Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.
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Supporting Information

The photocatalytic phenol degradation mechanism of the Ag-modified ZnO nanorods

Chang Feng,[acde] Zhuoyuan Chen,*[abde] Jiangping Jing,[ade] Jian Hou[b]

[a]Key Laboratory of Marine Environmental Corrosion and Bio-fouling, Institute of Oceanology, Chinese Academy of Sciences, 7 Nanhai Road, Qingdao 266071, China

[b]State Key Laboratory for Marine Corrosion and Protection, Luoyang Ship Material Research Institute (LSMRI), Wenhai Road, Qingdao 266237, China

[c]University of Chinese Academy of Sciences, 19 (Jia) Yuquan Road, Beijing 100039, China

[d]Center for Ocean Mega-Science, Chinese Academy of Sciences, 7 Nanhai Road, Qingdao 266071, China

[e]Open Studio for Marine Corrosion and Protection, Pilot National Laboratory for Marine Science and Technology (Qingdao), No. 1 Wenhai Road, Qingdao, 266237, China

*Corresponding author: Prof. Zhuoyuan Chen; Email: zychen@qdio.ac.cn; Tel: +86-0532-82898731; Fax: +86-0532-82880498

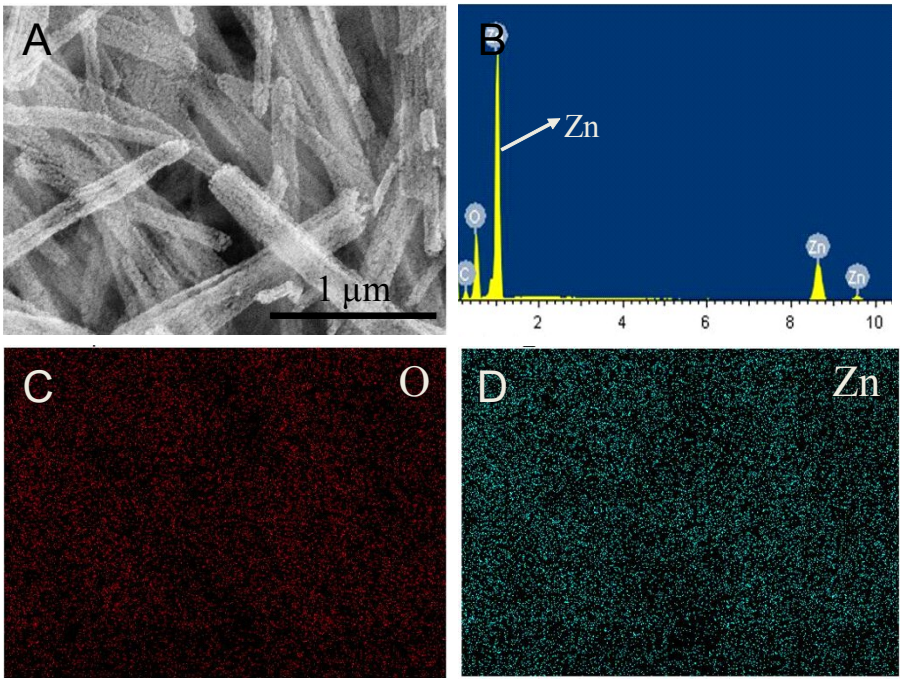

Figure S1. The SEM image (A), EDS spectrum (B) and EDS elemental mapping (C: Oxygen, D: Zinc) of ZnO NRs.

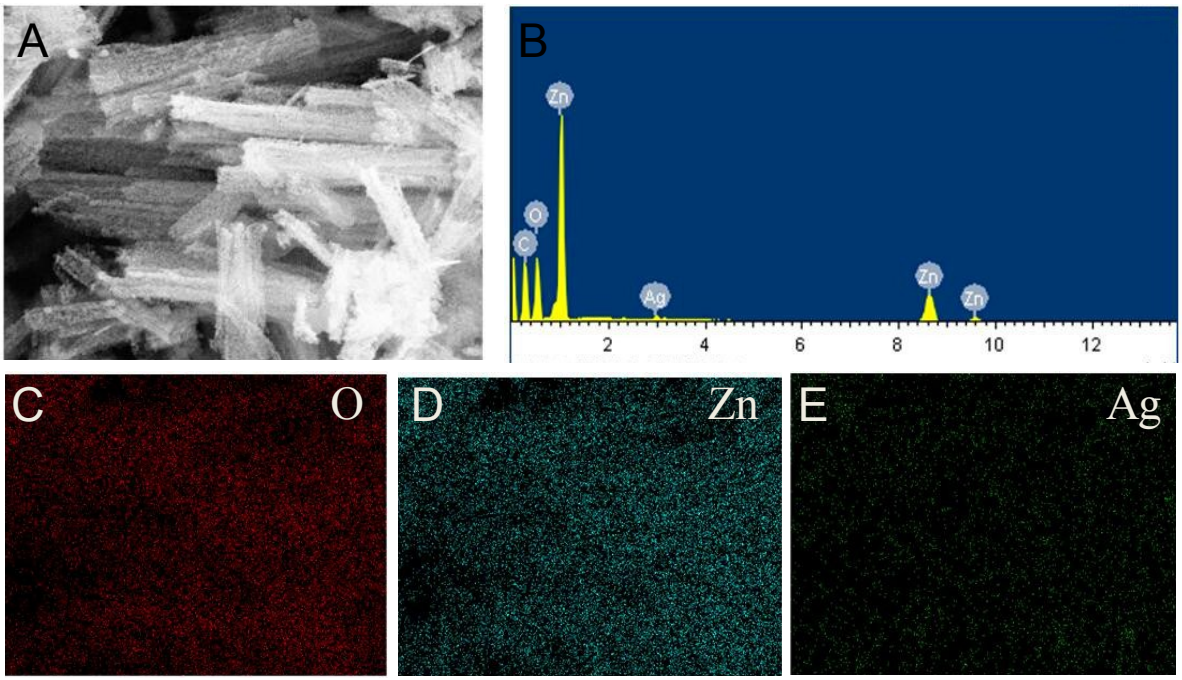

Figure S2. The SEM image (A), EDS spectrum (B) and EDS elemental mapping (C: Oxygen, D: Zinc, E: Silver) of ZnO/Ag.

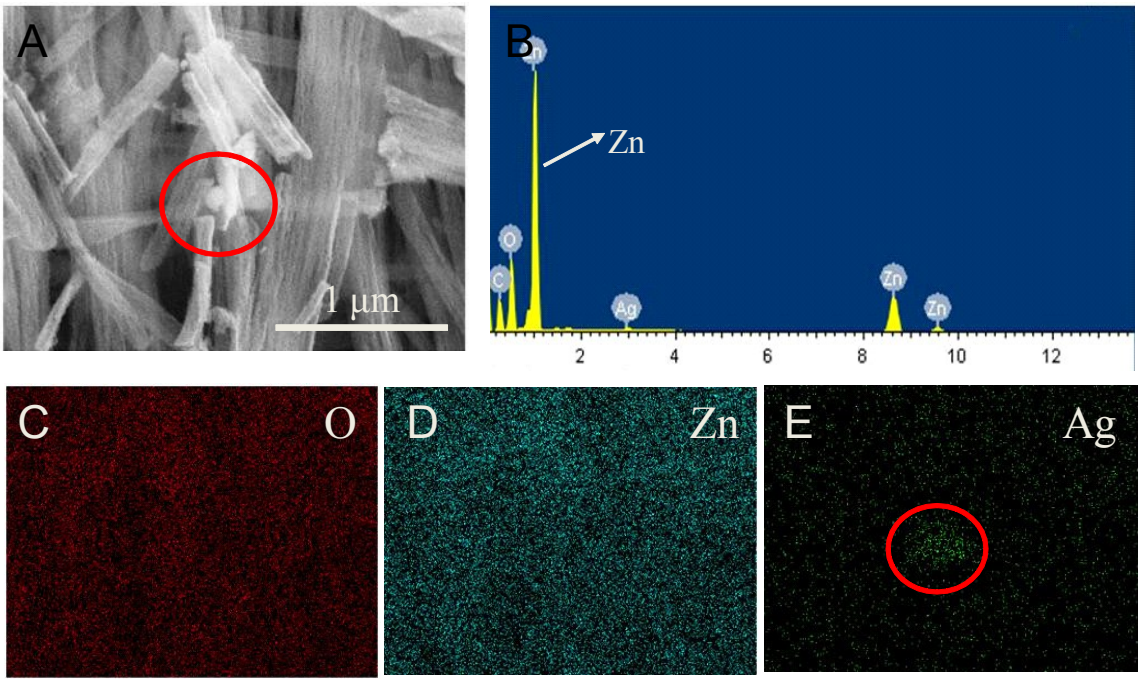

Figure S3. The SEM image (A), EDS spectrum (B) and EDS elemental mapping (C: Oxygen, D: Zinc, E: Silver) of $ZnO/Ag/Ag_2O$.

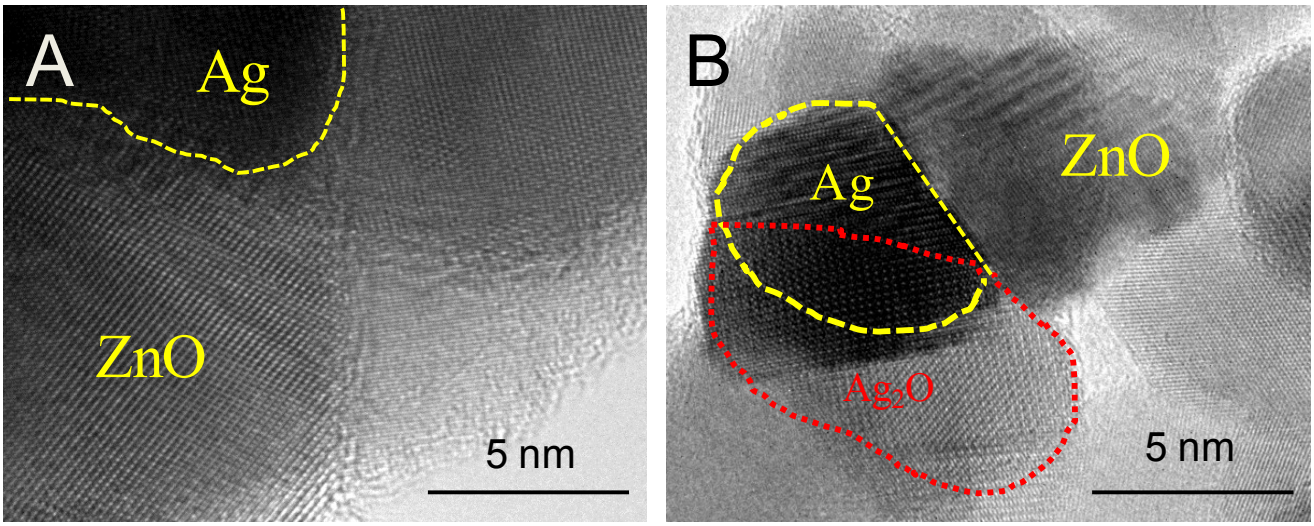

Figure S4. HRTEM images of ZnO/Ag (A) and $ZnO/Ag/Ag_2O$ (B).

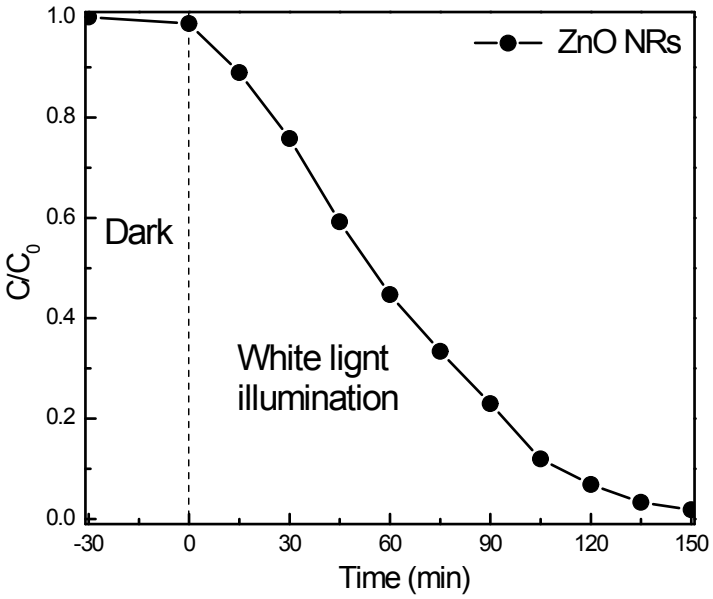

Figure S5. Effect of ZnO NRs photocatalyst on phenol degradation under white light illumination.

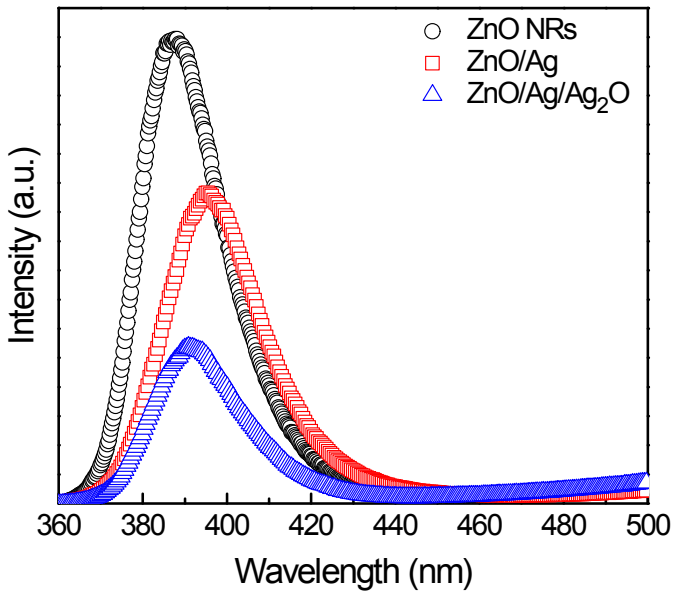

Figure S6. Micro-photoluminescence spectra of ZnO NRs, ZnO/Ag and ZnO/Ag/Ag_2O.

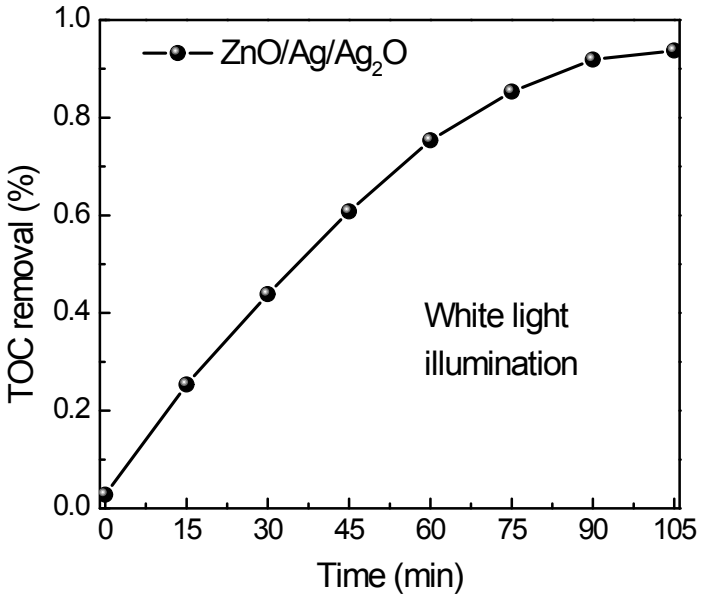

Figure S7. TOC removal efficiency in the presence of ZnO/Ag/Ag_2O under white light irradiation.

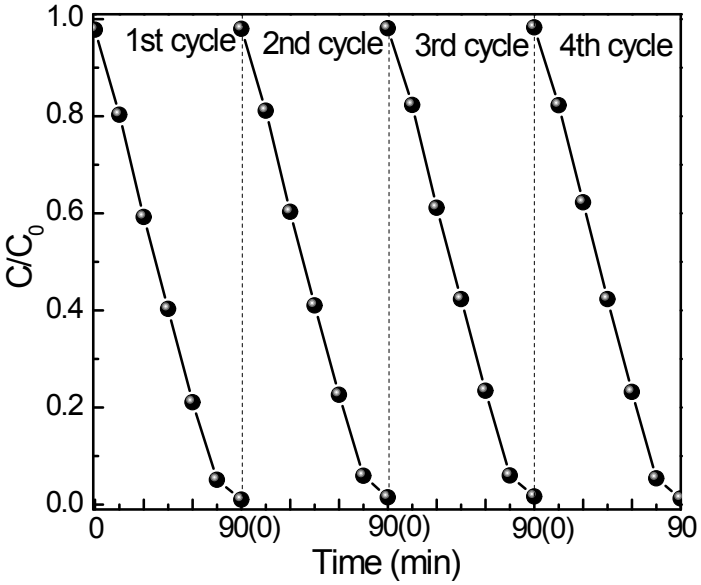

Figure S8. The cyclic photocatalytic phenol degradation test of ZnO/Ag/Ag_2O under white light irradiation.

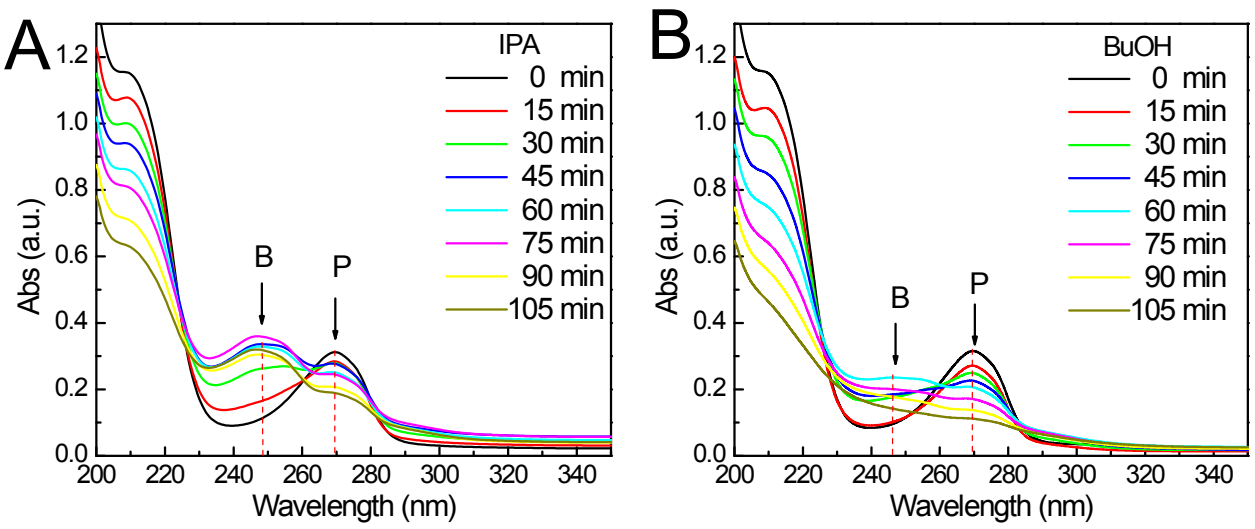

Figure S9. UV absorption spectra of phenol illuminated by white light for various durations in the presence of $ZnO/Ag/Ag_2O$ containing with IPA (A) or BuOH (B).