

Polyoxometalate-Antioxidant Peptide Assembly Materials with NIR-Triggered Photothermal Behaviour and Enhanced Antibacterial Activity

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Supporting Information

Table of Contents

MS spectra.....	S1
FT-IR spectra.....	S1
Elemental Analysis (EA).....	S1
Zeta potential	S2
Dynamic Light Scattering (DLS) Analysis.....	S2
Zeta potential	S3
Cytotoxicity.....	S4
Photothermal Behaviour.....	S5

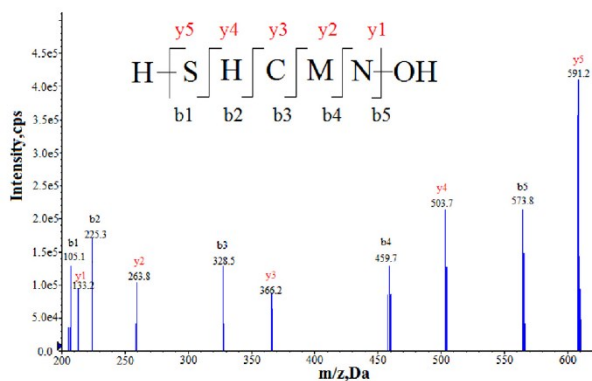


Figure S1. The MS spectrum of SHCMN.

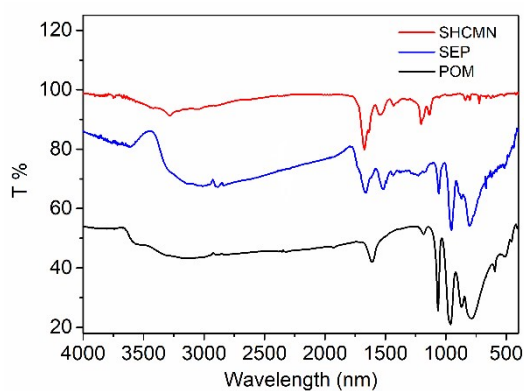


Figure S2. IR spectra of pure rPOM, SHCMN, and rSP in KBr pellets.

Table S1. The assignments of infrared spectra of rSP in solid state.

SHCMN /cm ⁻¹	rSP /cm ⁻¹	Assignment	SHCMN /cm ⁻¹	rSP /cm ⁻¹	Assignment
3300	3300	O-H asym. str.	1000–1300	1000–1300	C–O, C–OH, C–N
2933	2933	CH ₃ asym. str.	1203	1203	C=S
2823	2824	CH ₂ sym. str.	1128	1128	C–O–C stretching
1672	1672	-CO–NH-		1064	P–O _d
1630	1630	C=C frame str.		967	v(Mo=O _d)
1425	1425	CH ₂ scissoring		867	Mo–O _b –Mo
1350	1352	CH ₂ wagging		791	Mo–O _c –Mo
1325	1323	CH ₂ wagging	722	722	C–S
1297	1297	CH ₂ twisting			

Table S2. The summary of elemental analysis for the prepared complex rSP.^[a]

	C	H	N	S	Mo
Calcd. (%)	10.45	1.46	4.64	2.66	47.69
Found (%)	10.25	1.33	4.60	2.59	47.22

[a] The elemental analytical results of C, H, N and S were obtained from organic elemental analysis, and the elemental analysis of Mo was performed on inductive coupled plasma emission spectrometer.

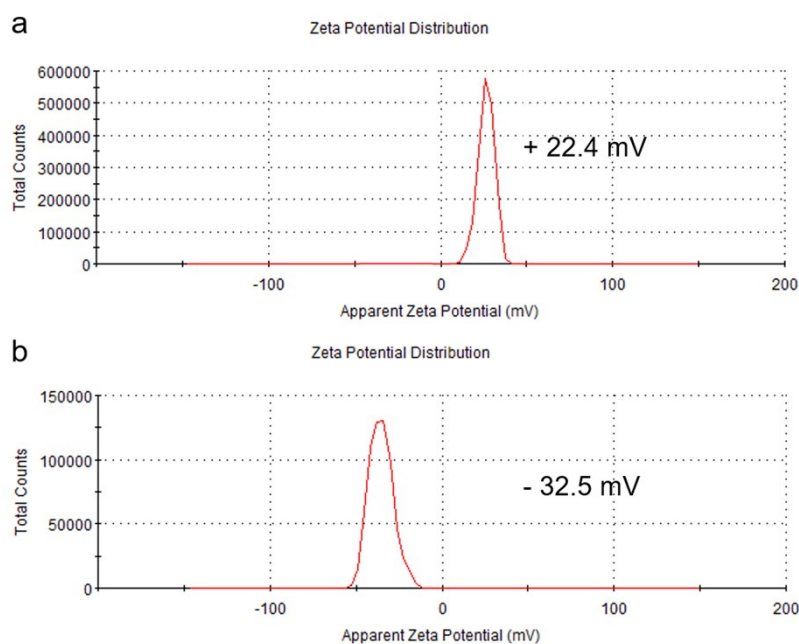


Figure S3. Zeta potential of (a) rSP complex and (b) pure POM in aqueous solution.

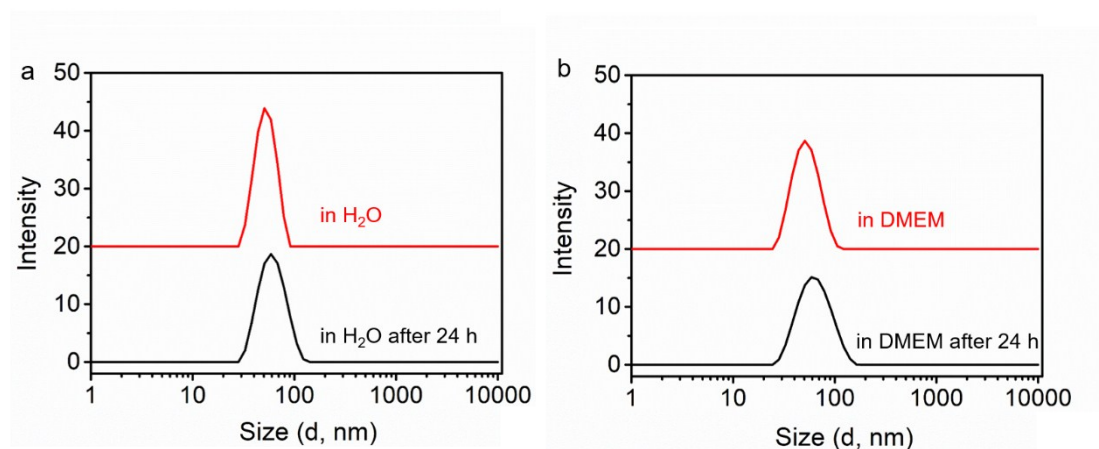


Figure S4. DLS curve of rSP complex in (a) aqueous solution and (b) DMEM culture media condition within 24 h.

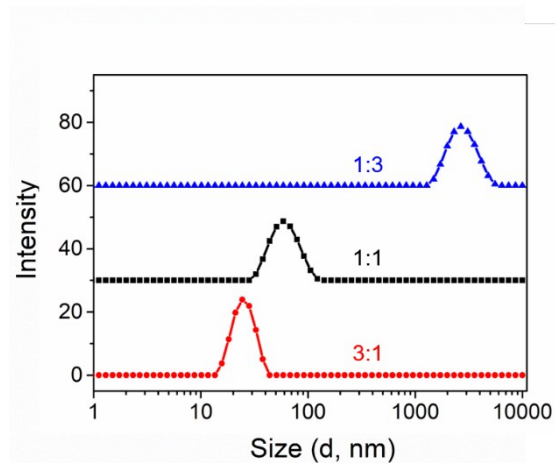


Figure S5. DLS curve of rSP complex solution with the ratio of peptide and POM is 3:1, 1:1 and 1:3.

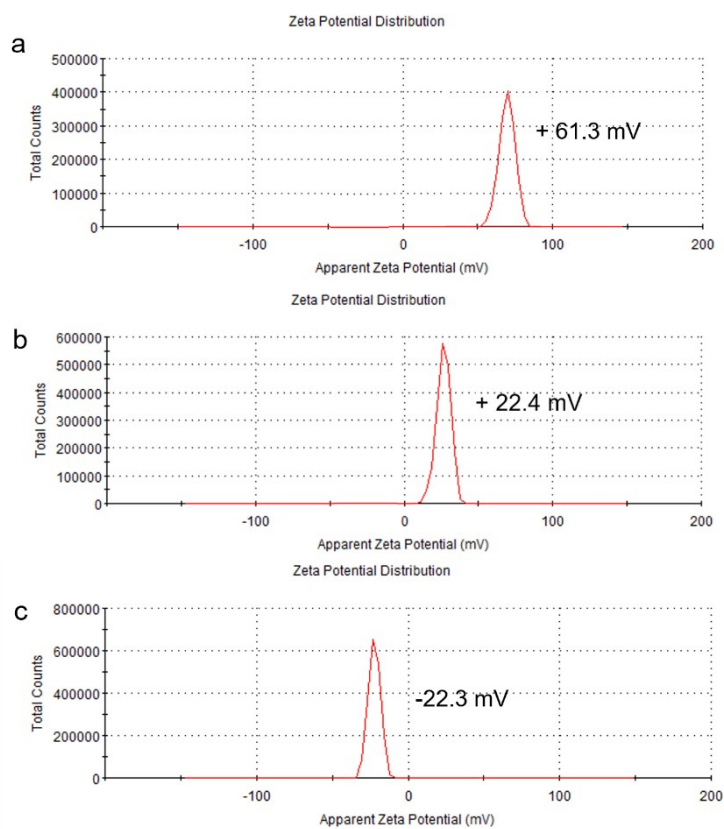


Figure S6. Zeta potential of rSP complex solution with the ratio of peptide and POM is (a) 3:1, (b) 1:1 and (c) 1:3.

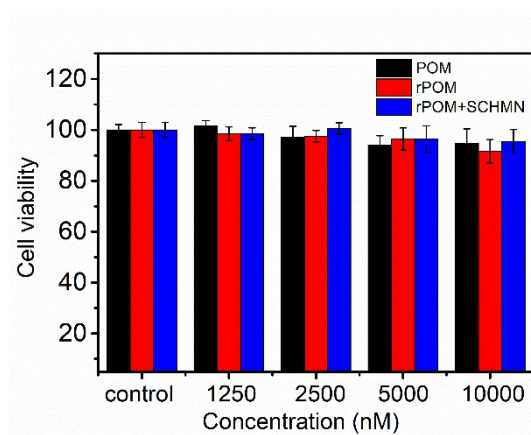


Figure S7. Columnar plots of viability of HepG2 cells after incubation for 24 h in the presence of POM, rPOM and rSP versus the increase in their concentrations.

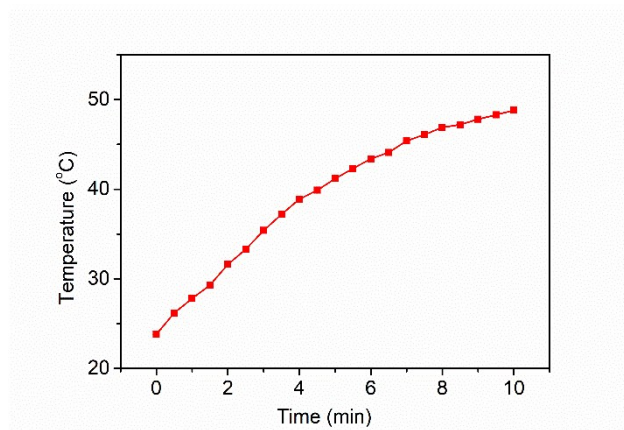


Figure S8. Photothermal heating curves of rSP aqueous solution under 808 nm laser irradiation at a power density of 0.5 W/cm² for 10 min.