Electronic Supplementary Material (ESI) for Nanoscale.

Electronic Supplementary Information

Green Microwave Switching from Oxygen Rich Yellow Anatase TiO_2 to Oxygen Vacancy Rich Black Anatase TiO_2 Photocatalyst Using Mn (II) as 'Anatase Phase Purifier'

Sanjay G. Ullattil, Pradeepan Periyat*

Department of Chemistry, University of Calicut, Kerala, India – 673635

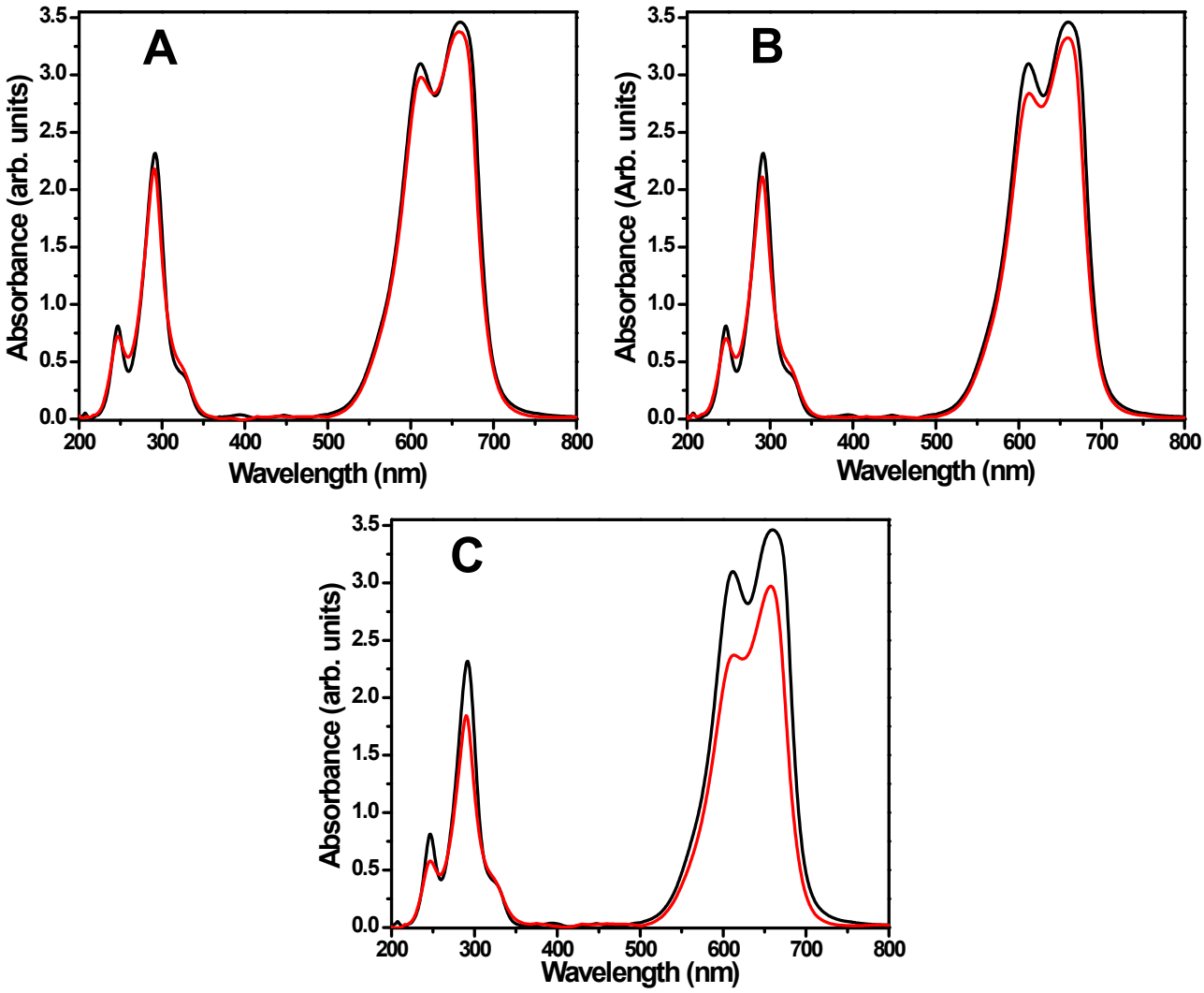

Figure S1. UV-Visible spectra of dark adsorption analysis using A) YAT-150 B) BAT-150 and C) Degussa-P25 (black line - before adsorption, red line – after adsorption)

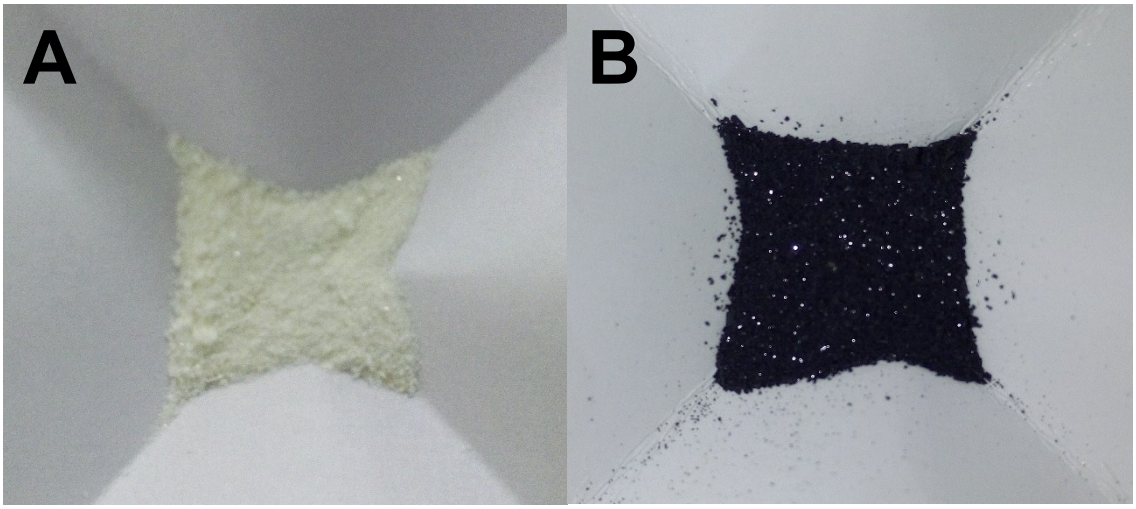
A
B

Figure S2. Digital photographs of A) Yellow anatase titania (YAT-150) and B) Black anatase titania (BAT-150)

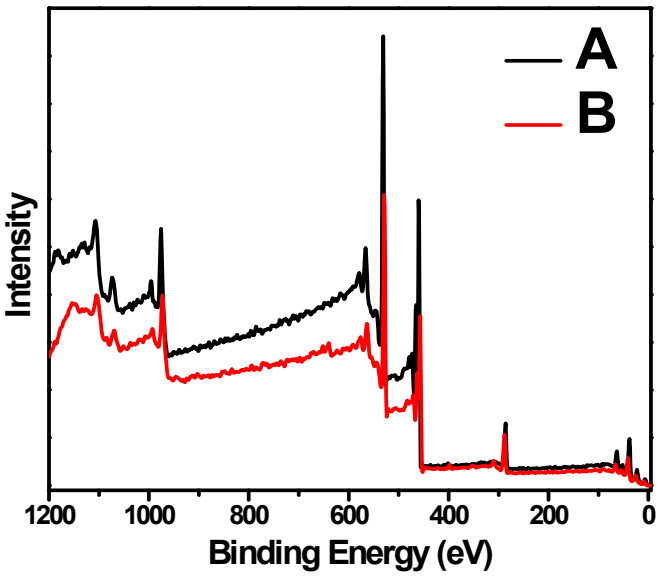

Figure S3. Wide area XPS of A) yellow anatase titania (YAT-150) and B) black anatase titania (BAT-150)

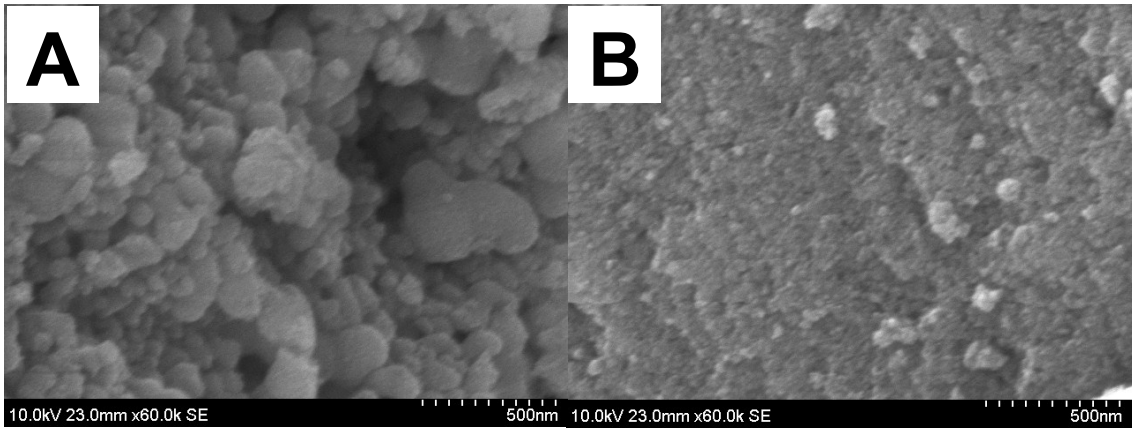

Figure S4. SEM images of A) Yellow anatase titania (YAT-150) and B) Black anatase titania (BAT-150)

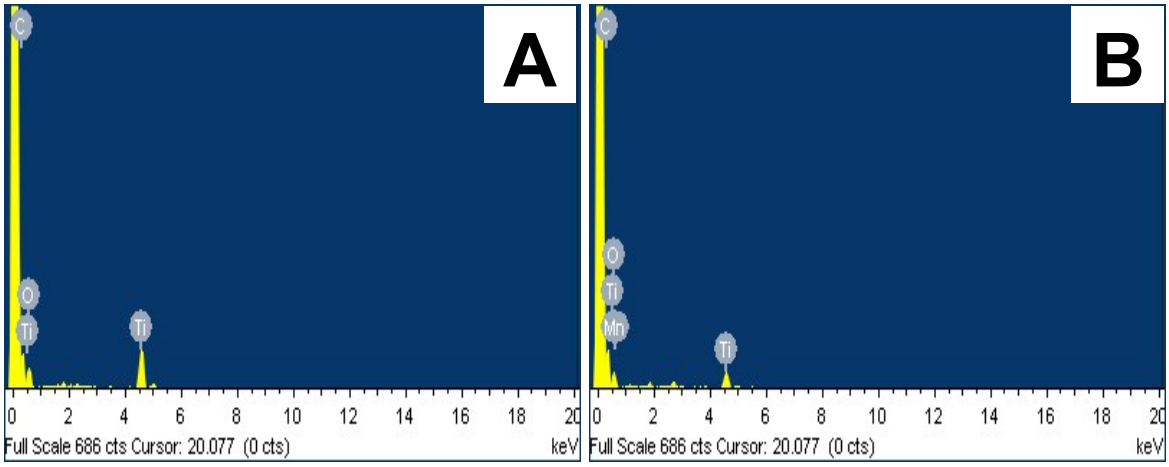

Figure S5. EDX of A) Yellow anatase titania (YAT-150) and B) Black anatase titania (BAT-150)

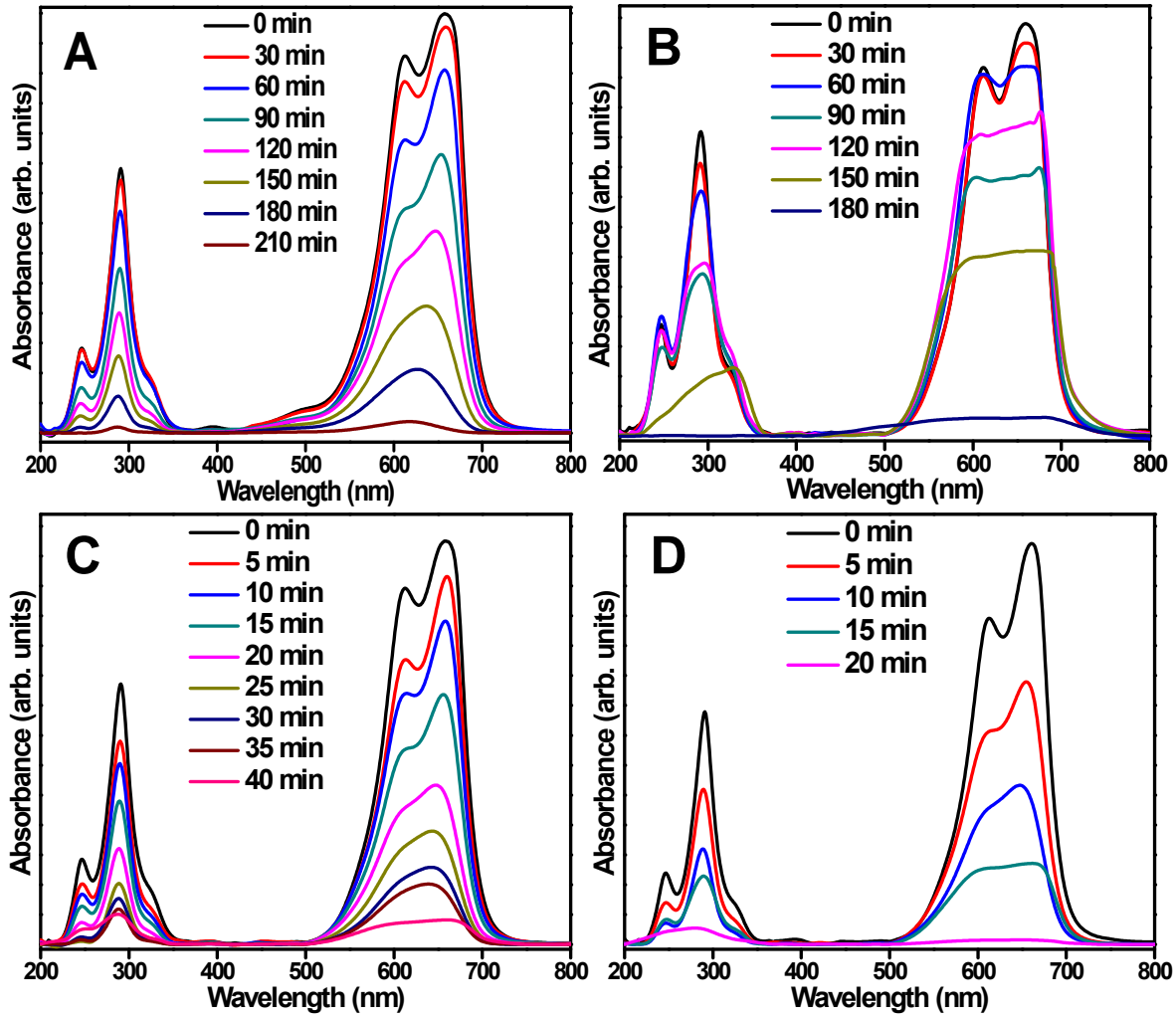

Figure S6. UV-Visible spectra of photodegradation under UV illumination using A) YAT-150, B) BAT-150 and under sunlight illumination using C) YAT-150, D) BAT-150.

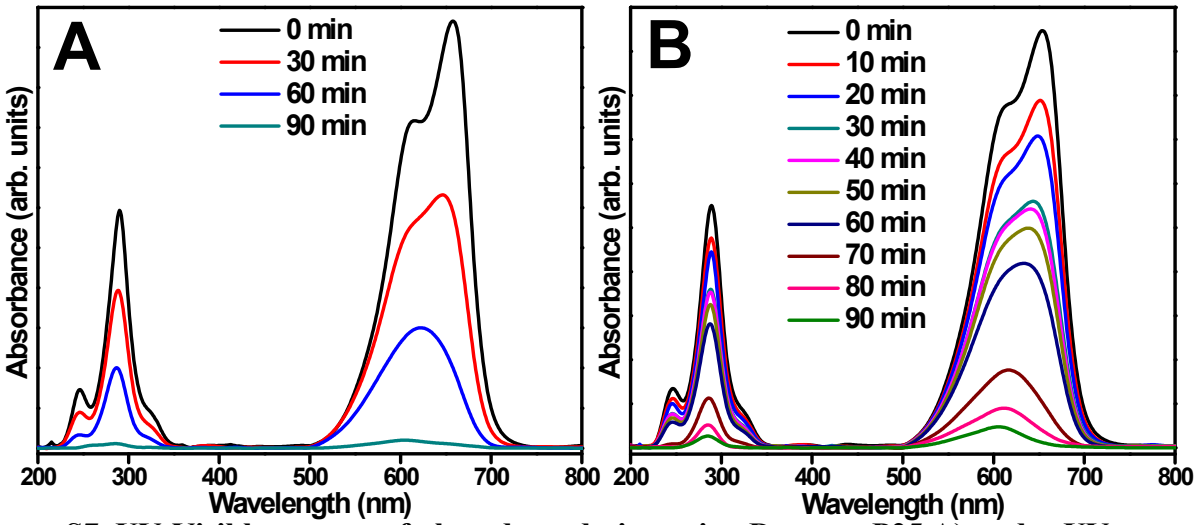

Figure S7. UV-Visible spectra of photodegradation using Degussa-P25 A) under UV illumination and B) under sunlight illumination.