

Supporting Information for
Synthesis of Activated Carbon-Surrounded and Carbon-Doped
Anatase TiO₂ Nanocomposites

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The supporting data include Table S1 and Fig. S1 – S5.

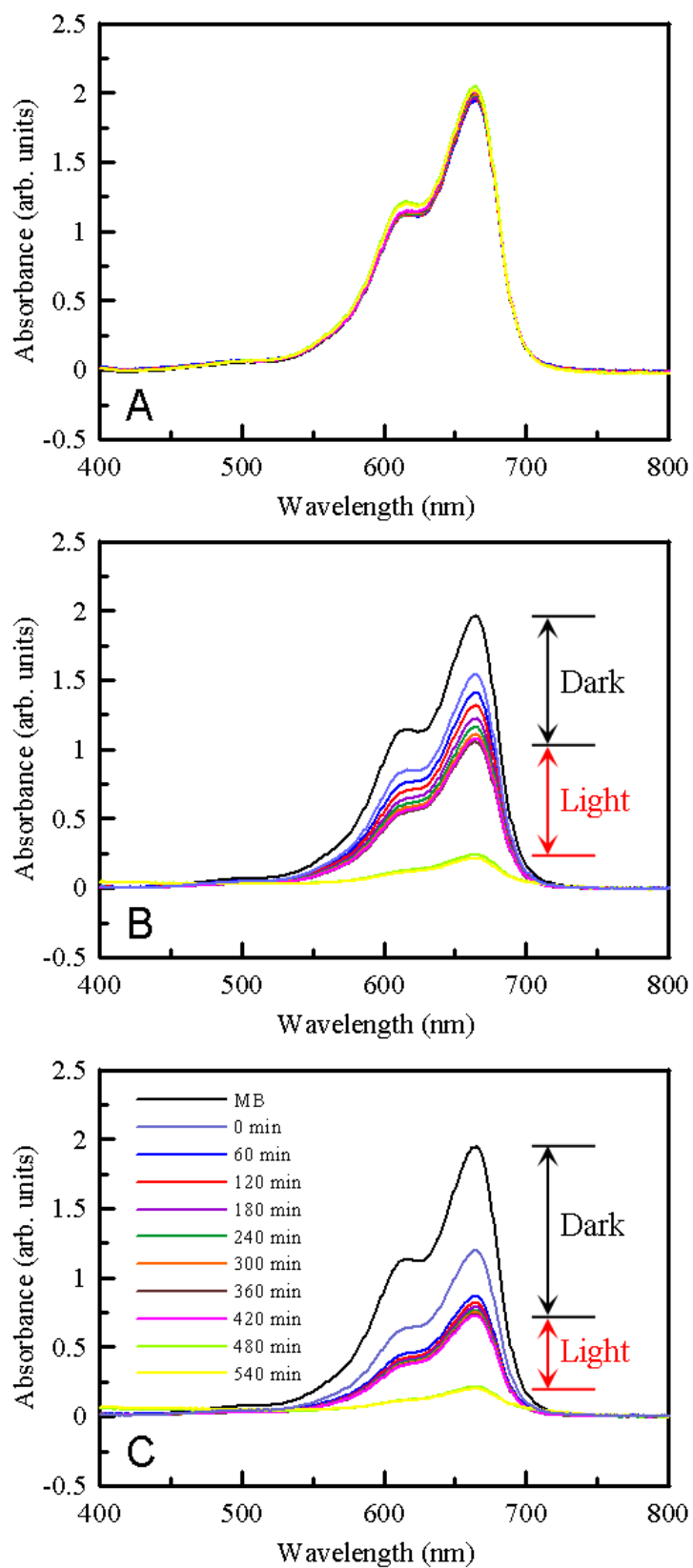


Fig. S1 UV-VIS spectra for photocatalytic degradation of MB by (A) pure A-TiO₂ (sample A), and A-TiO_{2-x}C_x-AC nanocomposites of (B) sample B and (C) sample C. Visible light was turned on at 420 min.

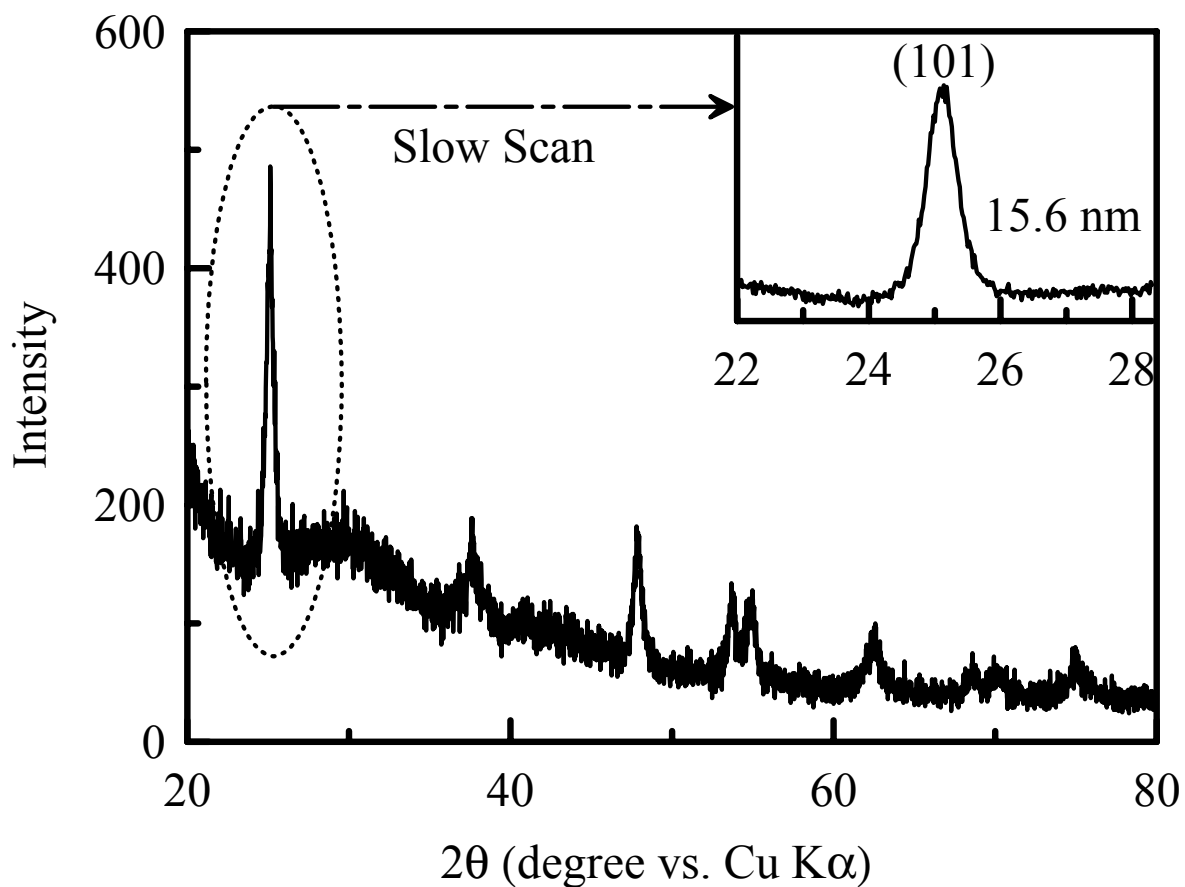


Fig. S2 The XRD pattern of the control sample (i.e., A-TiO₂ powders prepared from TTIP without adding any self-assembled copolymer). The average crystal size, equal to ca. 15.6 nm, was calculated from (101) peak by the Debye–Scherrer equation.

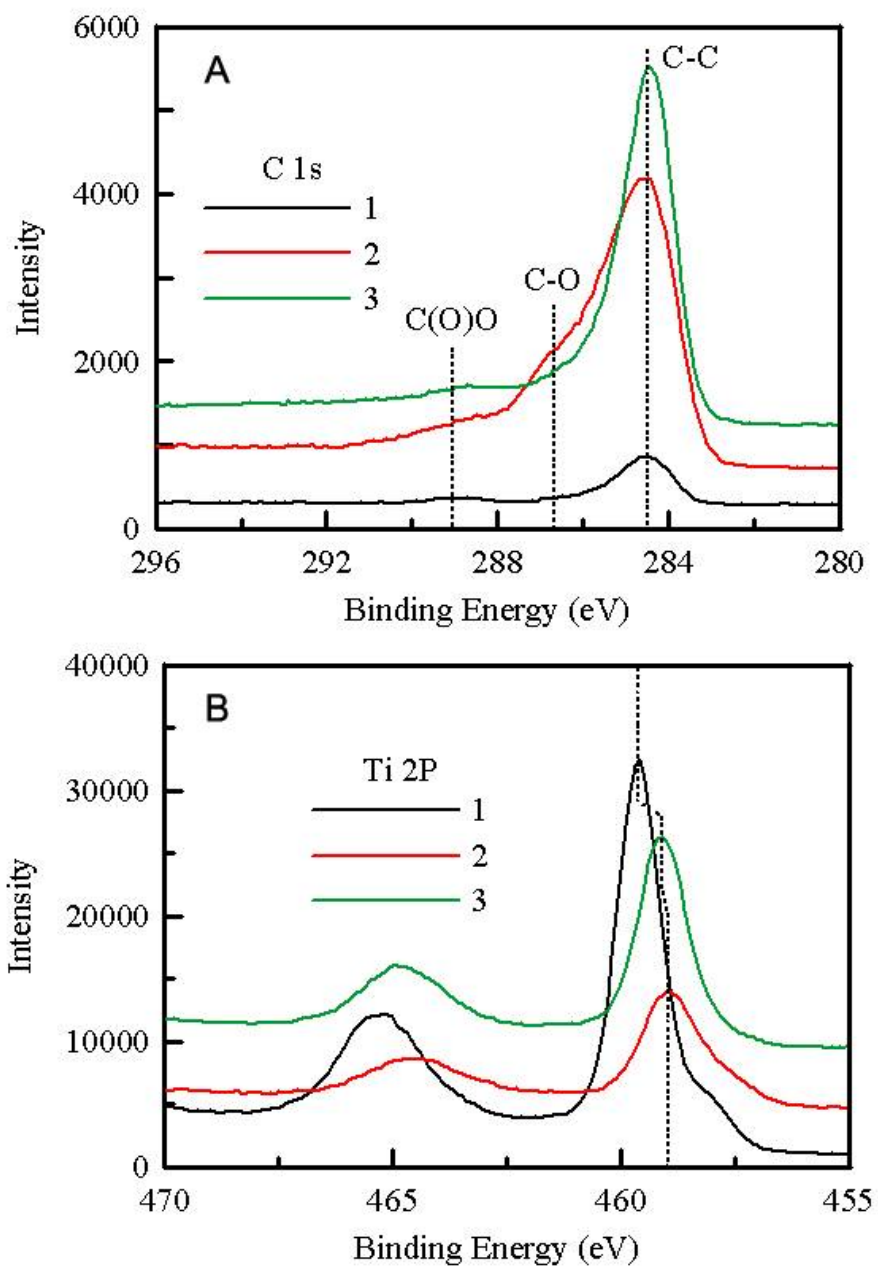


Fig. S3 XPS core-level spectra of (A) C 1s and (B) Ti 2p for (1) sample A, (2) sample B, and (3) sample C.

Table S1 The fitting results of C1s XPS spectra of samples B and C.

Samples	Carbon species (relative atomic percentage %)		
	C sp ³	C-O	C(O)O
Sample B	69.15	24.60	6.25
Sample C	82.14	12.12	5.74

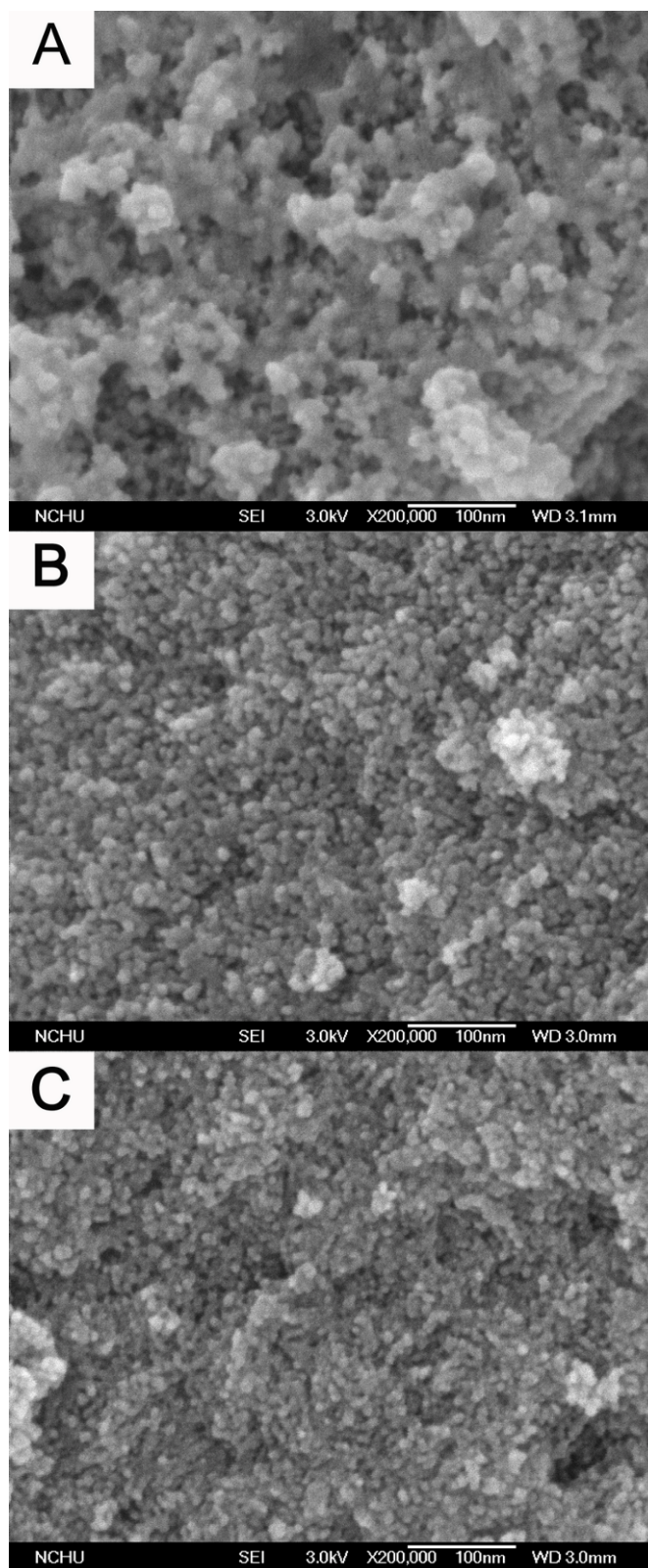


Fig. S4 SEM images of (A) sample A ($A\text{-TiO}_2$), and $A\text{-TiO}_{2-x}\text{C}_x\text{-AC}$ nanocomposites of (B) sample B and (C) sample C.

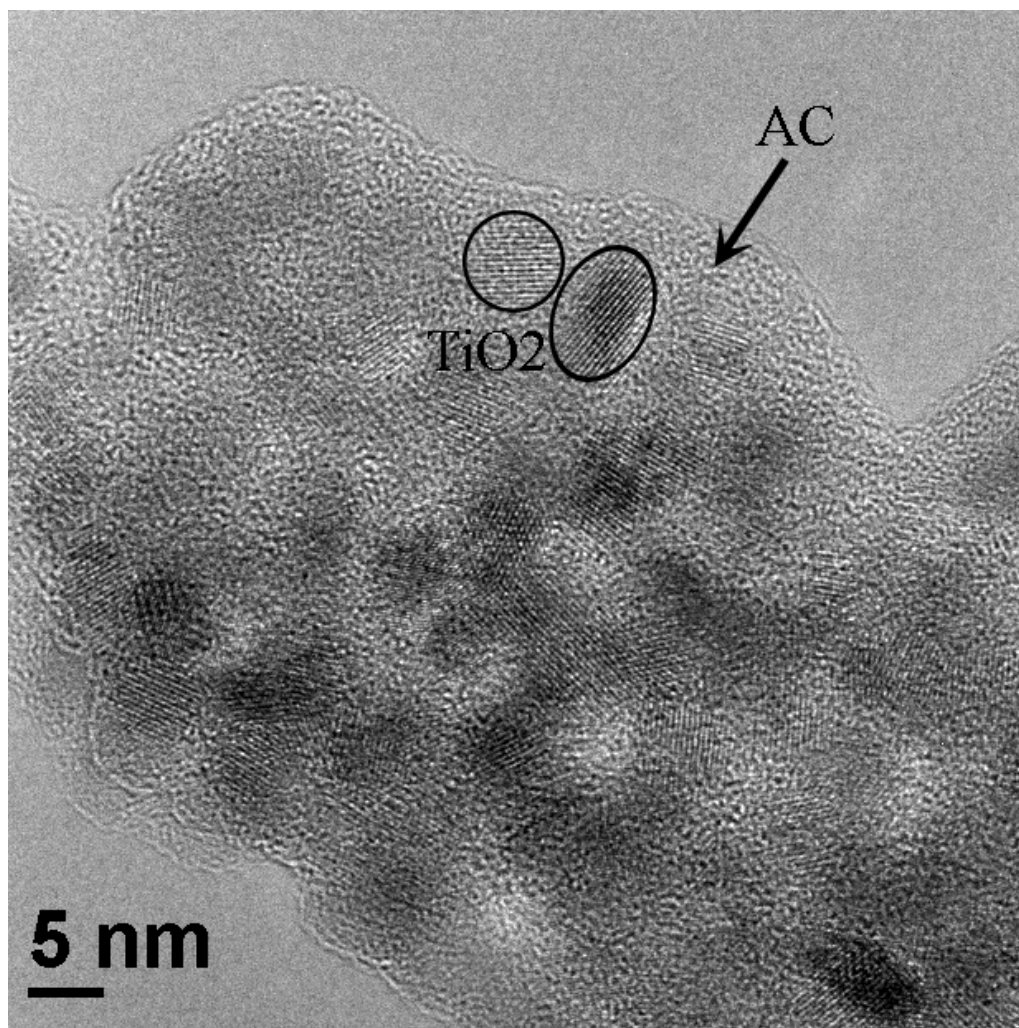


Fig. S5 A HR-TEM image of an A-TiO_{2-x}C_x-AC nanocomposite prepared from the aged mixture with the P123/TTIP ratio equal to 0.035, calcinated at 450°C for 4 h under vacuum. This HR-TEM image clearly shows the thickness of AC layer is simply increased by raising the amount of copolymer in the precursor mixture.