

Electronic Supplementary Information (ESI)

**Visible Light Sensitization of TiO₂ Nanoparticles by a Dietary
Pigment, Curcumin, for Environmental Photochemical
Transformations**

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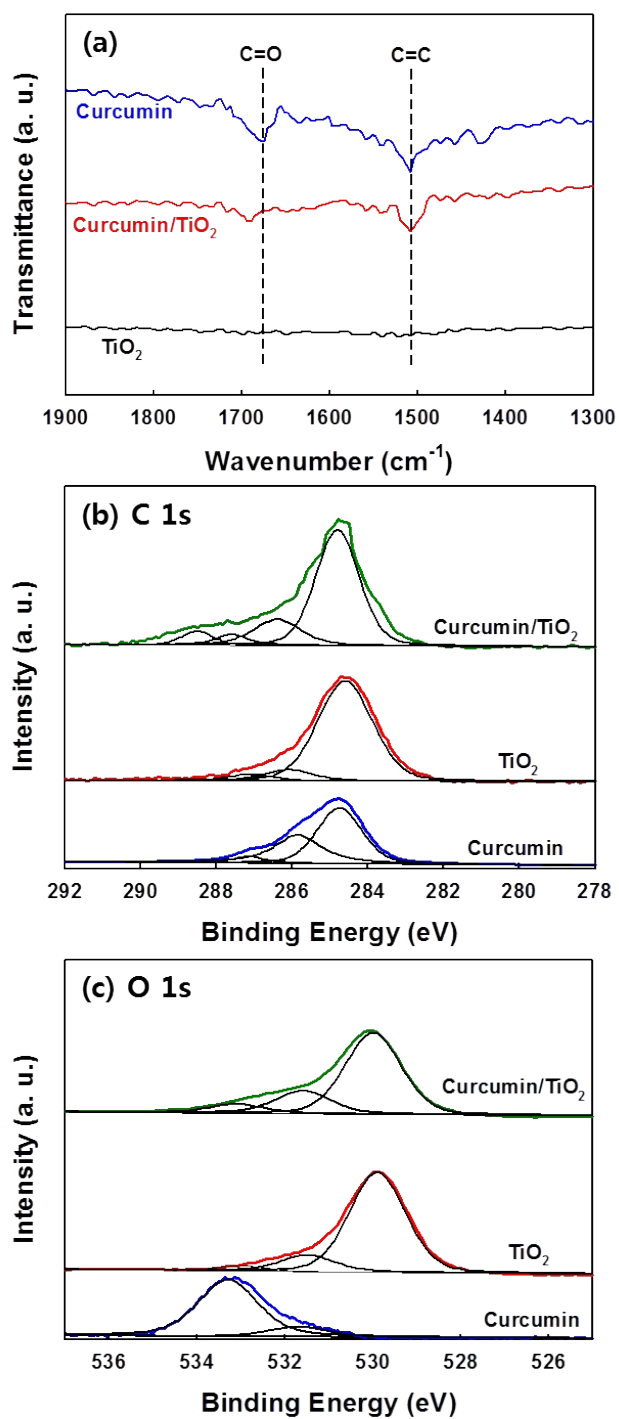


Fig. S1. (a) FT-IR transmittance spectra, and XPS spectra of (b) C 1s and (c) O 1s bands of TiO₂, curcumin, and curcumin/TiO₂.

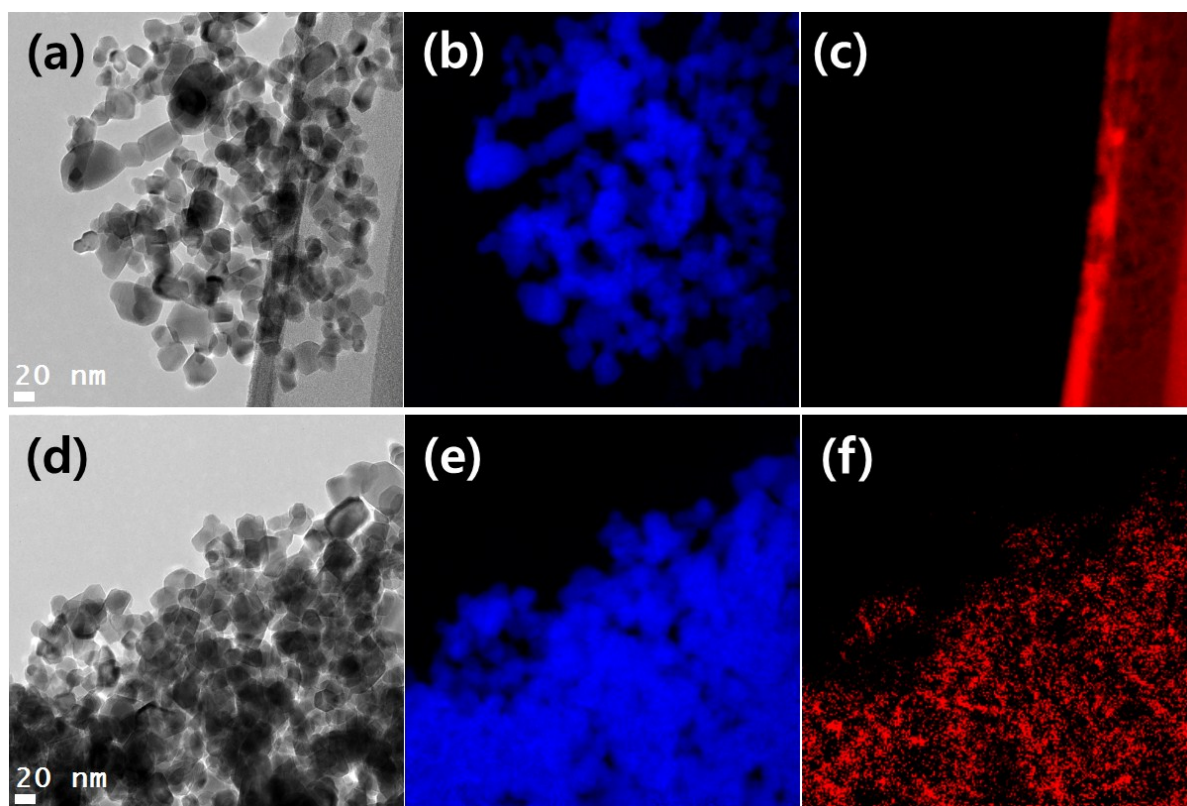


Fig. S2. (a) TEM image and EELS mapping of (b) Ti and (c) C of bare TiO₂ and (d) TEM image and EELS mapping of (e) Ti and (f) C of curcumin/TiO₂.

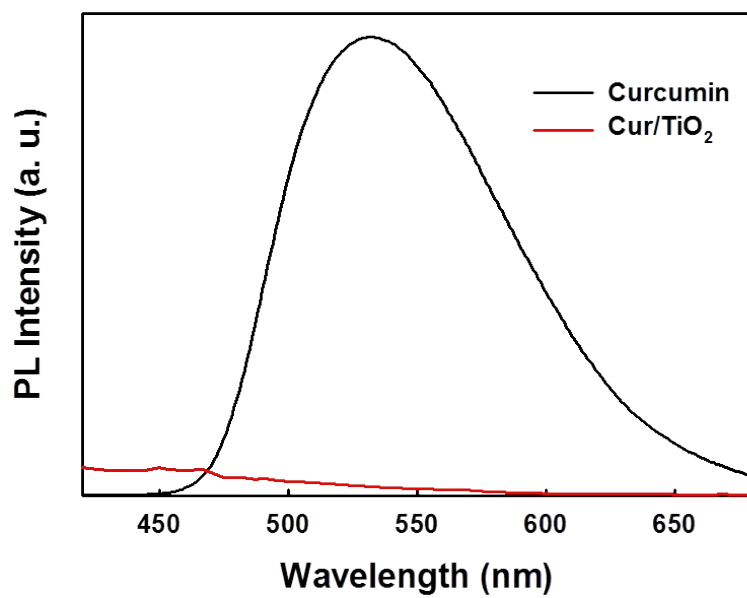


Fig. S3. Photoluminescence emission spectra of curcumin solution and curcumin/TiO₂ suspension; $\lambda_{\text{ex.}} = 350$ nm.

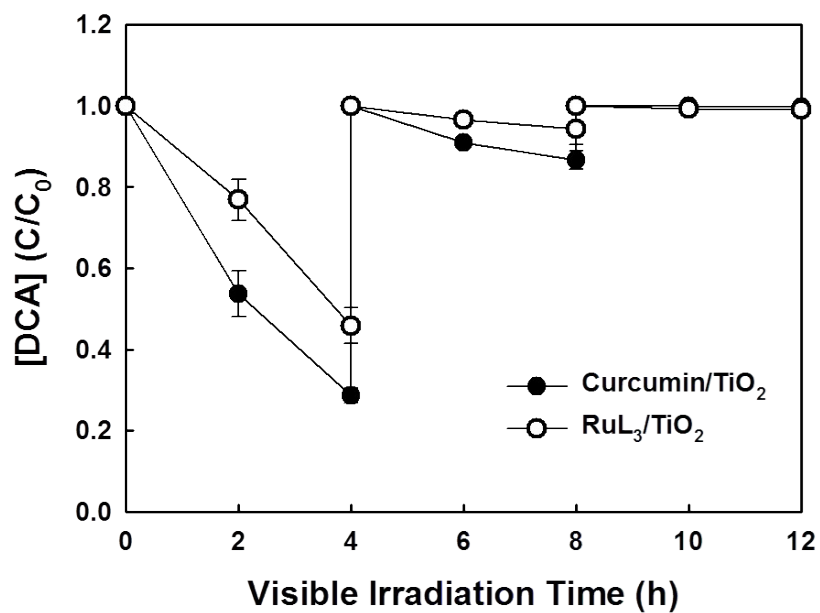


Fig. S4. Repeated cycles of the degradation of DCA in the suspension of dye/ TiO_2 under visible light. The experimental conditions were [catalyst] = 0.5 g/L, $[DCA]_0 = 100 \mu M$, $pH_0 = 3.0$, $\lambda > 420 \text{ nm}$, air-equilibrated for 30 min prior to irradiation.