**Supporting Information**

# Synthesis and characterization of dysprosium doped ZnO nanoparticles for photocatalysis of a textile dye under visible light irradiation

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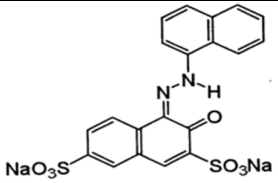
**Table S1.** Characteristics of Acid Red 17.

| Color Index Name | Chemical structure | Molecular formula | Color Index number | $M_w$ (g/mol) | $\lambda_{max}$ (nm) |
|---|---|---|---|---|---|
| C. I. Acid Red 17 (AR17) |  | $C_{20}H_{12}N_2Na_2O_7S_2$ | 5858-33-3 | 502.43 | 510 |

The DRS spectra of undoped and Dy-doped ZnO samples are illustrated in Fig. S1. It can be seen that the samples showed a strong photoabsorption at visible light range. There is a red shift in absorbance spectra of Dy-doped ZnO in comparison to undoped ZnO, as expected for doped materials.

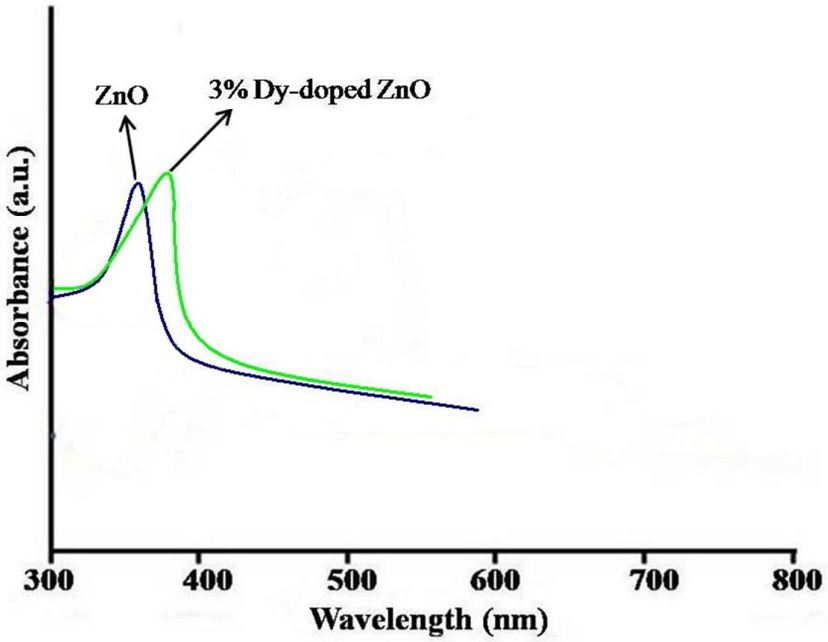



**Fig. S1.** UV-Vis diffuse reflectance spectra of the (a) undoped ZnO and (b) 3% Dy-doped ZnO samples.