

Electronic Supplementary Information (ESI)

Multifunctional Pt(IV) complexes containing a glutathione s-transferase inhibitor lead to enhancing anticancer activity and preventing metastasis of osteosarcoma cells

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Table S1 IC₅₀ values of complexes **1-3** and cisplatin toward cisplatin-sensitive SGC-7901 and cisplatin-resistant SGC-7901/DDP cancer cells for 72 h

Complex	IC ₅₀ (μM)		
	SGC-7901	SGC-7901/DDP	RF ^a
1	3.37±0.15	5.03±0.33	1.49
2	1.64±0.02	1.05±0.09	0.64
3	8.42±0.34	3.75±0.24	0.45
Cisplatin	12.69±0.82	67.88±2.16	5.35

^a RF = IC₅₀ (cisplatin-resistant cancer cells) / IC₅₀ (cisplatin-sensitive cancer cells)

Table S2 Enzyme activity of GSTs after treated with different concentrations of NBDHEX, NXSA, complex **1, 2** or **3**^a

Concentration	GSTs activity (nmol / min / 10 ⁴ cell)				
	NBDHEX	NXSA	1	2	3
1 μM	0.0925	0.0685	0.0649	0.0674	0.0384
5 μM	0.0439	0.0372	0.0363	0.0386	0.0041
10 μM	0.0166	0.0124	0.0147	0.0163	0

^a GSTs activity of control group was 0.2111 nmol / min / 10⁴ cell.

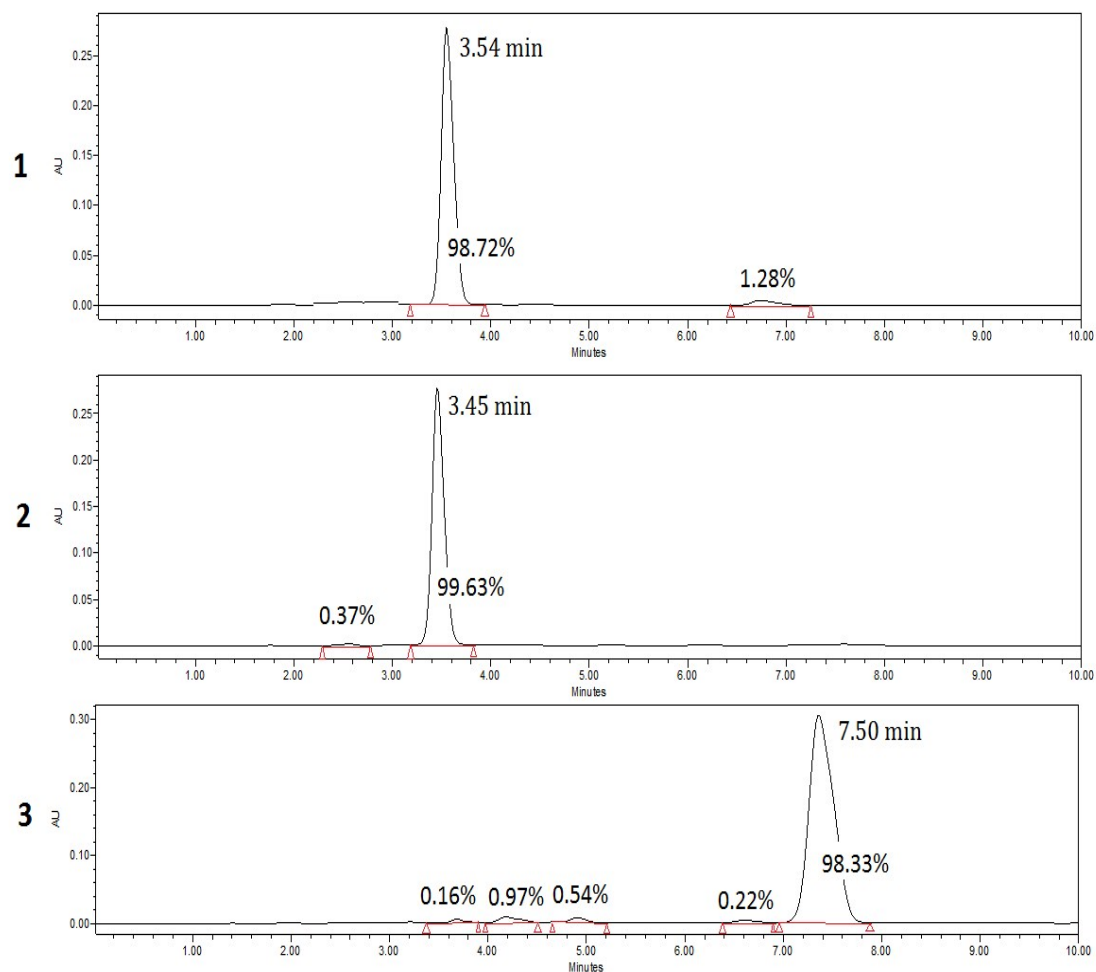


Fig. S1 Purity of complexes **1**, **2** and **3** detected by HPLC.

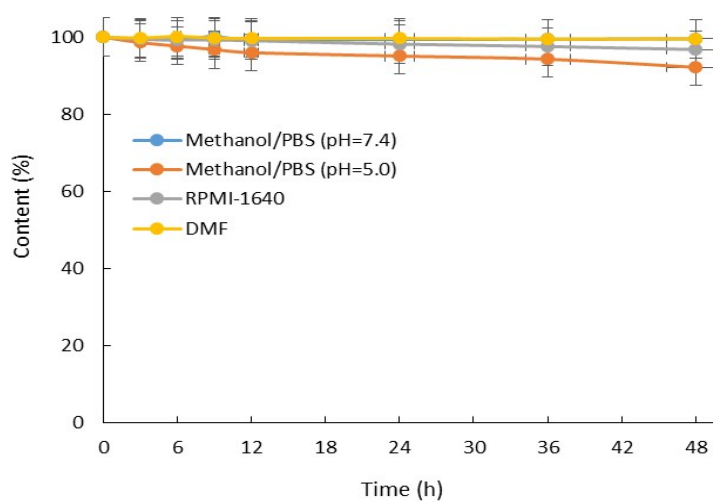


Fig. S2 Stability of complex **1** in different media at room temperature.

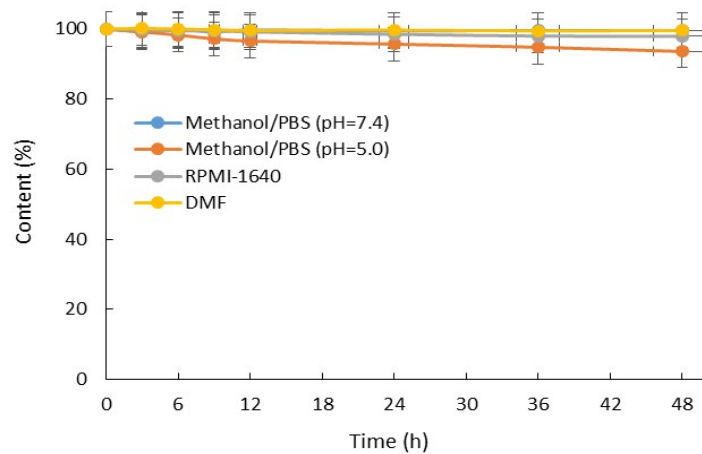


Fig. S3 Stability of complex 2 in different media at room temperature.

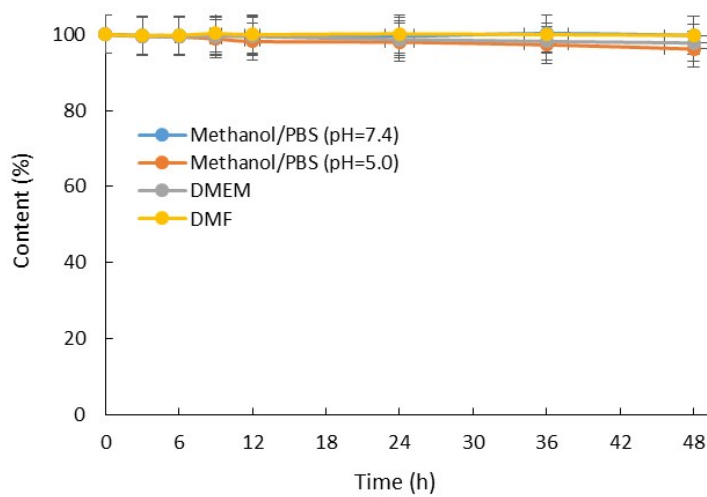


Fig. S4 Stability of complex 3 in different media at room temperature.

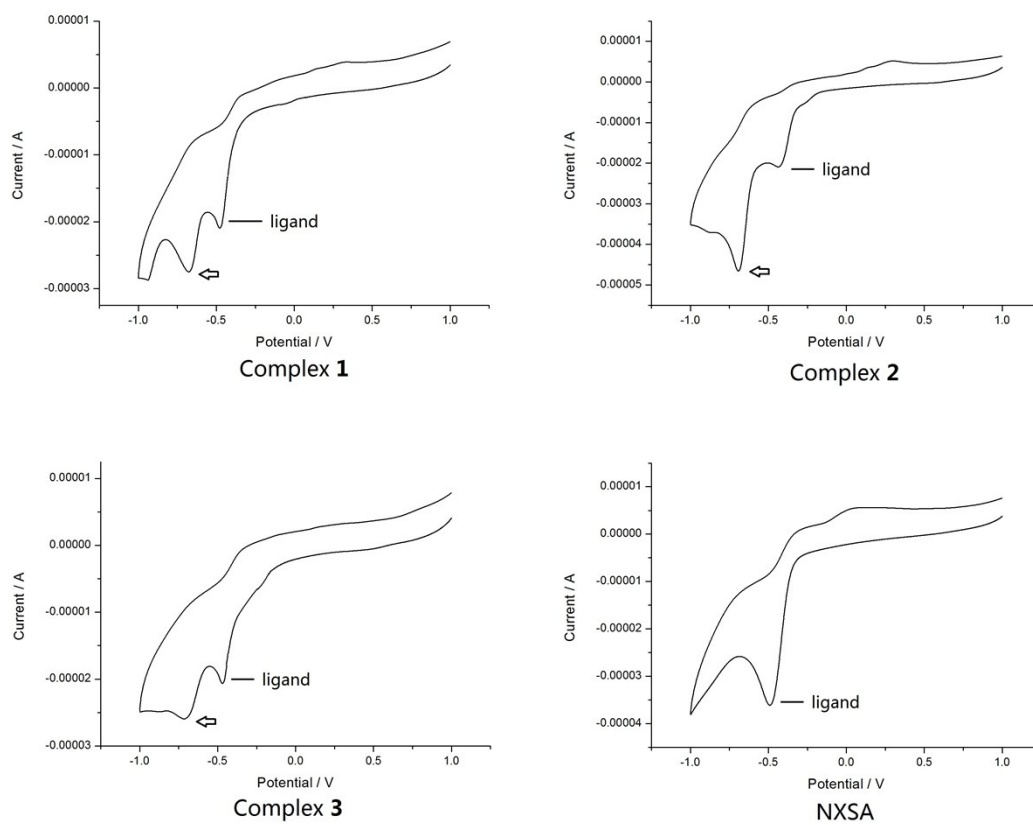


Fig. S5 Cyclic voltammograms of complexes 1-3 and NXSA.

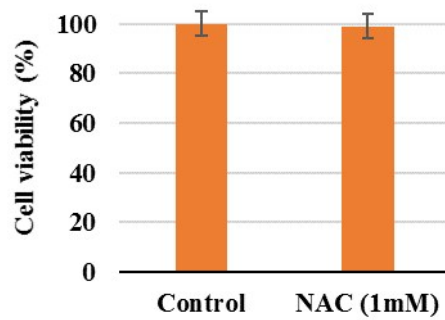


Fig. S6 The cytotoxic effect of 1 mM NAC on U2OS cancer cells for 48 h.

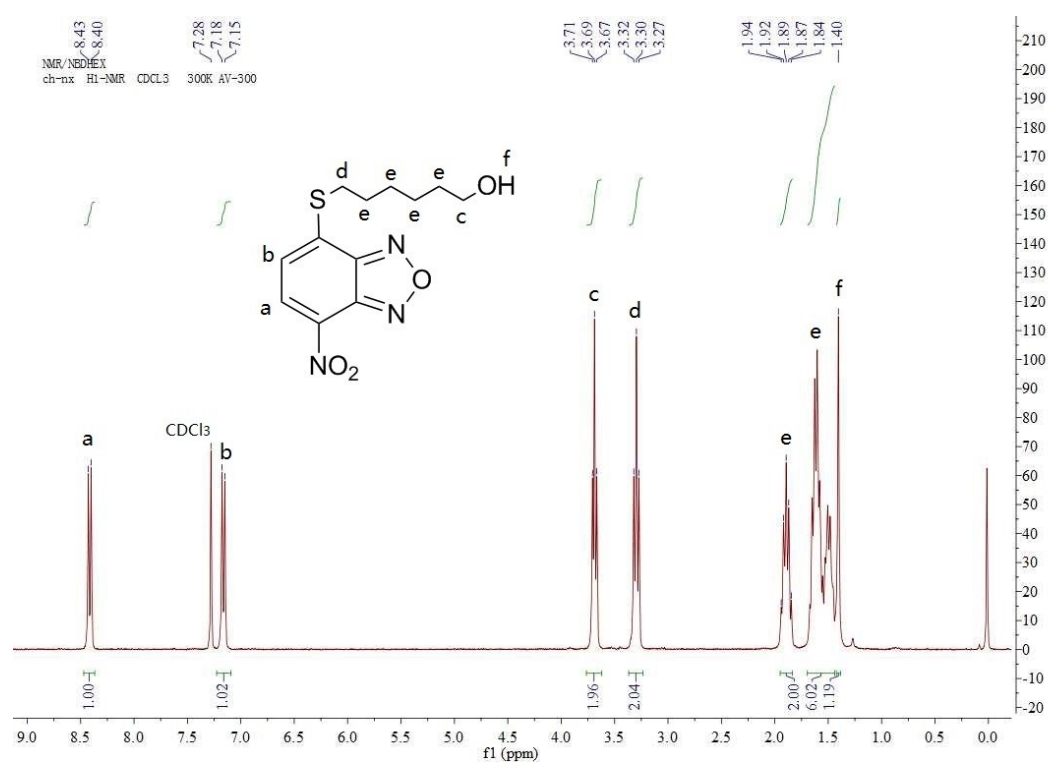
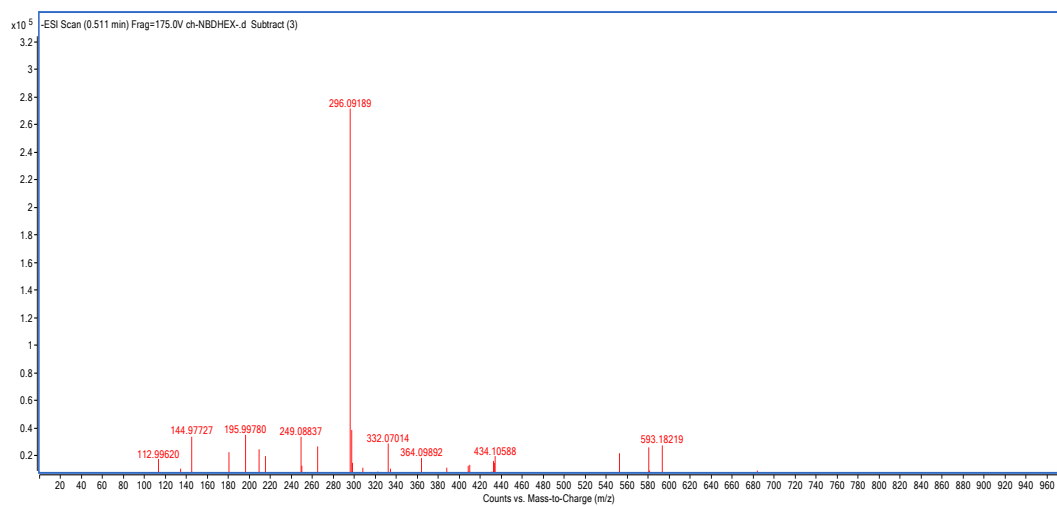


Fig. S7 ESI-MS diagram and ¹H-NMR spectra of NBDHEX.

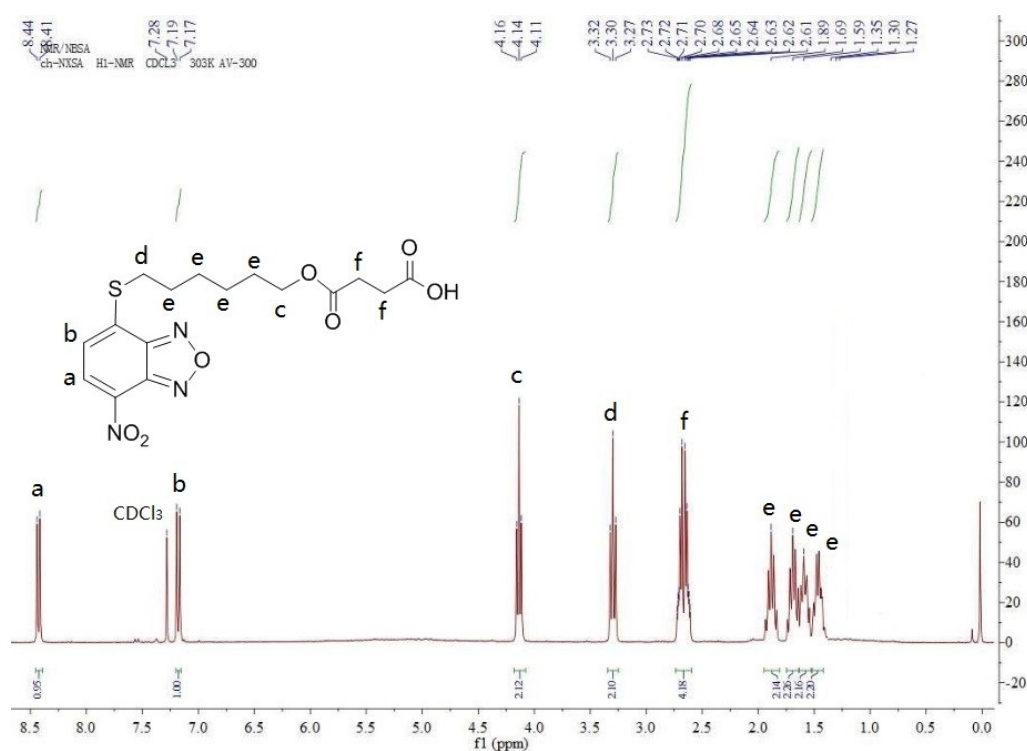
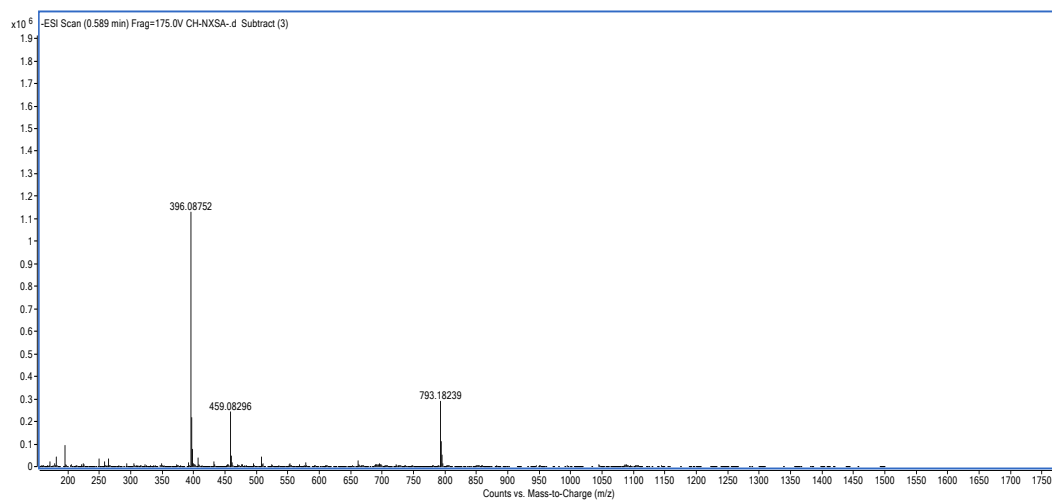
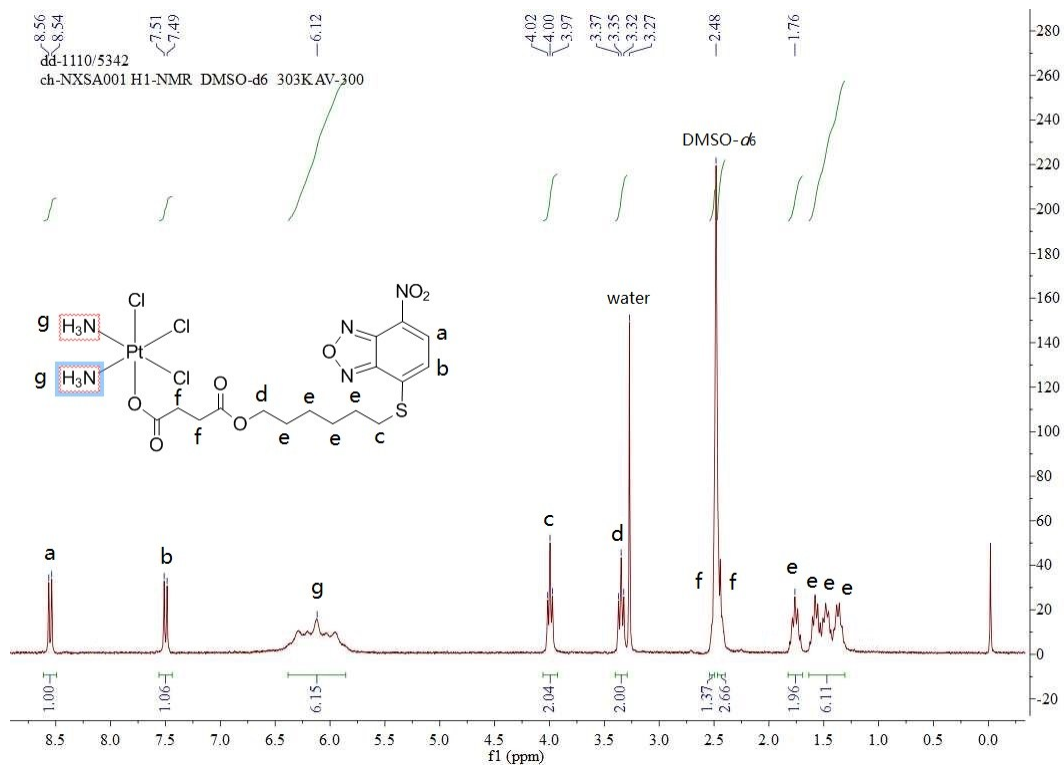
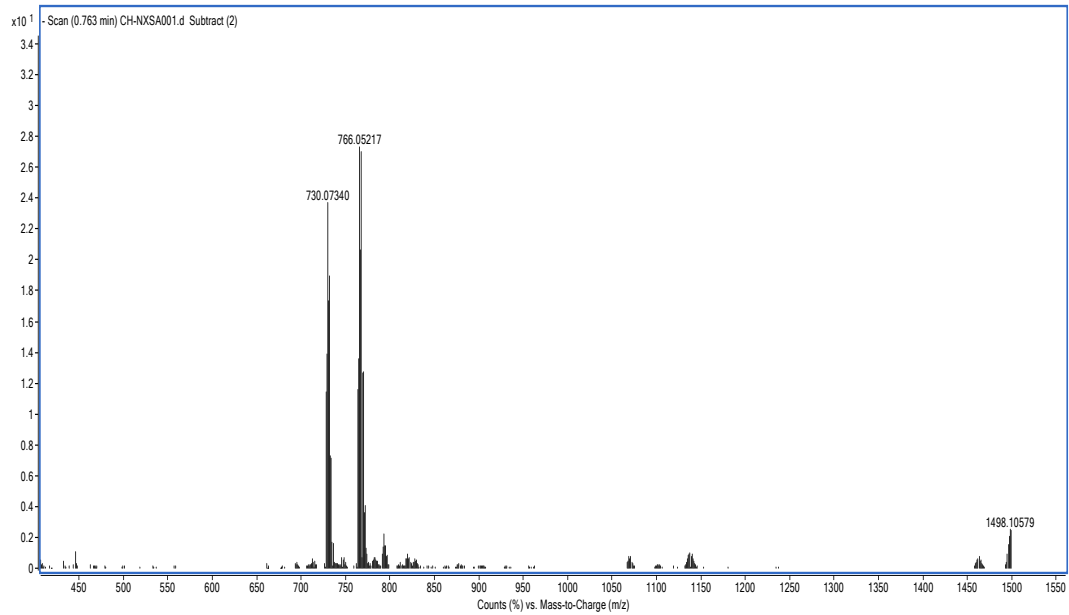


Fig. S8 ESI-MS diagram and ¹H-NMR spectra of NXSA.



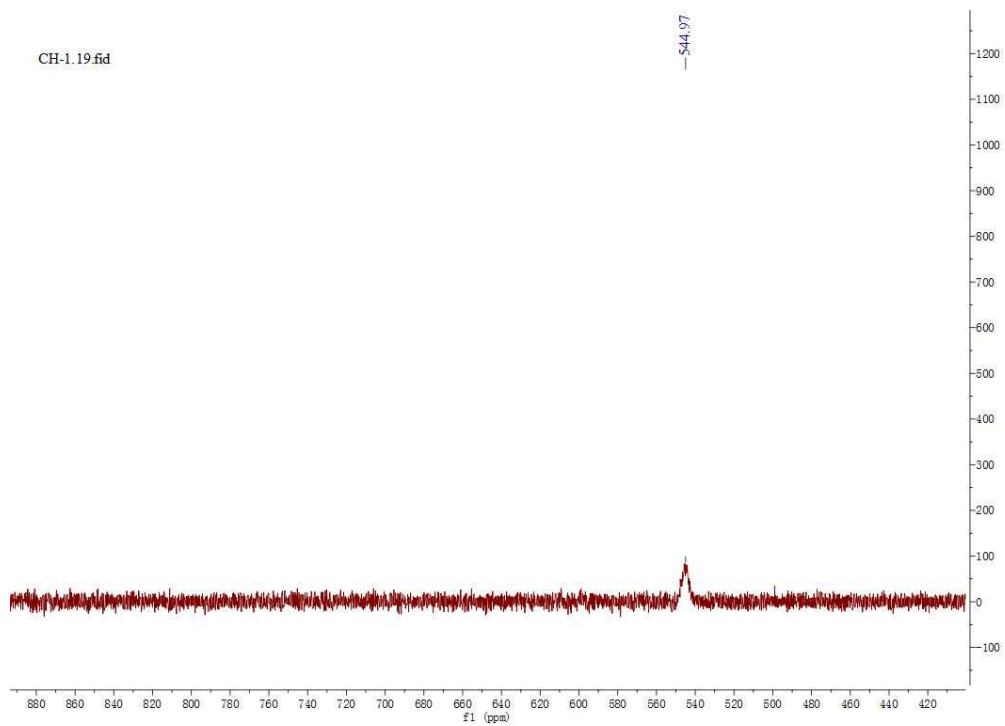
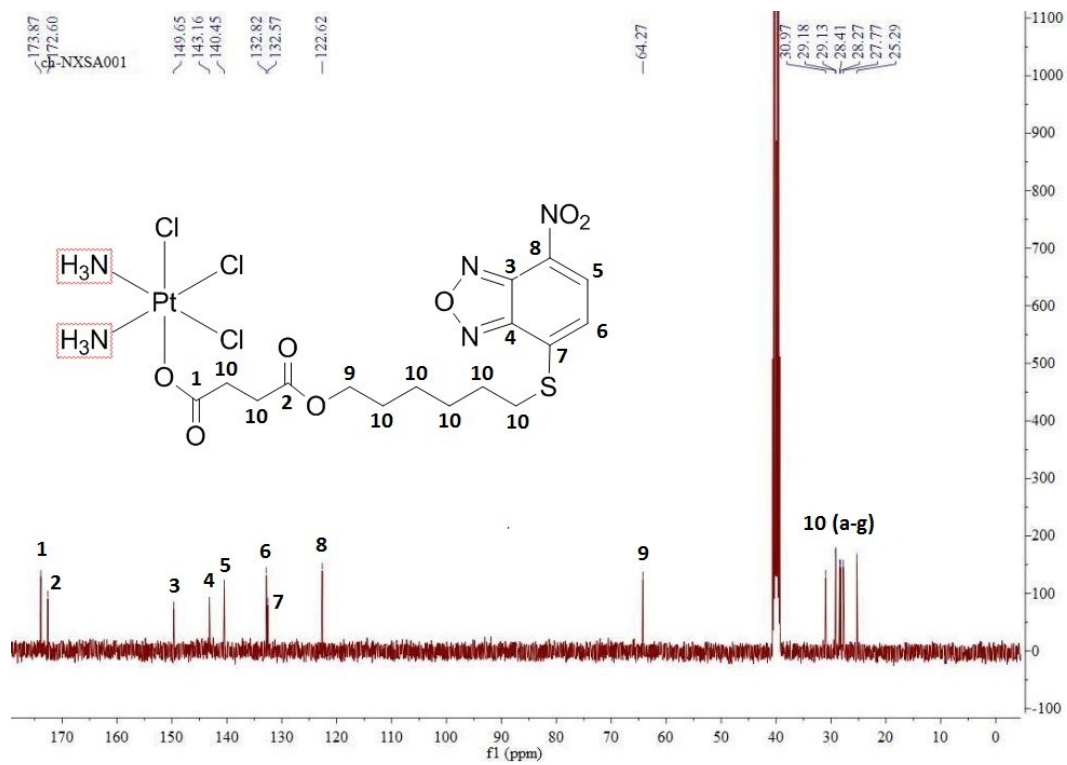
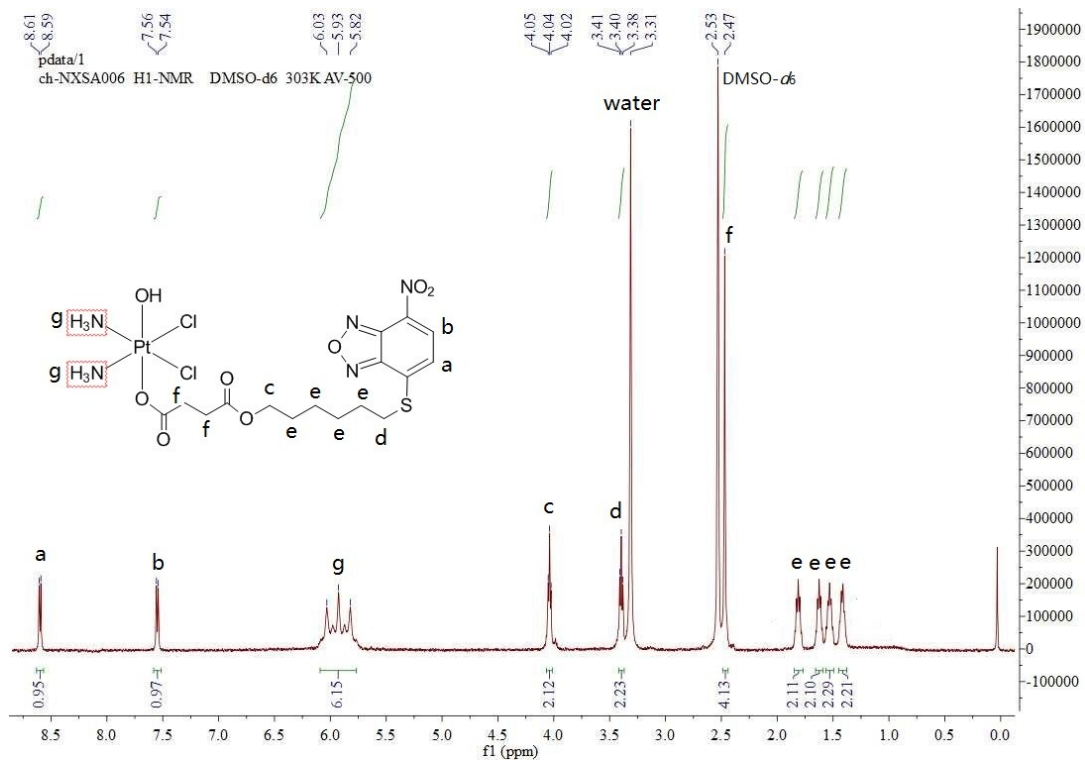
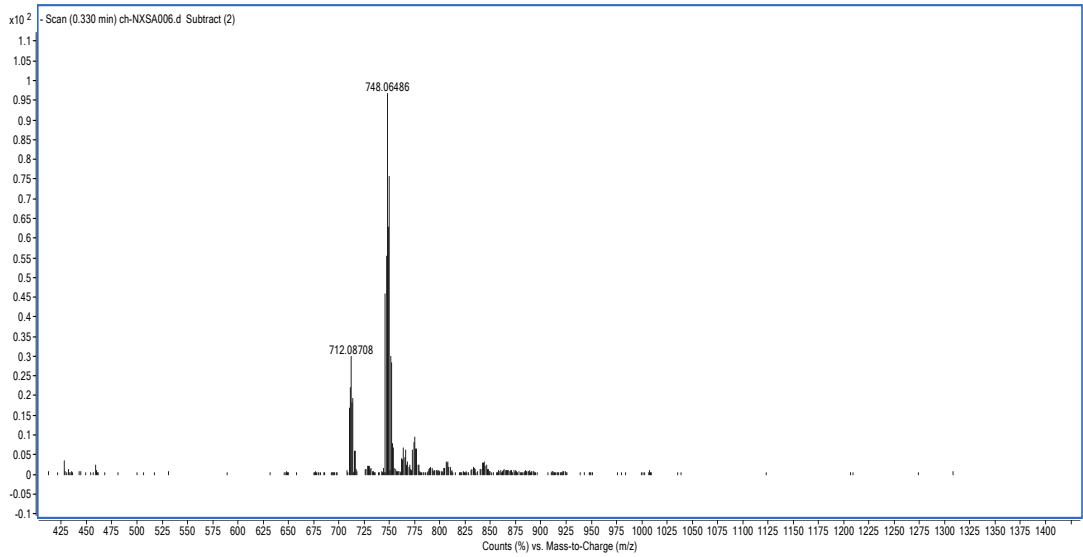


Fig. S9 ESI-MS diagram, and ¹H, ¹³C and ¹⁹⁵Pt -NMR spectra of complex **1**.



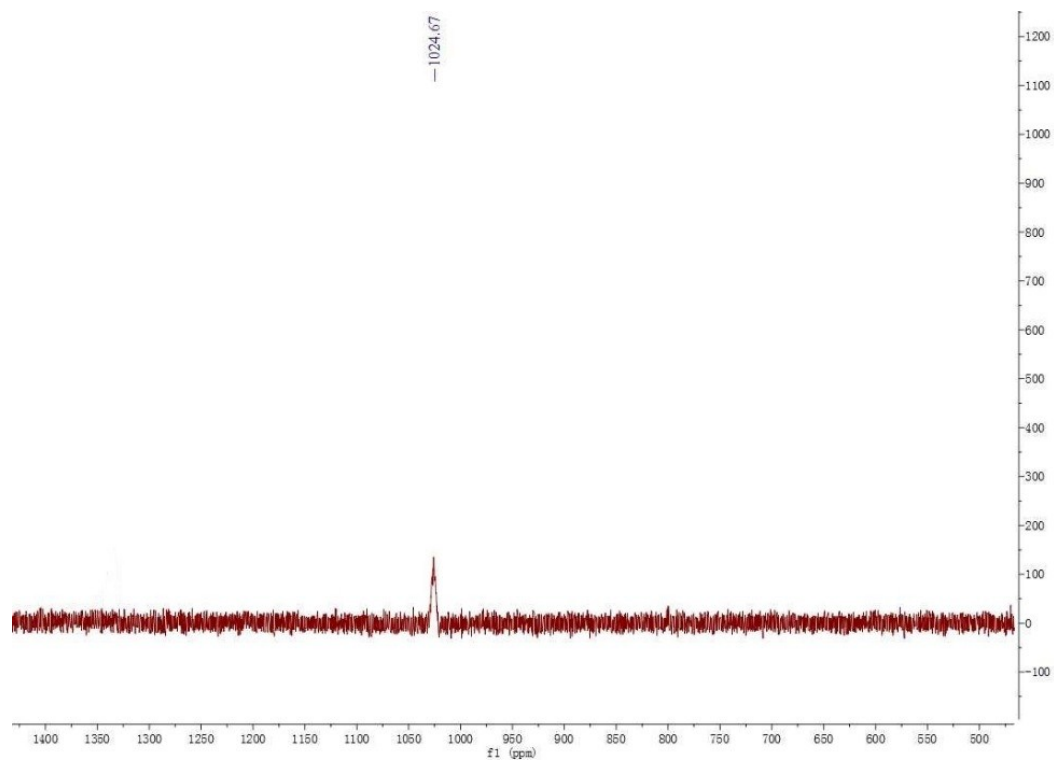
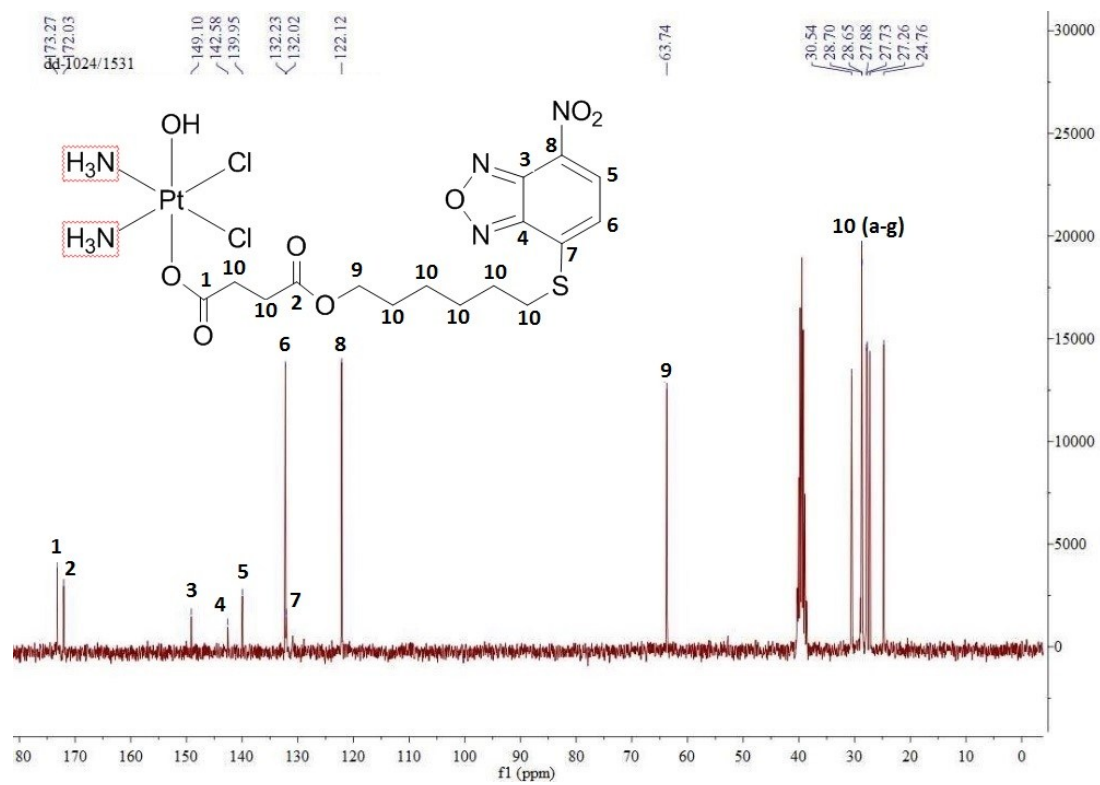


Fig. S10 ESI-MS diagram, and ¹H, ¹³C and ¹⁹⁵Pt -NMR spectra of complex 2.

