

Supporting Information (SI)

Ambient controlled synthesis of advanced core-shell plasmonic Ag@ZnO photocatalysts

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Table S1**Table S1** Experimental conditions for the synthesis of Ag@ZnO samples.

Sample	Ag ^a	Zn(NO ₃) ₂ · 6H ₂ O ^b	NaOH ^c	H ₂ O
A1	NWs	0.6 M	0.5 mL	14.5 mL
A2	NWs	0.6 M	0.5 mL	1.167 mL
A3	NWs	0.6 M	0.5 mL	2.5 mL
A4	NWs	0.6 M	0.5 mL	6.5 mL
A5	NWs	0.6 M	0.5 mL	22.5 mL
A6	NWs	0.3 M	0.25 mL	14.75 mL
A7	NWs	1.2 M	1 mL	14 mL
A8	NPs	0.6 M	0.5 mL	1.167 mL
A9	NPs	0.6 M	0.5 mL	2.5 mL
A10	NPs	0.6 M	0.5 mL	6.5 mL
A11	NPs	0.6 M	0.5 mL	14.5 mL
A12	NPs	0.6 M	0.5 mL	22.5 mL
A13	NPs	0.3 M	0.25 mL	14.75 mL
A14	NPs	1.2 M	1 mL	14 mL

Note: ^a The volume of silver nanowires or nanoparticles was 8 mL, ^b The volume of Zn(NO₃)₂ · 6H₂O solution was 1 mL, ^c The concentration of NaOH was 4.8 M.

Fig. S1

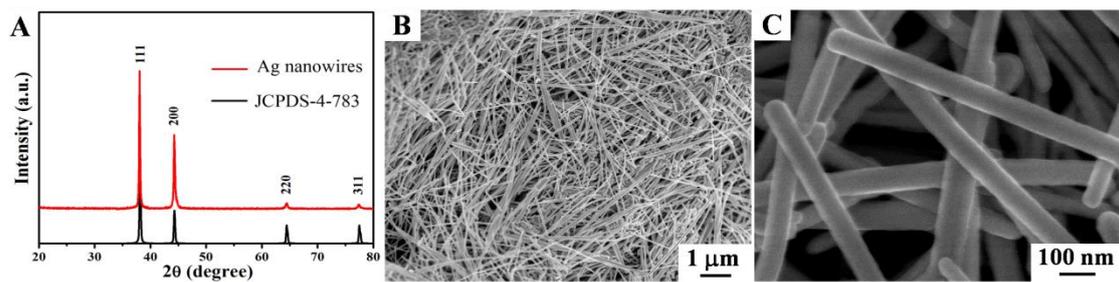


Fig. S1 (A) XRD pattern and (B and C) SEM images of as-synthesized Ag NWs.

Fig. S2

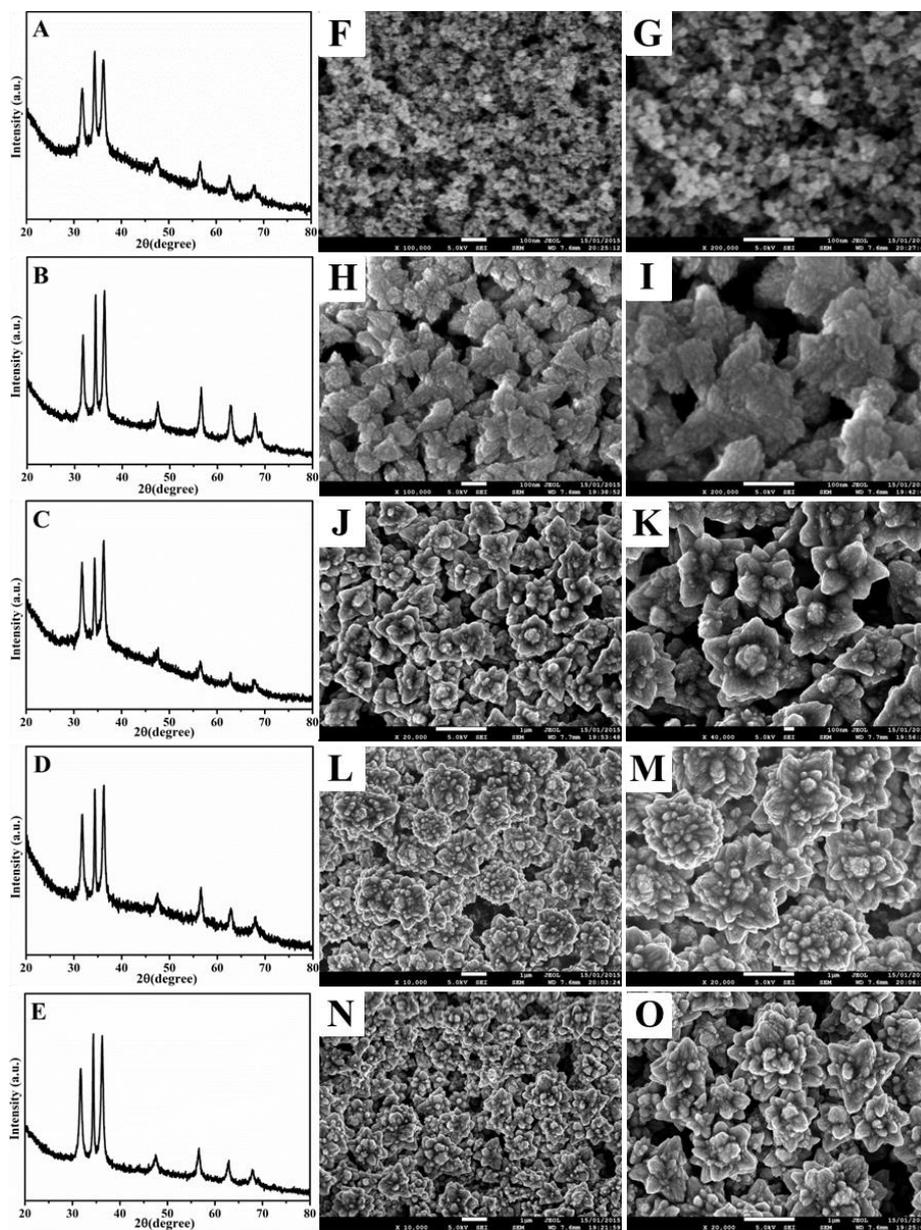


Fig. S2 (A-E) XRD patterns, and SEM images of the products prepared in the presence of different volumes of water: (F and G) 1.167 mL, (H and I) 2.5 mL, (J and K) 6.5 mL, (L and M) 14.5 mL, and (N and O) 22.5 mL.

Fig. S3

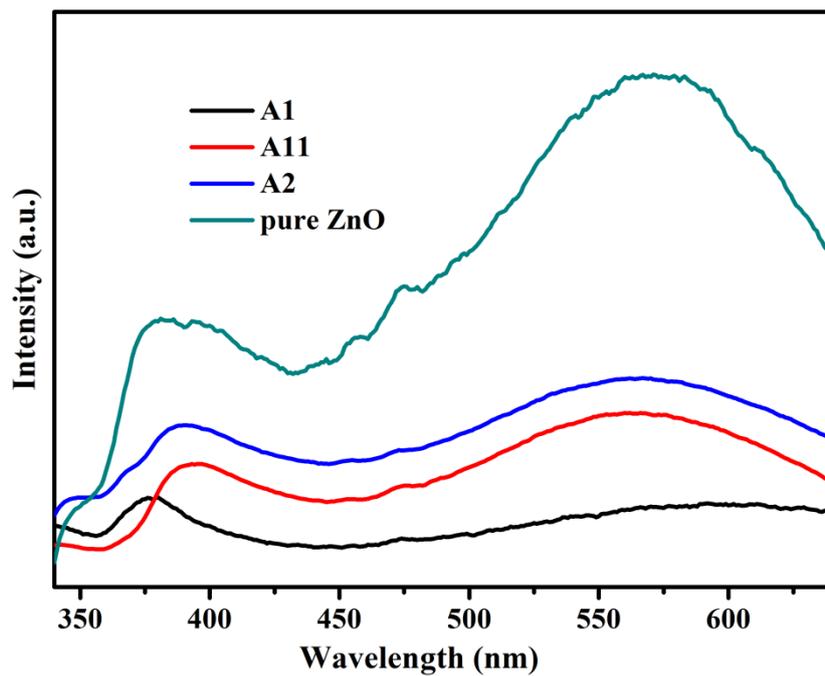


Fig. S3 The PL spectra of A1, A11, A2, and pure ZnO with an excitation wavelength of 325 nm.