

Supplementary information

Enhancement of Photocatalytic Activity of TiO₂/Carbon Aerogel Based on Hydrophilic Secondary Pore Structure

Hua`nan Cui,^a Zhenxing Liang,^b JinZhong Zhang,^c Hong Liu^a and Jianying Shi^{*a}

- a.* Key Laboratory of Environment and Energy Chemistry of Guangdong Higher Education Institutes, School of Chemistry and Chemical Engineering, Sun Yat-sen University, Guangzhou 510275, China. E-mail: shijying@mail.sysu.edu.cn.
- b.* Guangdong Provincial Key Laboratory of Fuel Cell Technology, School of Chemistry and Chemical Engineering, South China University of Technology, Guangzhou 510641, China
- c.* Department of Chemistry and Biochemistry, University of California, Santa Cruz, CA 95064, USA

1. Thermogravimetry (TG) and differential thermal gravity (DTG)

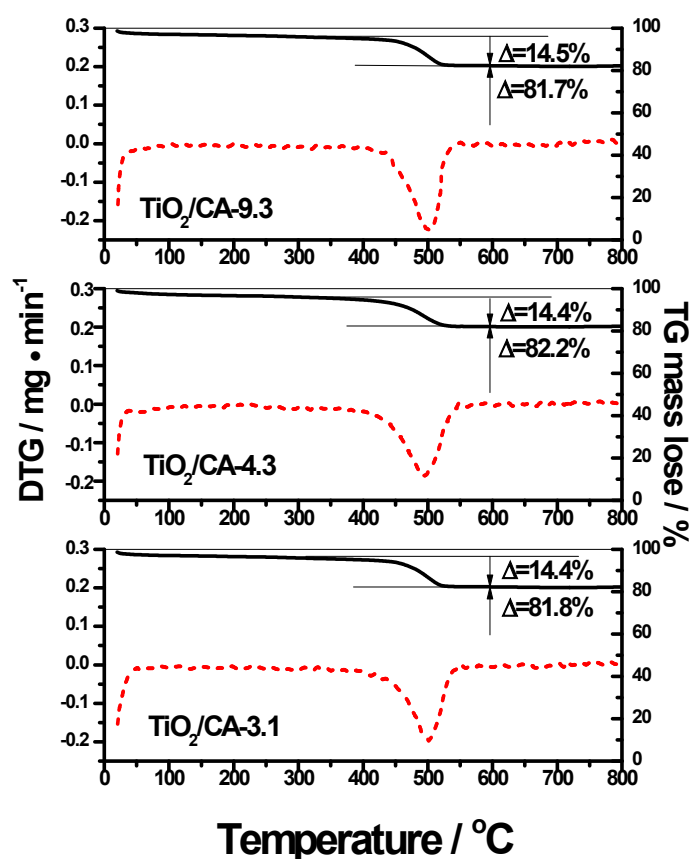


Fig. S1. TG and DTG analysis of TiO₂/CA-X.

2. X-ray diffraction of pristine TiO_2 , $\text{TiO}_2/\text{CA-X}$ and CA-X .

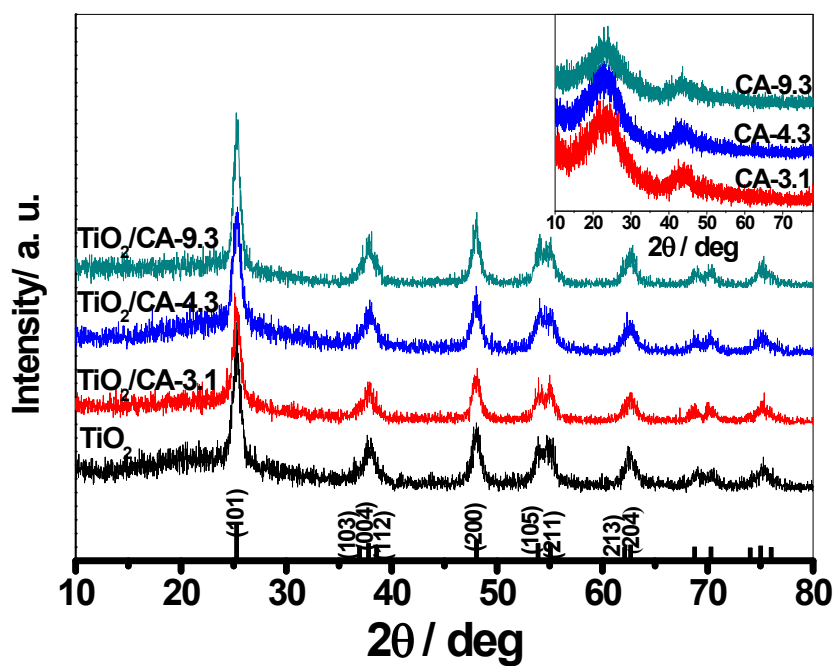


Fig. S2. XRD patterns of $\text{TiO}_2/\text{CA-X}$ samples, pure TiO_2 and carbon aerogels (inserted).

3. UV-Vis absorption spectra.

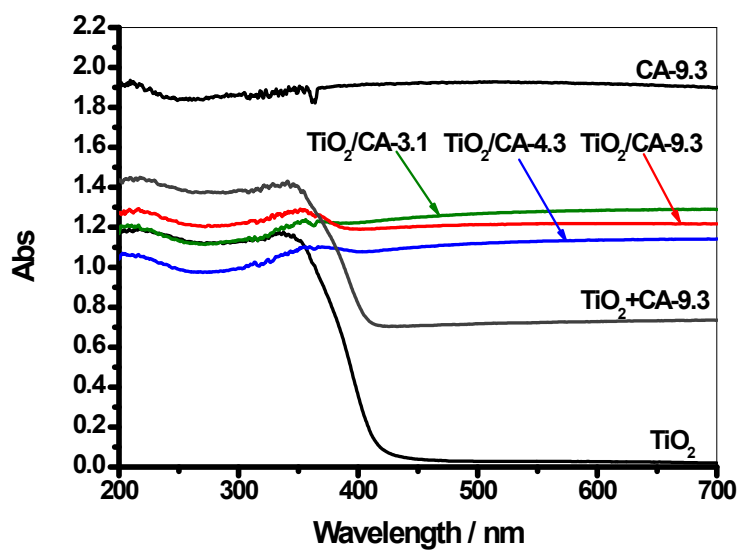


Fig. S3. Diffuse reflection spectra of $\text{TiO}_2/\text{CA-3.1}$, $\text{TiO}_2/\text{CA-4.3}$, $\text{TiO}_2/\text{CA-9.3}$, TiO_2 , and CA-9.3 .

4. Identification of intermediates.

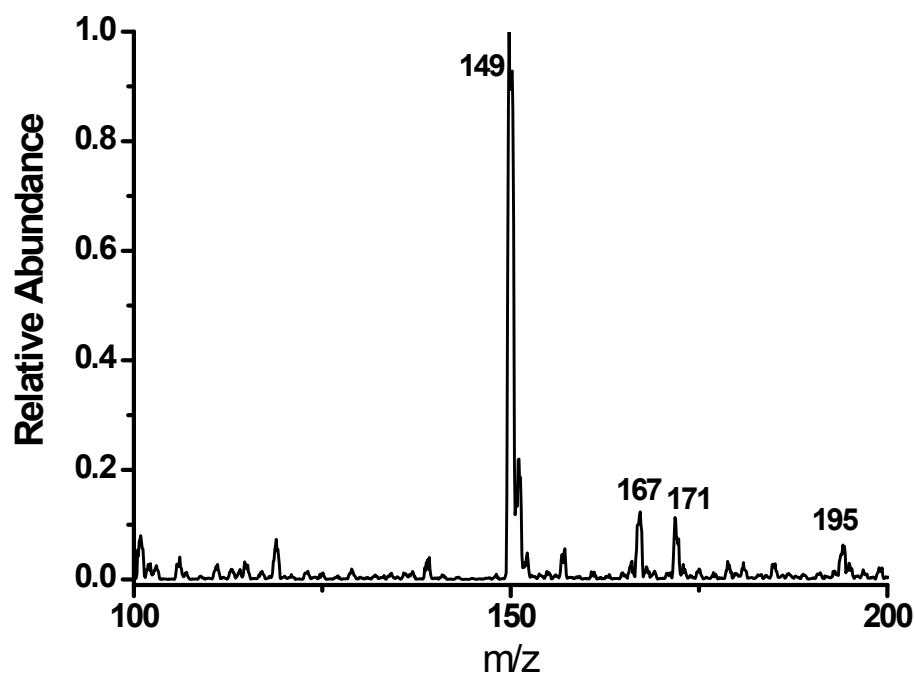


Fig. S4. Electrospray mass spectra in the positive mode recorded during photocatalytic process.

5. Mineralization of DMP.

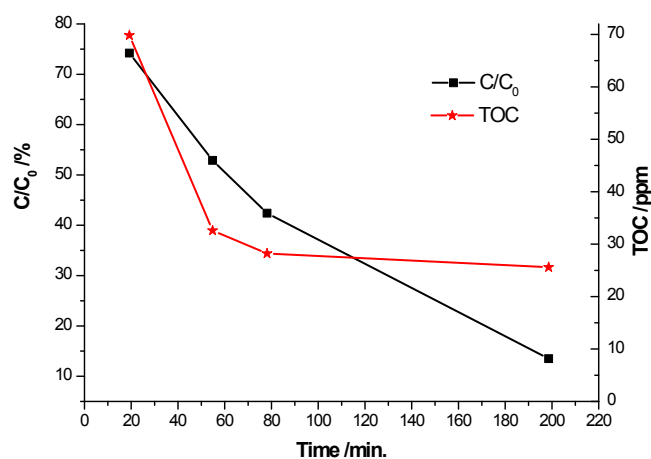


Fig. S5. Time variations of TOC concentration and DMP degradation percentage in $\text{TiO}_2/\text{CA-9.3}$ catalyst.