

**Figure S1** – (A) Changing of concentration of MO ( $C_{MO}=5$  ppm,  $pH=6.7$ )

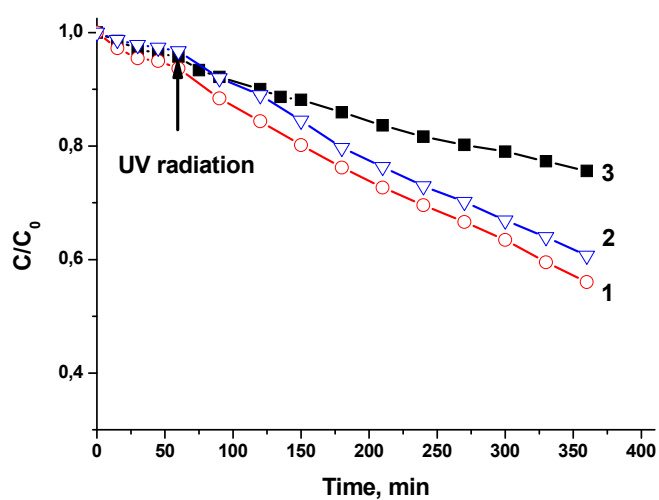
(1) UV irradiation, without  $\alpha$  composite

(2) Adsorption of MO in the presence of 26.1PE/TiO<sub>2</sub>

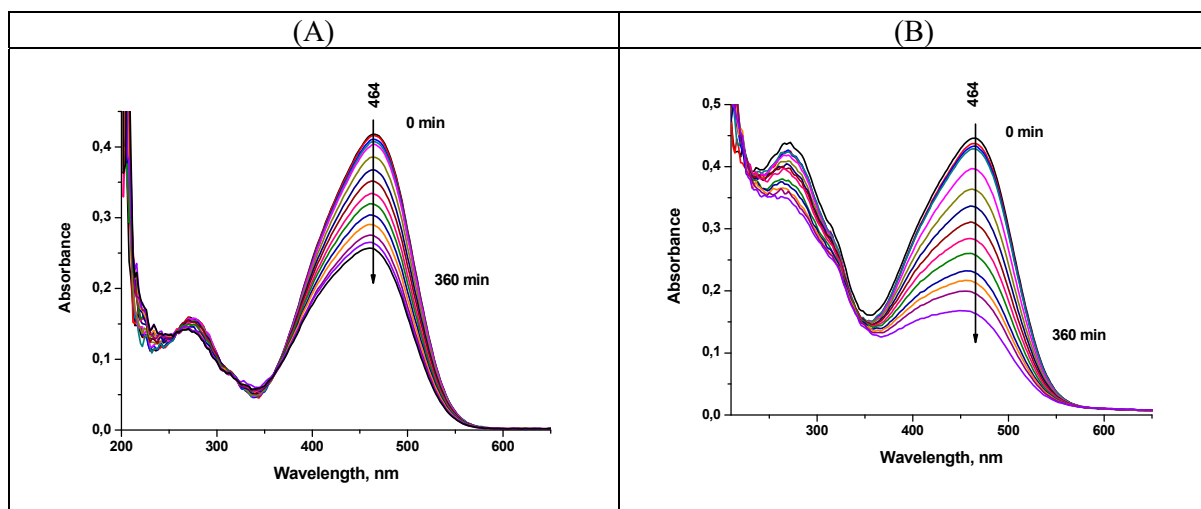
(3) UV irradiation, in the present of 26.1PE/TiO<sub>2</sub>

((A) – UV radiation)

(B) degradation of MO: difference between curve (3) and curve (2)



**Figure S2** – Effect of concentration of MO on the discoloration of MO dye in the presence 26.1PE/TiO<sub>2</sub>: concentration of MO (1) 1.7 ppm, (2) 5 ppm, (3) 15 ppm



**Figure S3** – UV-vis spectra of MO during adsorption and the discoloration in the presence 26.1ΠΠ/TiO<sub>2</sub>: (A) 1 cycle, (B) 3 cycle