

Supporting information

Photocatalytic Oxidative Desulfurization of Thiophene by Exploiting a Mesoporous V_2O_5 -ZnO Nanocomposite as an Effective Photocatalyst

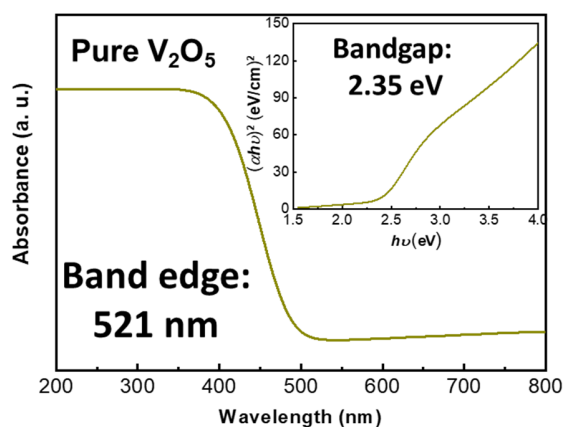


Figure S1. UV-Vis-NIR spectrum of pure V_2O_5 and estimated bandgap in the inset

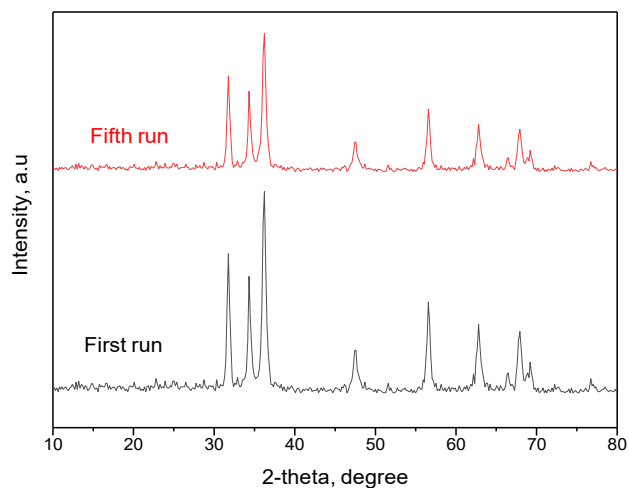


Figure S2. XRD patterns of the 3 wt % $\text{V}_2\text{O}_5/\text{ZnO}$ photocatalyst before and after photocatalytic reactions.

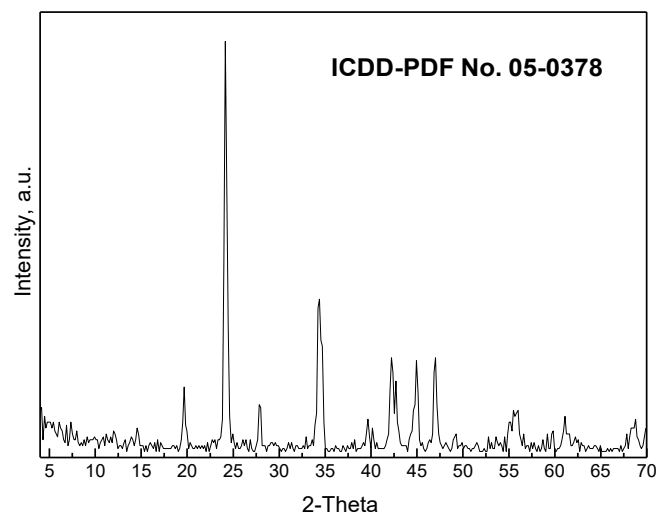


Figure S3. XRD patterns of the produced BaCO_3 .

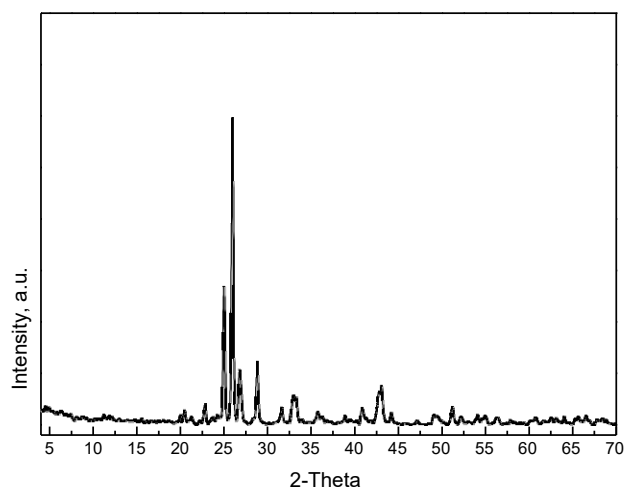


Figure S4. XRD patterns of the produced BaSO_4 (ICDD-PDF No. 24-1035)

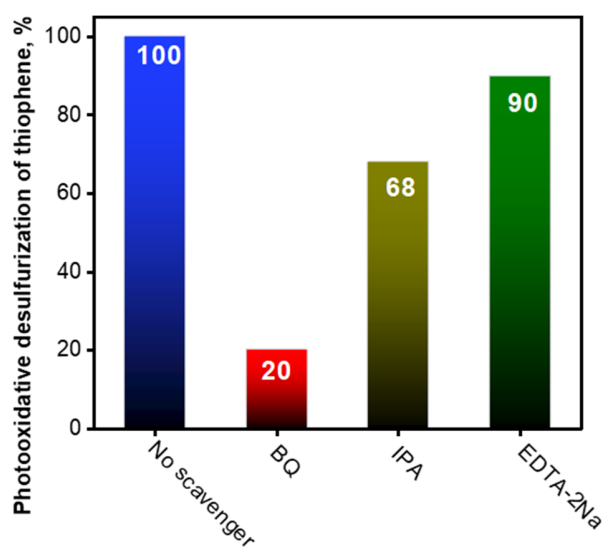


Figure S5. Photocatalytic oxidative desulfurization of thiophene over the optimized nanocomposites using different radical scavengers. The total desulfurization established without radical scavenger appeared in the first left bar. While the TPOD value was 20, 68, and 90% using 1,4-Benzoquinone (BQ, superoxide quenching), isopropanol (IPA, hydroxyl quenching), and EDTA Disodium Dihydrate (EDTA-2Na, hole scavenger), respectively