

Supporting Information

Figure S1.

Catalyst Stability Study

We studied the stability of PQ/TiO₂ catalyst. For this purpose 50 mg of PQ/TiO₂ was stirred in 100 mL DI water for 12 hrs, then the catalyst separated using centrifugation and UV-Visible spectra of supernatant solution was taken to check the presence of PQ in the solution (Figure S1). The linear spectrum in the range of 250 to 800 nm confirms that the leaching of PQ was not occurring which confirms the stability of catalyst.

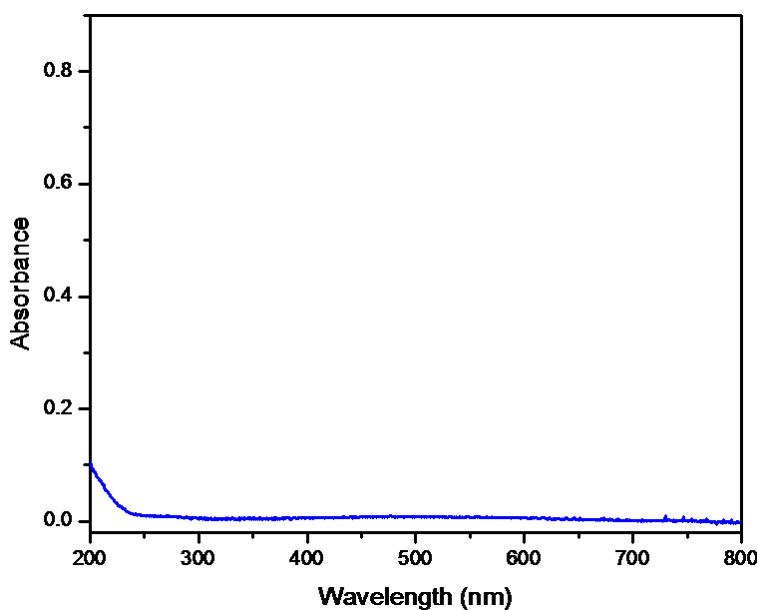


Figure S1. Leaching Study photocatalyst 6, 13-Pentacenequinone/TiO₂ (UV-Visible spectrum of supernatant solution)

Characterization details: UV-Visible absorbance spectra were recorded using Shimadzu UV-vis-NIR spectrophotometer (Model UV-3600) over a wavelength range of 200 to 800nm.

Figure S2.

Re-cycle Study

Recycle study of the catalyst was carried out using 10 ppm, 100 mL MB solution along with 50 mg 0.2 wt% PQ/TiO₂. The mixture was stirred under illumination of 400 W mercury vapour lamp 60 min, centrifuged and catalyst was recovered and used for next run. The catalyst shows comparable photocatalytic MB degradation up to five cycles. The slight lowering in the catalytic performance is due to the loss of catalyst during the recovery.

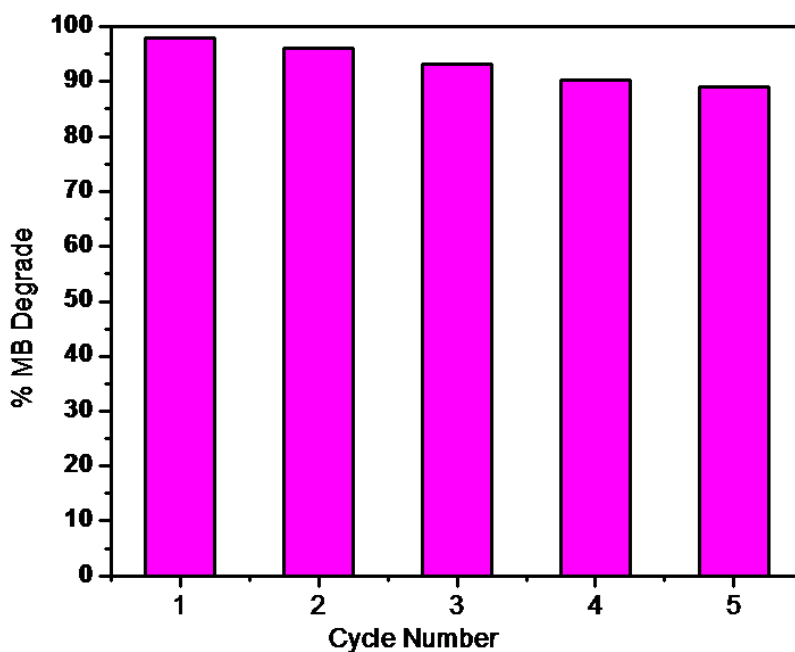


Figure S2. Catalyst recycles study using 0.2 wt% PQ/TiO₂ catalyst