

Synthesis and Spectroscopic Properties of Silver-Fluorescein Codoped Phosphotungstate Hollow Spheres

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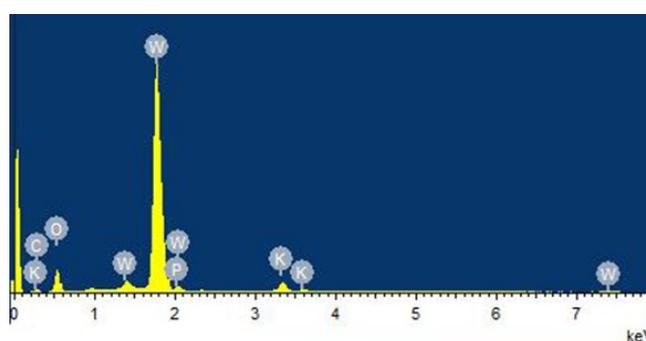


Fig.S1 EDX spectrum of FS-KPW₁₂.

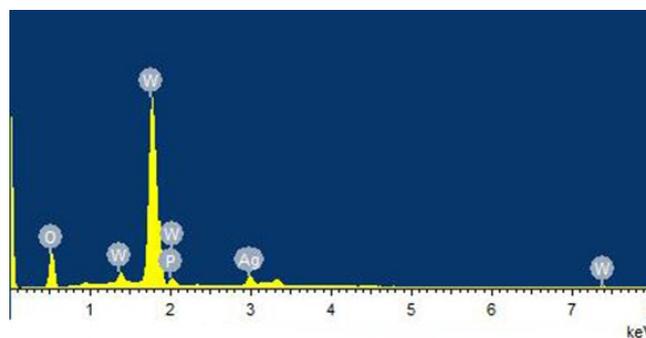


Fig.S2 EDX spectrum of AgPW₁₂.

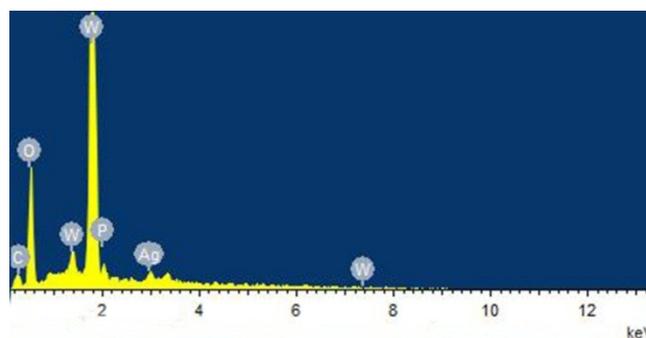


Fig.S3 EDX spectrum of FS-AgPW₁₂ (excess FS).

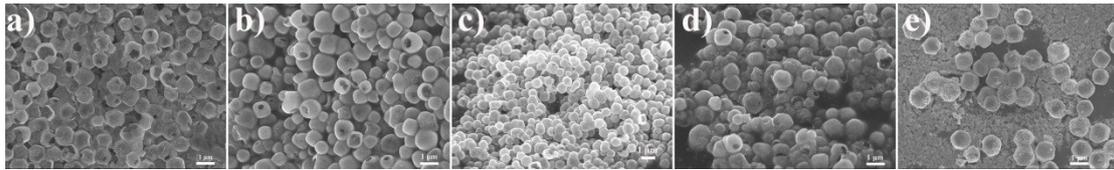


Fig.S4 SEM images of different dosage of FS in nano/micro structures: (a) 0.000 mmol; (b) 0.006 mmol; (c) 0.008 mmol; (d) 0.010 mmol; (e) 0.011 mmol, scale bar in these images are 1 μm .

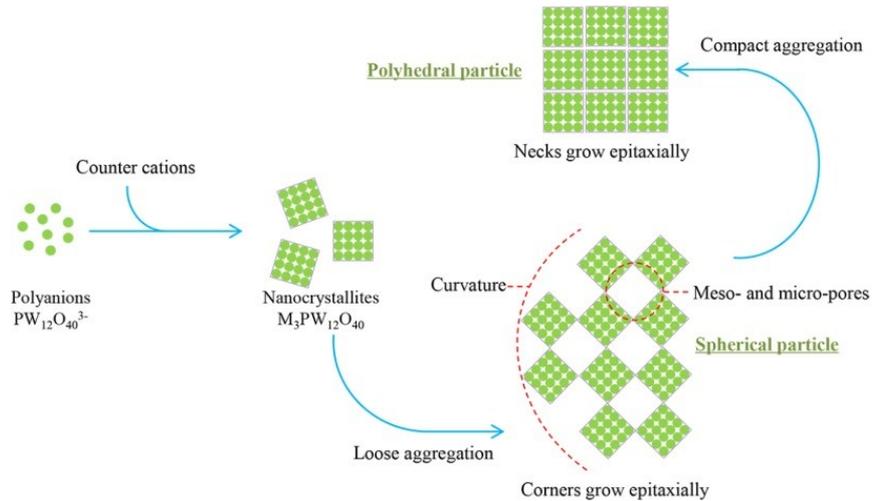


Fig.S5 Schematic illustration of the aggregation process of PW_{12} particle.

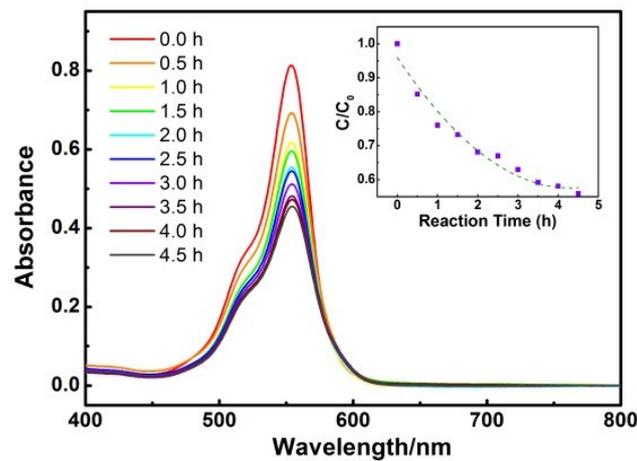


Fig.S6 Photodegradation reaction of RhB in the presence of FS-Ag PW_{12} upon 500 W Hg lamp irradiation. Inset: Photodegradation efficiency of the catalyst during 4.5 h.

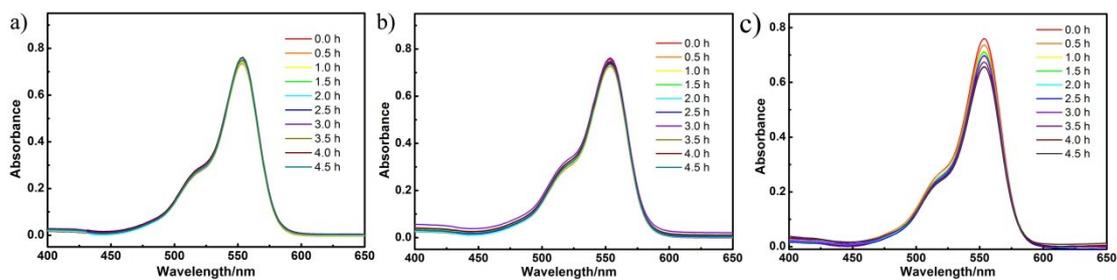


Fig.S7 Blank reactions of photodegradation: RhB substrates were kept in visible irradiation either in the absence (a) of or in the presence (b) of FS-AgPW₁₂, the degradation reactions of RhB hardly happened; (c) RhB substrates were kept in UV irradiation alone.

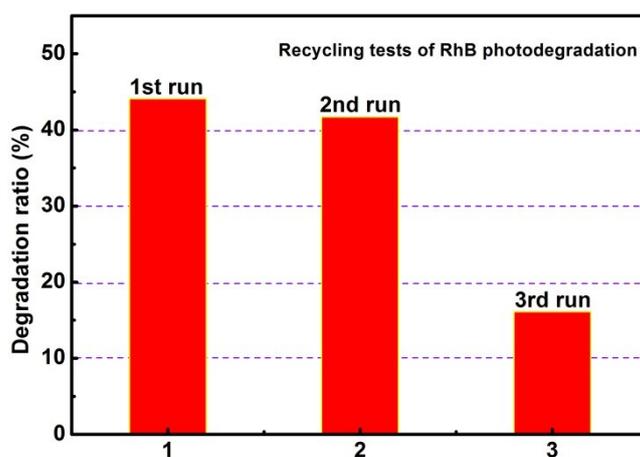
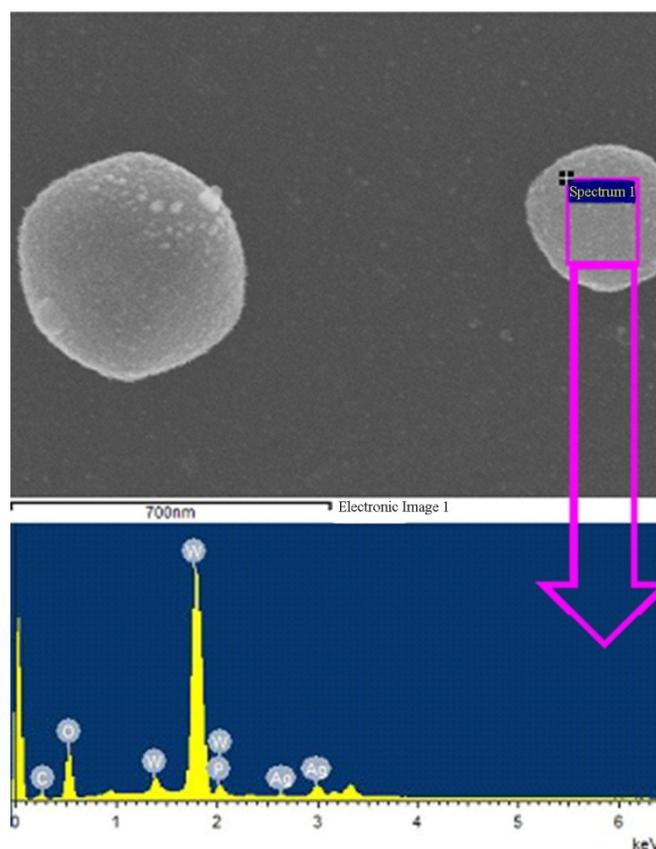


Fig.S8 Recycling tests of RhB photodegradation on FS-AgPW₁₂ under 500 W Hg lamp irradiation for 4.5 h.



Elements	Percent by weight	Percent by Atoms
C K	3.96	14.37
O K	24.92	67.86
P K	0.42	0.60
Ag L	2.55	1.03
W M	68.14	16.14
Total	100.00	100.00

Fig.S9 We used Energy dispersive X-ray spectroscopy (EDX) to characterize the composition of FS-AgPW₁₂. In this regard, this sample was identified using silicon wafer as substrate. The analysis evidently indicates the presence of P, W, Ag, O and C components. The containing of C can be assigned to the doped fluorescein.

Table S1 Experimental condition of photocatalytic H₂ evolution

	Sample	H ₂ PtCl ₆ ·6H ₂ O	CH ₃ OH	HCl	H ₂ SO ₄	H ₂ O	TEA	TEOA
1	10 mg	5 mg	1.7 mL	7.3 mL				
2	15 mg	5 mg	1 mL		4 mL			
3	10 mg	10 mg	2 mL			9 mL		
4	10 mg	10 mg				9 mL	1 mL	
5	10 mg	10 mg				9.5 mL		0.5 mL

Sample: FS-AgPW₁₂

H₂SO₄: 0.5 mol·L⁻¹

HCl: 0.5 mol·L⁻¹