Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supplementary Information

Effective ways to enhance photocatalytic activity of ZnO nanopowders：high crystalline degree, more oxygen vacancies, and preferential growth

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Figure S1 SEM images of Zn powder

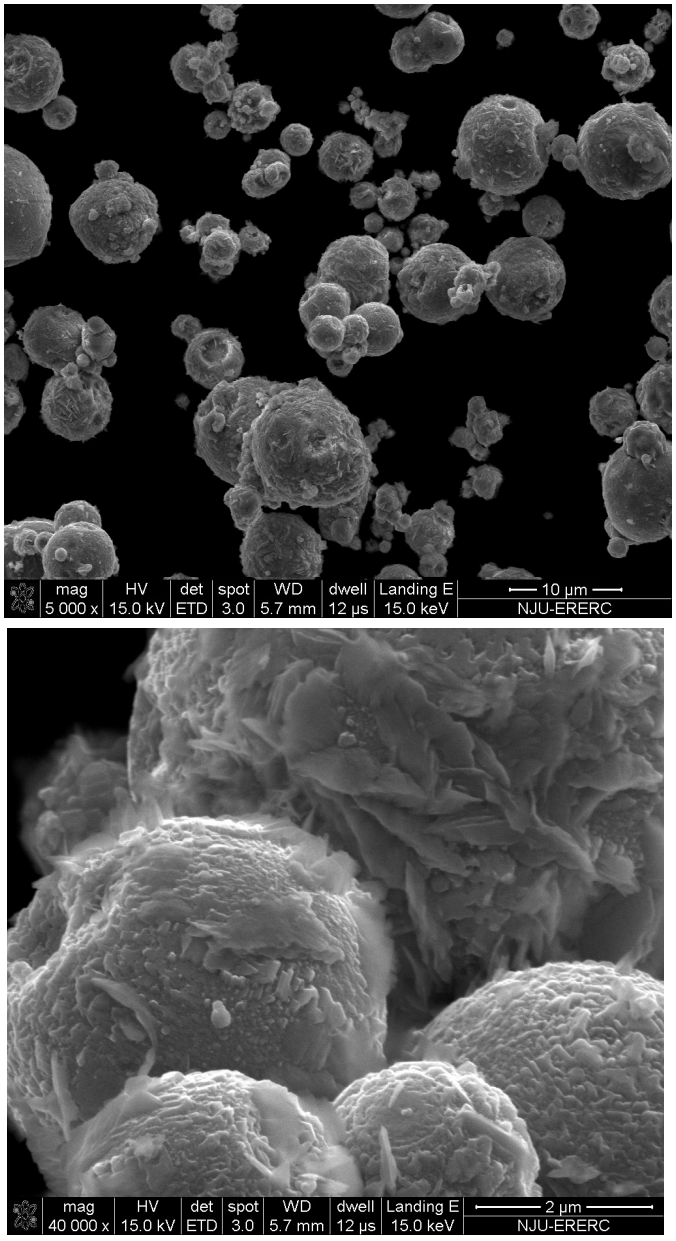

Figure S2 FT-IR spectra of various ZnO samples in the range of 450~3500 cm^{-1}

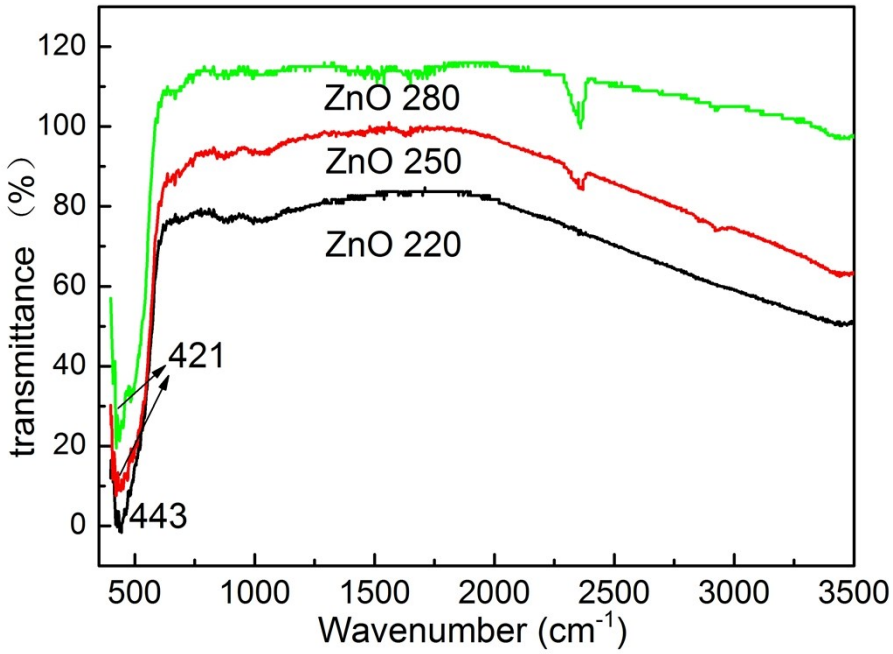

Figure S3 Time-dependent absorption spectra of a rhodamine B aqueous solution in the presence of various ZnO samples with a weight of 50 mg under 365 nm UV irradiation.

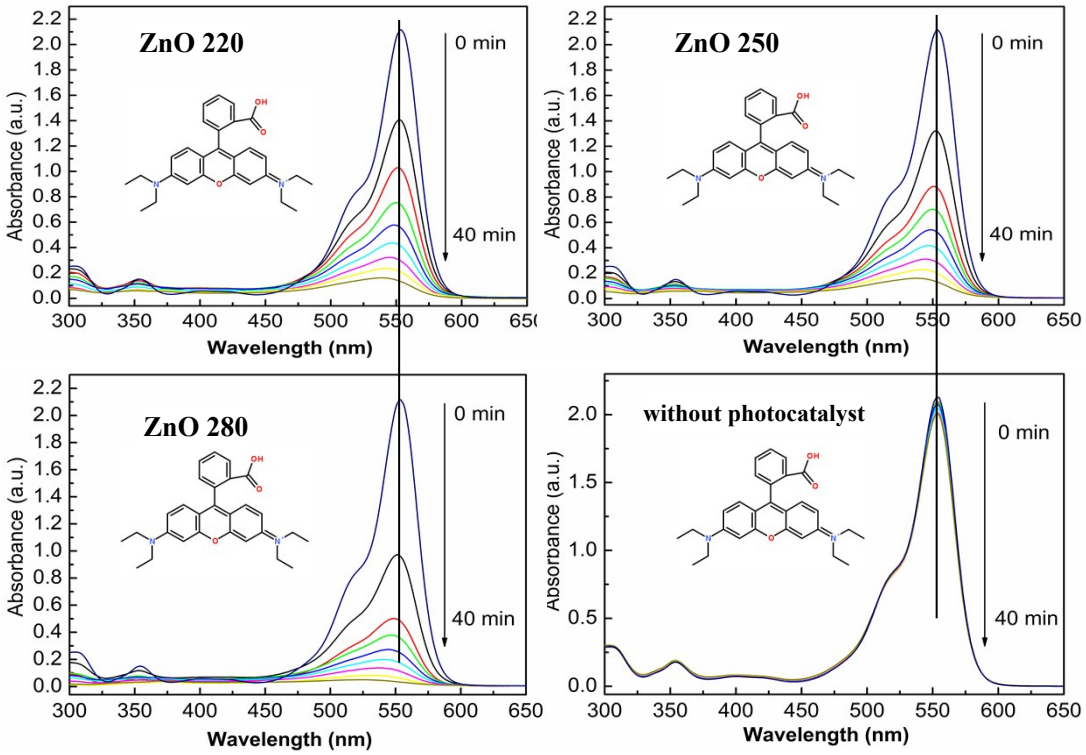

Figure S4 Degradation ratio of Rh-B over different dosage of ZnO 280 under UV irradiation for different times.

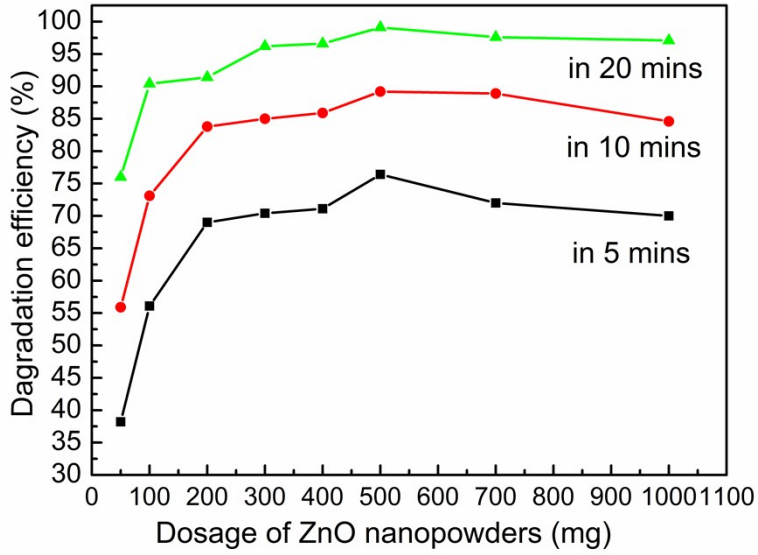

Figure S5 XRD patterns of the ZnO samples before and after photocorrosion (under the UV irradiation for 20 h).