

Supporting Information

for

High performance Ce-doped ZnO nanorods for sunlight-driven photocatalysis

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Additional experimental data

Table S1: Lattice parameters of ZnO and ZnO:Ce rods.

Doping in Ce (%)	a (Å)	c (Å)	Lattice volume (Å ³)
0	3.244	5.197	47.35
1	3.246	5.201	47.44
3	3.253	5.212	47.78
5	3.254	5.213	47.80
7	3.250	5.206	47.61
10	3.249	5.206	47.61

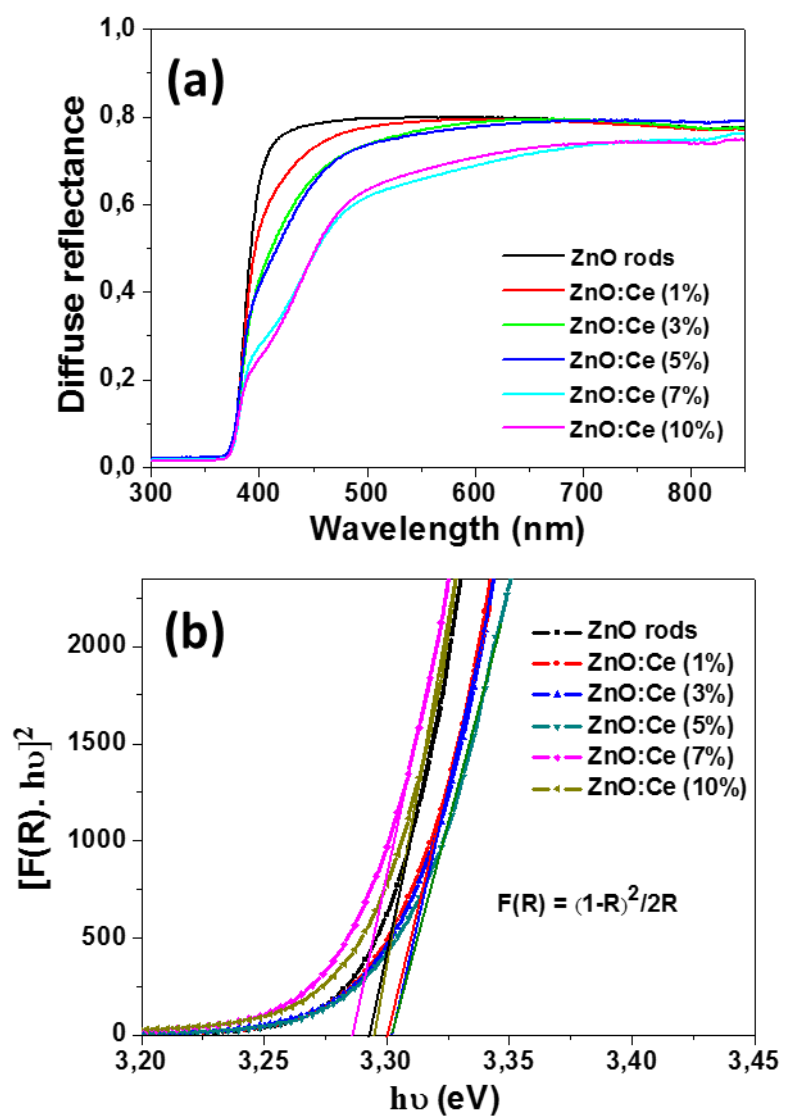


Figure S1: (a) UV–visible absorption spectra of ZnO and ZnO:Ce rods, (b) Tauc plots of ZnO and ZnO:Ce rods for the determination of bandgap energy values.

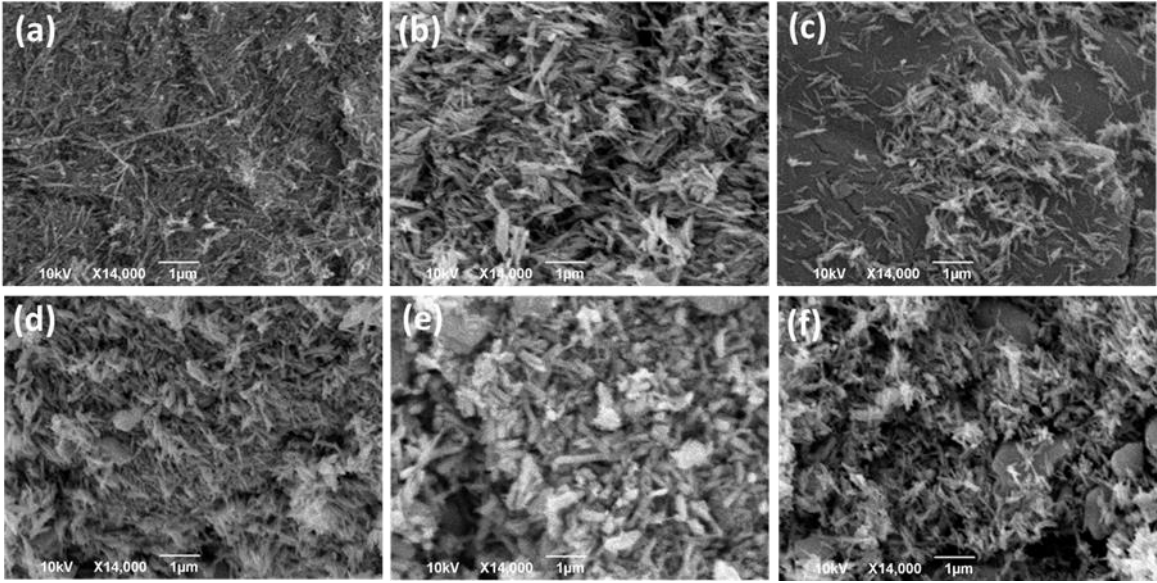


Figure S2: SEM images of (a) ZnO rods and (b–f) ZnO rods doped with 1, 3, 5, 7 and 10% Ce, respectively.

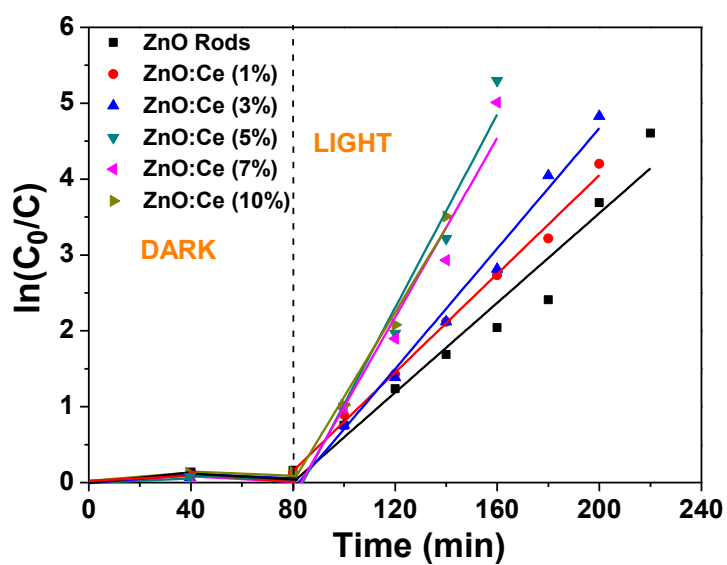


Figure S3: Plots of $\ln(C_0/C)$ of Orange II versus reaction time when varying the dopant percentage in Ce in the photocatalyst (concentration of Orange II = 10 mg/L).

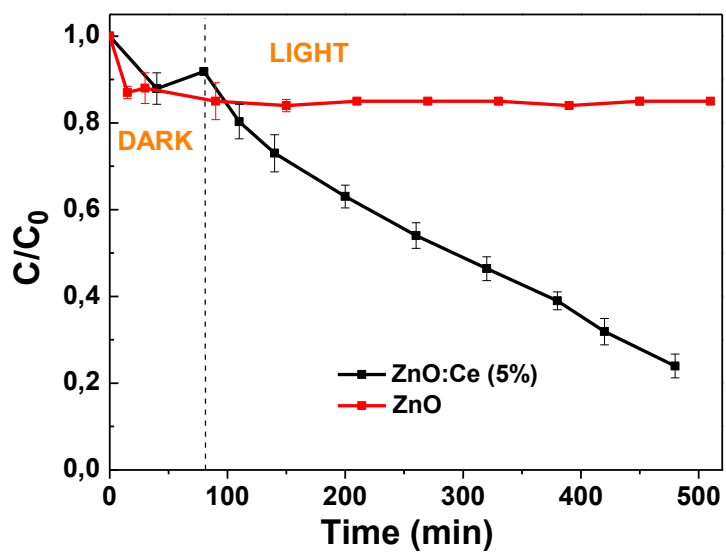


Figure S4: Comparison of the photocatalytic efficiencies under visible light irradiation of ZnO and 5% Ce-doped ZnO rods.

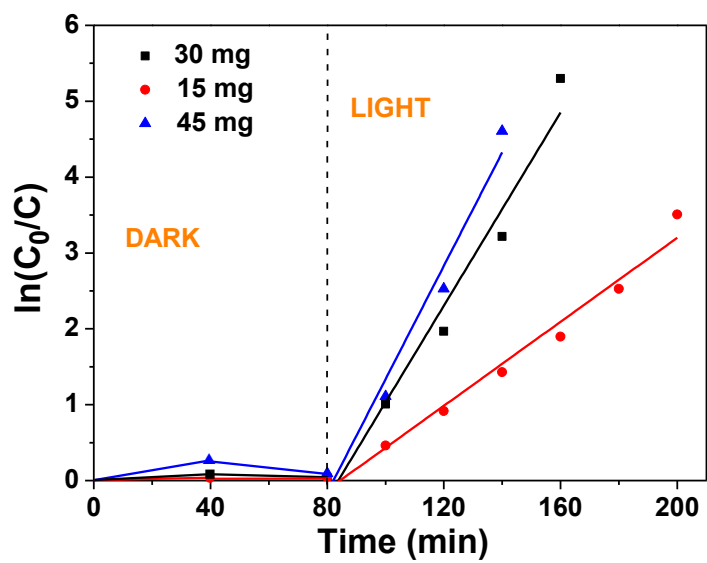


Figure S5: Plots of $\ln(C_0/C)$ of Orange II versus reaction time when varying the amount of ZnO:Ce catalyst (concentration of Orange II = 10 mg/L).

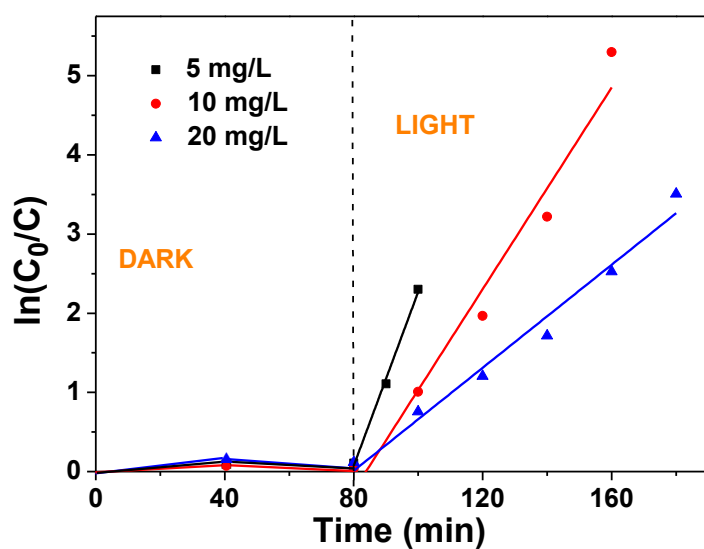


Figure S6: Plots of $\ln(C_0/C)$ of Orange II versus reaction time when varying the concentration of Orange II (5, 10 or 20 mg/L).