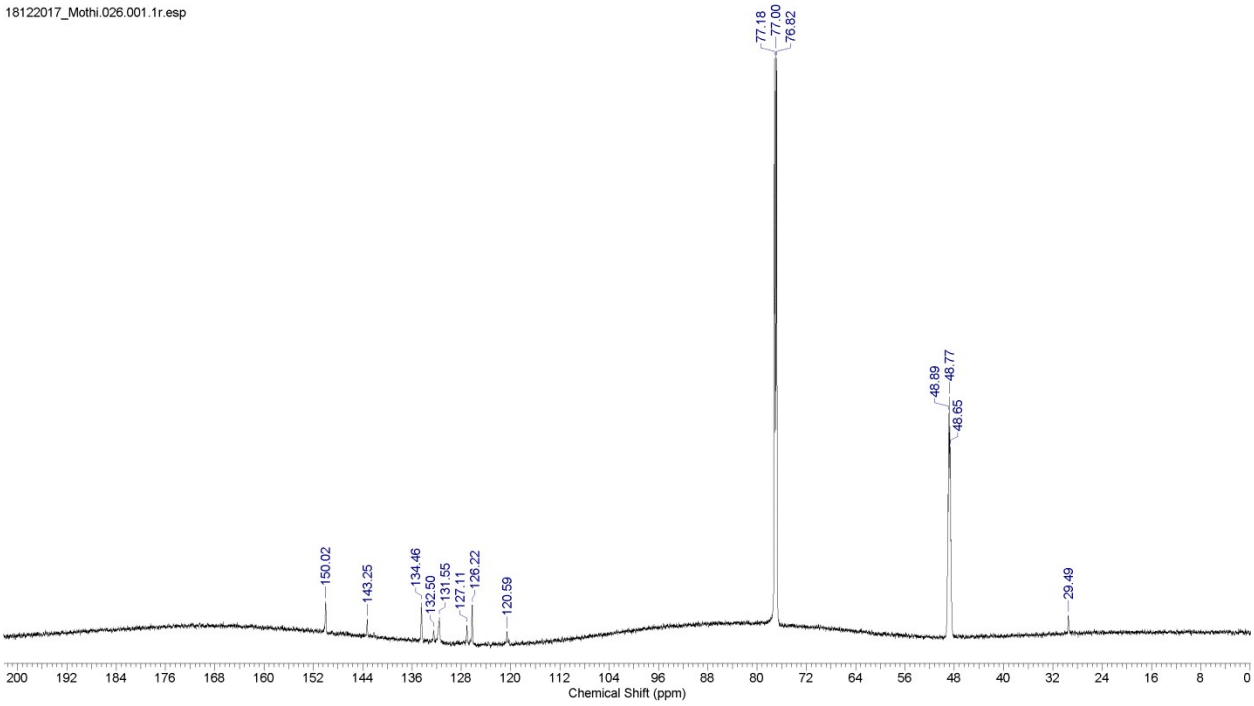

Figure S4: ^{13}C-NMR ($CDCl_3$+ few drops CD_3OD, 176.05 MHz) spectrum of zinc porphyrin (**ZnPHy**)

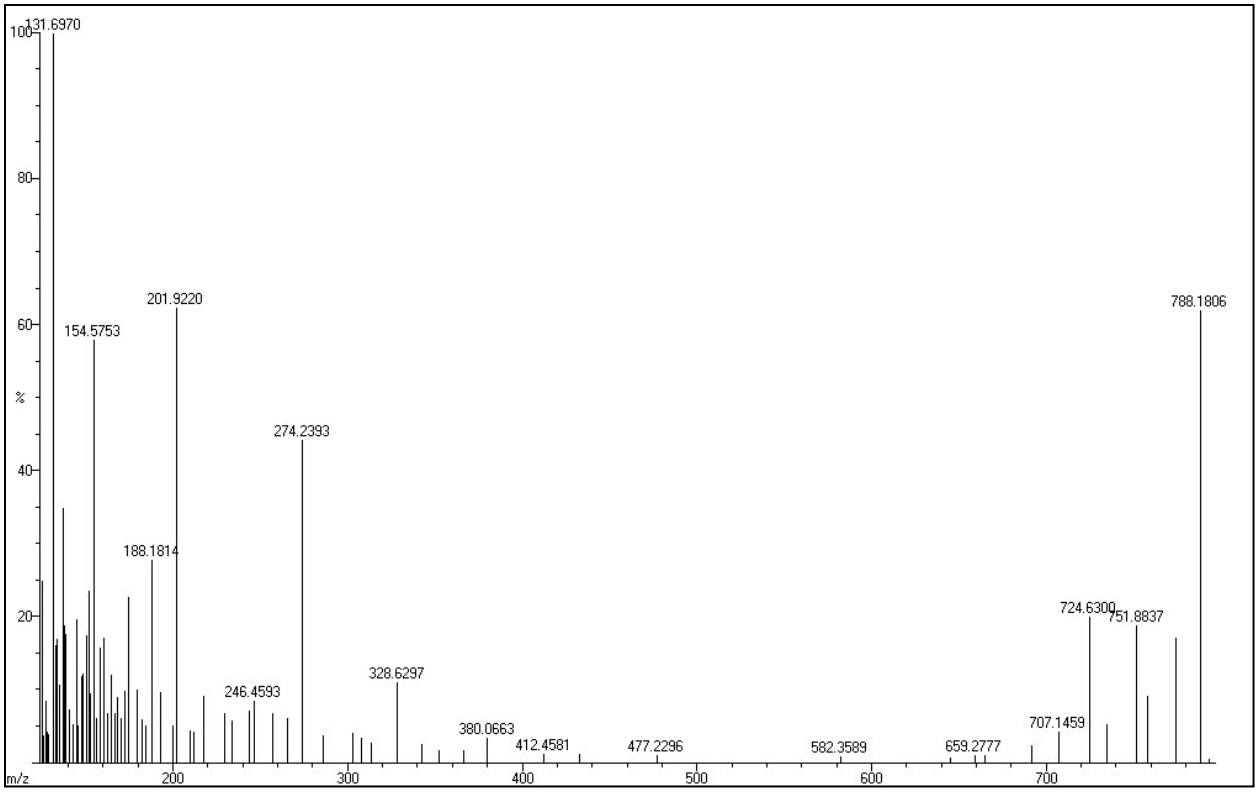

Figure S5: EI-MS spectrum of zinc porphyrin (**ZnPHy**)

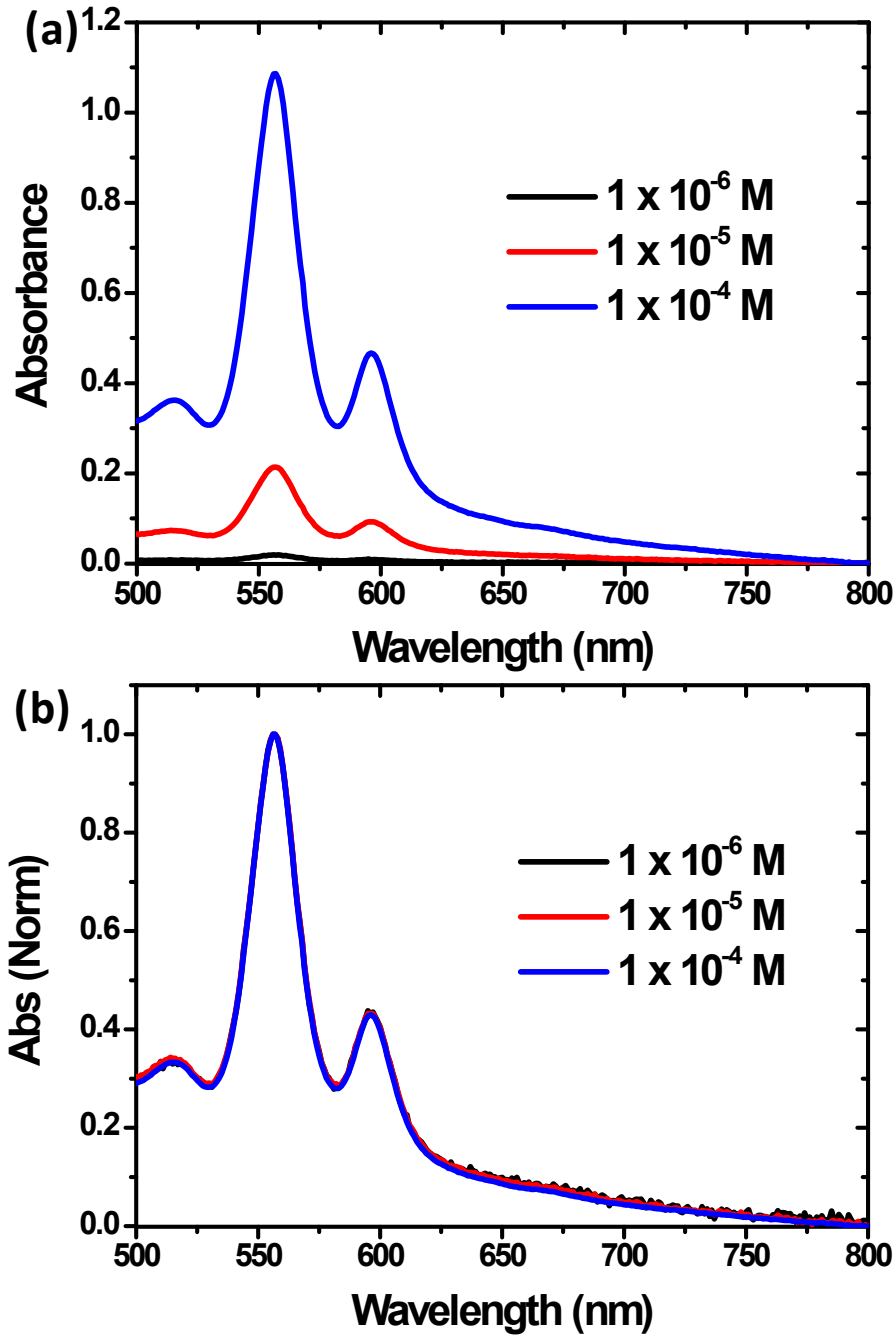

Figure S6: (a) Absorption spectra of ZnPHy in THF at various concentrations (b) Normalized absorption spectra of ZnPHy at various concentrations.

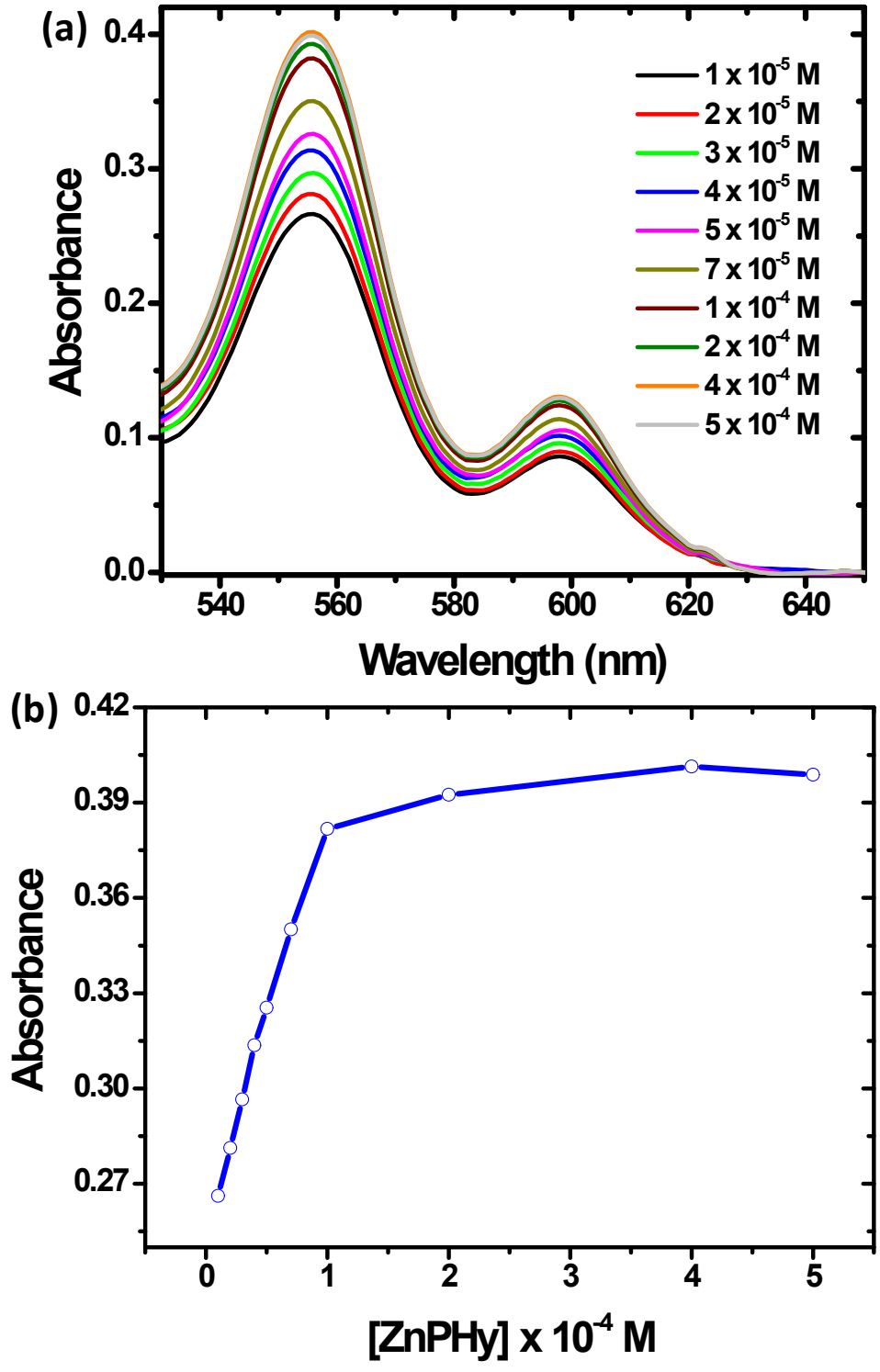

Figure S7: (a) Absorption spectra of ZnPHy/TiO_2 films, (b) A plot of absorbance *vs.* ZnPHy concentrations.

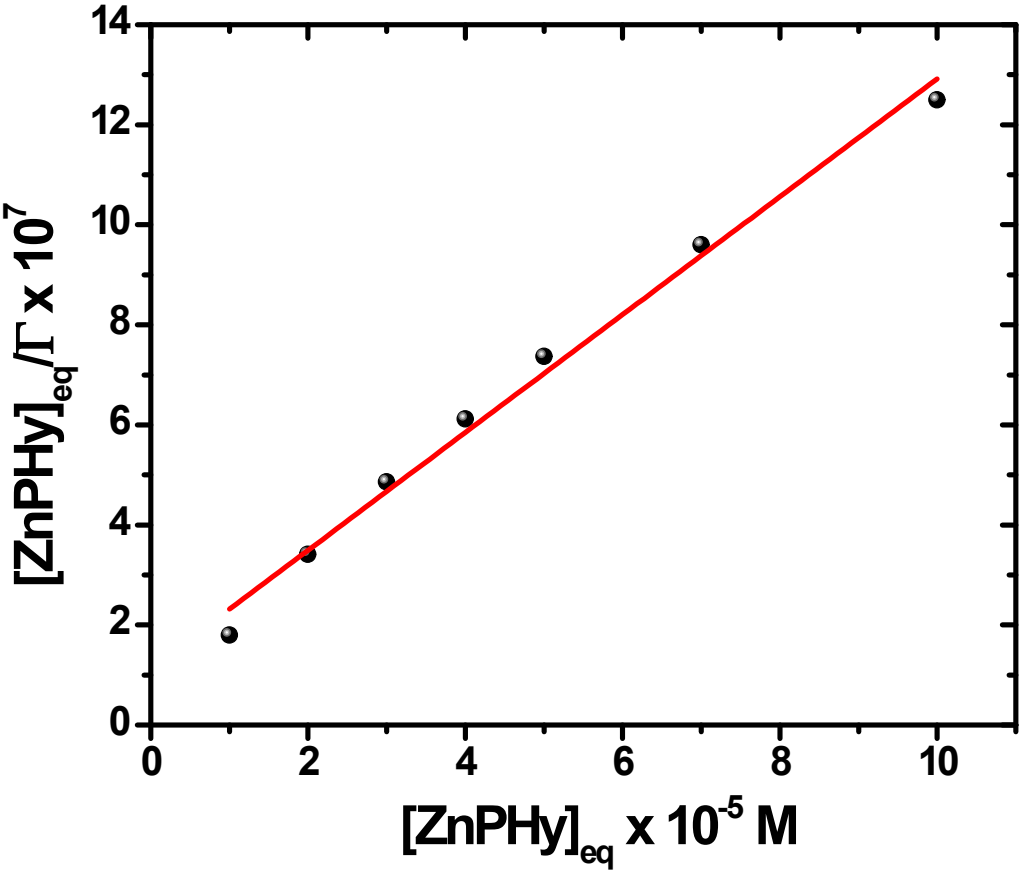

Figure S8: Plot of $[ZnPHy]_{eq}/\Gamma$ vs $[ZnPHy]_{eq}$.

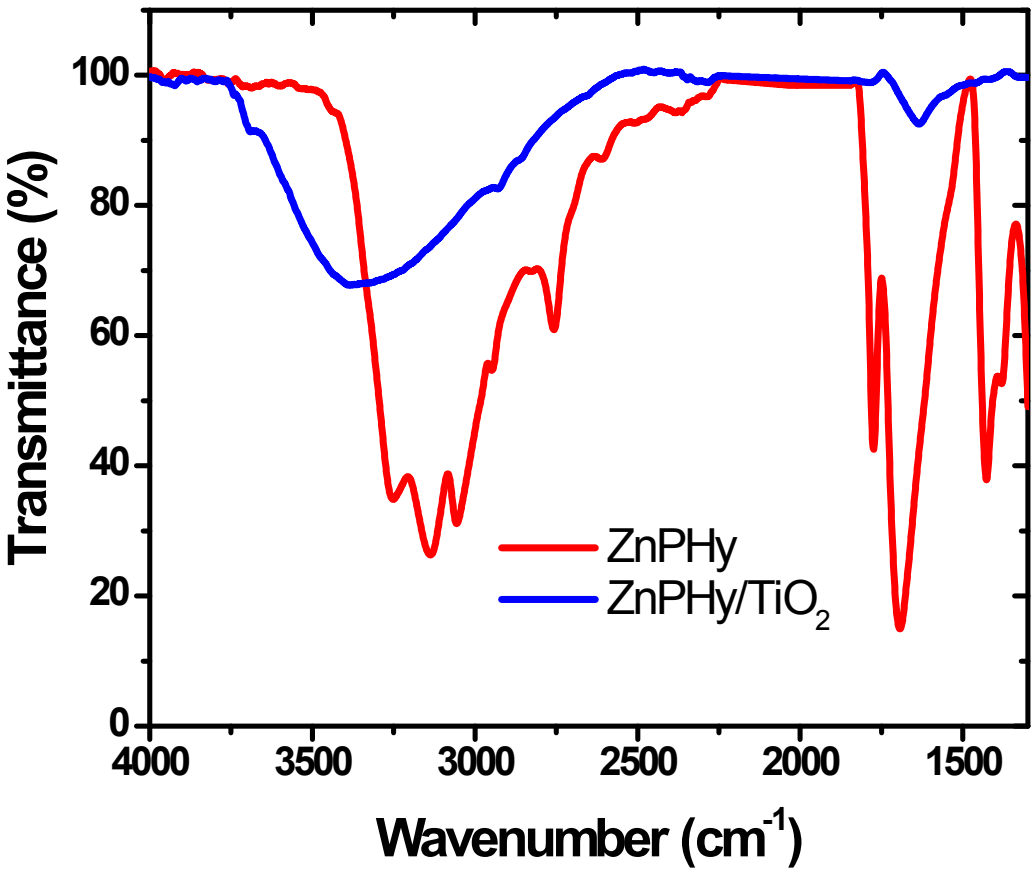

Figure S9: FT-IR spectra of ZnPHy and ZnPHy/TiO_2 film.

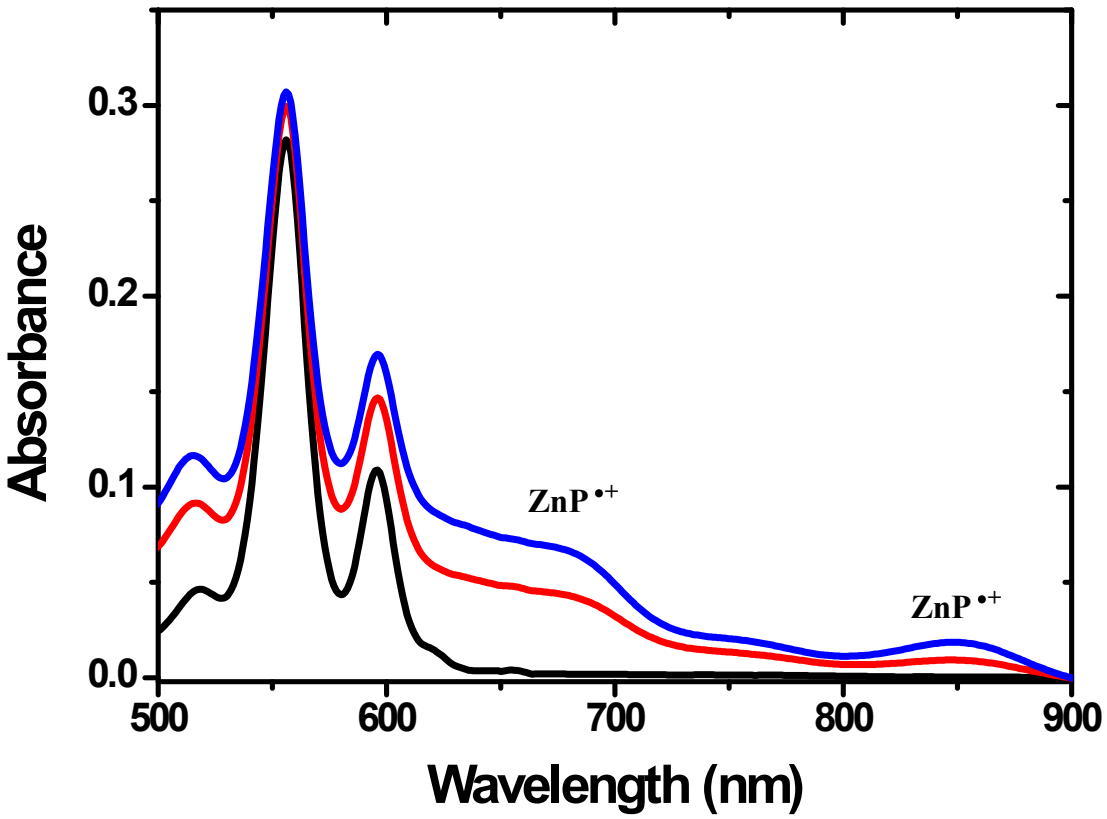

Figure S10: Chemical oxidation of ZnPHy using nitrosonium tetrafluoroborate.