

Enhanced photocatalytic activity toward organic pollutants degradation and mechanism insight of novel CQDs/Bi₂O₂CO₃ composite

Zisheng Zhang ^{1,2,*}, Shuanglong Lin ¹, Xingang Li ^{1,3}, Hong Li ¹, Tong Zhang ⁴ and Wenquan Cui ^{4,*}

- ¹ School of Chemical Engineering and Technology, Tianjin University, Tianjin 300072, China; linshuanglong15@126.com (S.L.); lxg@tju.edu.cn (X.L.); lihong.tju@163.com (H.L.)
 - ² College of Chemical Engineering, North China University of Science and Technology, Tangshan 063009, China
 - ³ National Engineering Research Center of Distillation Technology, Tianjin 300072, China
 - ⁴ Department of Chemical & Biological Engineering, University of Ottawa, 161 Louis Pasteur St., Ottawa K1N6N5, Canada; zhangt@126.com
- * Correspondence: zzhang@uottawa.ca (Z.Z.); wkcui@163.com (W.C.); Tel.: +001-613-796-9771 (Z.Z.); +86-315-2592169 (W.C.)

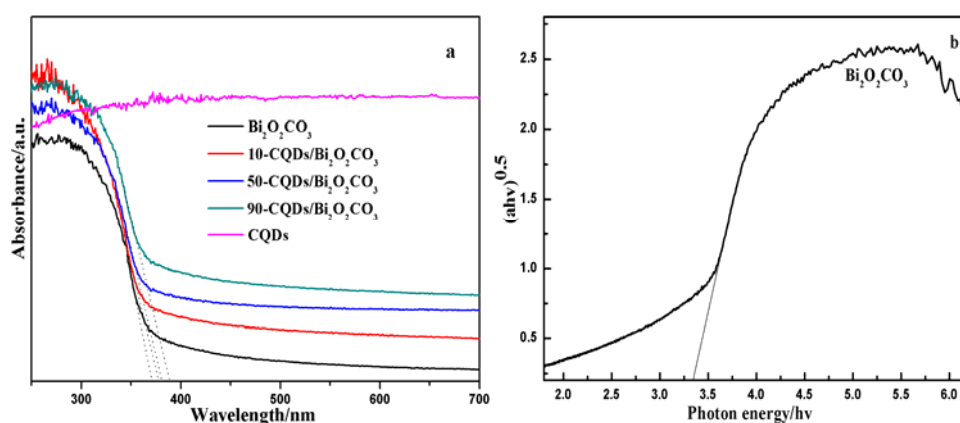


Figure S1. (a) UV-vis diffuse reflectance spectrum (DRS) and (b) the band gap energies (E_g) of Bi₂O₂CO₃ and different CQDs/Bi₂O₂CO₃ samples.

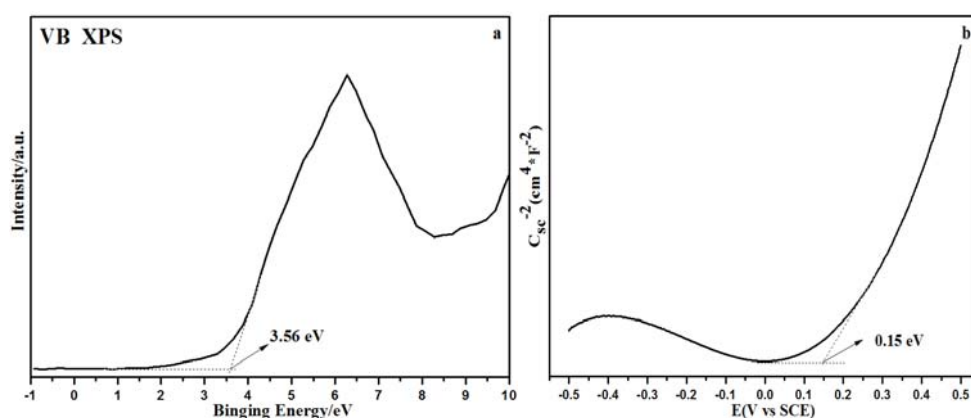


Figure S2. (a) Valence band X-ray photoelectron spectroscopy (VB XPS) spectrum of Bi₂O₂CO₃. (b) Mott-Schottky (MS) plots of Bi₂O₂CO₃ photoelectrode

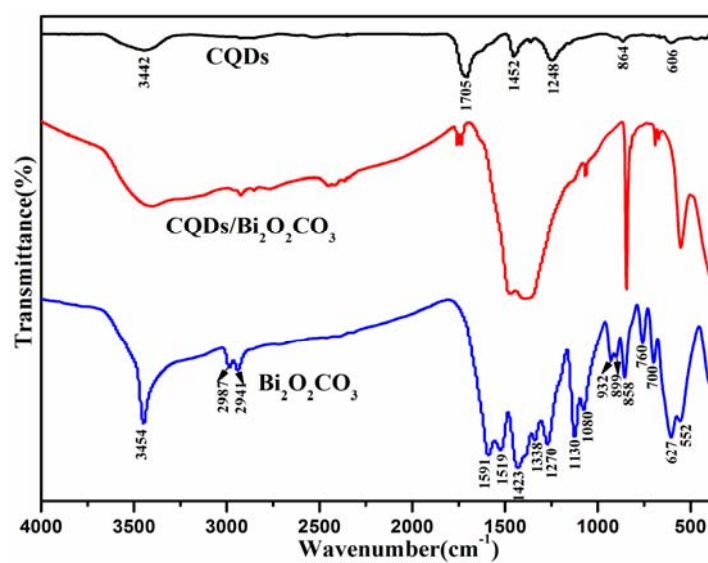


Figure S3. FT-IR spectra of CQDs, Bi₂O₂CO₃ and CQDs/Bi₂O₂CO₃ samples.

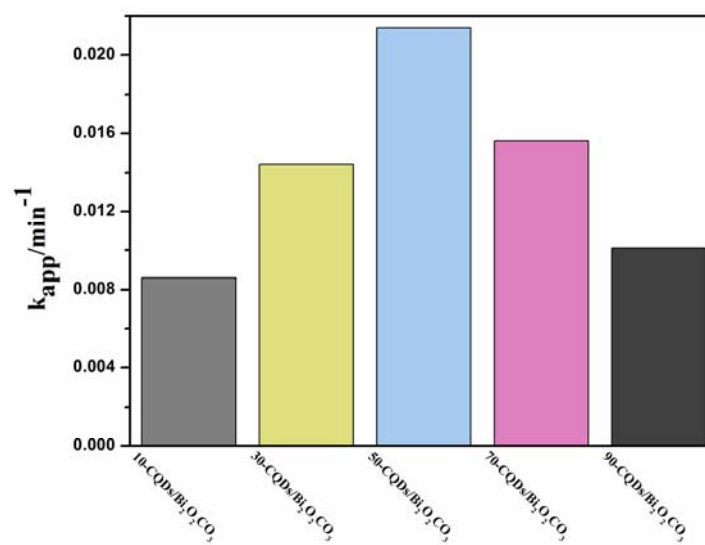


Figure S4. kinetic constant for the degradation of MB with the CQDs/Bi₂O₂CO₃ composites prepared with different amounts of CQDs