

Electronic Supplementary Information

**Spectroscopic dimensions of silver nanoparticles and clusters in
ZnO matrix and their role in bioinspired antifouling and
photocatalysis**

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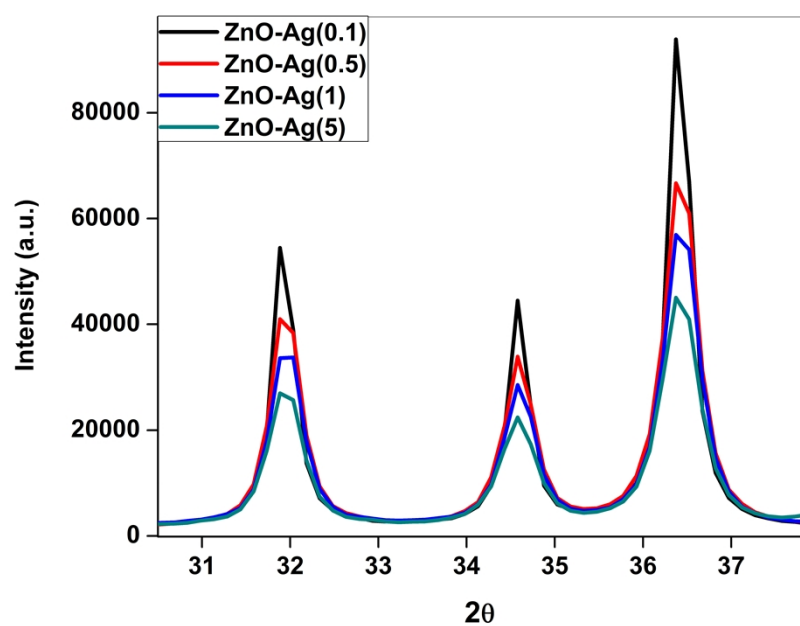


Fig. S1 X-Ray diffraction patterns of Silver (0.1, 0.5, 1 and 5%) loaded ZnO with expanded region of 2θ from 30° - 38° in $\text{Zn}_{1-\delta}\text{Ag}_\delta\text{O}$.

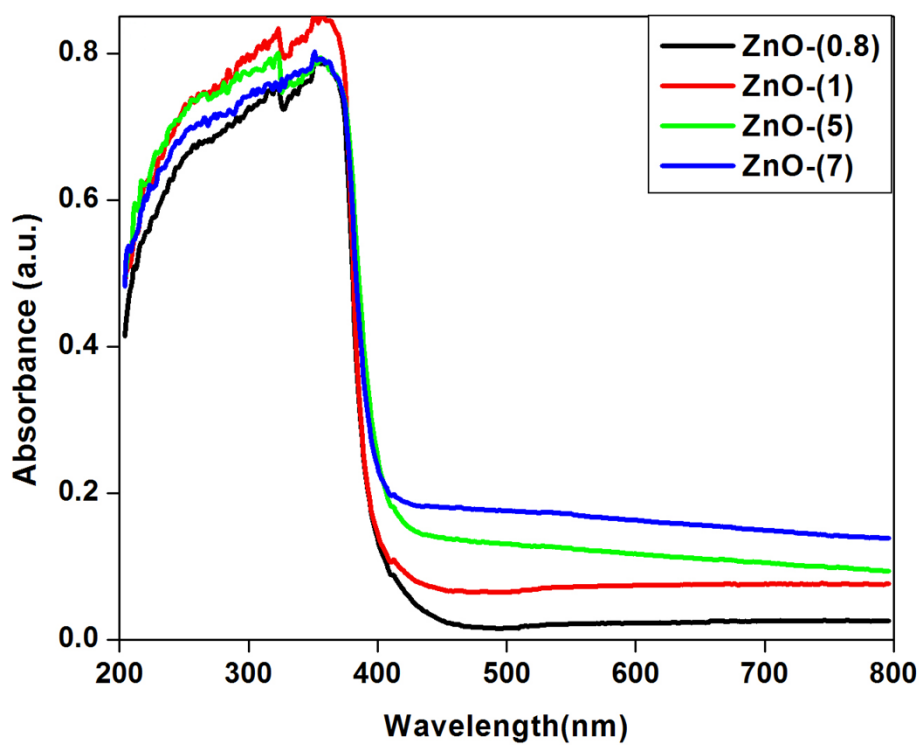


Fig. S2 DRS UV-Visible spectra of ZnO-(with different ZnO/Fuel ratios).

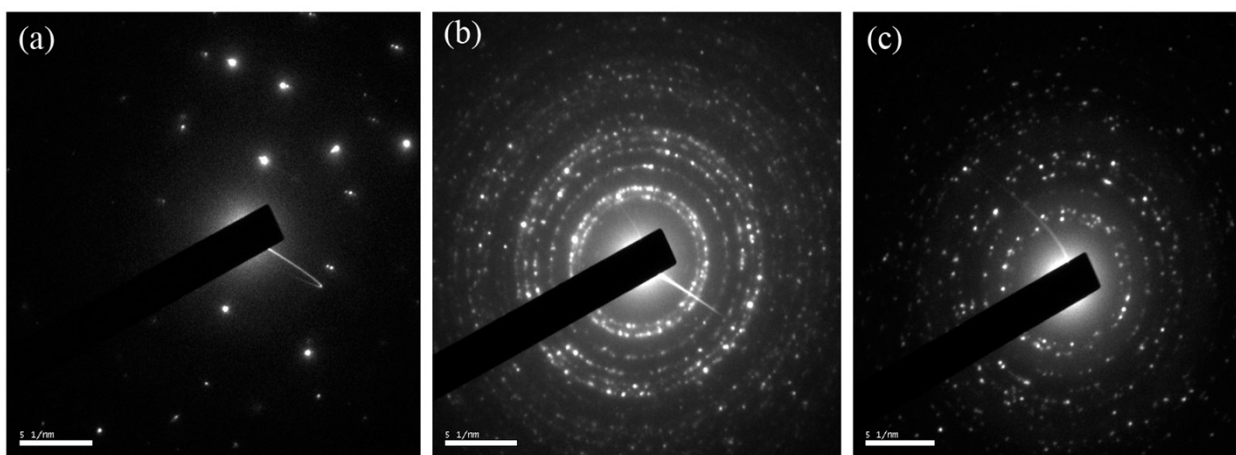


Fig. S3 Electron diffraction pattern of (a) pure ZnO (b) ZnO-Ag(0.5) and (c) ZnO-Ag(5) with corresponding HR-TEM images given in Fig. 8.

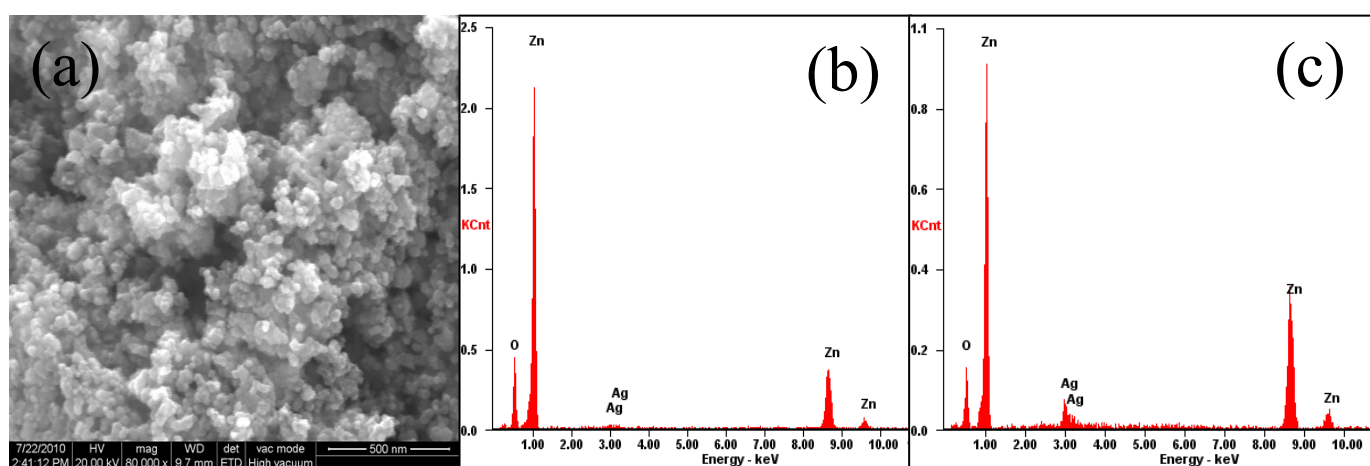


Fig. S4 SEM image of (a) ZnO-Ag(5) and EDAX of (b) ZnO-Ag(1) and (c) ZnO-Ag(5).

Photocatalytic activity on degradation of Rh-B with different ZnO/Fuel ratios

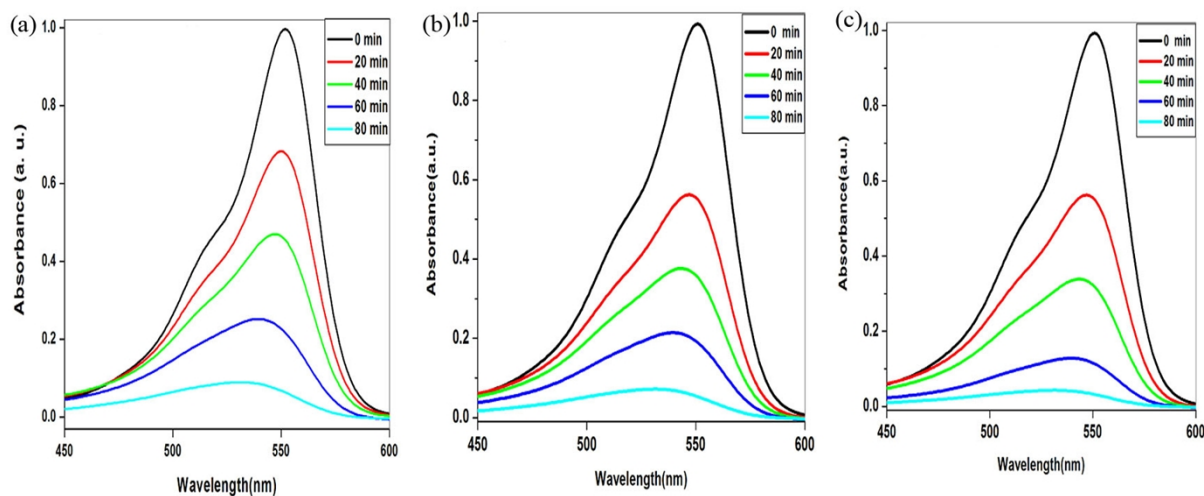


Fig. S5 (a), (b) and (c) Photocatalytic activity on degradation of Rh-B with different ZnO/Fuel Ratio of 0.8, 1 and 3 respectively

Photocatalytic activity on degradation of Rh-B with silver doped ZnO

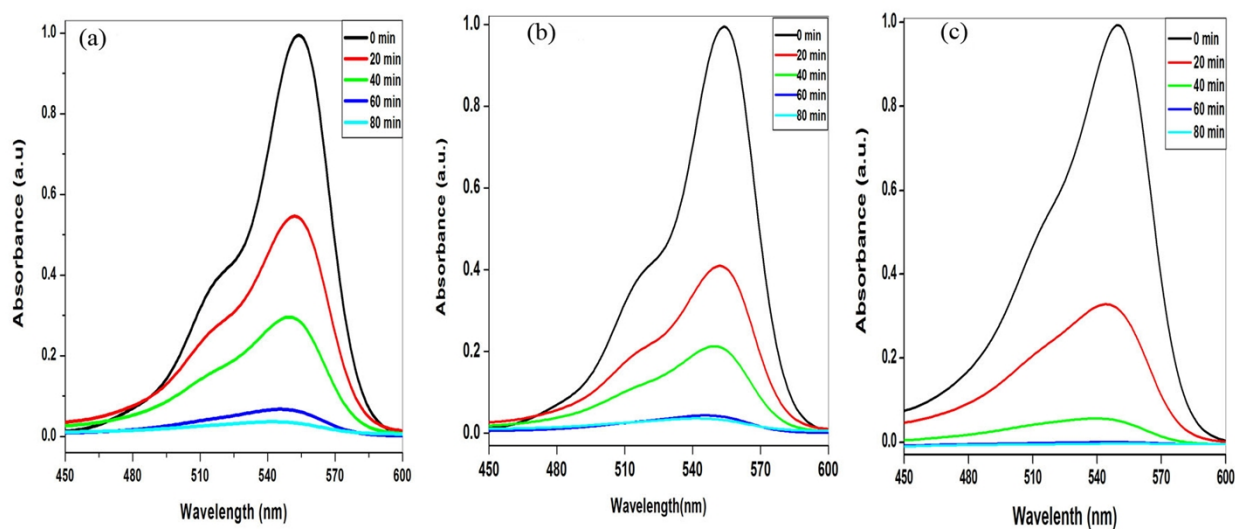


Fig. S6 (a), (b) and (c) Photocatalytic activity on degradation of Rh-B with silver doped ZnO of 0.1 %, 0.5% and 1% respectively. In these experiments ZnO/Fuel ratio was kept at 3.0

Photocatalytic activity on degradation of 4-Chlorophenol with ZnO and silver doped ZnO

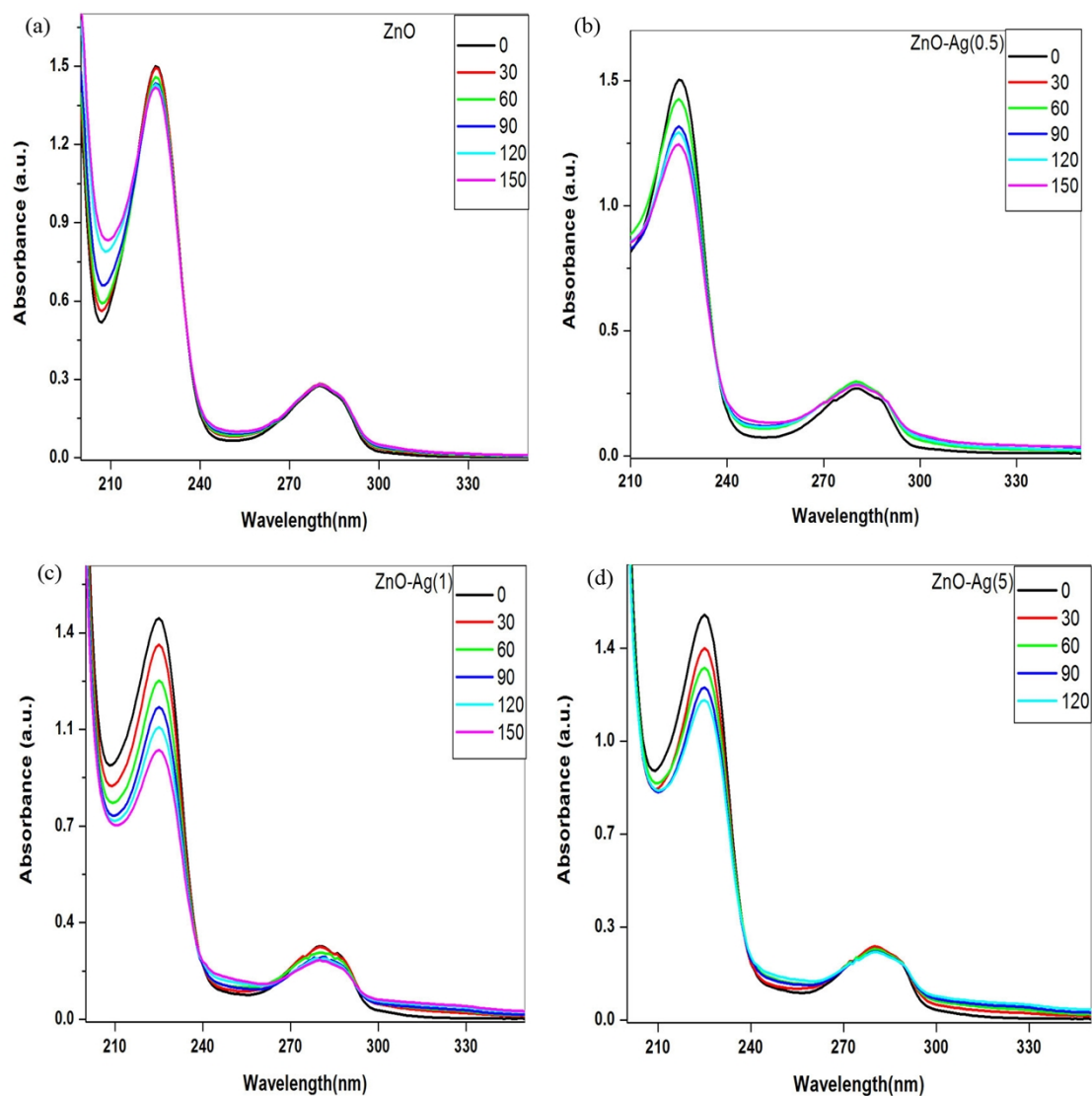


Fig. S7 (a), (b), (c) and (d) Photocatalytic activity on degradation of 4-Chlorophenol with silver doped ZnO of 0.5%, 1% and 5% respectively. In these experiments also ZnO/Fuel ratio was kept at 3.0.