

Titanium Dioxide (TiO₂) Decorated Silver Indium Diselenide (AgInSe₂): Novel Nano-Photocatalyst for Oxidative Dye Degradation

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Supplementary Information

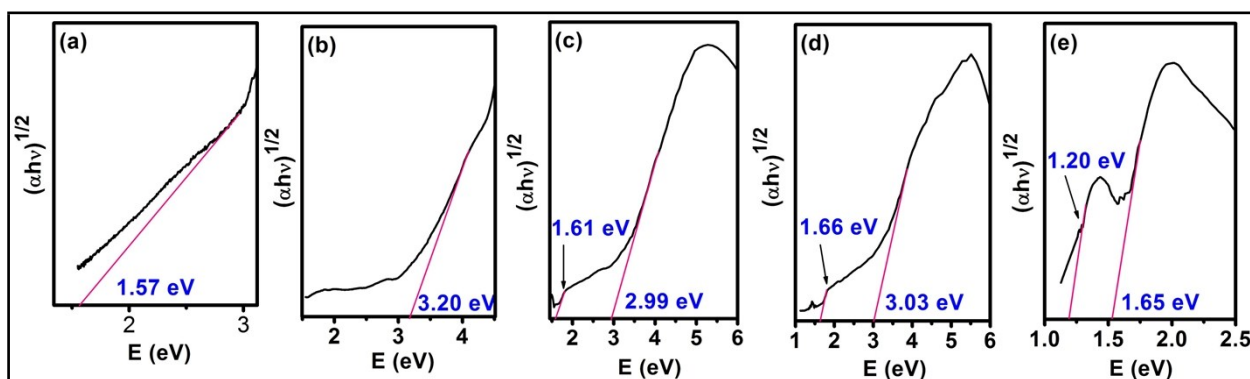


Figure S1. Tauc plots for (a) AlSe (b) TiO₂ and AlSe/TiO₂ hybridized using (c) thermal methods and (d) microwave (e) Tauc plot for AlSe/Ag₂Se.

Table S1: XPS data analysis of AlSe/TiO₂ hybrid synthesized using MW method

Sr. No.	Elements	Binding Energy (eV)	FWHM (eV)	Peak area	Absolute area (%)
1.	Ag (3d _{5/2} , 3d _{3/2})	367	2.0	11940	53.13
		373	1.78	10530	46.86
2.	In (3d _{5/2} , 3d _{3/2})	444	2.49	15630	58.19
		452	2.51	11230	41.80
3.	Se (3d _{5/2})	54	2.62	2662	100
4.	Ti (2p _{3/2} , 2p _{1/2})	452	1.69	14260	41.50
		458	2.12	9175	26.70
		464	3.63	10920	31.78
5.	O (1s)	528	3.57	22360	100
6.	C (1s)	284	1.91	21610	100

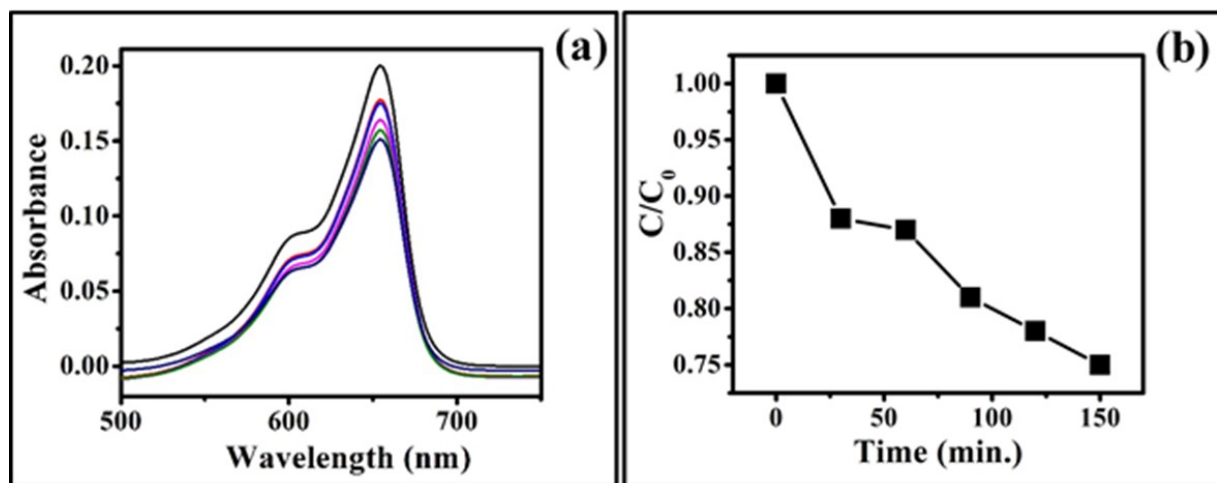


Figure S2. Degradation of MB using AlSe photocatalyst