Electronic Supplementary Material (ESI) for Inorganic Chemistry Frontiers.


# Electronic Supplementary Information

## Free-standing and flexible 0D $CeO_2$ nanodots/1D $La(OH)_3$ nanofibers heterojunctions net as a novel efficient and easily recyclable photocatalyst

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**Synthesis of $CeO_2$ nanodots**

$CeO_2$ nanodots were prepared by a facile molten salt process. In a typical process, 1 mmol $Ce(NO_3)_3 \cdot 6H_2O$ was mixed with 2 g NaOH and 8 g KOH uniformly grinded thoroughly for over 20 min in an agate mortar. After that, the grinded mixture was placed in a 50 mL Telfonlined oxidation-resisting steel autoclave with 1.5 mL of deionized water, then heated to 150 $^oC$ for 8 h. Finally, the obtained samples were washed with deionized water and ethanol for several times, and then dried at 80 $^oC$ over night.

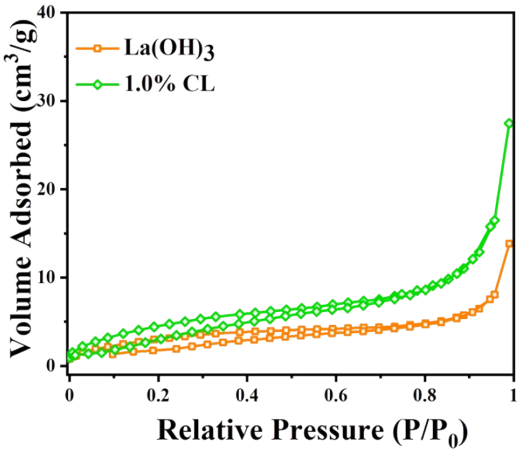


Fig. S1 $N_2$ adsorption/desorption isotherms of $La(OH)_3$ and 1.0% CL.

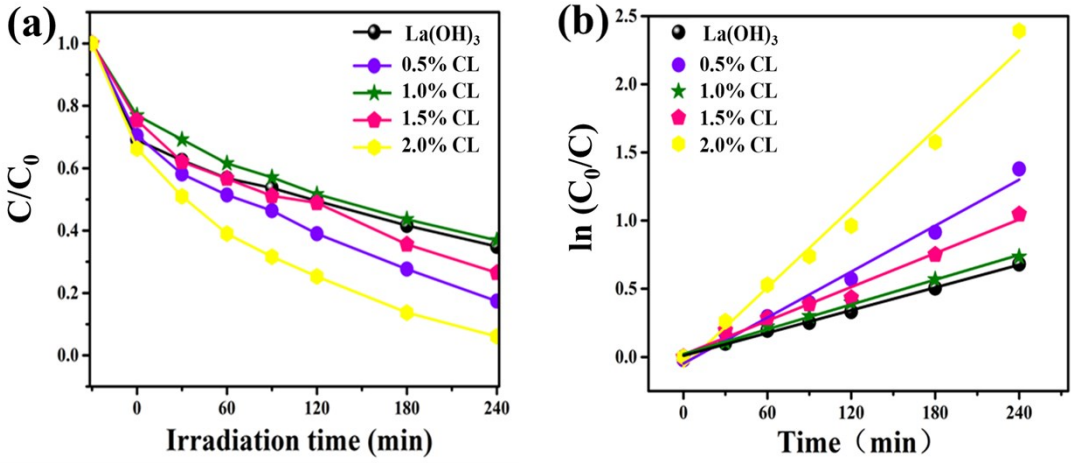


Fig. S2 (a) The photocatalytic activities of the CL and pure $La(OH)_3$ for MO degradation and (b) the pseudo-first-order reaction kinetics curves for MO degradation.

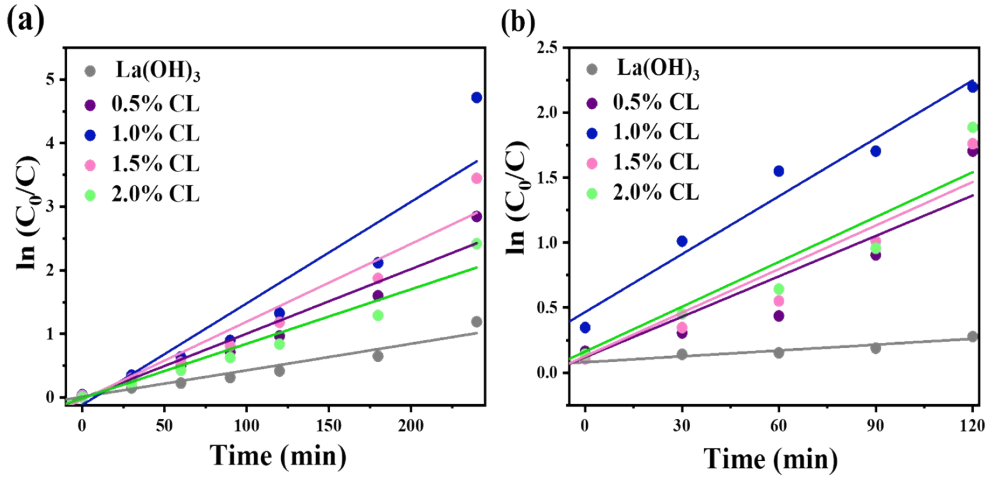


Fig. S3 (a, b) The pseudo-first-order kinetics curves for RhB degradation and Cr(VI) reduction.

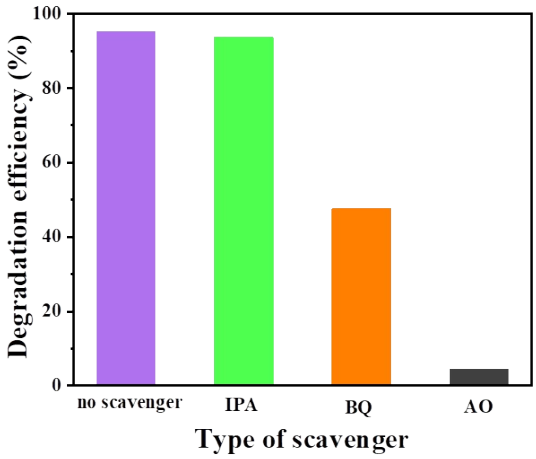


Fig. S4 Radical trapping experiments of 1.0% CL.