

Supplementary Materials

Microwave-Assisted Synthesis of High-Energy Faceted TiO₂ Nanocrystals Derived from Exfoliated Porous Metatitanic Acid Nanosheets with Improved Photocatalytic and Photovoltaic Performance

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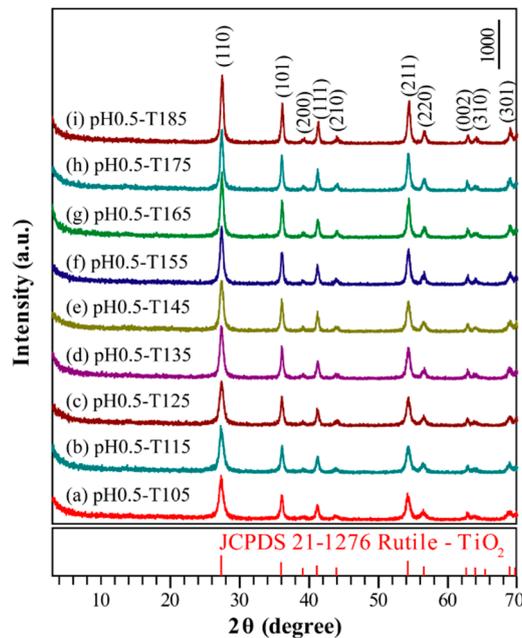


Figure S1. Evolution of the XRD patterns of the TiO₂ nanocrystals samples synthesized at pH = 0.5 and various temperatures. Evolution of the XRD patterns of the TiO₂ nanocrystals samples synthesized at pH0.5-13.5 and various temperatures; UV-vis spectral changes of MO solutions as a function of UV irradiation time in the presence of (a) pH4.5-T175, (b) pH6.5-T175, (c) P25 photocatalysts and (d) absence of photocatalyst; and particles size distributions of (a) pH2.5-T175, (b) pH4.5-T175, (c) pH6.5-T175, and (d) P25.

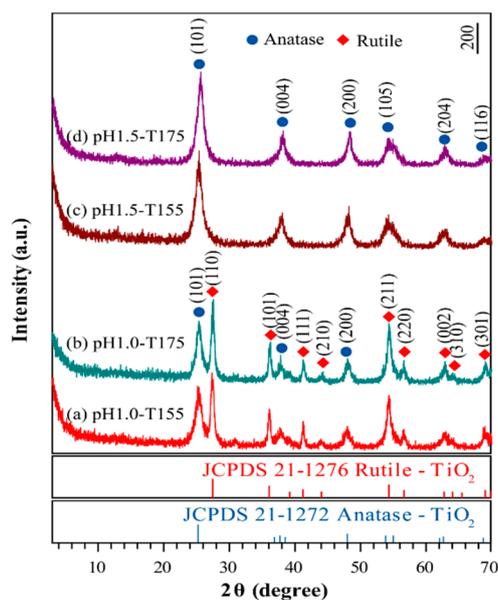


Figure S2. Evolution of the XRD patterns of the TiO₂ nanocrystals samples synthesized at pH = 0.5, 1.0, and various temperatures.

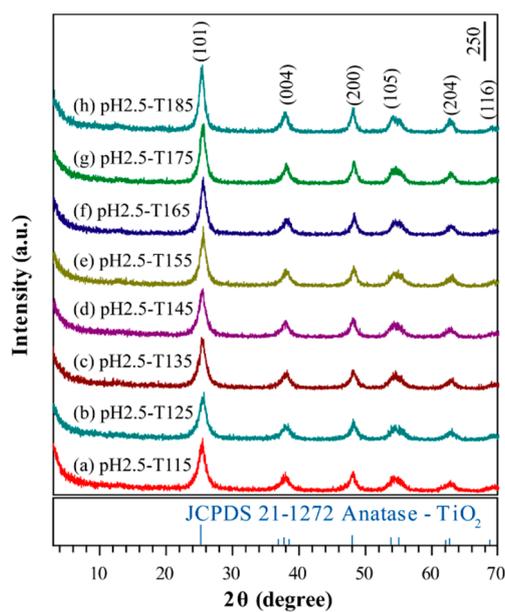


Figure S3. Evolution of the XRD patterns of the TiO₂ nanocrystals samples synthesized at pH = 2.5 and various temperatures.

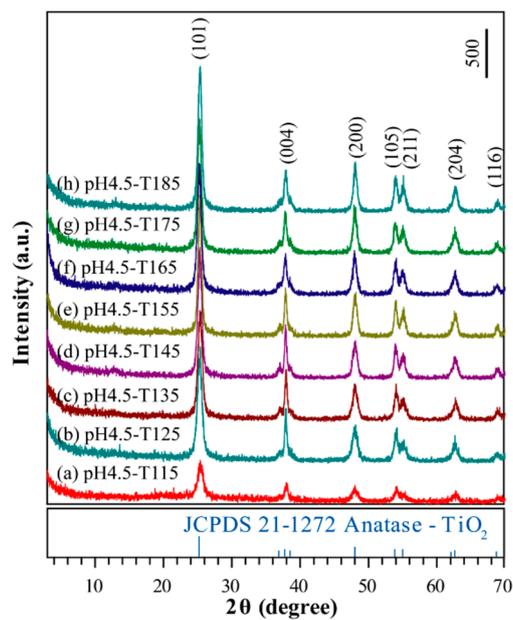


Figure S4. Evolution of the XRD patterns of the TiO₂ nanocrystals samples synthesized at pH = 4.5 and various temperatures.

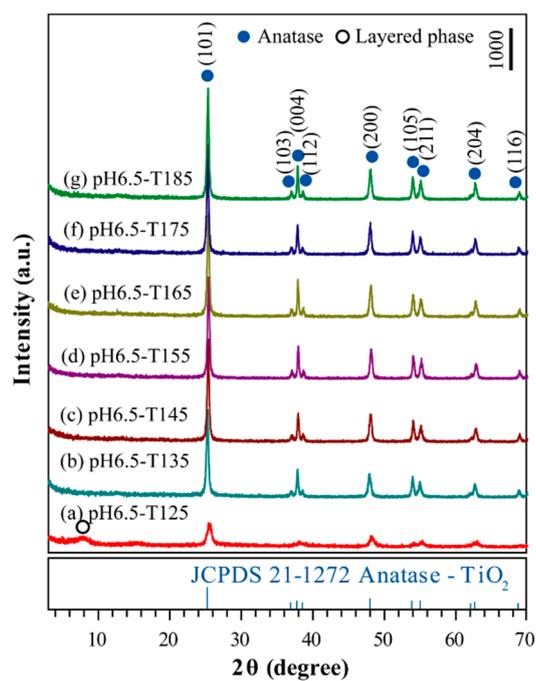


Figure S5. Evolution of the XRD patterns of the TiO₂ nanocrystals samples synthesized at pH = 6.5 and various temperatures.

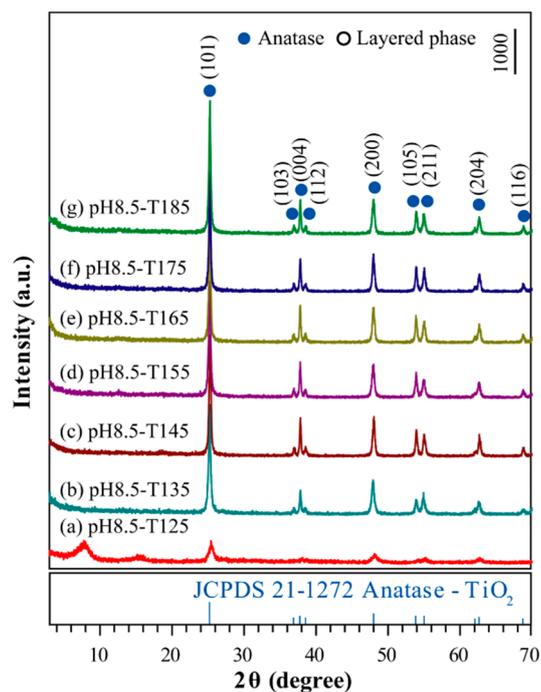


Figure S6. Evolution of the XRD patterns of the TiO₂ nanocrystals samples synthesized at pH = 8.5 and various temperatures.

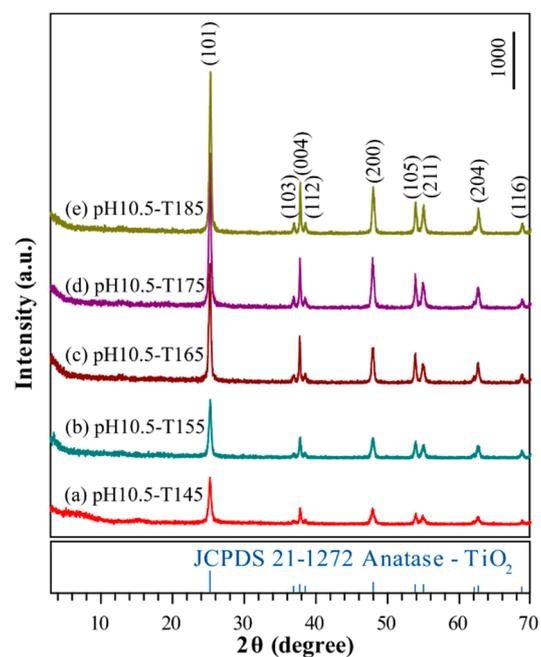


Figure S7. Evolution of the XRD patterns of the TiO₂ nanocrystals samples synthesized at pH = 10.5 and various temperatures.

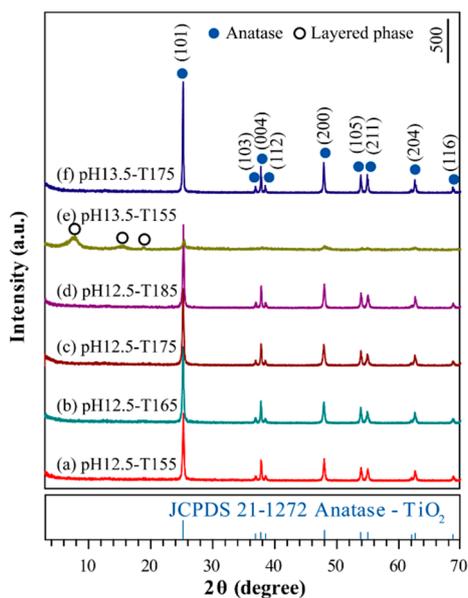


Figure S8. Evolution of the XRD patterns of the TiO_2 nanocrystals samples synthesized at pH = 12.5, 13.5 and various temperatures.

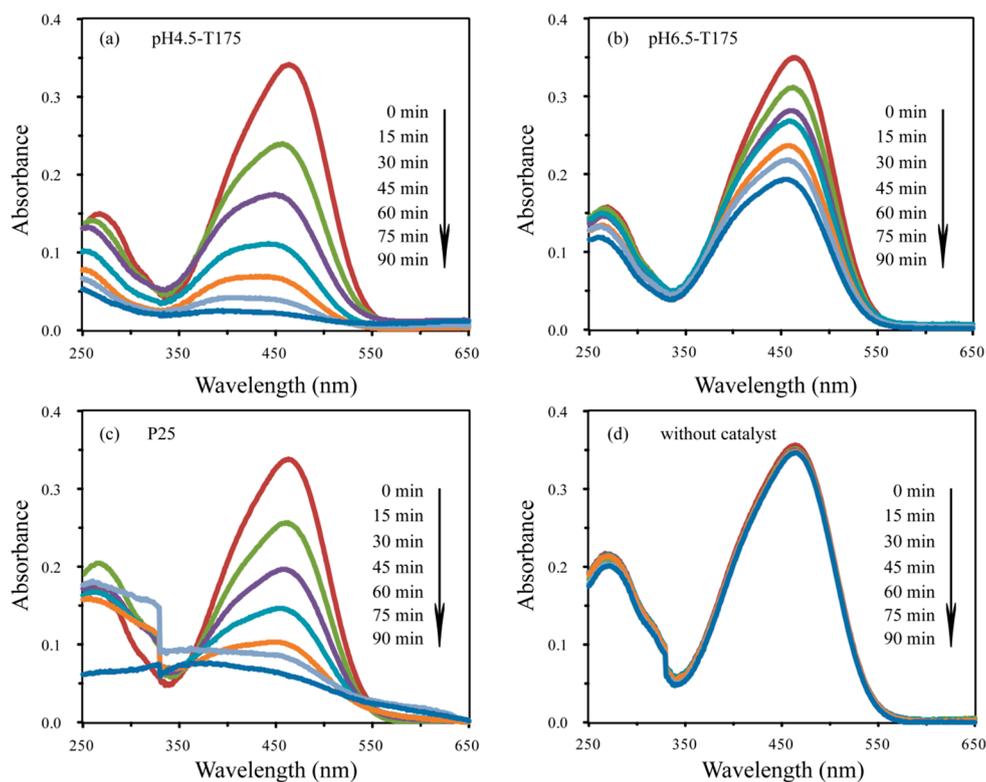


Figure S9. UV-vis spectral changes of MO solutions as a function of UV irradiation time in the presence of (a) pH4.5-T175, (b) pH6.5-T175, (c) P25 photocatalysts and (d) absence of photocatalyst.

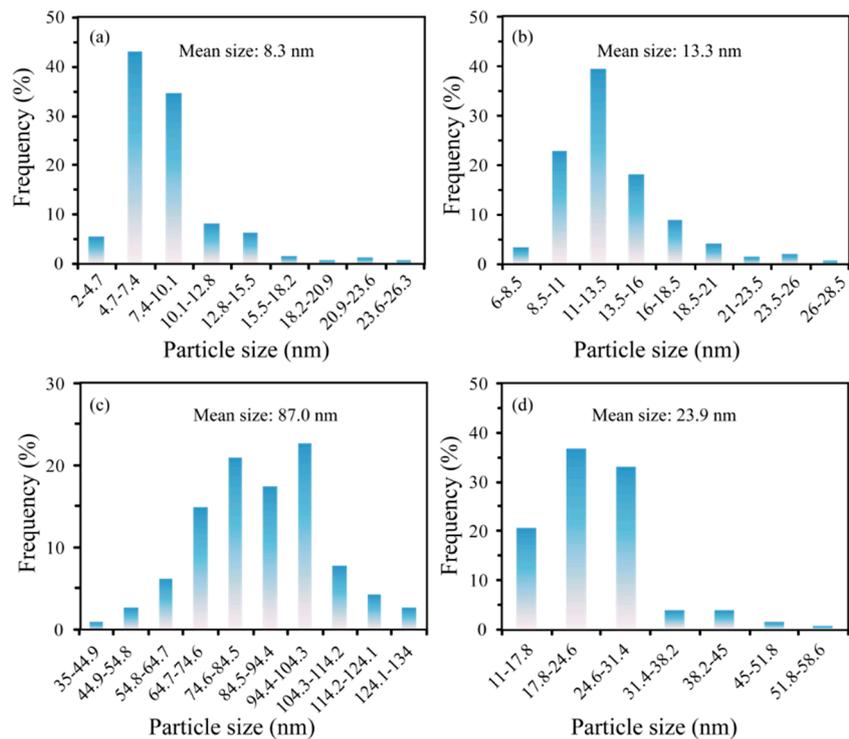


Figure S10. Particles size distributions of (a) pH2.5-T175, (b) pH4.5-T175, (c) pH6.5-T175, and (d) P25.