

Supplementary Information

The synergistic role of carbon quantum dots for the improved photocatalytic performances of Bi_2MoO_6

Jun Di, Jiexiang Xia*, Mengxia Ji, Hongping Li, Hui Xu, Huaming Li*, Rong Chen

School of Chemistry and Chemical Engineering, Institute of Energy, Jiangsu
University, 301 Xuefu Road, Zhenjiang, 212013, P. R. China

*Corresponding author: Tel.:+86-511-88791108; Fax: +86-511-88791108;

E-mail address: xjx@ujs.edu.cn; lhm@ujs.edu.cn

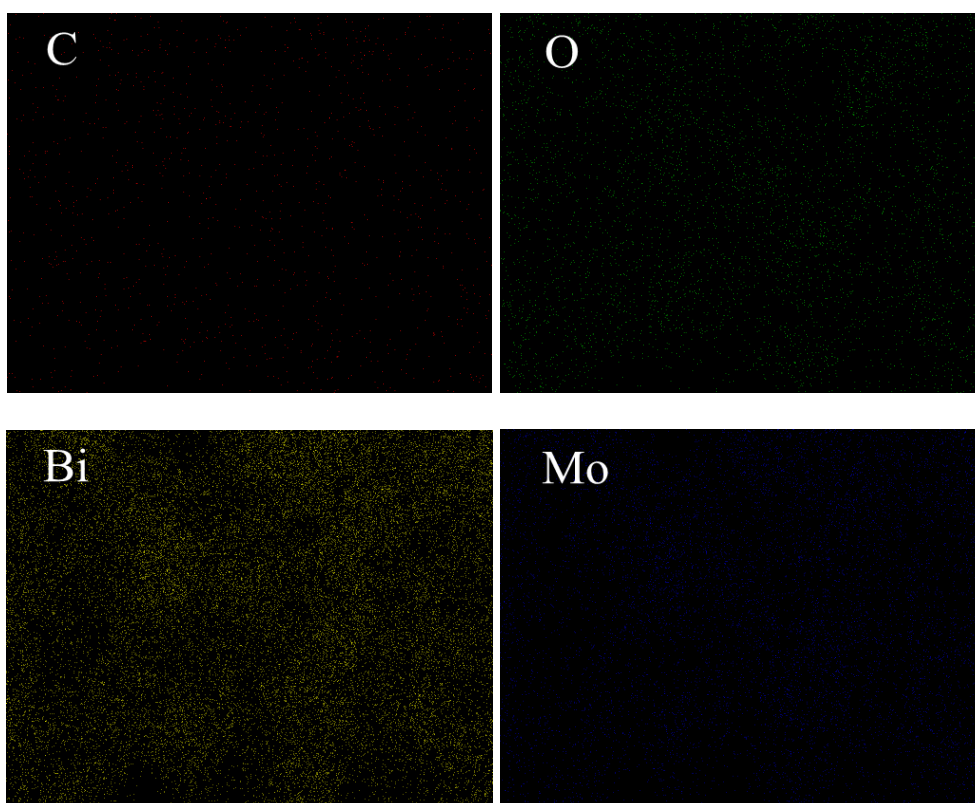
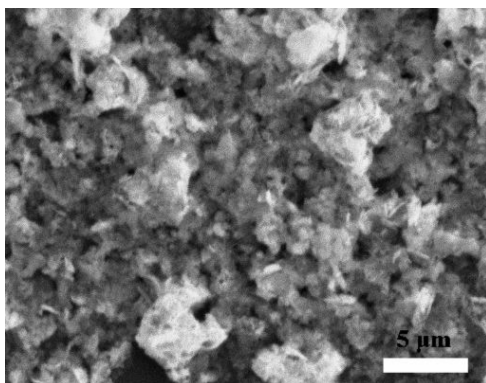


Figure S1 Typical SEM image of 2 wt% CQDs/Bi₂MoO₆ materials and corresponding elemental mapping images of C, O, Bi, and Mo.

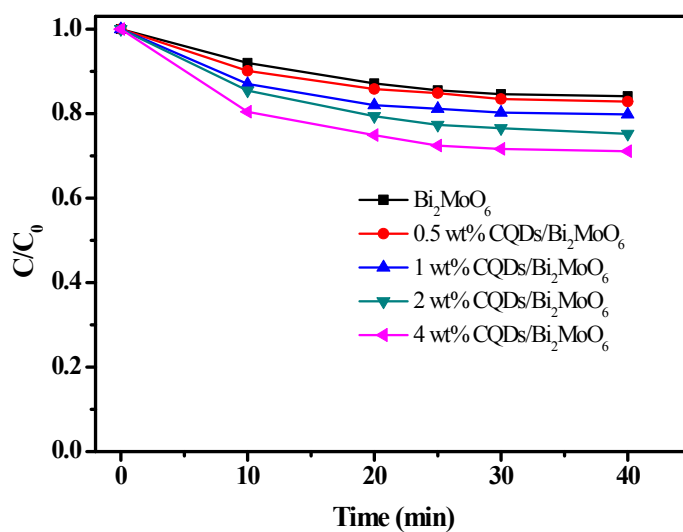


Figure S2 Time profiles of adsorption of CIP over CQDs/Bi₂MoO₆ materials with different CQDs contents.

Table 1. Pseudo-first-order rate constant for CIP photocatalytic oxidation under different photocatalysts.

Series	Photocatalyst	The first order kinetic equation	k (min^{-1})	R^2
1	Bi ₂ MoO ₆	$-\ln(C/C_0)=0.0033 t$	0.0033	0.9953
2	0.5wt% CQDs/Bi ₂ MoO ₆	$-\ln(C/C_0)=0.0112 t$	0.0112	0.9917
3	1wt% CQDs/Bi ₂ MoO ₆	$-\ln(C/C_0)=0.0130 t$	0.0130	0.9906
4	2wt% CQDs/Bi ₂ MoO ₆	$-\ln(C/C_0)=0.0188 t$	0.0188	0.9903
5	4wt% CQDs/Bi ₂ MoO ₆	$-\ln(C/C_0)=0.0155 t$	0.0155	0.9934