

Supplementary Material for
Graphene oxide mediated co-generation of C-doping and oxygen
defects in Bi₂WO₆: a combined DRIFTS and DFT investigation

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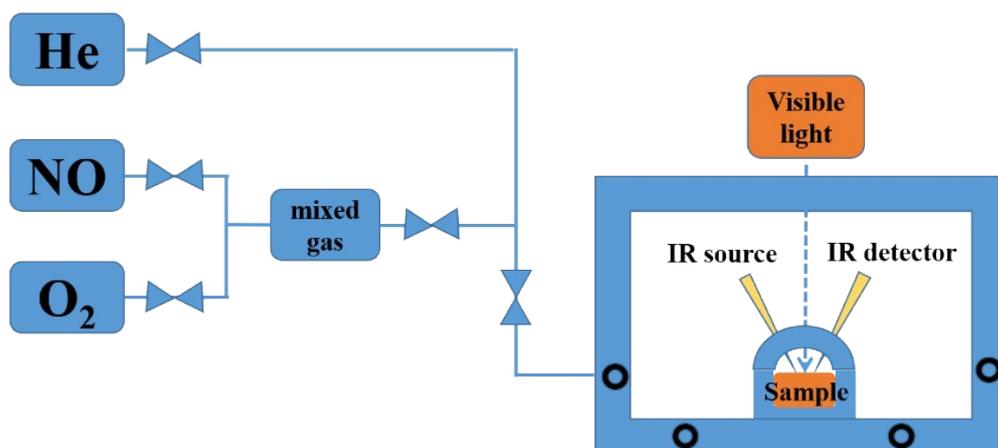


Fig. S1 Scheme of the designed reaction system for the *in situ* FT-IR signal recording.

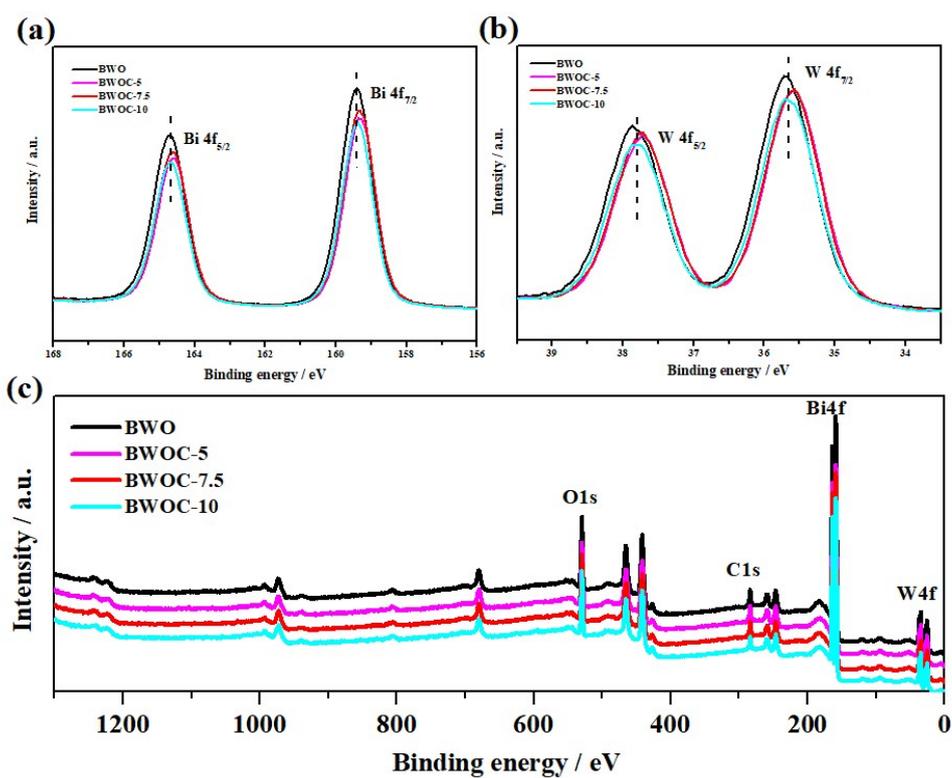


Fig. S2 XPS spectra of Bi 4f (a) and W 4f (b) and survey (c) for the as-prepared samples.

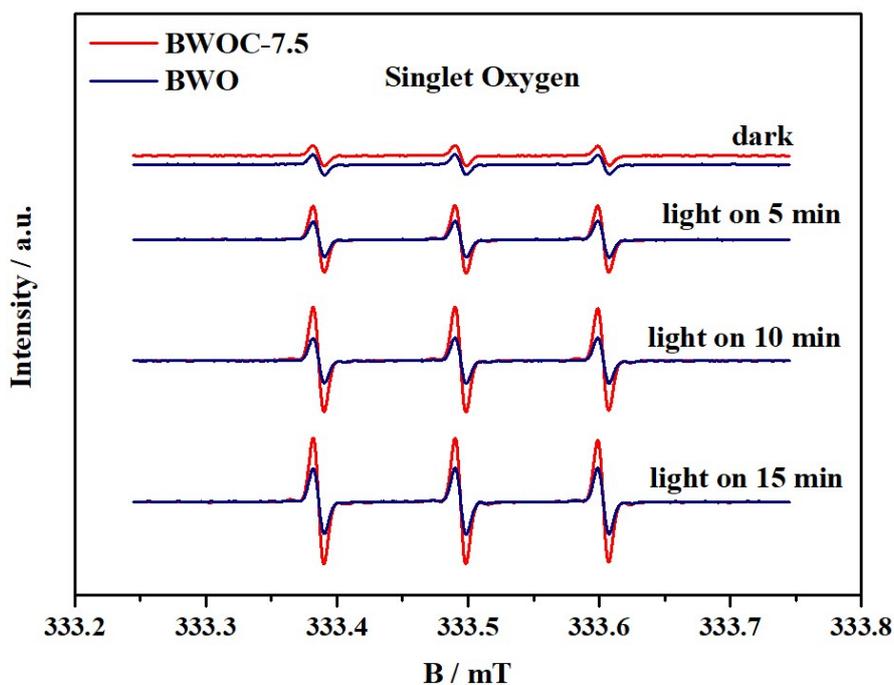


Fig. S3 DMPO ESR spin-trapping for singlet oxygen.

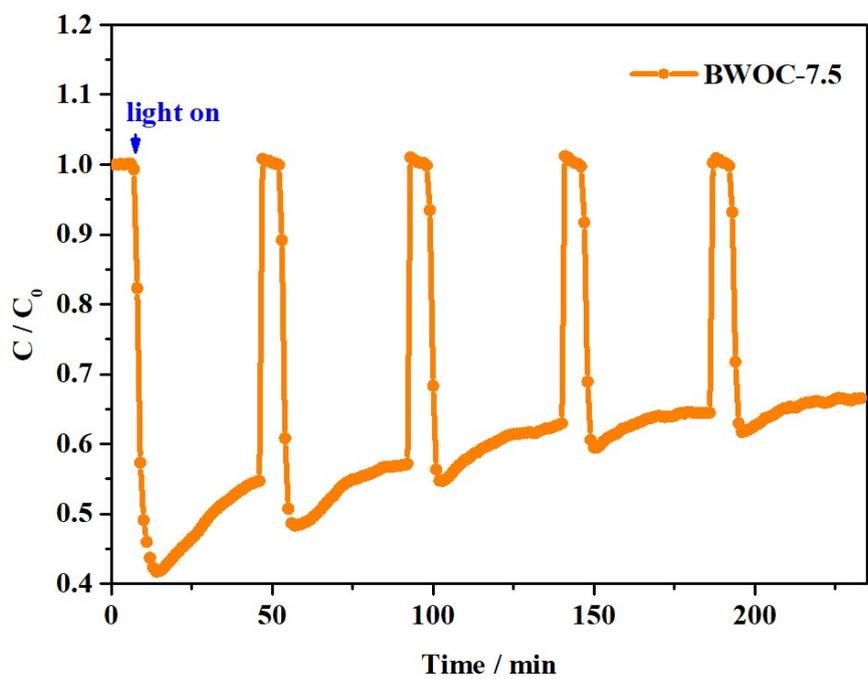


Fig. S4 Photocatalytic activity stability test of BWOC-7.5.

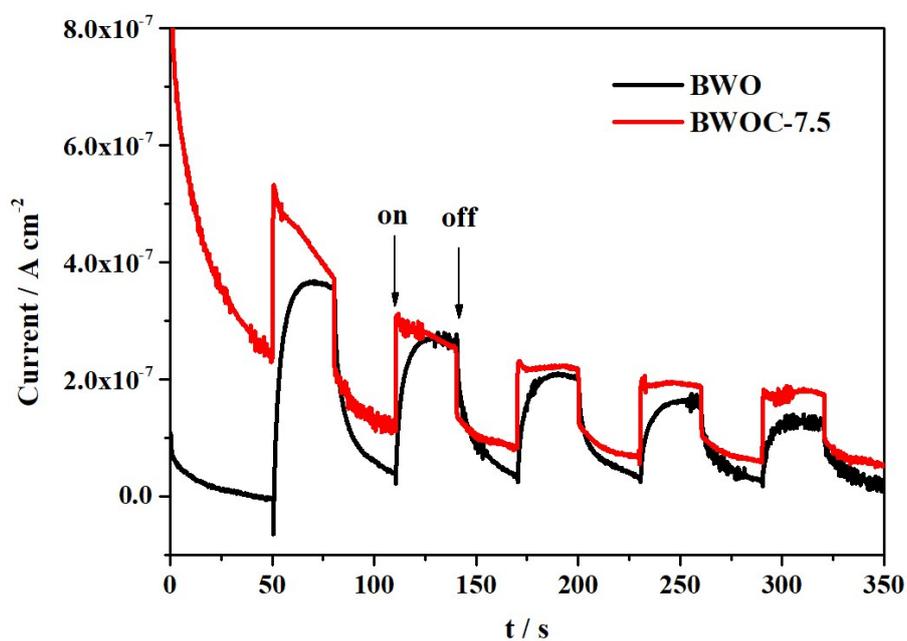


Fig. S5 Transient photocurrent density of BWO and BWOC-7.5.

Table S1 Summary of the specific surface areas, pore parameters of the as-prepared samples.

Samples	S_{BET}/m²·g⁻¹	Total volume/cm³·g⁻¹	Peak pore size/nm
BWO	26.32	0.14	21.50
BWOC-2	27.95	0.12	16.72
BWOC-5	28.41	0.15	20.72
BWOC-7.5	34.56	0.17	19.34
BWOC-10	33.37	0.15	18.19

Table S2 Assignments of the FT-IR bands observed during photocatalytic NO oxidation processes.

Wavenumber (cm⁻¹)	Band assignment
870, 1590	NO
1057	Monodentate NO ₂ ⁻
1519	Bidentate NO ₂ ⁻
1347, 1584	NO ₂ ⁻
1276	Monodentate NO ₃ ⁻
1000	Bridge NO ₃ ⁻
1446, 1492	Bidentate NO ₃ ⁻
817, 840, 1382	NO ₃ ⁻