

Supporting Informations

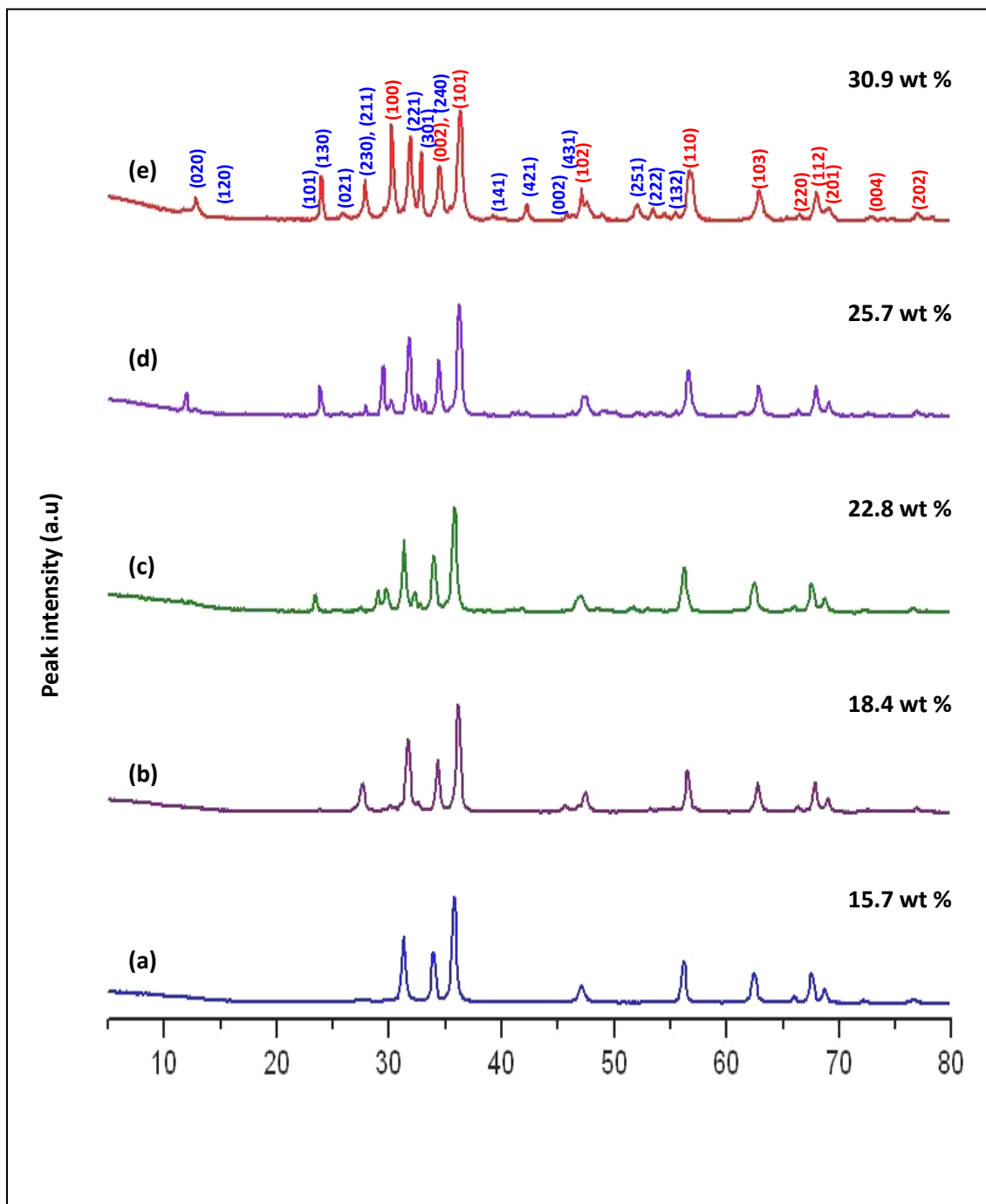


Fig. S1 XRD pattern of various percentage Bi₂S₃-ZnO (a) 15.7wt%,
(b) 18.4wt%, (c) 22.8wt%, (d) 25.7wt% and (e) 30.9wt%

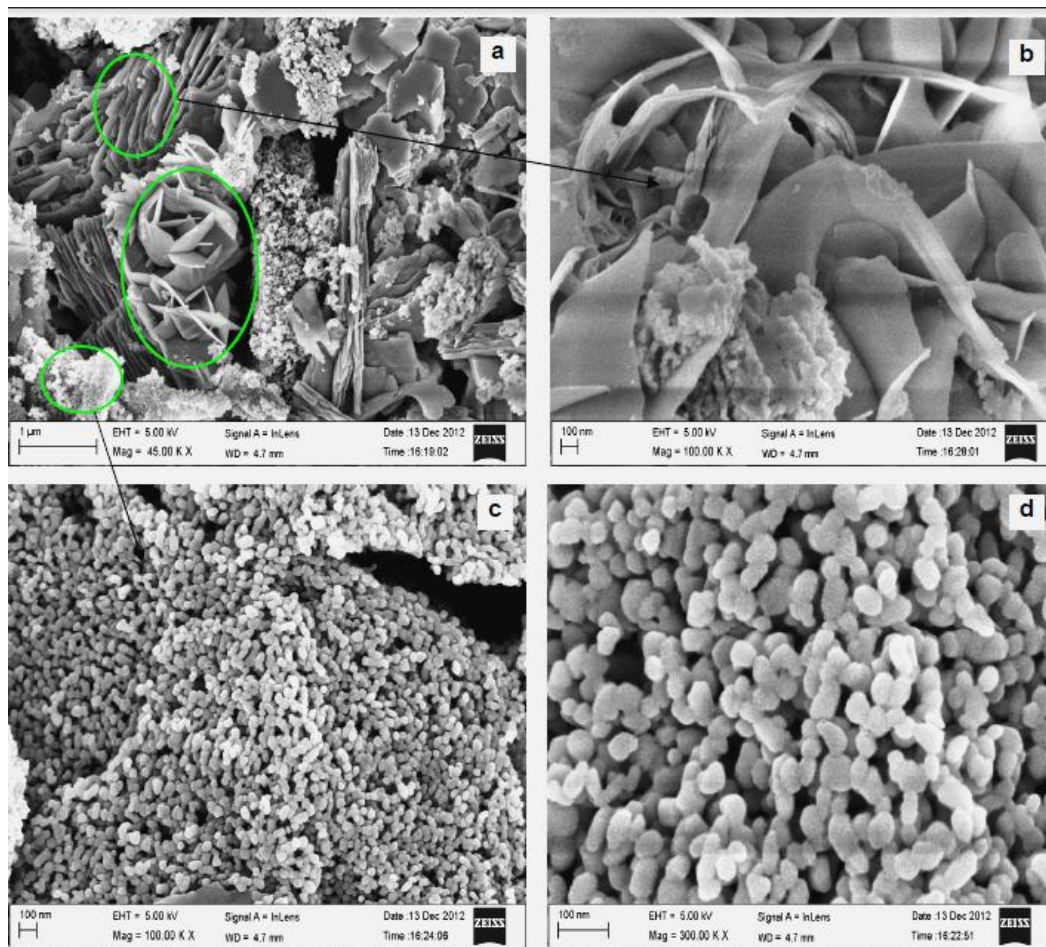
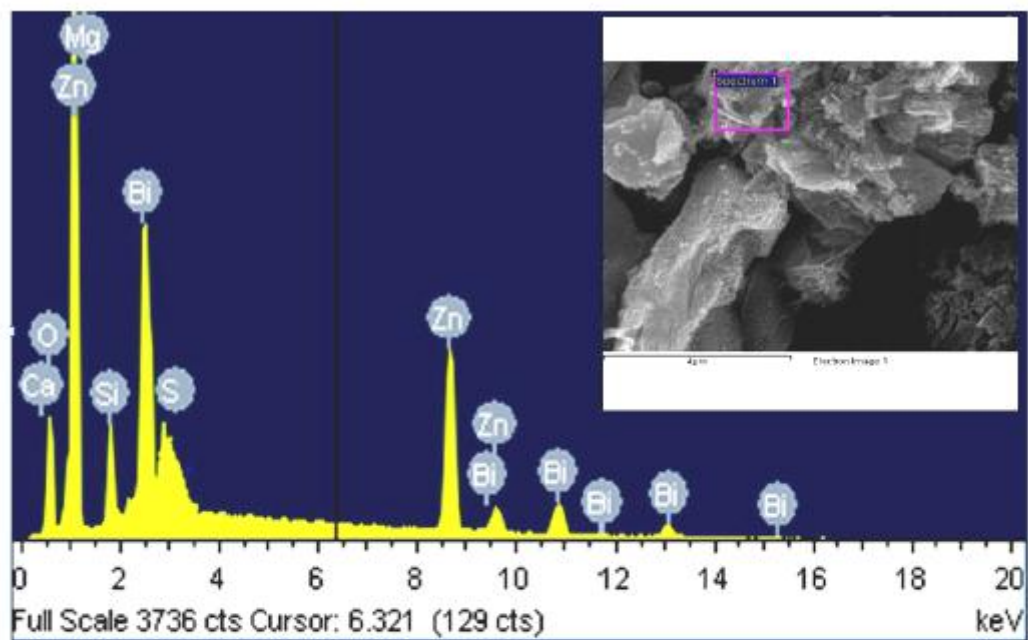


Fig. S2 FE-SEM images of 25.7wt% Bi₂S₃-ZnO at two magnifications (a) 1 μm, (b) 100 nm, (c) 100 nm and (d) 100 nm



Element	Weight%	Atomic%
O K	15.38	48.12
Mg K	0.37	0.75
Si K	0.53	0.99
S K	3.53	6.29
Ca K	1.32	1.65
Zn K	45.38	34.23
Bi M	33.49	8.02
Totals	100.00	

Fig. S3 EDS analysis of 25.7wt% Bi₂S₃-ZnO

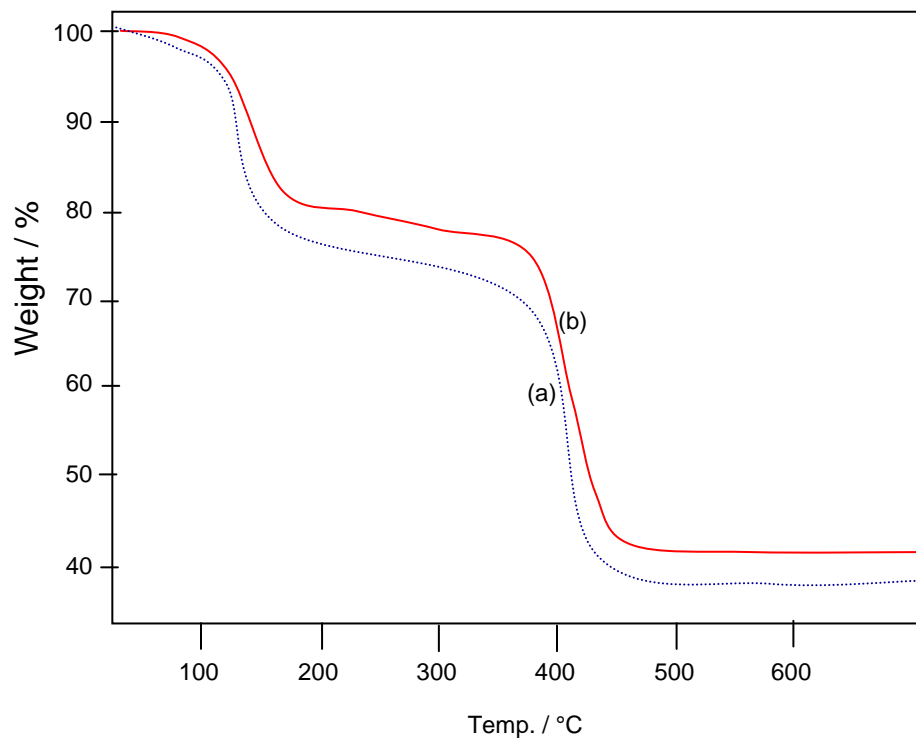


Fig. S4 Thermal Gravimetric Analysis (a) Zinc oxalate and (b) Mixed precipitate of Bismuth sulfide - Zinc oxalate

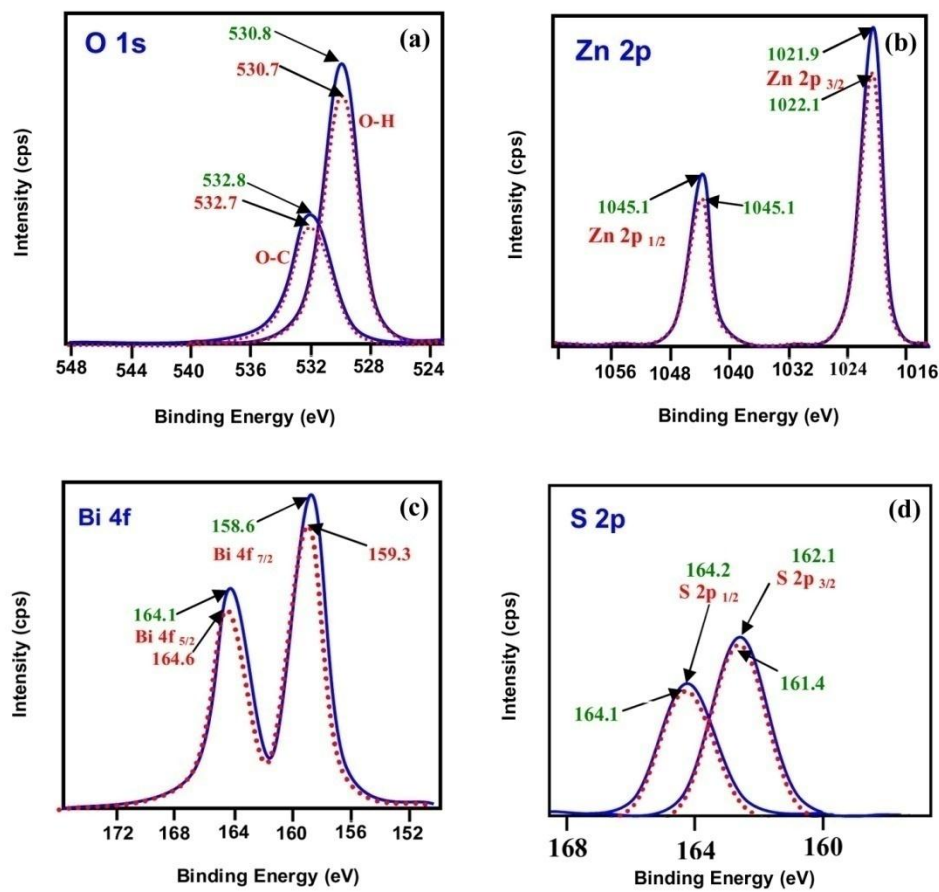


Fig .S5 XPS analysis of $\text{Bi}_2\text{S}_3\text{-ZnO}$ (a)O 1s , (b) Zn 2p, (c) Bi 4f and (d) S 2p

— Fresh $\text{Bi}_2\text{S}_3\text{-ZnO}$, $\text{Bi}_2\text{S}_3\text{-ZnO}$ after fifth cycle

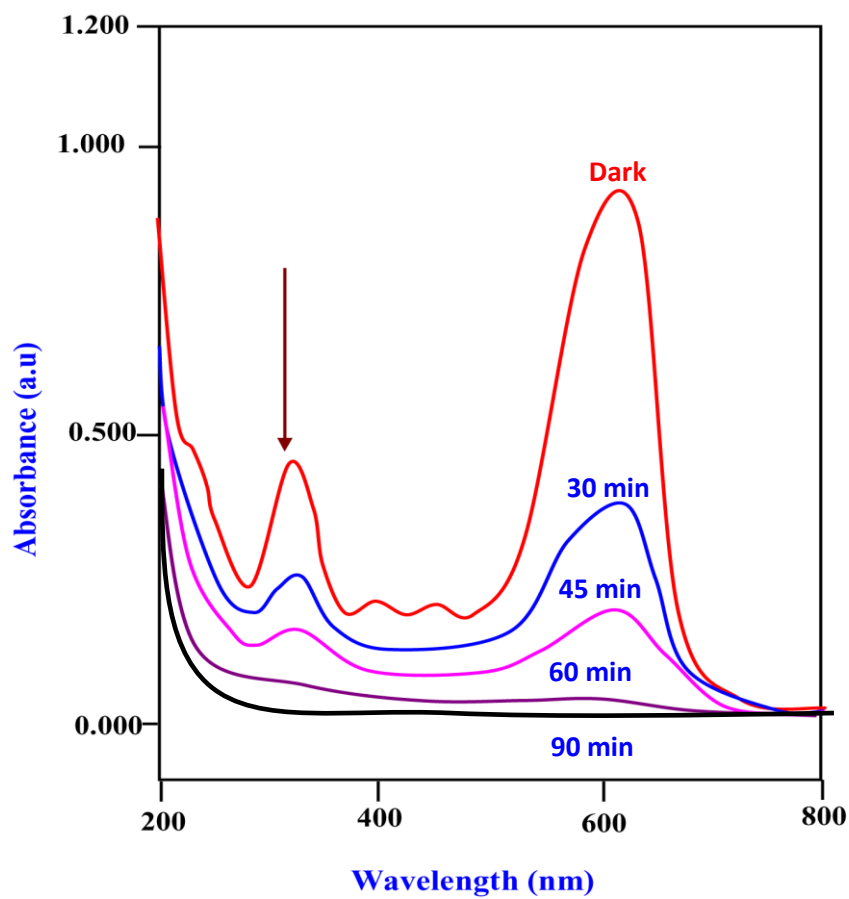


Fig .S6 UV spectral changes of AB 1 at different irradiation times with Bi₂S₃-ZnO

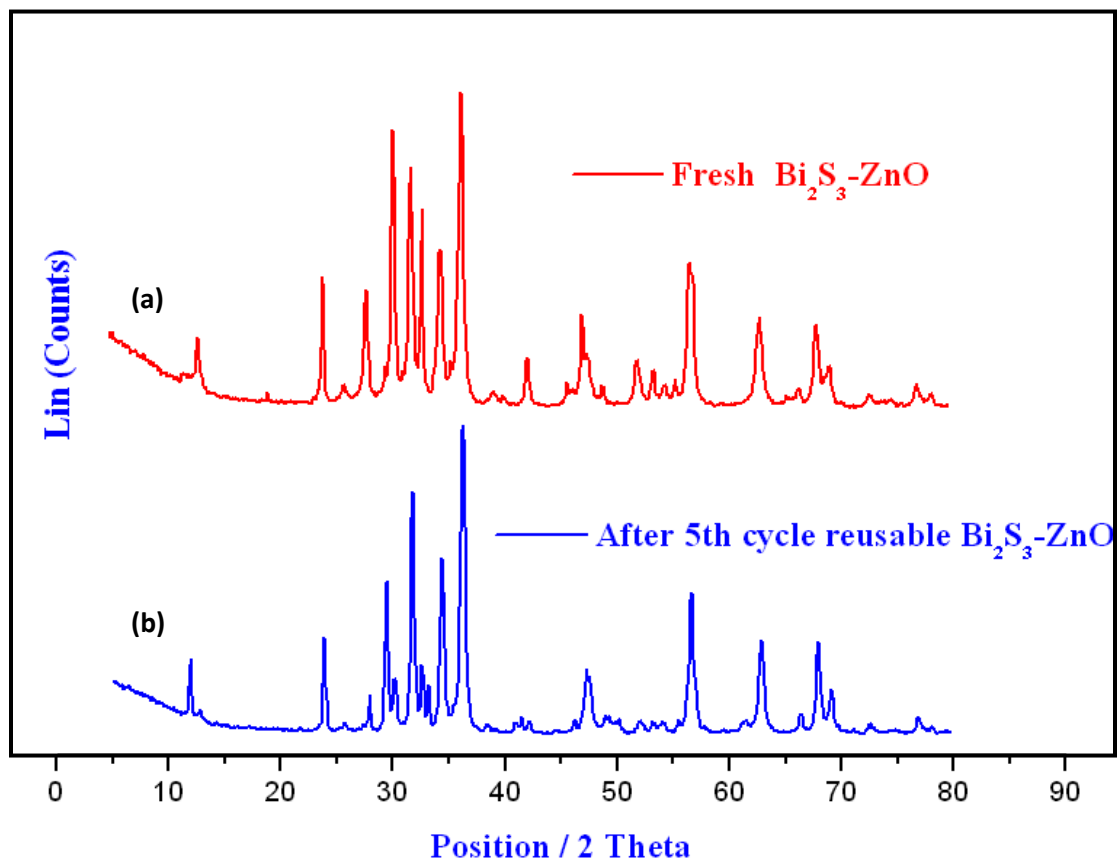


Fig. S7 XRD pattern of (a) Fresh Bi₂S₃-ZnO and (b) After fifth cycle reusable

Bi₂S₃-ZnO