

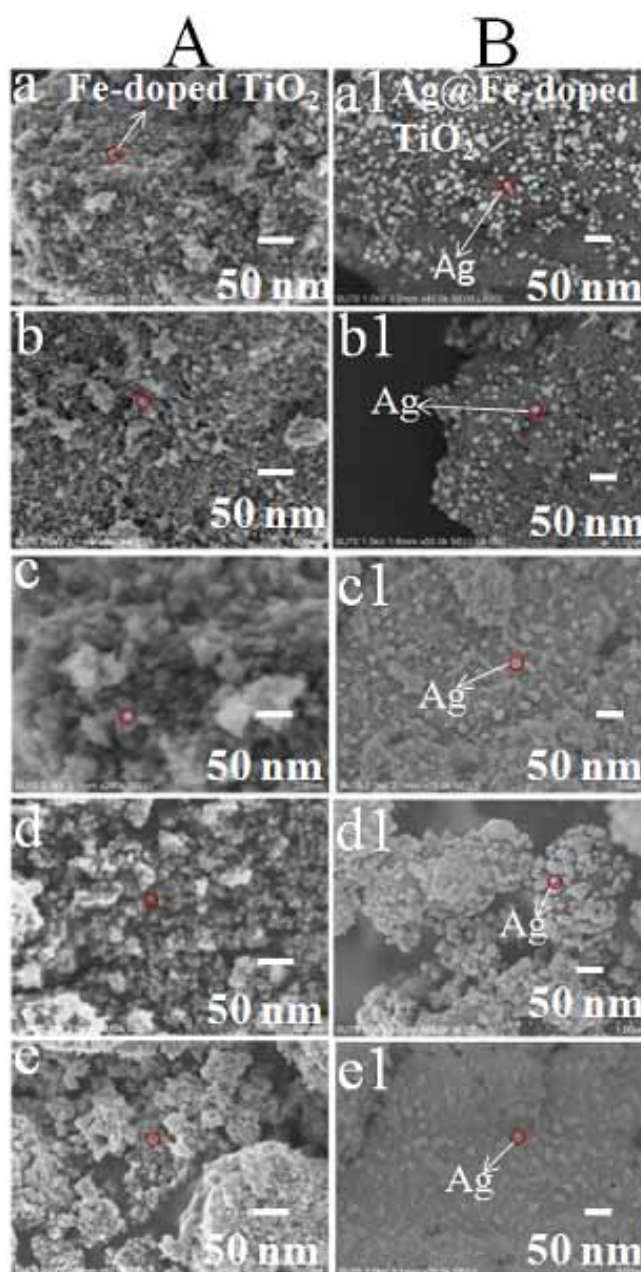
## Enhanced Photocatalytic Activity of Ag @ Fe-doped TiO<sub>2</sub> Composite Nanoclusters against Human Epithelial Carcinoma Cells

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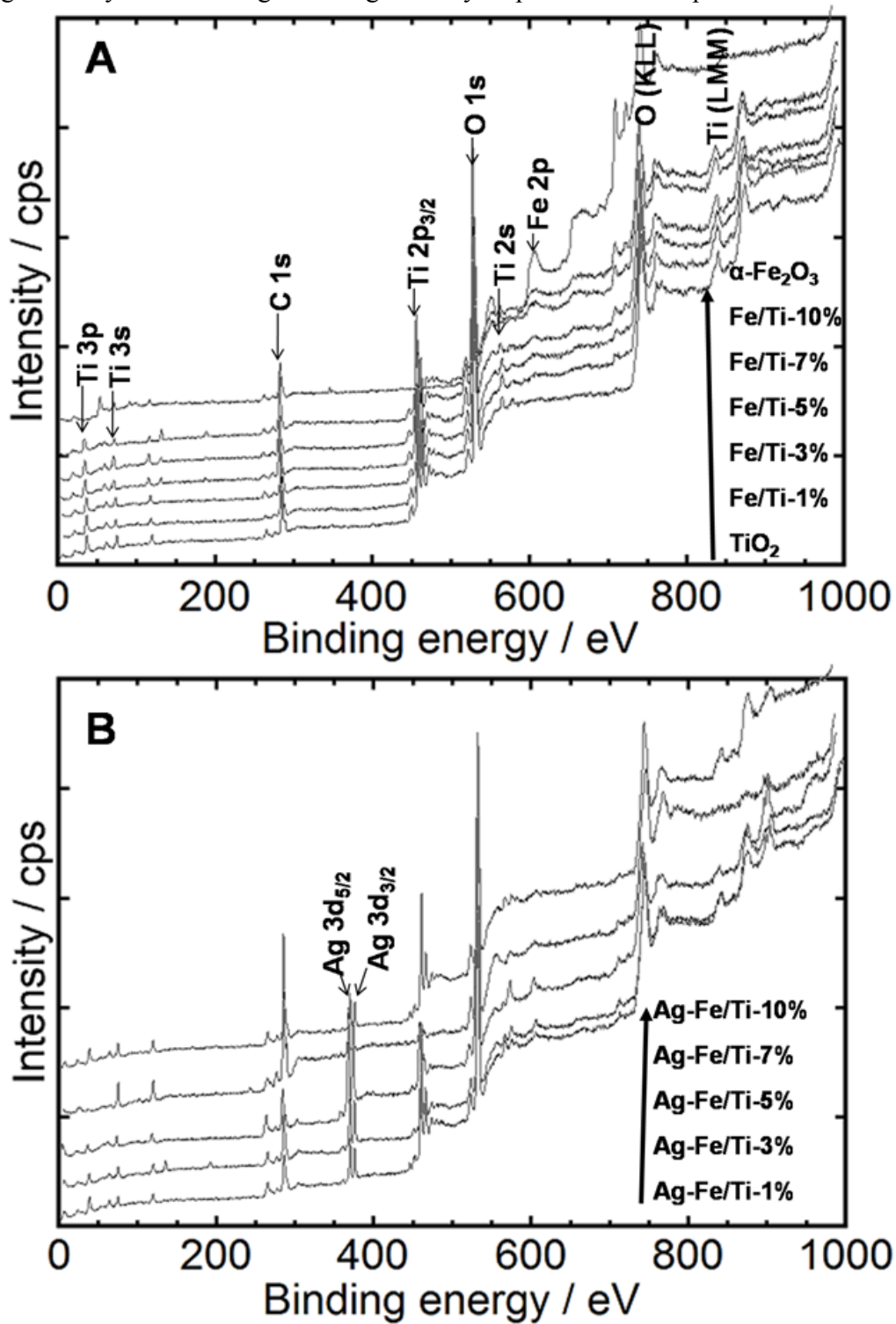
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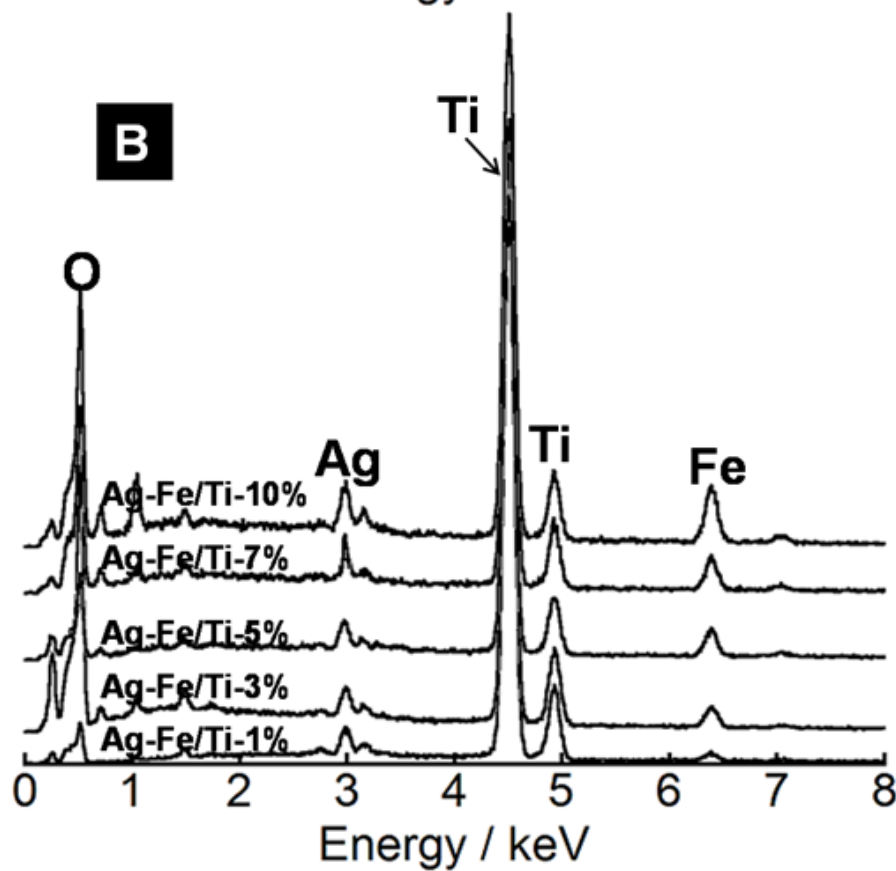
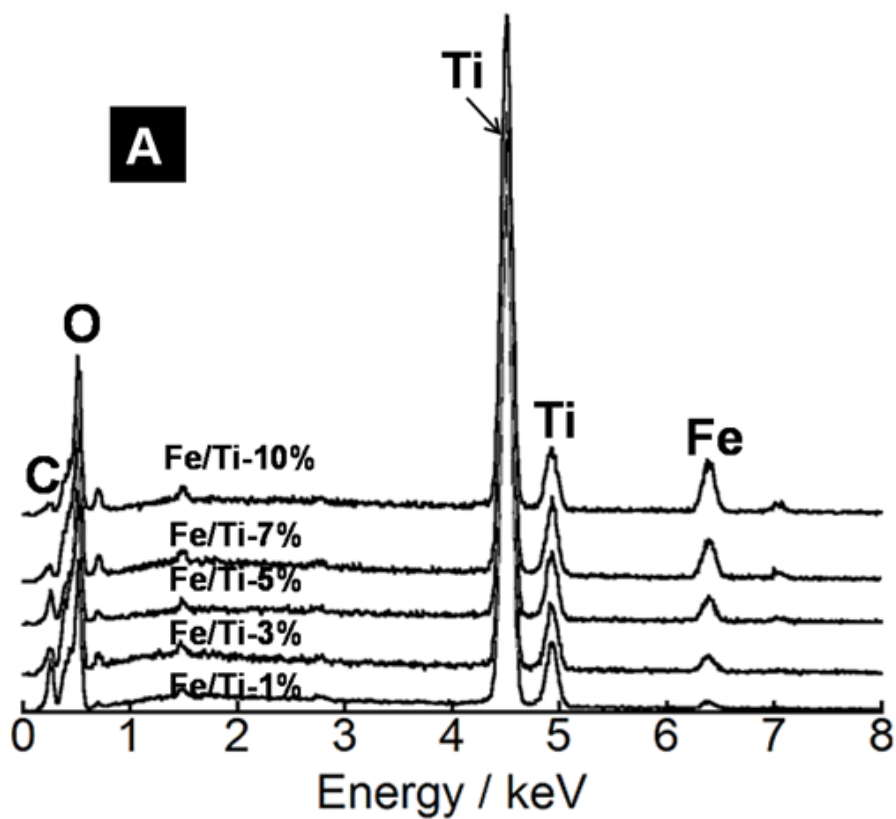
### Supporting data



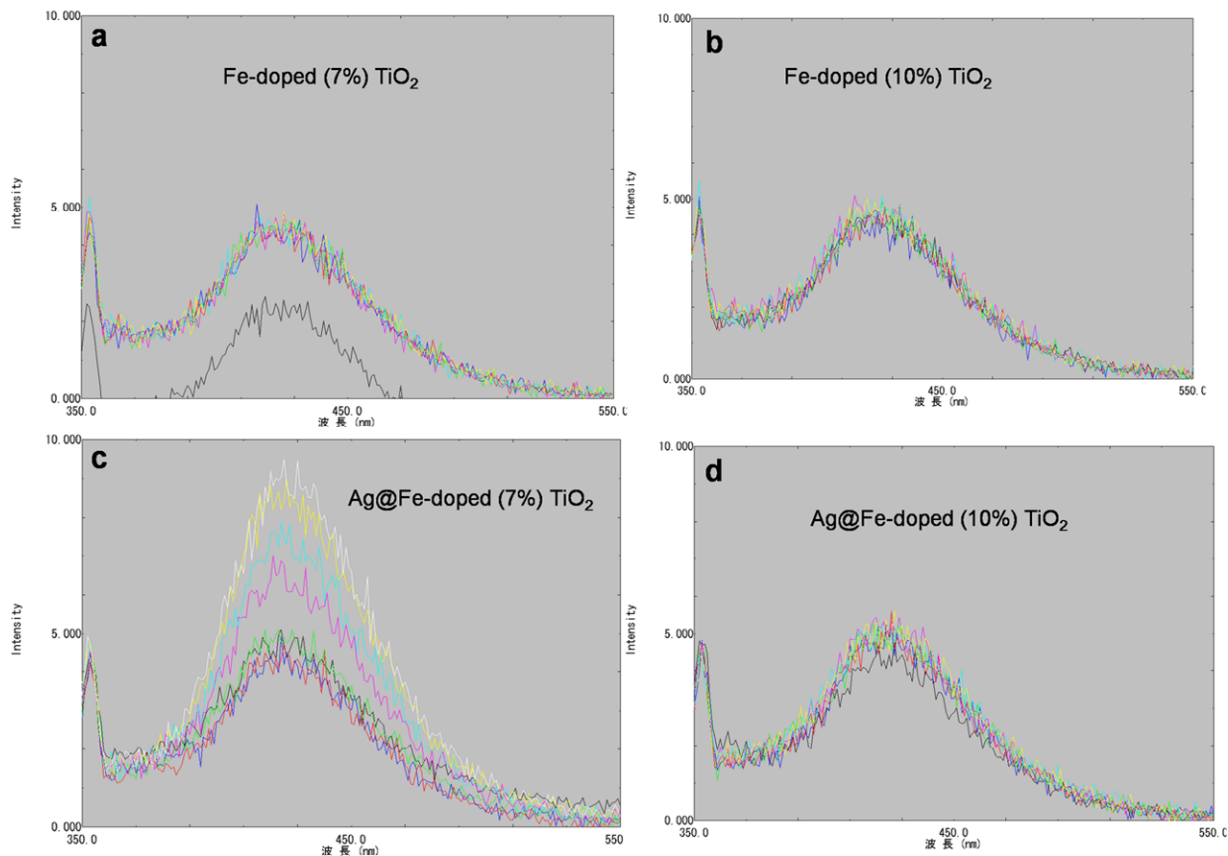
**Fig. S1.** SEM images of (A) 1,3,5,7 and 10% (Fe content; a,b,c,d and e) Fe-doped TiO<sub>2</sub> and (B) 1,3,5,7, and 10% (Fe content; a1,b1,c1,d1 and e1) Ag@Fe-doped TiO<sub>2</sub> composite nanoclusters. The images clearly show that Ag is homogeneously dispersed on Fe-doped TiO<sub>2</sub>.



**Fig. S2.** XPS wide range spectra of (A) Fe-doped TiO<sub>2</sub> and (B) Ag@Fe-doped TiO<sub>2</sub>.



**Fig. S3.** EDX spectra of (A) Fe-doped TiO<sub>2</sub> and (B) Ag@Fe-doped TiO<sub>2</sub>. The strong Ag, Fe and Ti signals in the EDX spectra indicate that Ag is metallic and Ti and Fe consist of mixed oxides.



**Fig.S4.** PL spectral changes during irradiation of (a) Fe-doped (7%) TiO<sub>2</sub>, (b) Fe-doped (10%) TiO<sub>2</sub>, (c) Ag@Fe-doped (7%) TiO<sub>2</sub> and (d) Ag@Fe-doped (10%) TiO<sub>2</sub> samples. Each fluorescence spectrum was recorded every 10 min for (a) Fe-doped TiO<sub>2</sub> and 5 min for (b) Ag@Fe-doped TiO<sub>2</sub> under visible irradiation.