## **Supplementary Information**

Bottom-up assembly of recyclable van der Waals-integrated photocatalysts towards efficient photoelectrocatalytic degradation

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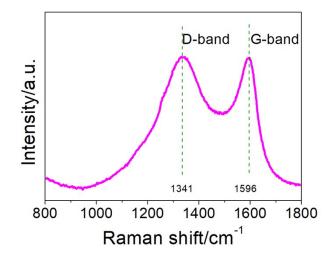


Figure S1. Raman spectra of P25@AC core/shell nanospheres.

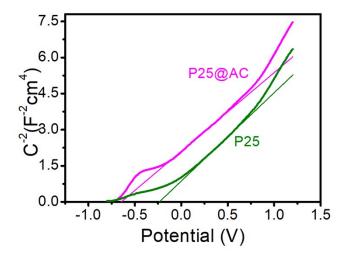


Figure S2. Mott-Schottky plots of P25 and TiO<sub>2</sub>@AC core-shell nanosphere.

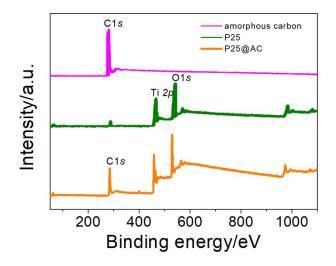


Figure S3. The survey XPS spectrum of amorphous carbon, commercial P25, and P25@AC core-

shell nanospheres.

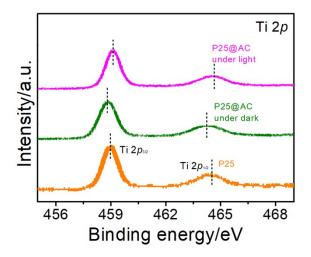


Figure S4. High-resolution XPS spectra of Ti 2p.

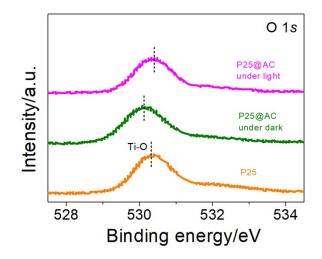


Figure S5. High-resolution XPS spectra of O 1s.

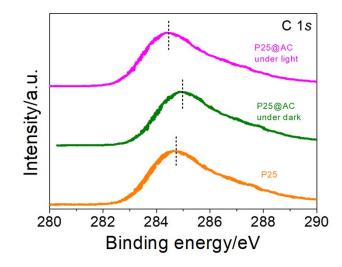


Figure S6. High-resolution XPS spectra of C 1s.