Electronic Supplementary Information

Room Temperature Synthesis of Ag_3PO_4 Nanoparticles with the Assistance of Trisodium Citrate for Photocatalytic Dye Degradation

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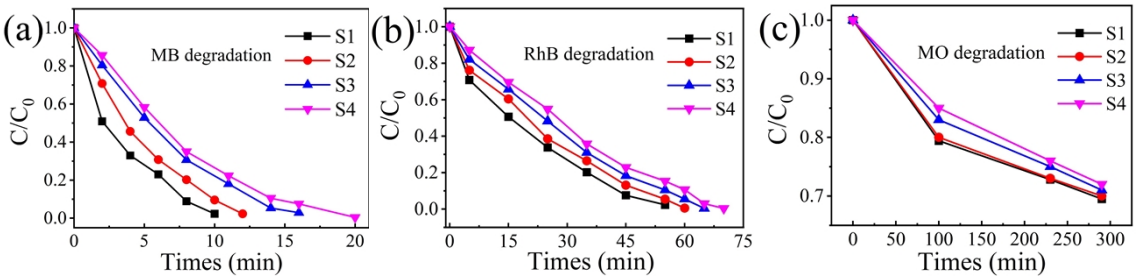

Fig. 1. MB (a), RhB (b) and MO (c) photocatalytic activity of the Ag_3PO_4 NPs with different size at different reaction times under visible light irradiation.

Fig. 1 show the photodegradation rate of MB, RhB and MO under visible light irradiation. Compared with the photocatalytic capacity of different Ag_3PO_4 NPs, the photocatalytic degradation rate of S1 samples is the strongest.

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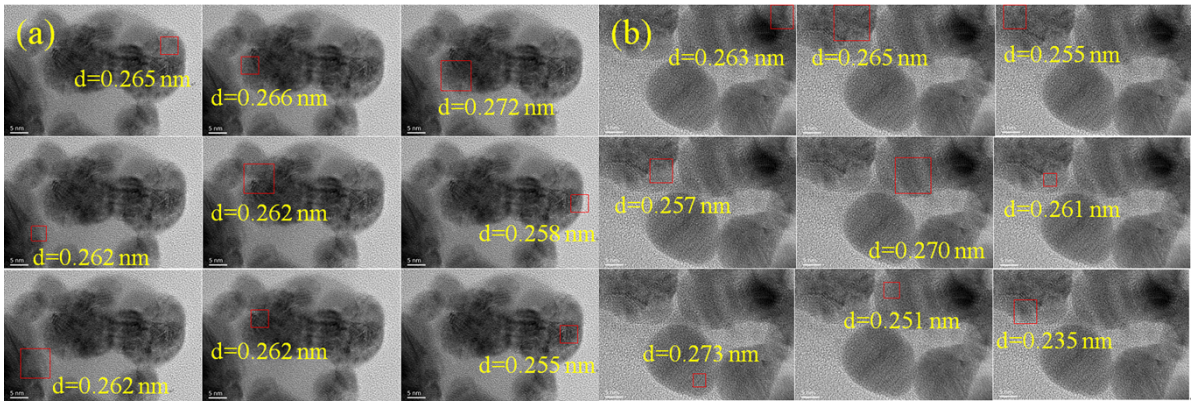

Fig. 2. HRTEM images of the Ag_3PO_4 NPs before (a) and after (b) catalysis reactions.

Fig 2a, b shows the HRTEM image of Ag_3PO_4 NPs before and after catalysis reactions. The lattices fringes are clearly discerned in a different location, which most of fringes (0.260-0.270 nm) belong to Ag_3PO_4 NPs. But in Fig 2b, the lattice fringes with a d-spacing of 0.235 nm, which could be matches the (111) reflection of face-centered cubic silver. The lattice fringes with d-spacing of 0.273 nm might be agree with the (111) refection of primitive cubic Ag_2O.[1]

Reference

1. Li, M.Y., et al., *Out-of-Substrate Ag–Ag_2O Nanoplates: Surfactantless Photochemical Synthesis, Structural Evolution, and Mechanistic Study.* ACS Omega, 2016. **1**(4): p. 696-705.