

Supporting Information

In-situ S-doped ultrathin gC_3N_4 nanosheet coupled with mixed- dimensional (3D/1D) nanostructures of silver vanadates for enhanced photocatalytic degradation of organic pollutants

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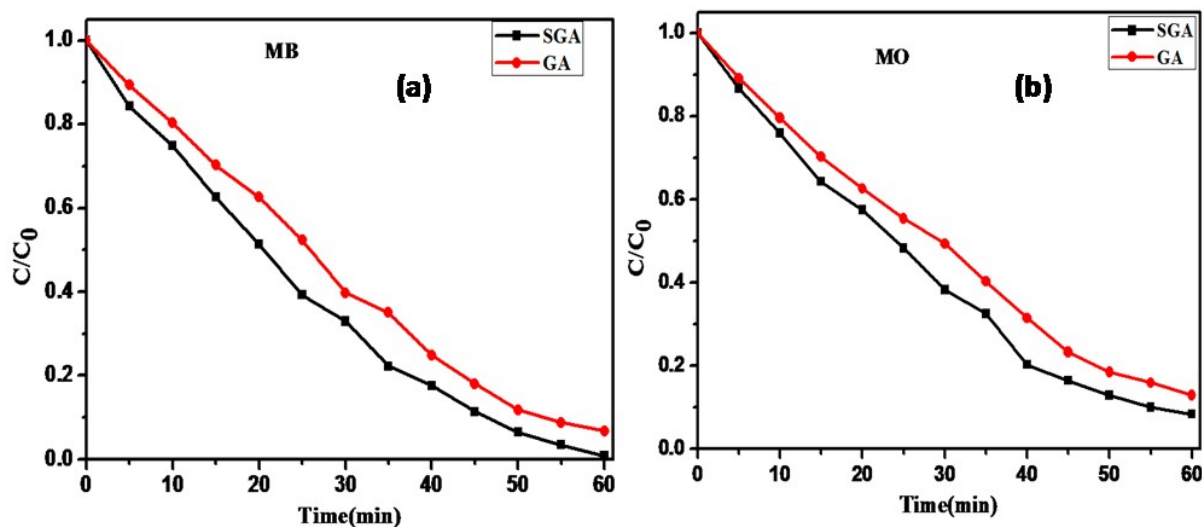


Figure S1- Photocatalytic degradation of (a) MB and (b) MO with S- gC_3N_4/Ag_3VO_4 (SGA) and gC_3N_4/Ag_3VO_4 (GA)

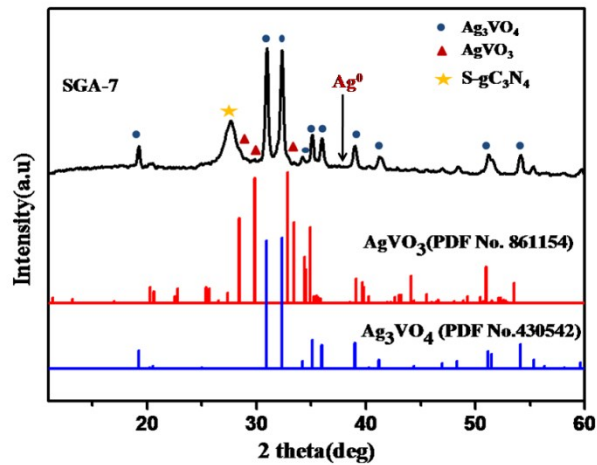


Figure S2 - XRD pattern showing the formation of β -AgVO₃

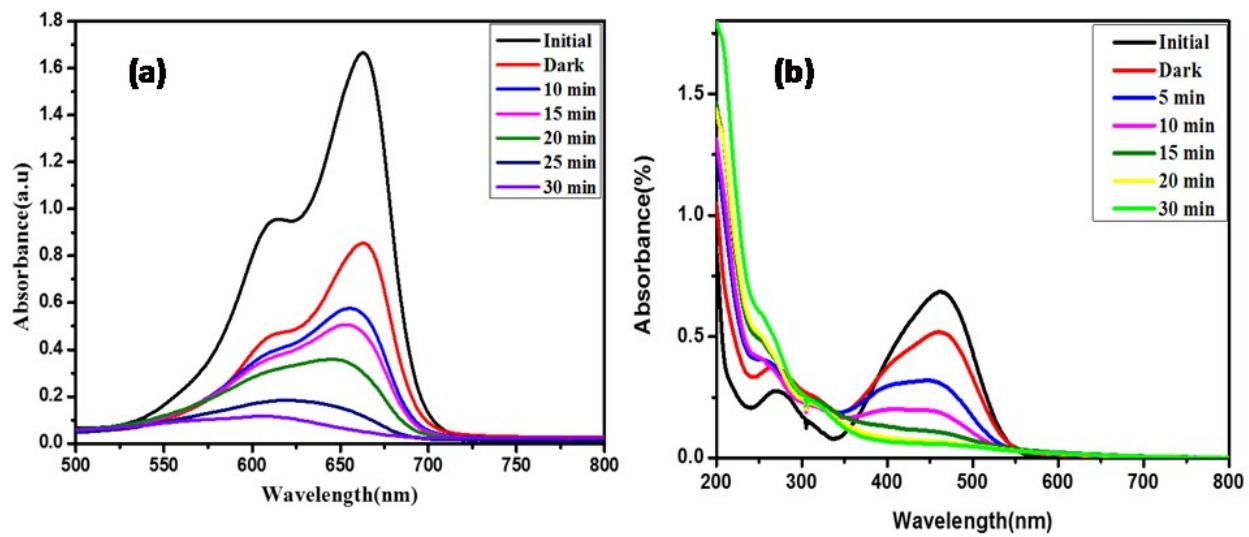


Fig. S3. Temporal absorption spectral pattern of (e) MB and (f) MO.

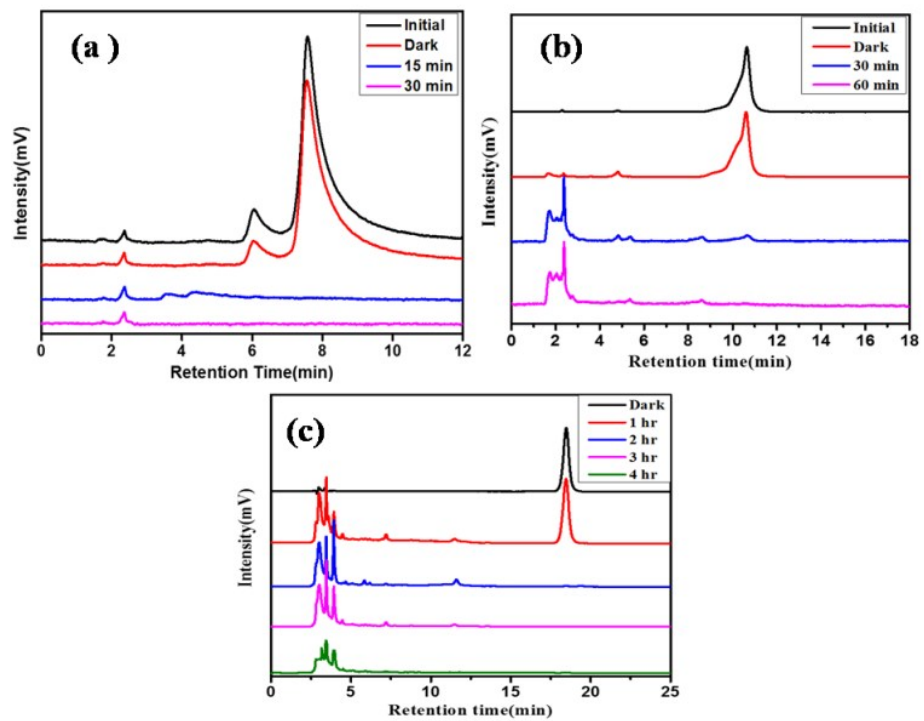


Figure S4 - HPLC chromatograms for the degradation of (a) MB , (b) MO and (c) 2,4-D

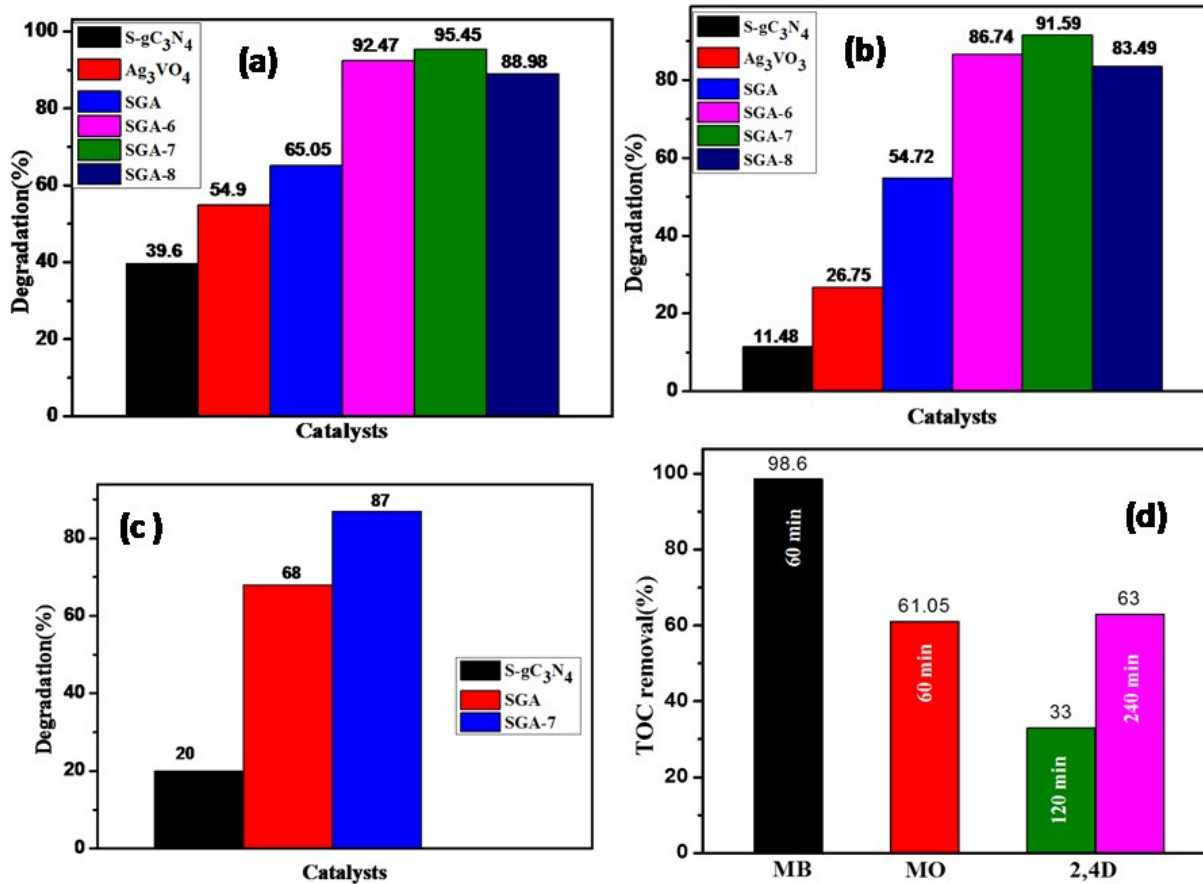


Fig. S5. Percentage degradation of (a) MB, (b) MO, and (c) 2, 4-D; (d) TOC removal rate of SGA-7

Table 1. S6. Comparison of photocatalytic activity of SGA-7 with previous literatures

Amount of catalyst/ Target pollutant	Light Source	Removal percentage	References
0.05g catalyst, 100 ml MB(10 mg/L)	300W Xenon lamp	85%(30 min)	Zhu et al.,2015[65]
0.1g catalyst, 50 ml MB(10 mg/L)	150 W tungsten halogen lamp	94% (120 min)	Vadivel et al.,2016[66]
50 mg catalyst, 250 ml MB(3mg/L)	Visible light	100%(90 min)	Mao et al.,201[67]
MB(7 mg/L)	Solar light	100%(120 min)	Sacco et al.,2018[68]
30 mg catalyst, 50 ml MB(5 mg/L), MO(6 mg/L)	Xe lamp	MB-100%(60 min) MO-84.4%(60 min)	Junlei Zhang et al.,2017 [69]
0.15g catalyst, 150 ml MO(15 mg/L)	300-W tungsten bulb	92 % (45 min)	Rong Ran et al.,2016 [70]
0.05 g catalyst, 100 ml MB (10 mg/L)	300 W Xe lamp	85% (30 min)	Tingting Zhu et al.,2015 [71]
20 mg catalyst, 20 ml MO(20 mg/L)	Xe arc lamp	92 % (140 min)	Haidong Li et al.,2017 [72]
0.2g /L catalyst, 2,4 D(50 mg/L)	UV light	96%(120 min)	Nagashree et al.,2018[73]
0.2g/L catalyst, 2,4 D(10 mg/L)	UV light	48.06%(240 min)	Razani et al.,2017[73]
50 mg catalyst, 50 ml 2,4 D(0.5mM)	200 W Hg-Xe lamp	18%(60 min)	Lee et al.,2017[75]
50 mg catalyst, 100 ml MB(10 mg/L), MO(10 mg/L),2,4 D(20 mg/L)	Solar light	MB - 95.45% (30min) MO - 91.6% (30 min) 2,4 D -87% (120 min)	This work

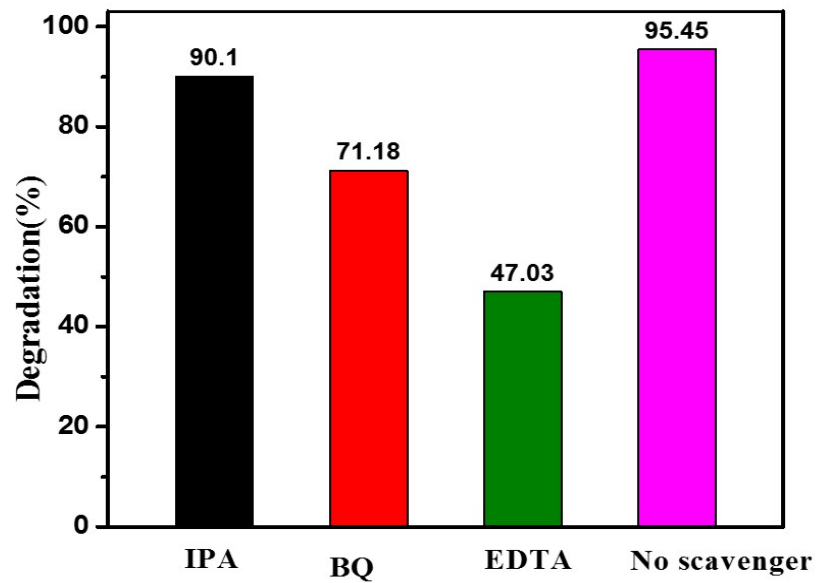


Fig. S7. Scavenger effect on the percentage of degradation of MB with SGA-7