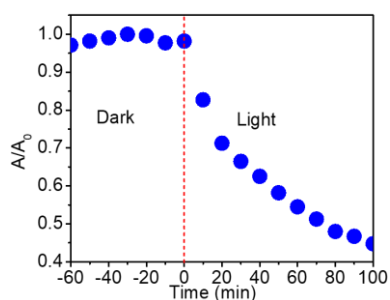
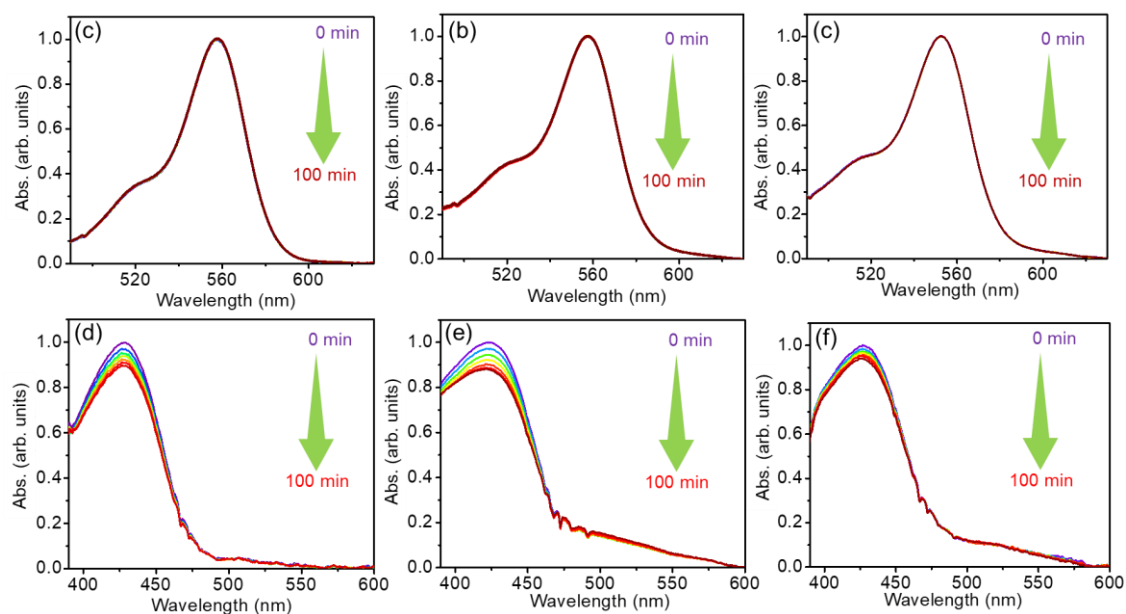


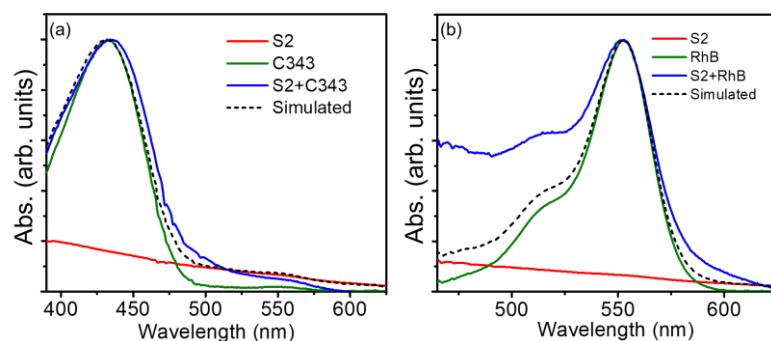
**Figure S1.** Effect of (a) Photocatalyst dose (*i.e.*, concentration of HNTs), (b) Pollutant (RhB dye) concentration, and (c) pH dependent photodegradation kinetics.



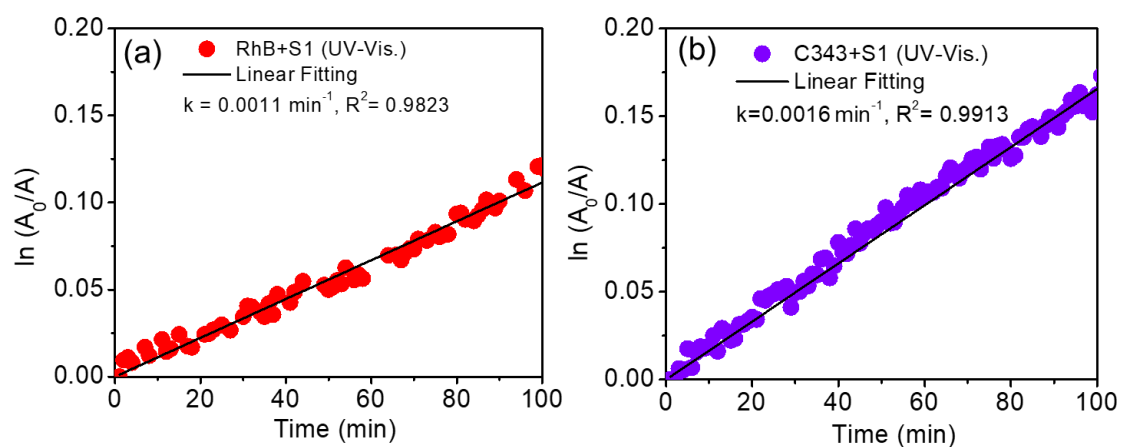
**Figure S2.** Degradation profile of RhB dye in presence of HNTs, and before and after the exposure of UV-Vis irradiation.



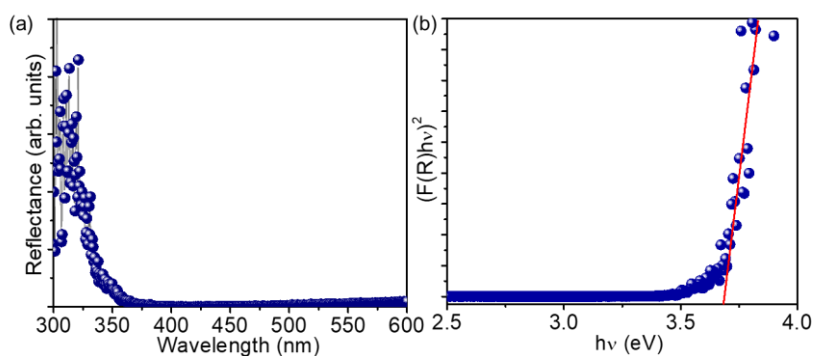
**Figure S3.** Absorption spectra of bare (a) cationic RhB, RhB in presence of (b) S1, and (c) S2 under the visible light irradiation. Absorption spectra of (d) bare anionic C343 dye, C343 dye in presence of (e) S1, and (f) S2 under visible light irradiation as a function of exposure time.



**Figure S4.** Absorption spectra of (a) C343, and (b) RhB dye in absence and presence of S2. Simulated: a numerical addition of absorption spectra of bare S2 with dye.



**Figure S5.** Degradation kinetics (fitted with a pseudo-first order linear equation) corresponding to the degradation of (a) cationic RhB dye and (b) anionic C343 dye in presence of S1 and under UV-Visible light irradiation.



**Figure S6.** (a) UV-Vis DRS spectrum of HNTs (0.10 g/L) and (b) the corresponding Tauc plot for HNTs.