Electronic Supplementary Information

Band gap engineered TiO_2 nanoparticles for visible light induced photoelectrochemical and photocatalytic studies

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UV-vis diffuse absorbance spectra for the *p*-TiO_2 and *m*-TiO_2 nanoparticles

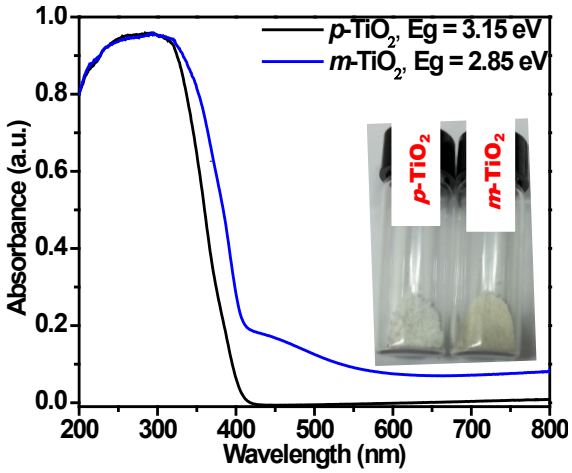

Fig. S1. UV-vis diffuse absorbance spectra for the *p*-TiO_2 and *m*-TiO_2 nanoparticles. Inset shows the color of the *p*-TiO_2 and *m*-TiO_2 nanoparticles.

EPR spectra for g values of the *p*-TiO_2 and *m*-TiO_2 nanoparticles at RT and 20 K

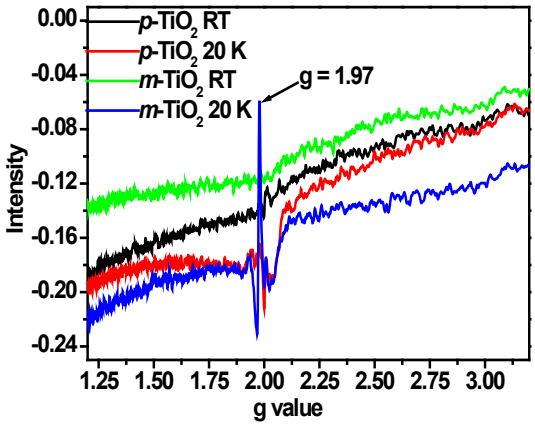

Fig. S2. g value of the *p*-TiO_2 and *m*-TiO_2 nanoparticles at RT and 20 K.

XPS spectra of *p*-TiO_2 and *m*-TiO_2 nanoparticles

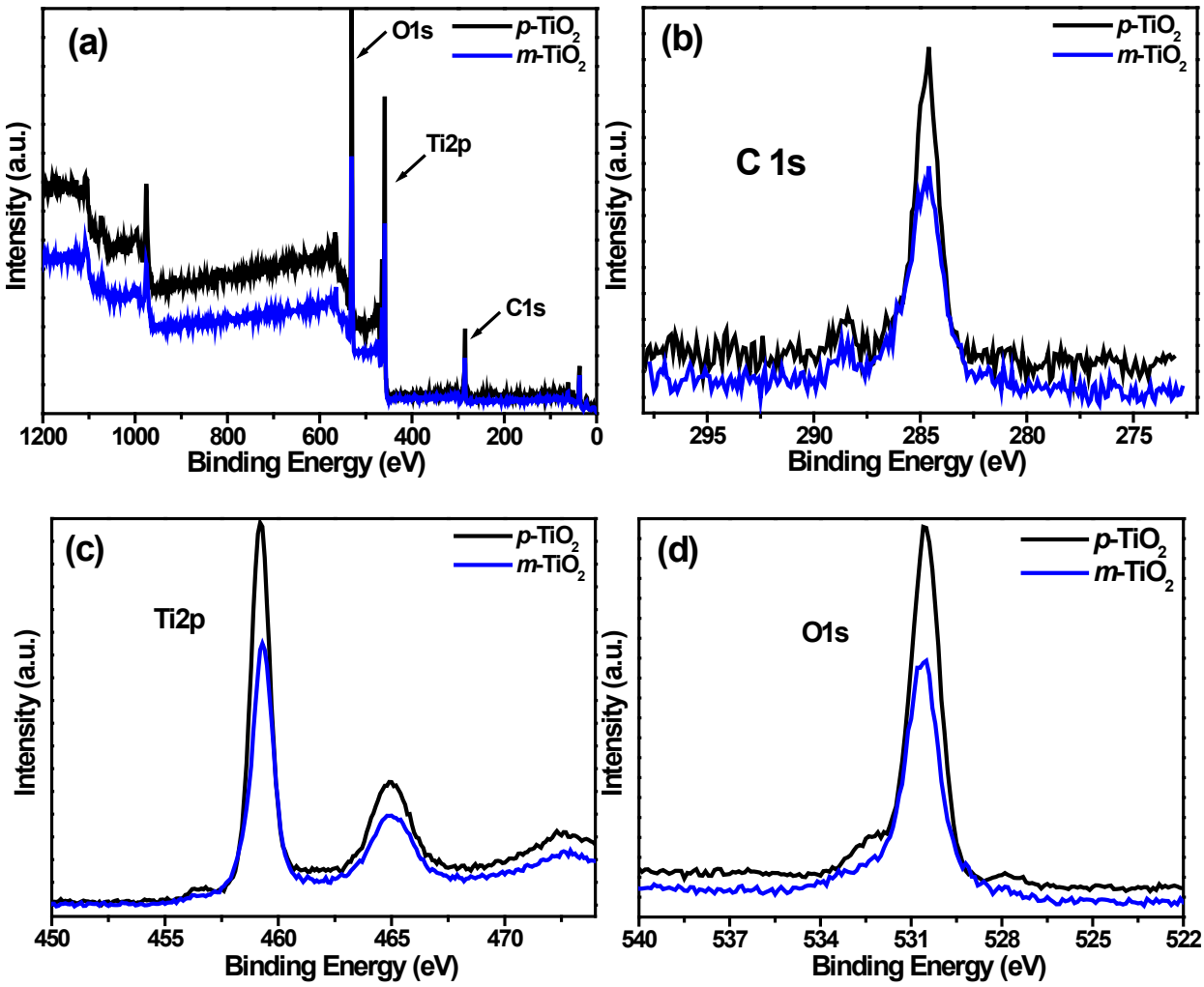

Fig. S3. (a) XPS survey spectra, **(b)** C1s of *p*-TiO_2 and *m*-TiO_2, **(c)** Ti2p overlapped spectra of *p*-TiO_2 and *m*-TiO_2, **(d)** O1s overlapped spectra of *p*-TiO_2 and *m*-TiO_2.