

Assembly of recyclable TiO₂@AC/CTs through vdW-integrated strategy for photocatalytic and photoelectrocatalytic oxidation

Hua-jun Chen,[†] Jian-zhou Zhang,[†] Xiao-jing Xi,^{†*} Wen-jie Tian*

School of Environmental Engineering and Chemistry, Luoyang Institute of Science and Technology, Luoyang 471023, China.

[†]The first three authors contributed equally to this work.

***Corresponding Authors**

E-mail: xiaojing-xi@163.com (XJX); 200900700459@lit.edu.cn (WJT)

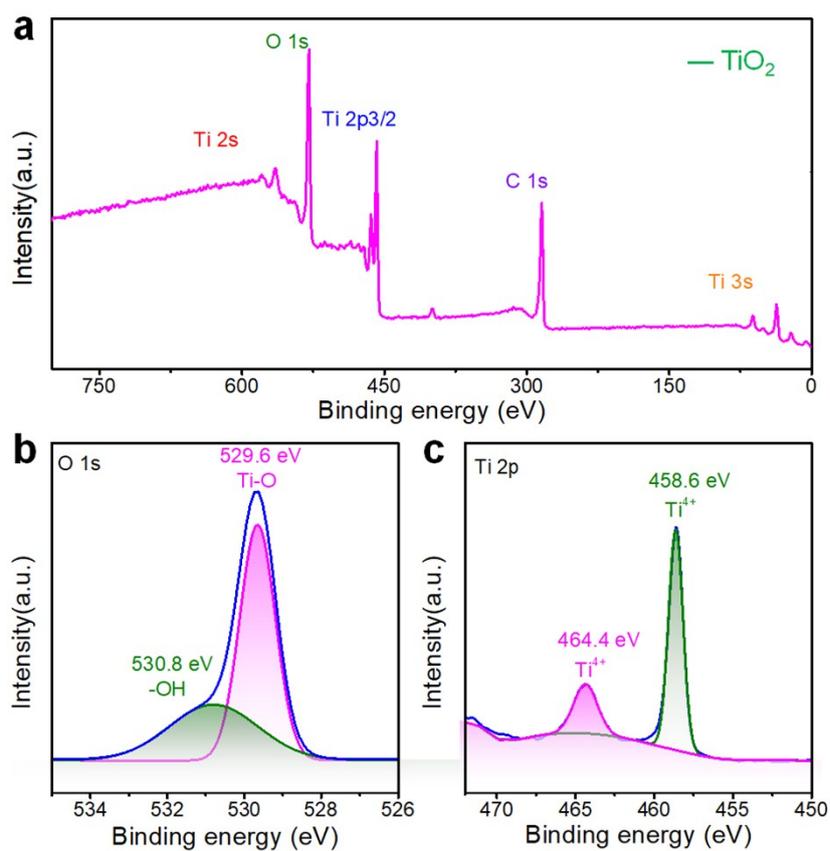


Figure S1 XPS full spectra of TiO₂ nanosphere (a), and their O 1s (b), T 2p (c) spectrum.

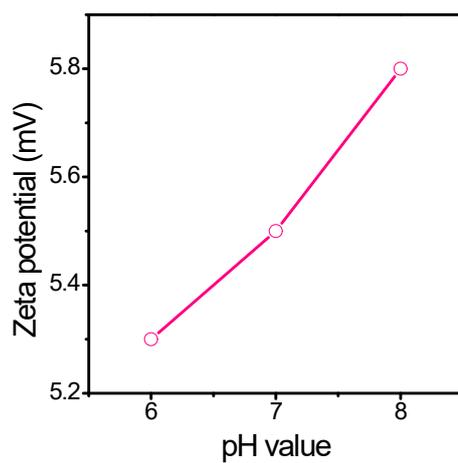


Figure S2 Effect of pH on Zeta potential of TiO₂@AC core-shell nanosphere.

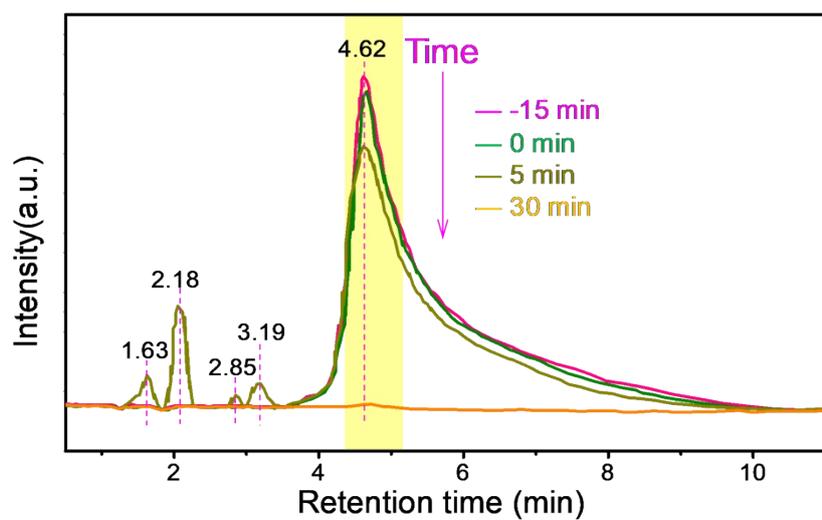


Figure S3 HPLC results of methylene blue at different times during photoelectrocatalytic process.

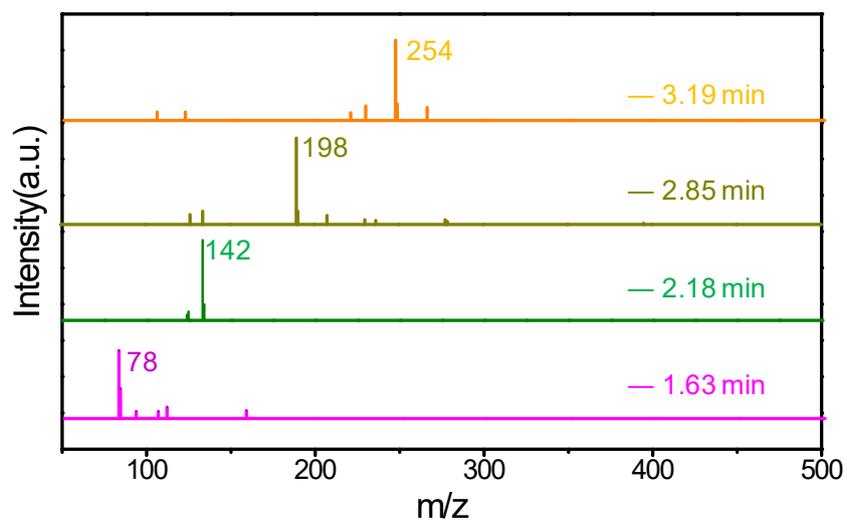


Figure S4 High-resolution mass spectra at a different retention time.

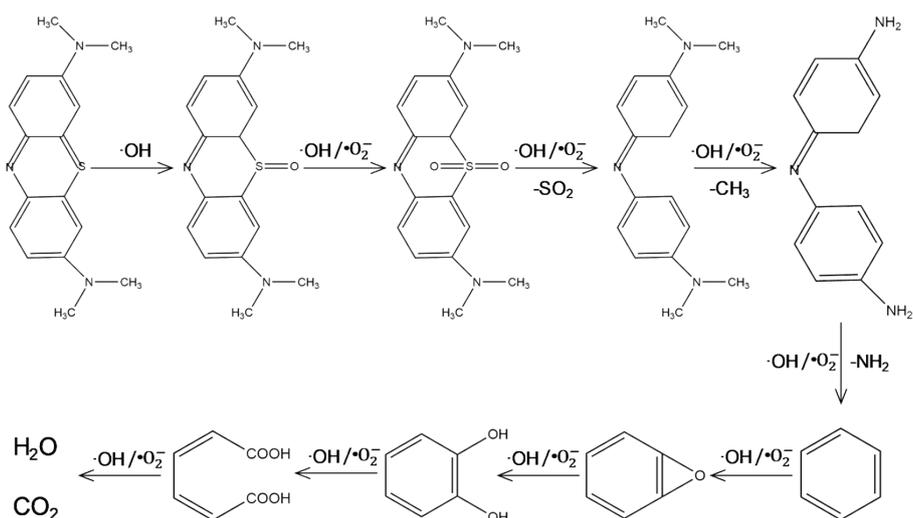


Figure S5 The degradation pathways of methylene blue during photoelectrocatalytic process.

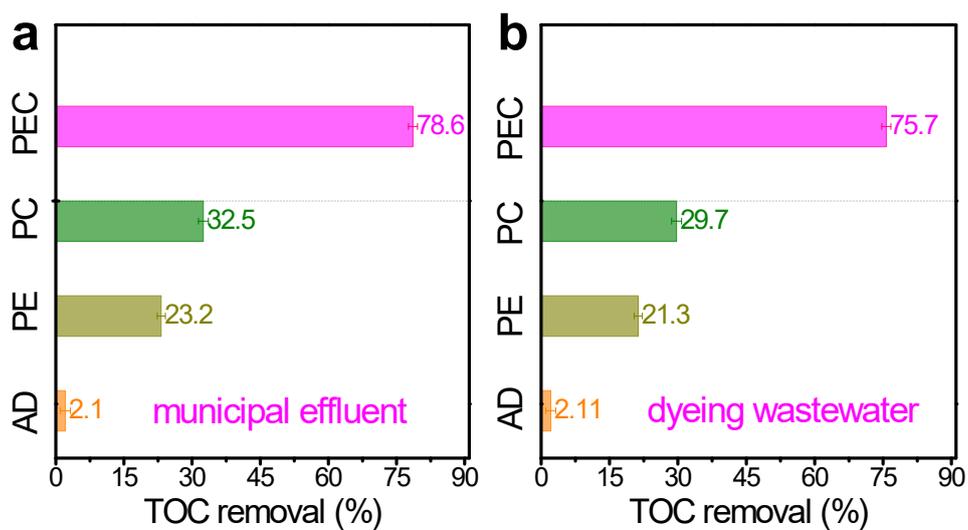


Figure S6 TOC removal efficiency of the actual wastewater during photoelectrocatalysis, photocatalysis, electrocatalysis, and adsorption of $\text{TiO}_2@\text{AC}/\text{CTs}$ system.