Electronic Supplementary Information

Ag_3PO_4 nanoparticles loaded on 3D flower-like spherical MoS_2: Highly efficient hierarchical heterojunction photocatalyst

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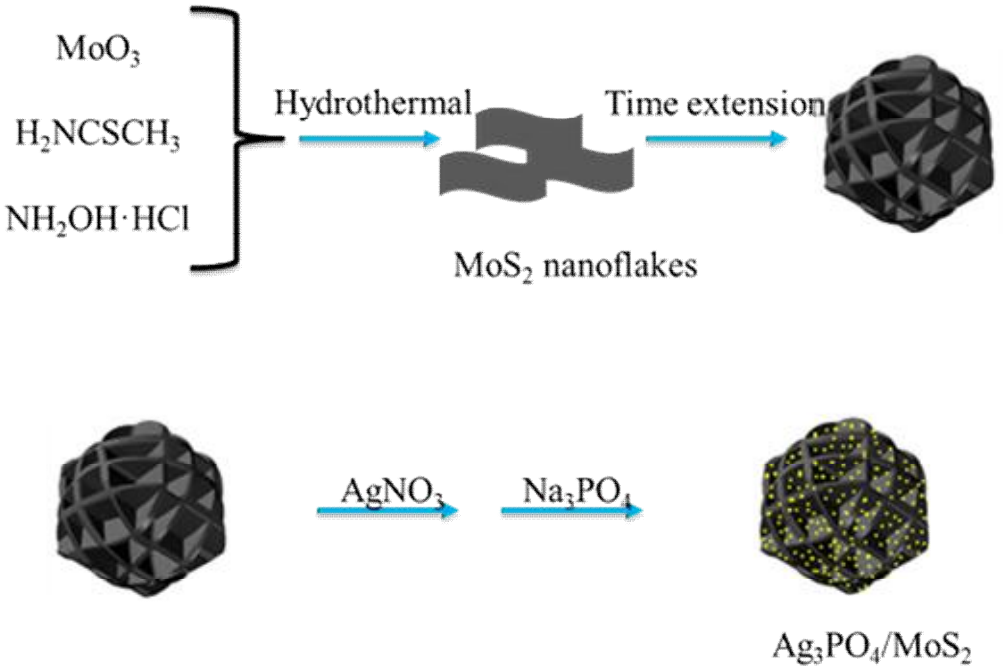

Fig. S1 Schematic representation of the synthesis process of 3D hierarchical Ag_3PO_4/MoS_2 composites photocatalysts.

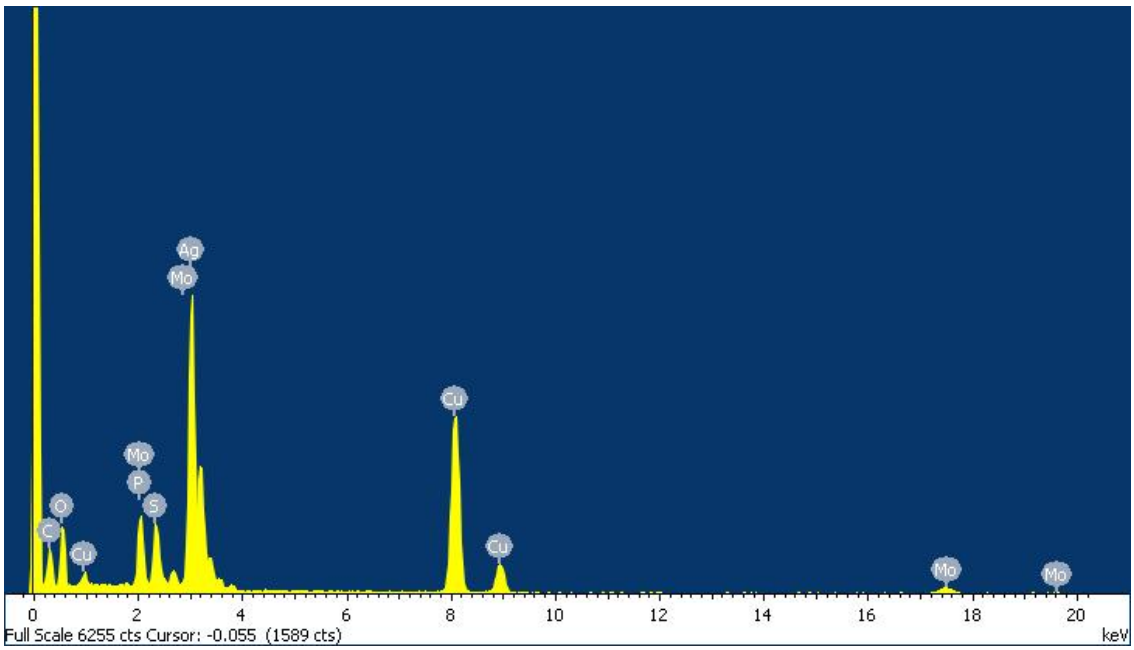

Fig. S2 EDS (e) of 3D hierarchical Ag_3PO_4/MoS_2 composite

Table S1 BET surface areas of the as-prepared samples

Sample	$\mathbf{S_{BET}\,(m^2/g)}$
Ag_3PO_4	8.7
Ag_3PO_4/MoS_2-10wt%	17.7
Ag_3PO_4/MoS_2-15wt%	21.2
Ag_3PO_4/MoS_2-20wt%	27.9
Ag_3PO_4/MoS_2-30wt%	34.2
MoS_2	37.1

Table S2 Determination of the kinetic constants for RhB degradation over hierarchical nanocomposites with different content of 3D MoS_2 nanoarchitectures under visible light irradiation.

Sample	K（min^{-1}）	R^2
Ag_3PO_4	0.02796	0.99291
Ag_3PO_4/MoS_2-10wt%	0.09289	0.97948
Ag_3PO_4/MoS_2-15wt%	0.13254	0.98488
Ag_3PO_4/MoS_2-20wt%	0.09954	0.95538
Ag_3PO_4/MoS_2-30wt%	0.04145	0.9925
MoS_2	0.00066	1

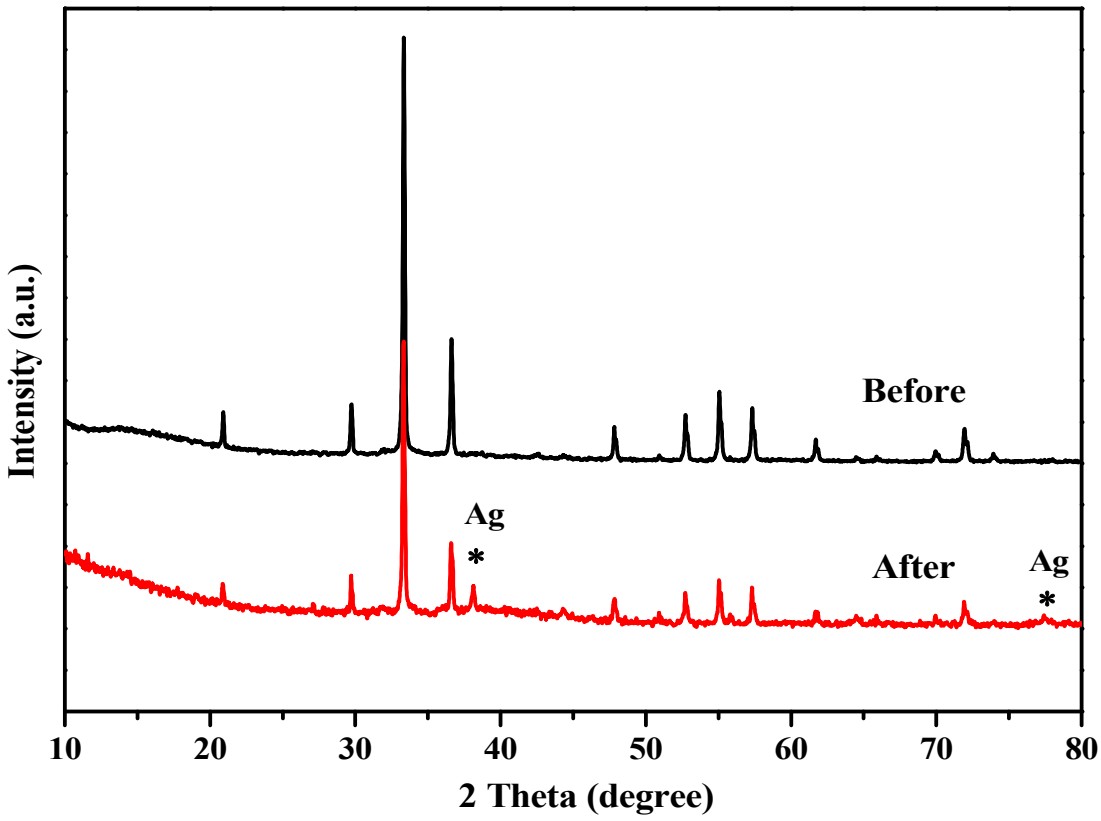

Fig. S3 XRD patterns of Ag_3PO_4/MoS_2 composites before and after 3 times cycling runs