

Supplementary Material

Table S1 Bond Lengths of C1-C5

Identification code	C1	C2	C3	C4	Identification code	C5
Pt(1)-S(1)	2.2018(13)	2.1992(11)	2.201(3)	2.2097(10)	Pt(1)-S(1)	2.1953(18)
Pt(1)-Cl(1)	2.2967(14)	2.2959(12)	2.288(2)	2.2974(10)	Pt(1)-Cl(1)	2.2960(18)
Pt(1)-O(1)	2.015(4)	2.010(3)	1.997(6)	2.013(2)	Pt(1)-O(2)	1.997(5)
Pt(1)-N(2)	2.014(4)	2.012(4)	2.002(8)	2.018(3)	Pt(1)-N(2)	1.995(5)

Table S2 Bond Angles of C1-C5

Identification code	C1	C2	C3	C4	Identification code	C5
S(1)-Pt(1)-Cl(1)	89.21(5)	89.18(9)	89.94(4)	89.20(4)	S(1)-Pt(1)-Cl(1)	88.83(7)
O(1)-Pt(1)-S(1)	174.07(12)	177.8(2)	179.59(9)	177.37(7)	O(2)-Pt(1)-S(1)	174.07(15)
O(1)-Pt(1)-Cl(1)	89.95(11)	89.74(19)	90.63(8)	89.31(7)	O(2)-Pt(1)-Cl(1)	85.25(15)
N(2)-Pt(1)-S(1)	101.84(12)	101.8(2)	101.29(10)	102.26(8)	N(2)-Pt(1)-S(1)	96.69(16)
N(2)-Pt(1)-Cl(1)	168.95(12)	168.9(2)	169.70(11)	168.54(8)	N(2)-Pt(1)-Cl(1)	173.67(16)
N(2)-Pt(1)-O(1)	79.05(15)	79.2(3)	79.12(13)	79.23(10)	N(2)-Pt(1)-O(2)	89.2(2)

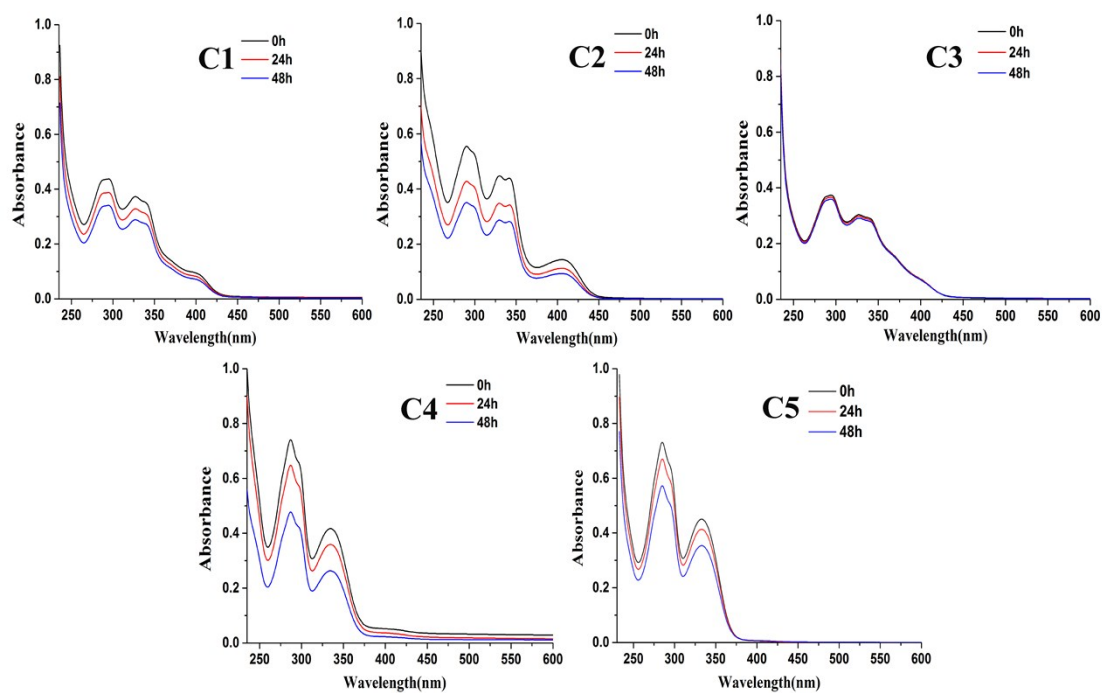


Fig. S1 UV-Vis spectra of the complexes dissolving in Tris buffer solution for 0h, 24h and 48h.

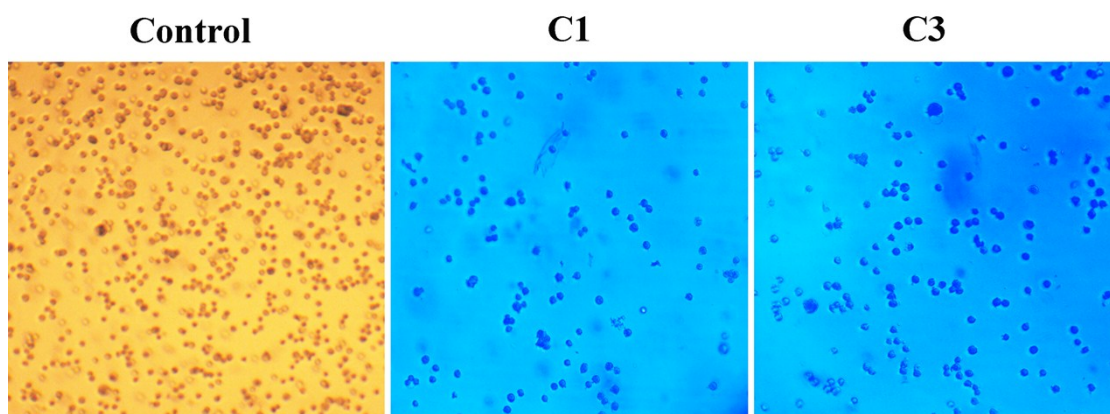


Fig. S2 The Trypan blue staining test.

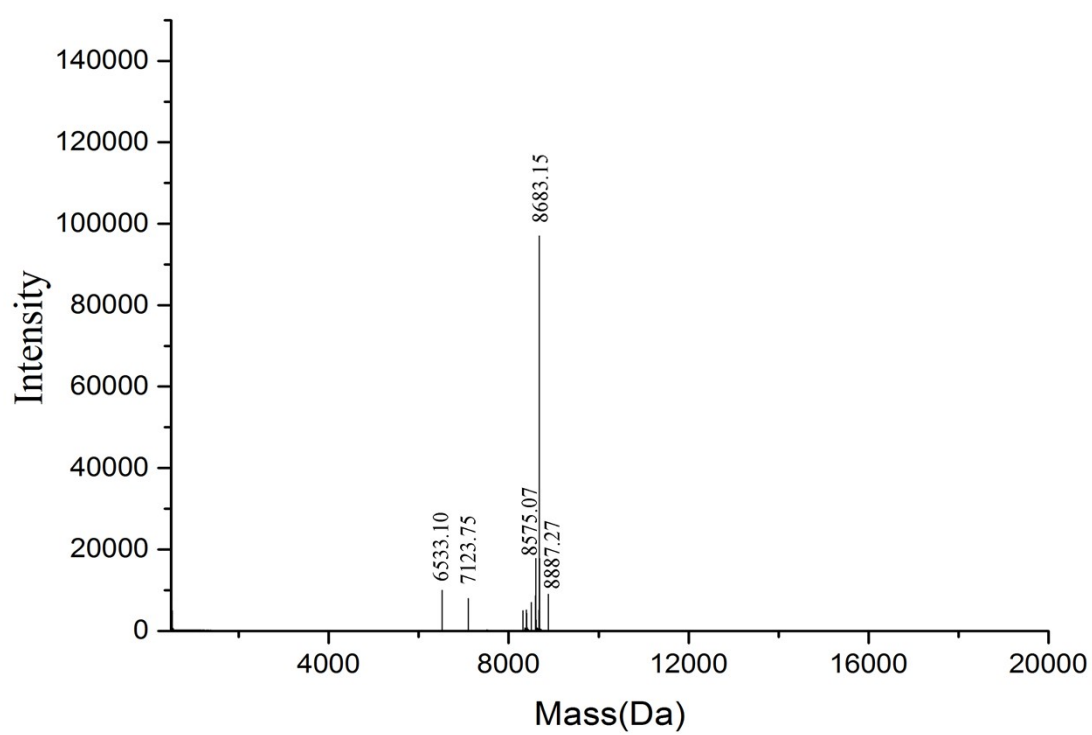


Fig. S3 ESI-mass spectrum of the Pu-27 DNA showing an intense signal at $m/z = 8683.15$ for $[\text{Pu-27-4H}]^-$.

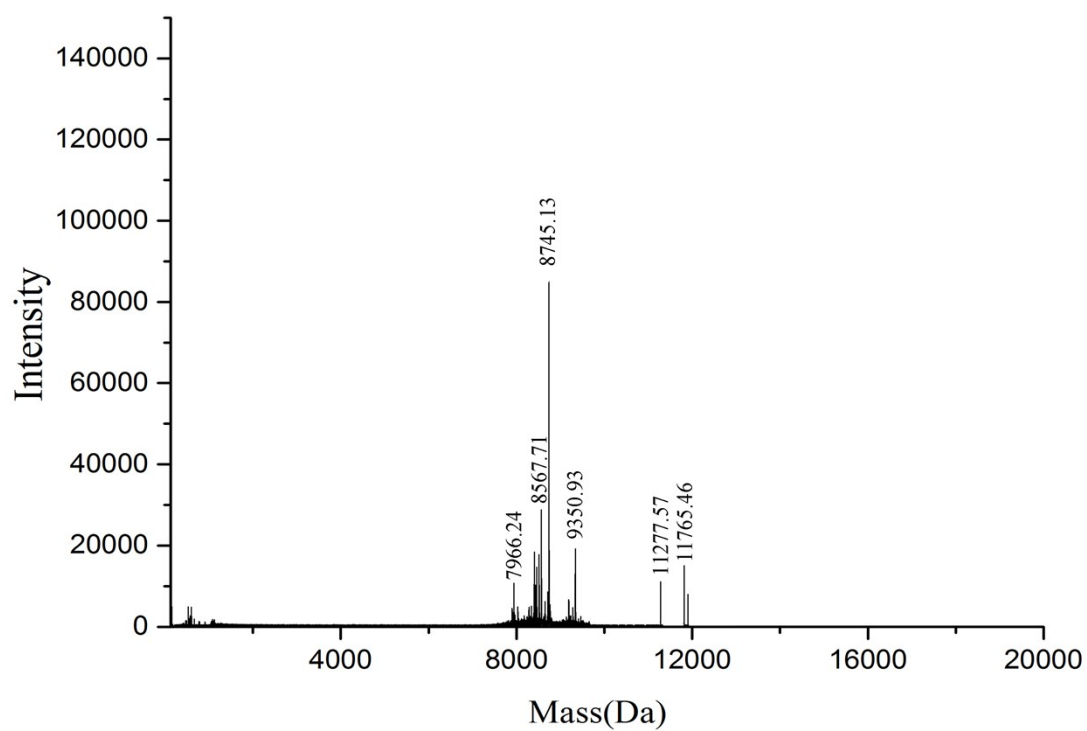


Fig. S4 ESI-mass spectrum of the Pu-27 DNA bind with C3 showing an signal at $m/z = 11277.57$ for $[\text{Pu}+3\text{C3}+2\text{CH}_3\text{CH}_2\text{OH}-3\text{H}]^-$.

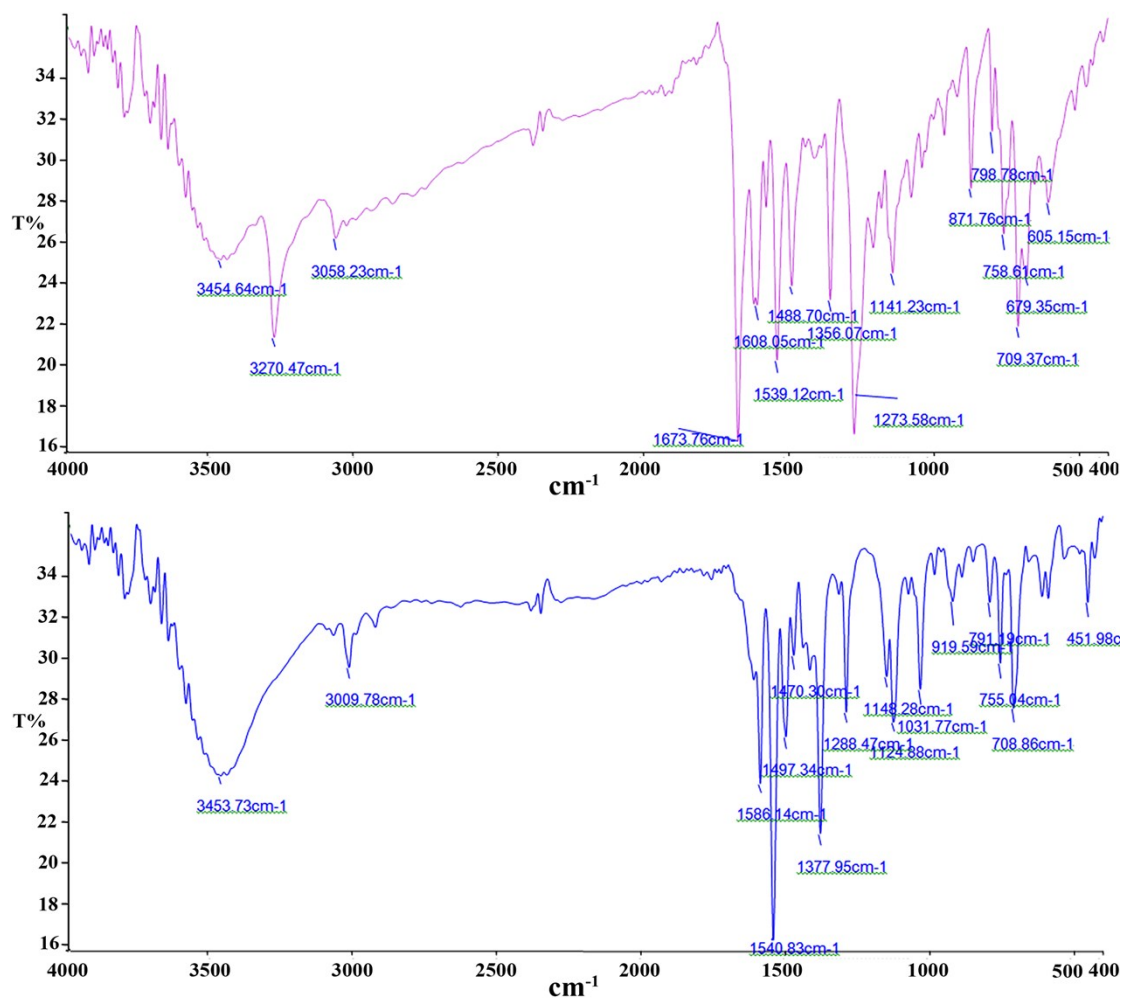


Fig. S5 IR spectrum of Ligand1 and C1

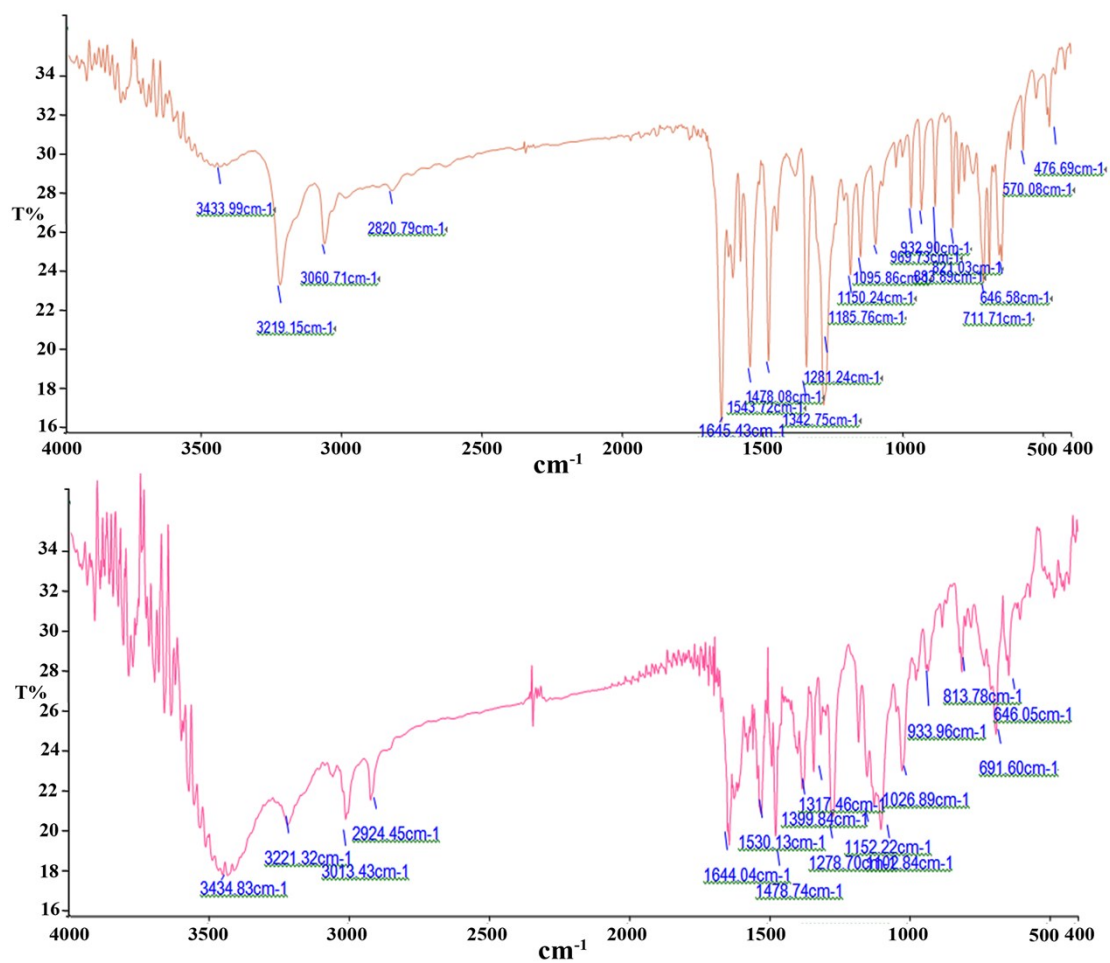


Fig. S6 IR spectrum of Ligand2 and C2

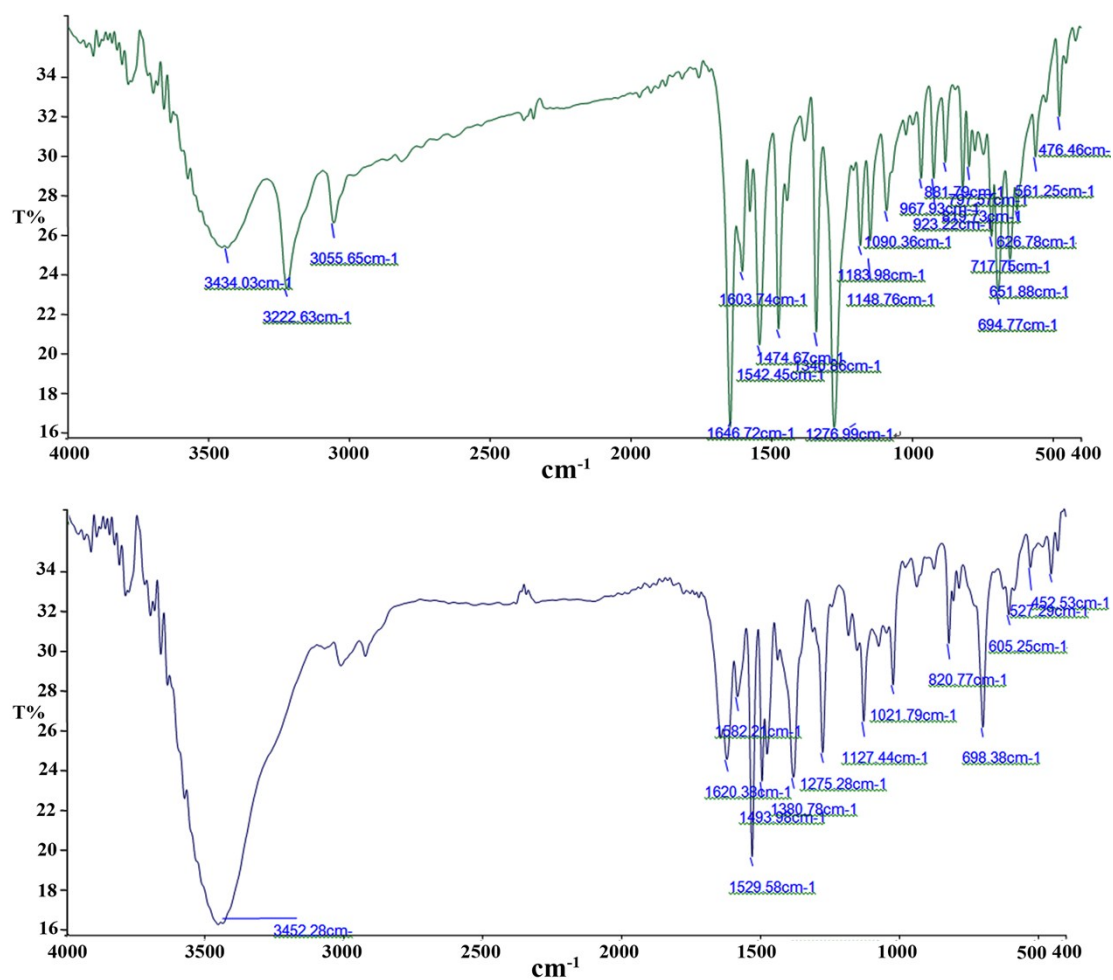


Fig. S7 IR spectrum of Ligand3 and C3

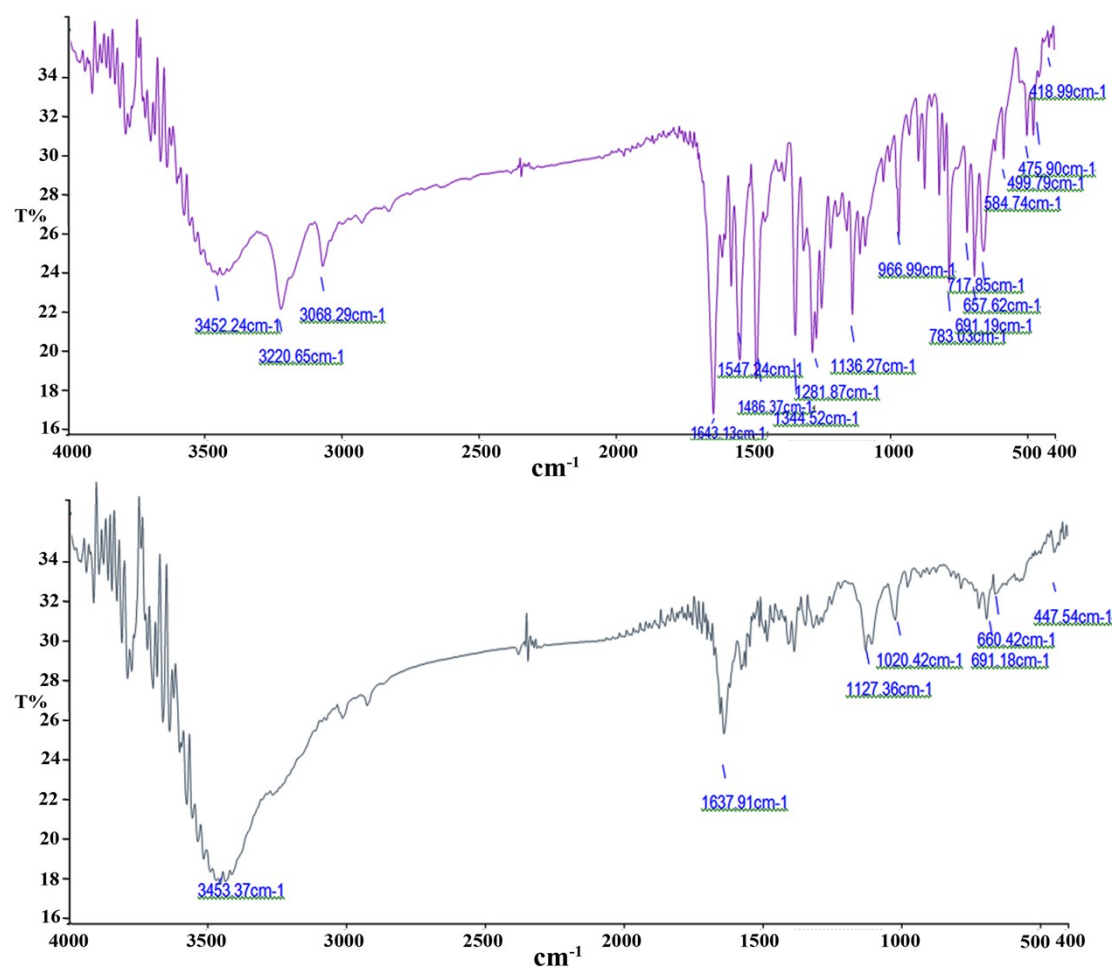


Fig. S8 IR spectrum of Ligand4 and C4

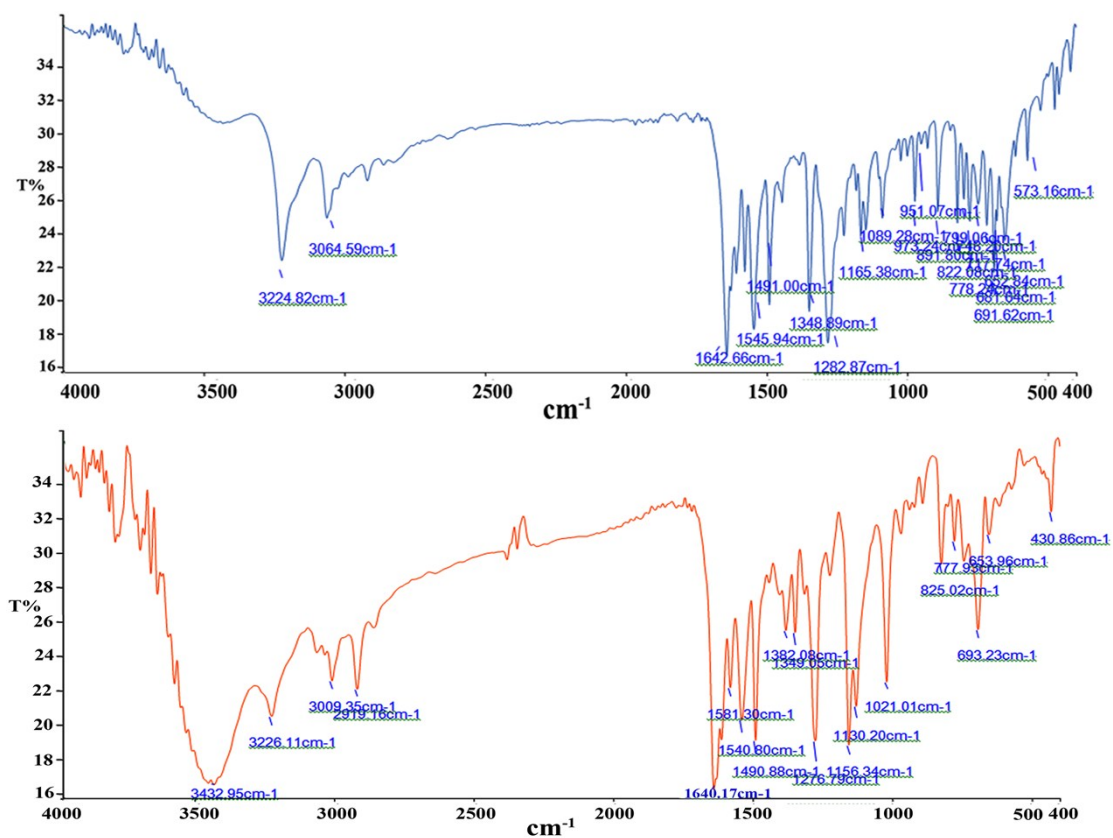


Fig. S9 IR spectrum of Ligand5 and C5

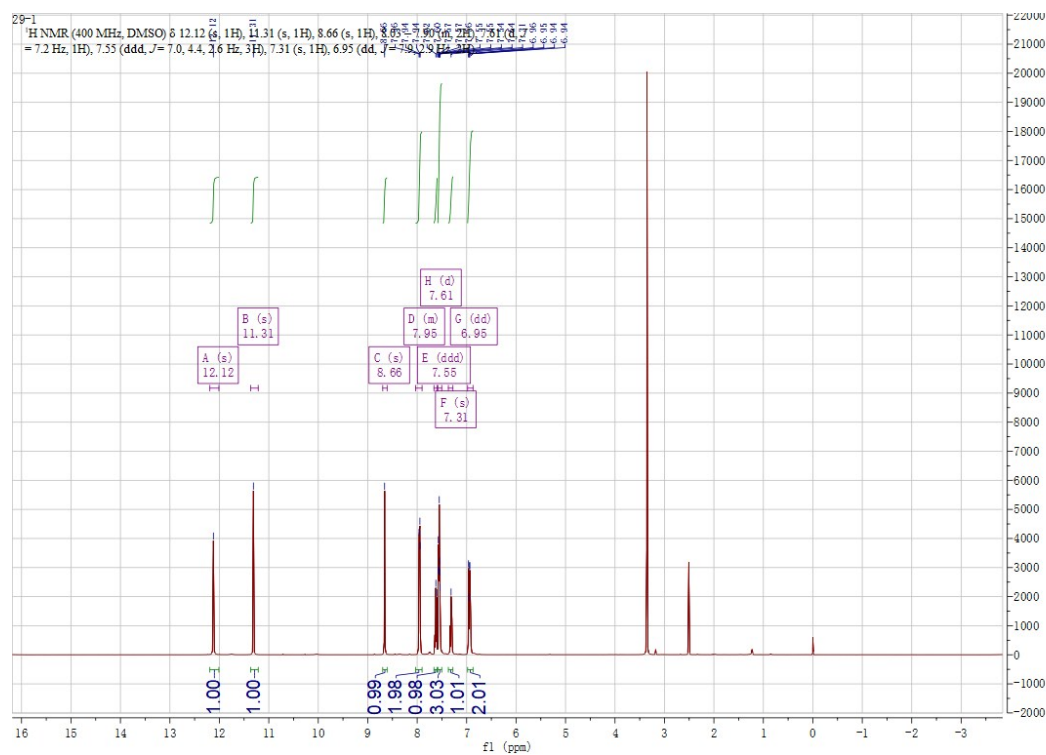


Fig. S10 ¹H-NMR spectrum of Ligand1

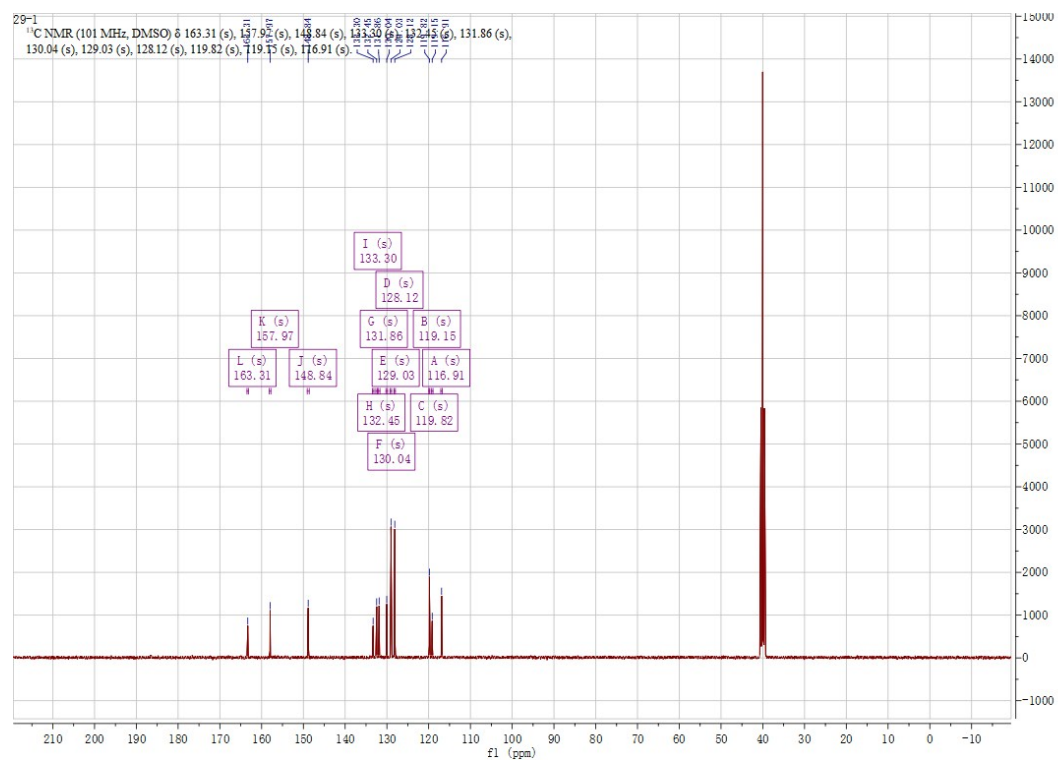


Fig. S11 ^{13}C -NMR spectrum of Ligand1

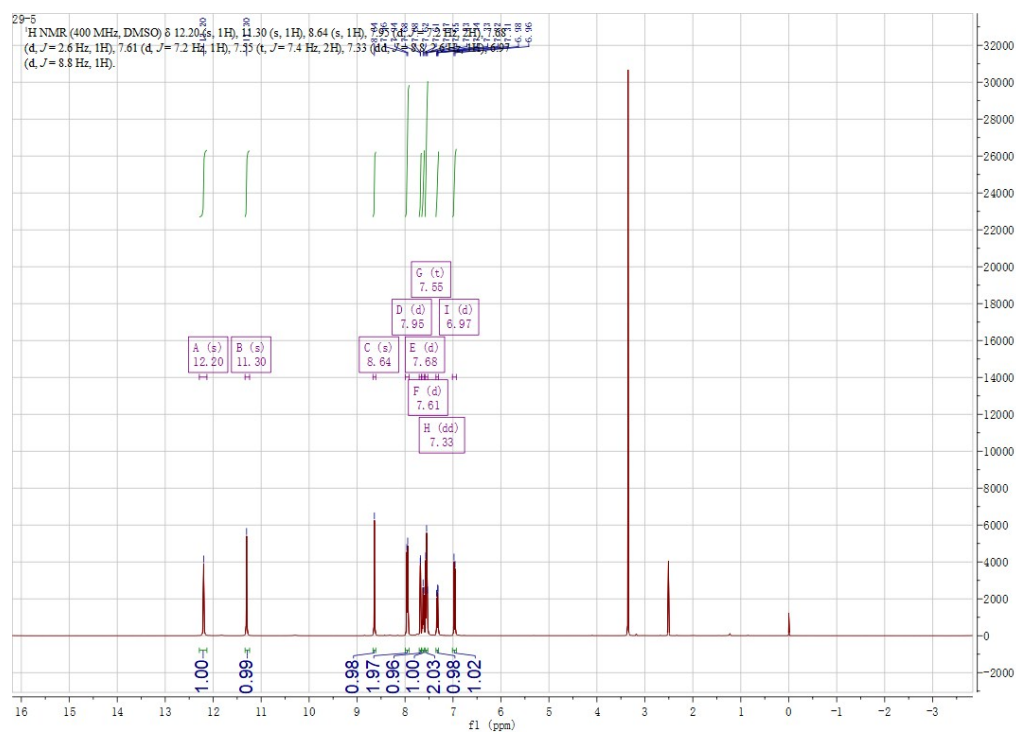


Fig. S12 ¹H-NMR spectrum of Ligand2

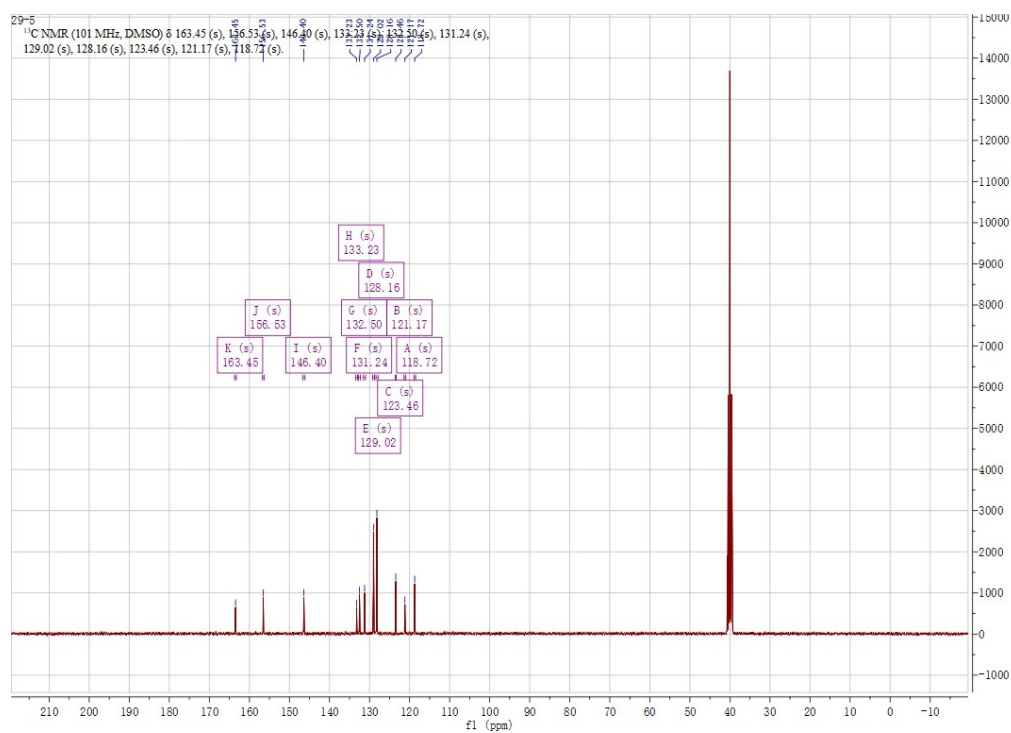


Fig. S13 ^{13}C -NMR spectrum of Ligand2

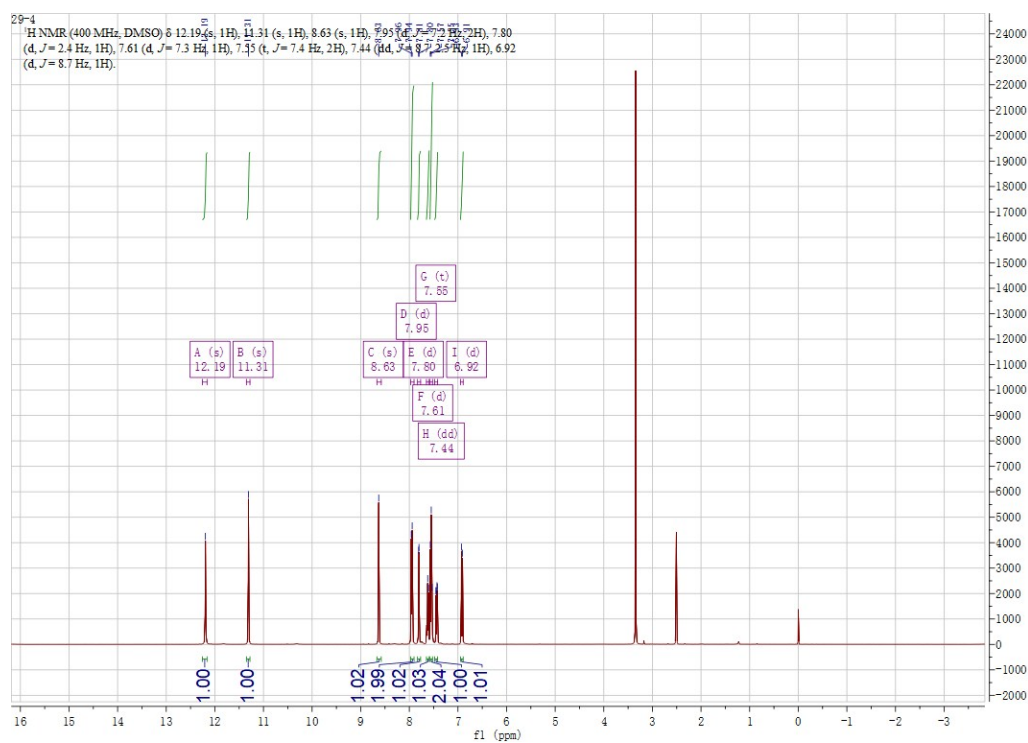


Fig. S14 ¹H-NMR spectrum of Ligand3

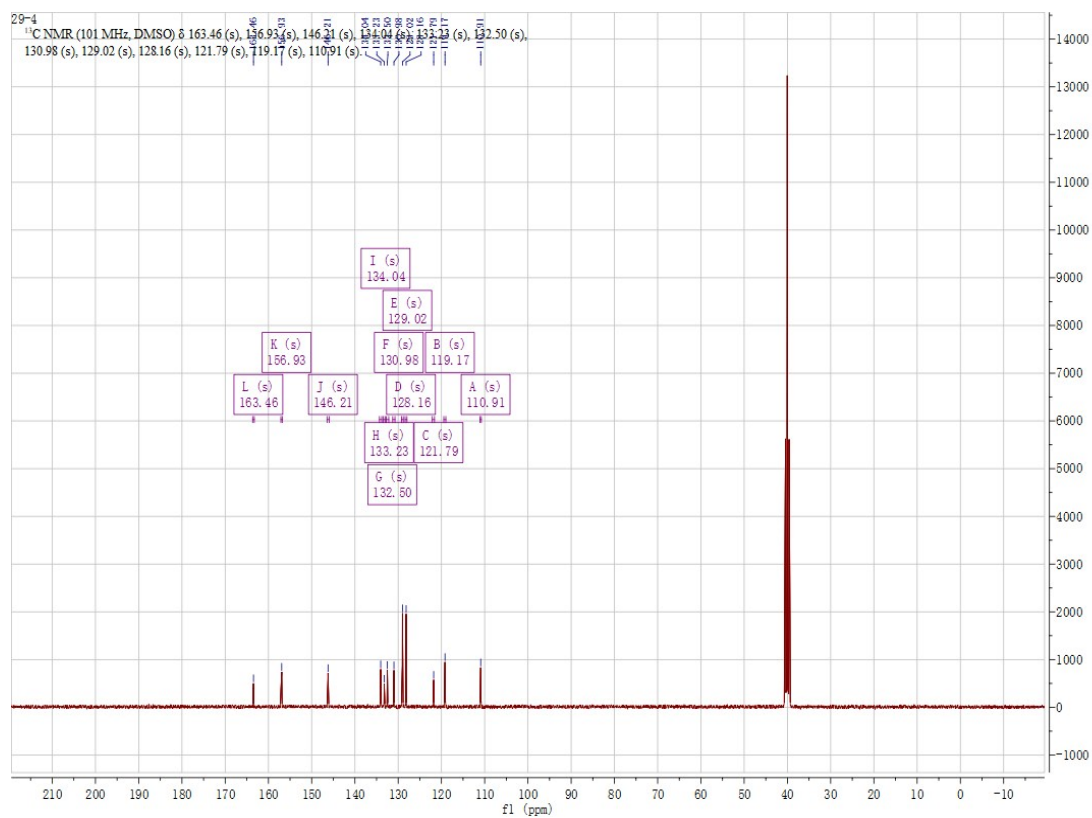


Fig. S15 ¹³C-NMR spectrum of Ligand3

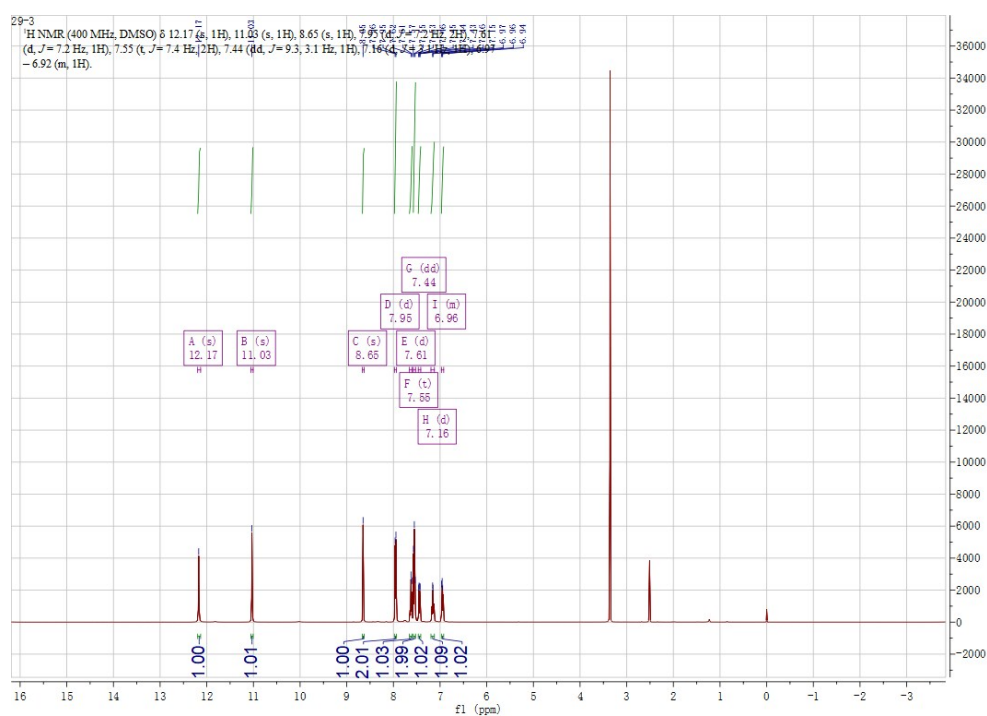


Fig. S16 ¹H-NMR spectrum of Ligand4

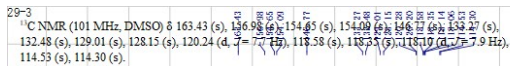


Fig. S17 ^{13}C -NMR spectrum of Ligand4

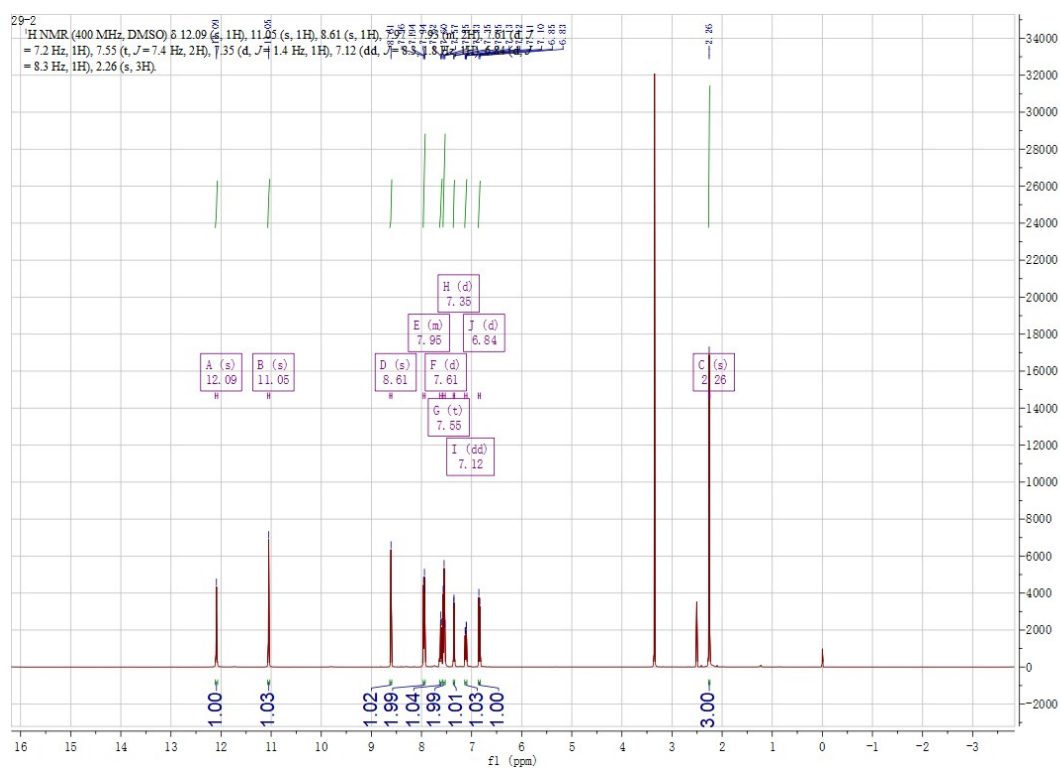


Fig. S18 ¹H-NMR spectrum of Ligand5

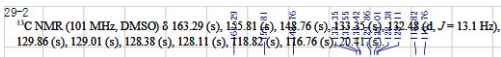


Fig. S19 ^{13}C -NMR spectrum of Ligand5

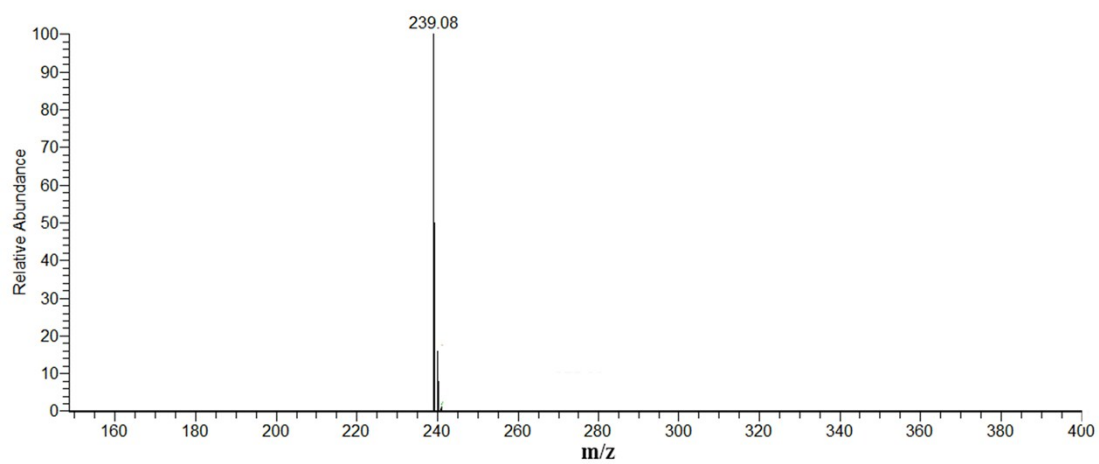


Fig. S20 ESI-mass spectrum of the Ligand1 showing an intense signal at m/z: 239.08 for $[\text{C}_{14}\text{H}_{12}\text{N}_2\text{O}_2-\text{H}]^-$.

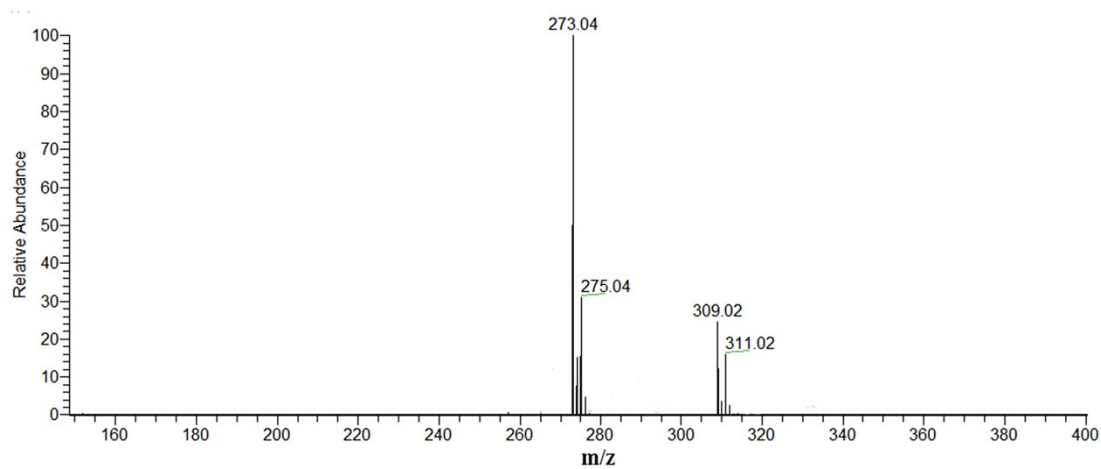


Fig. S21 ESI-mass spectrum of the Ligand2 showing an intense signal at $m/z = 273.04$ for $[\text{C}_{14}\text{H}_{11}\text{ClN}_2\text{O}_2\text{-H}]^-$.

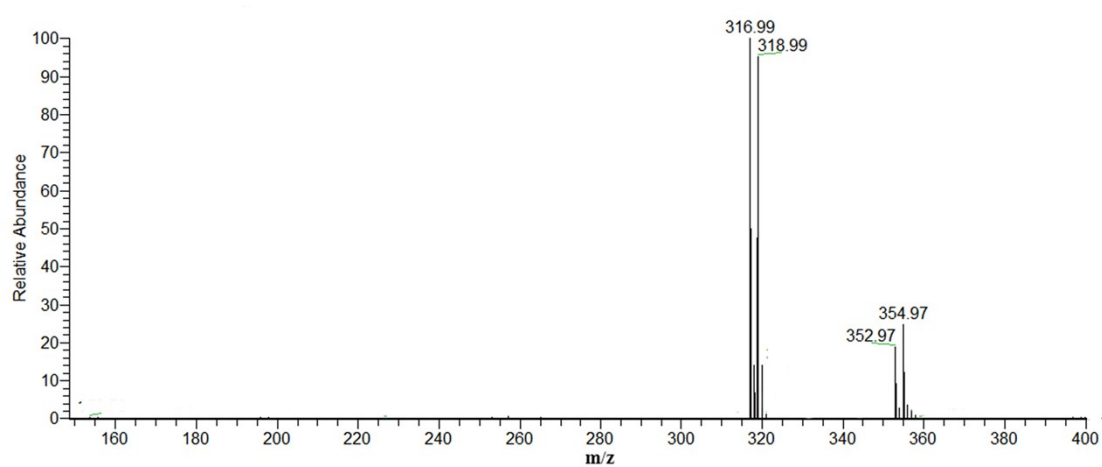


Fig. S22 ESI-mass spectrum of the Ligand3 showing an intense signal at $m/z = 318.99$ for $[C_{14}H_{11}BrN_2O_2-H]^-$.

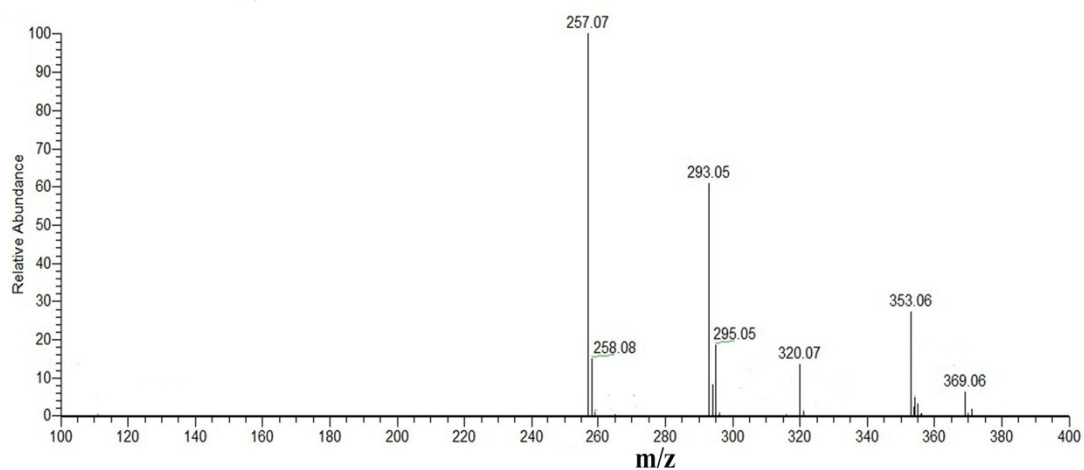


Fig. S23 ESI-mass spectrum of the Ligand4 showing an intense signal at $m/z = 257.07$ for $[C_{14}H_{11}FN_2O_2-H]^-$.

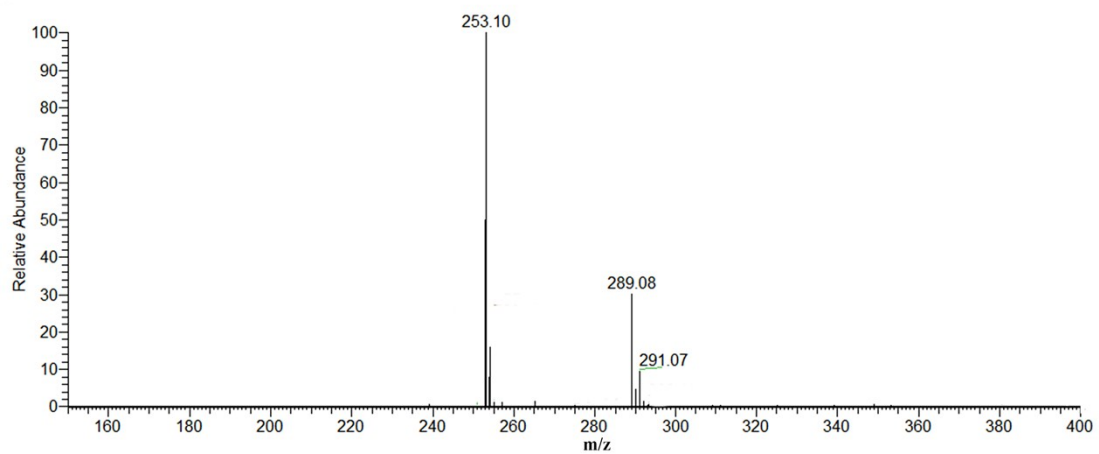


Fig. S24 ESI-mass spectrum of the Ligand5 showing an intense signal at m/z: 253.10 for $[\text{C}_{15}\text{H}_{14}\text{N}_2\text{O}_2-\text{H}]^-$.

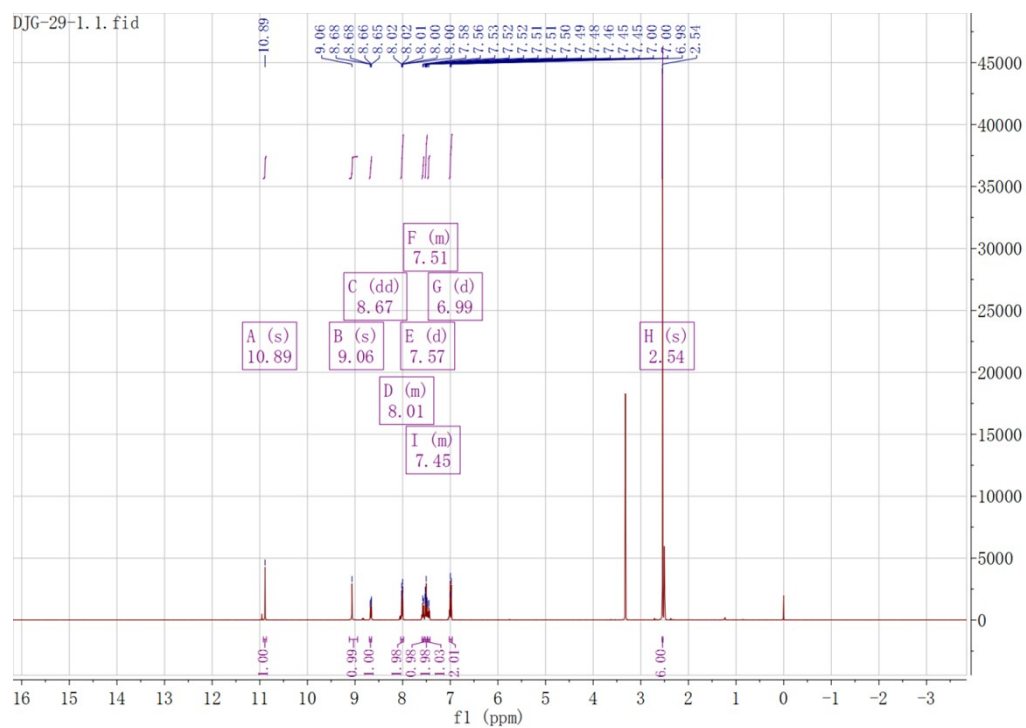


Fig. S25 ^1H -NMR spectrum of C1 in DMSO for 0h

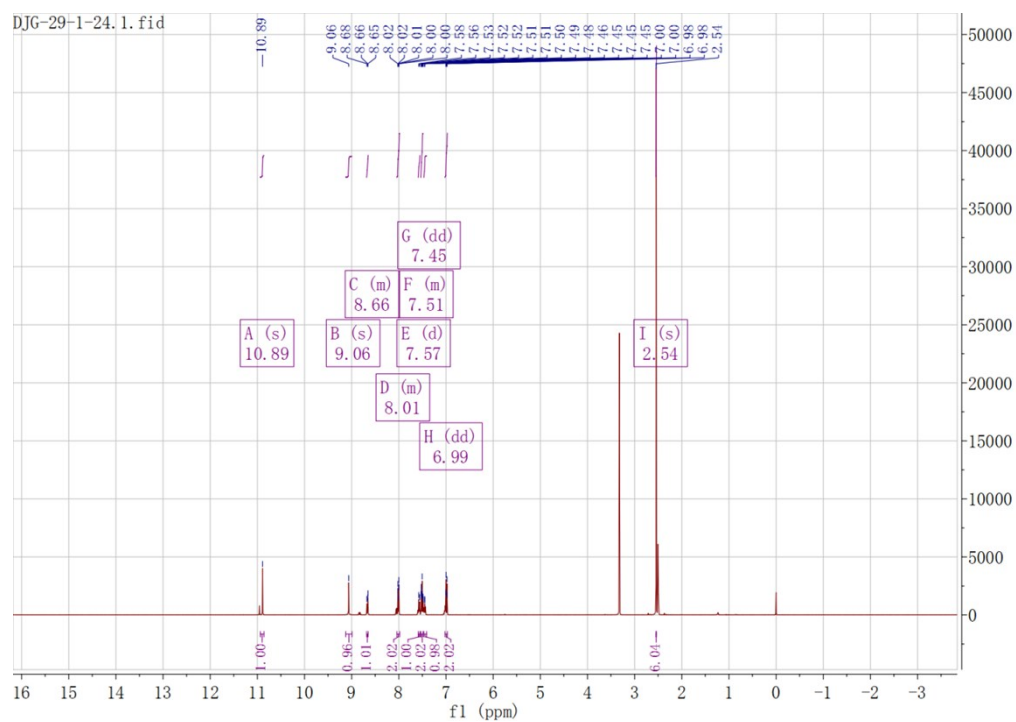


Fig. S26 ^1H -NMR spectrum of C1 in DMSO for 48h

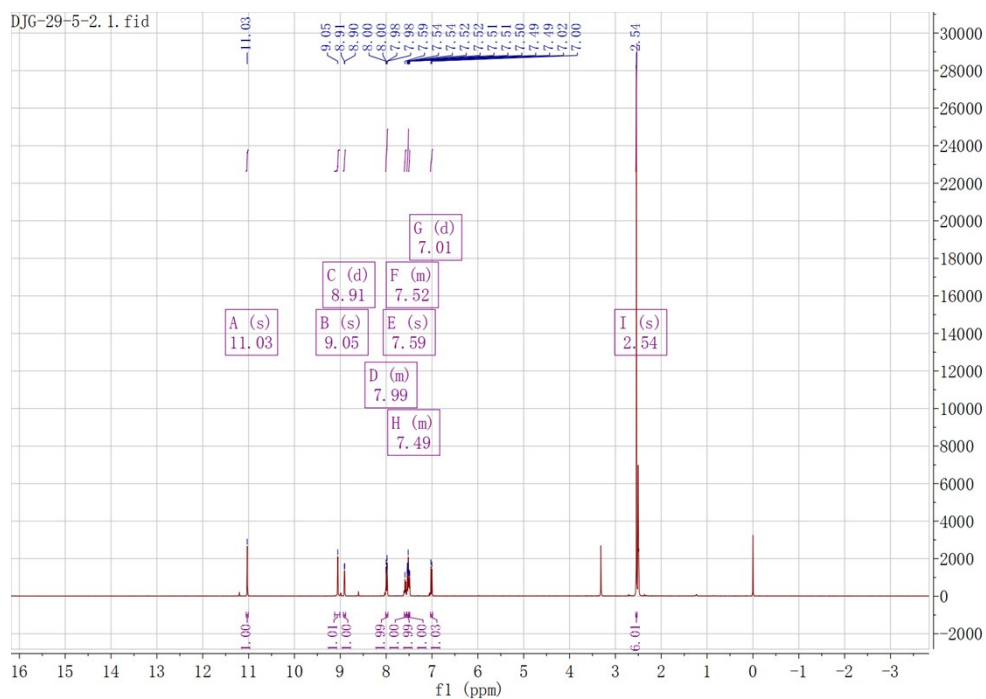


Fig. S27 ^1H -NMR spectrum of C2 in DMSO for 0h

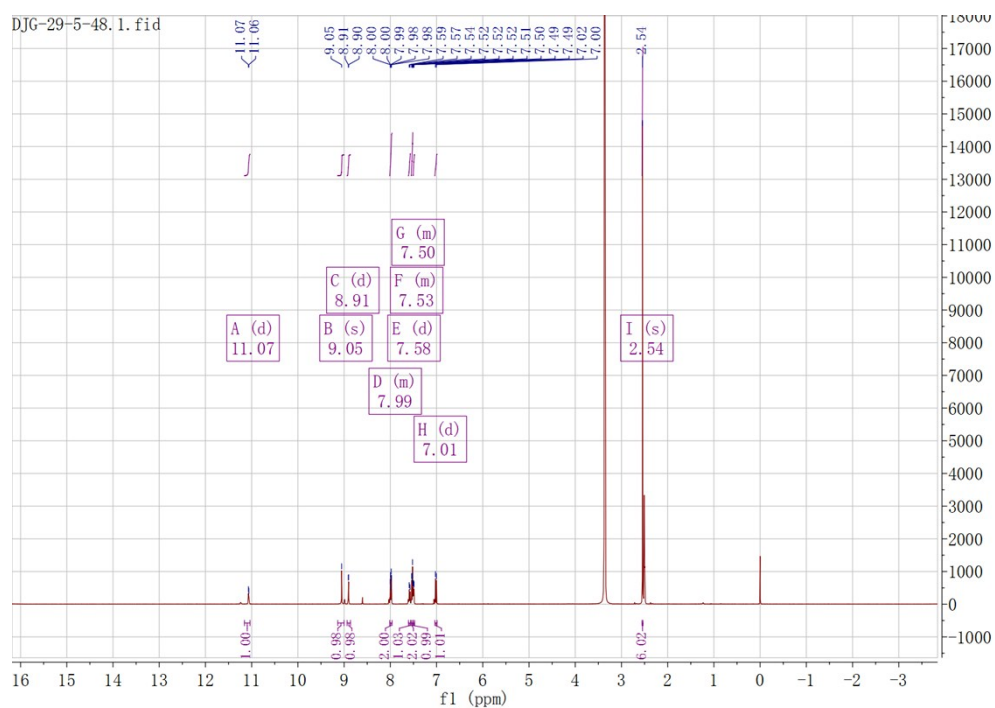


Fig. S28 ^1H -NMR spectrum of C2 in DMSO for 48h

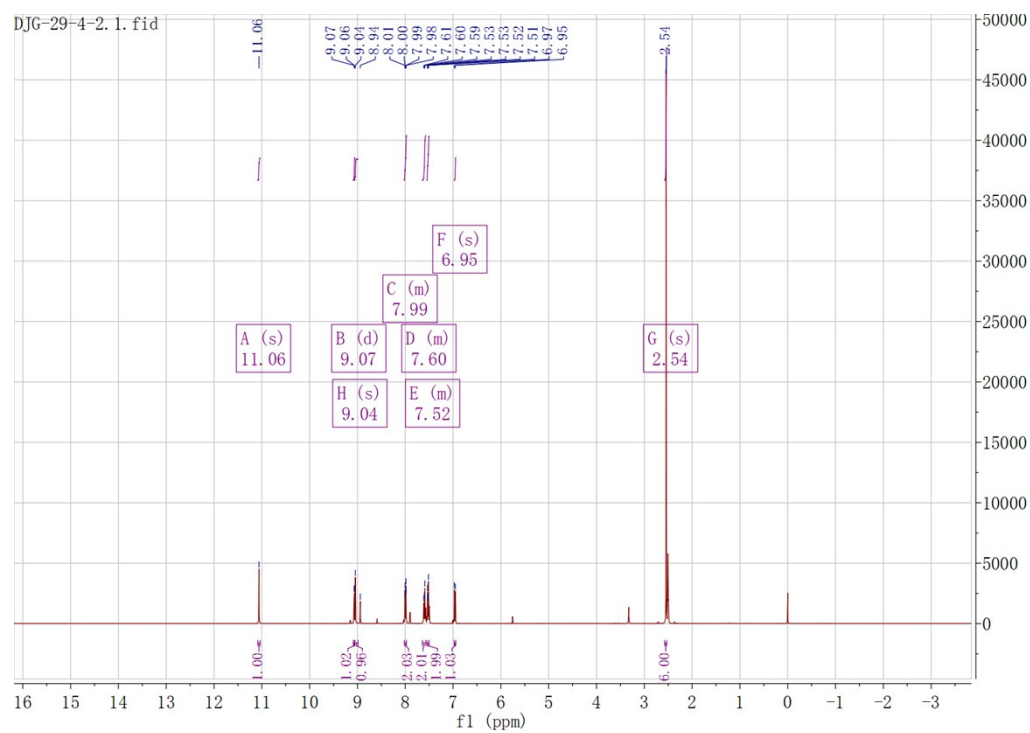


Fig. S29 ^1H -NMR spectrum of C3 in DMSO for 0h

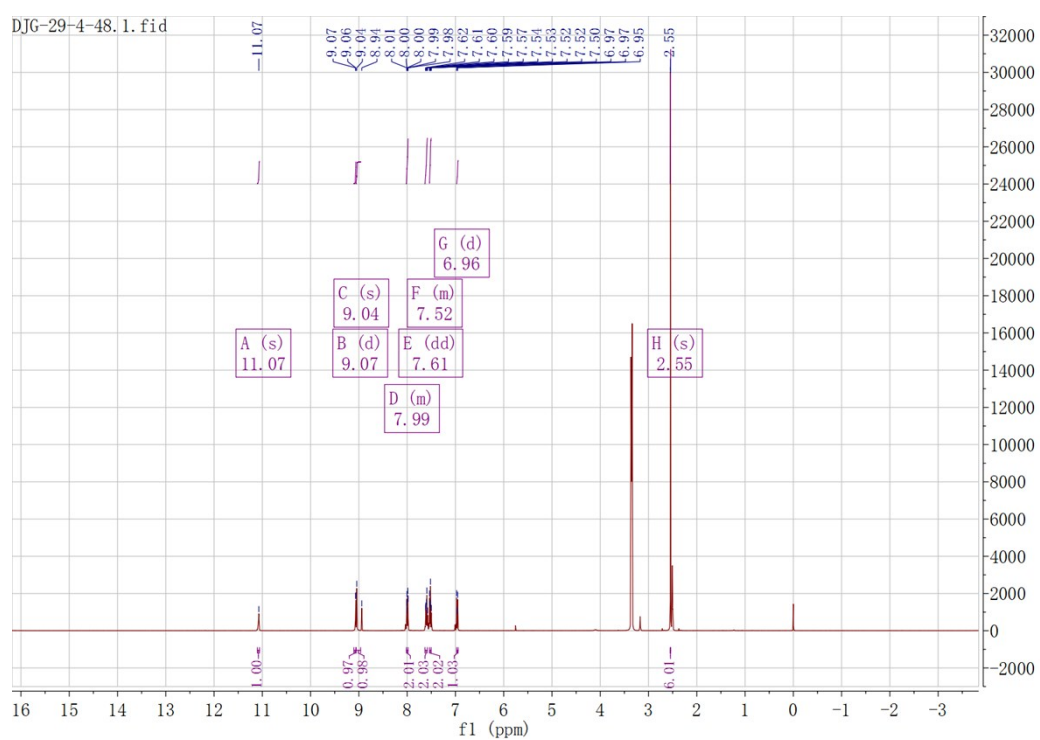


Fig. S30 ^1H -NMR spectrum of C3 in DMSO for 48h

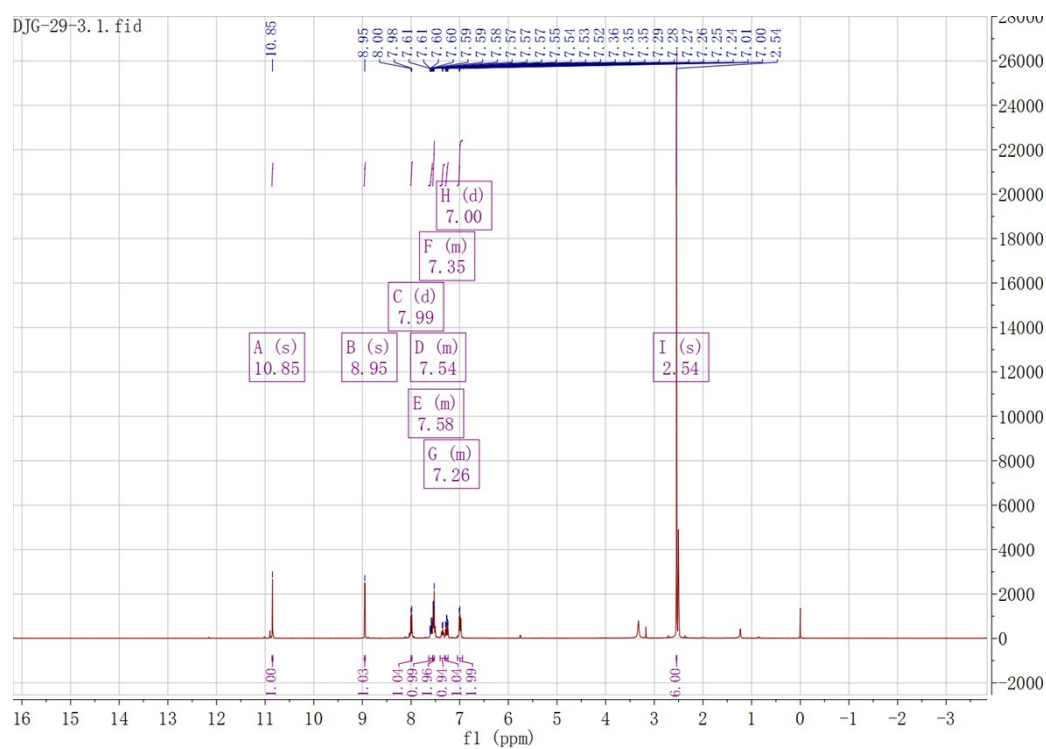


Fig. S31 ^1H -NMR spectrum of C4 in DMSO for 0h

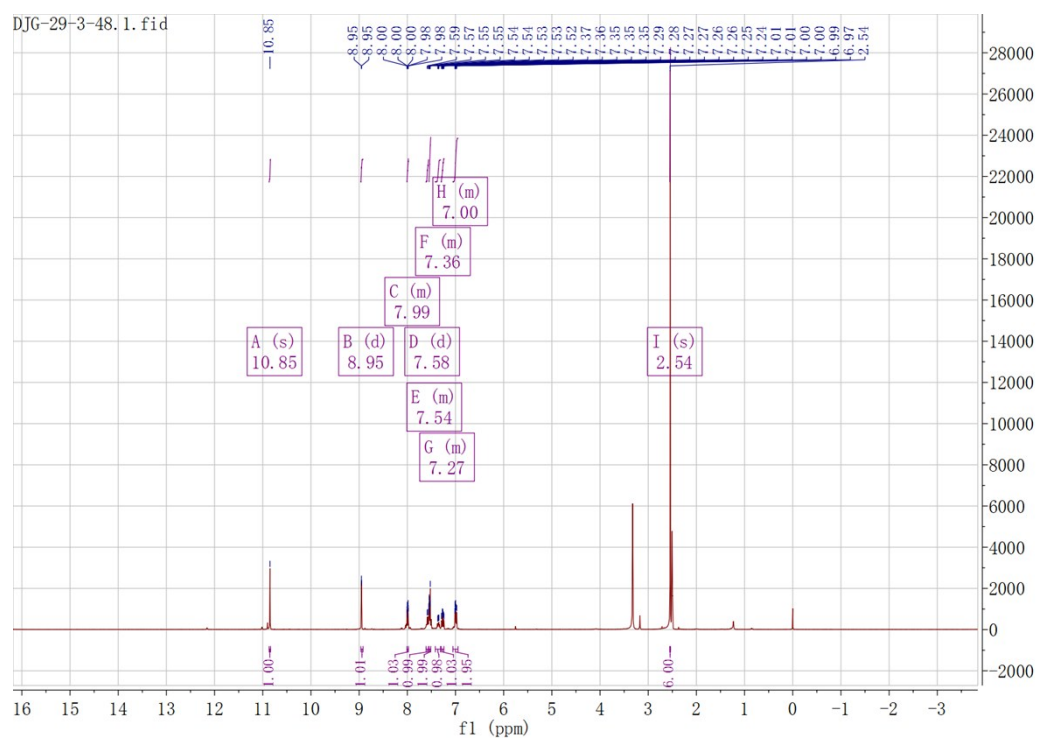


Fig. S32 ^1H -NMR spectrum of C5 in DMSO for 48h

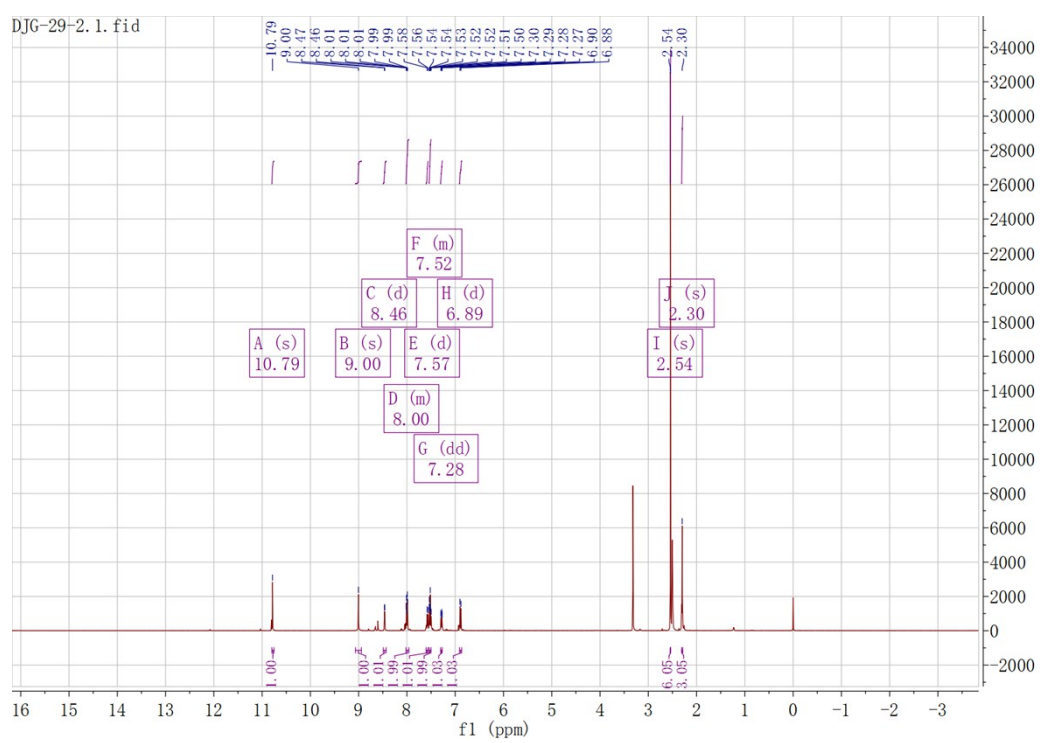


Fig. S33 ^1H -NMR spectrum of C2 in DMSO for 0h

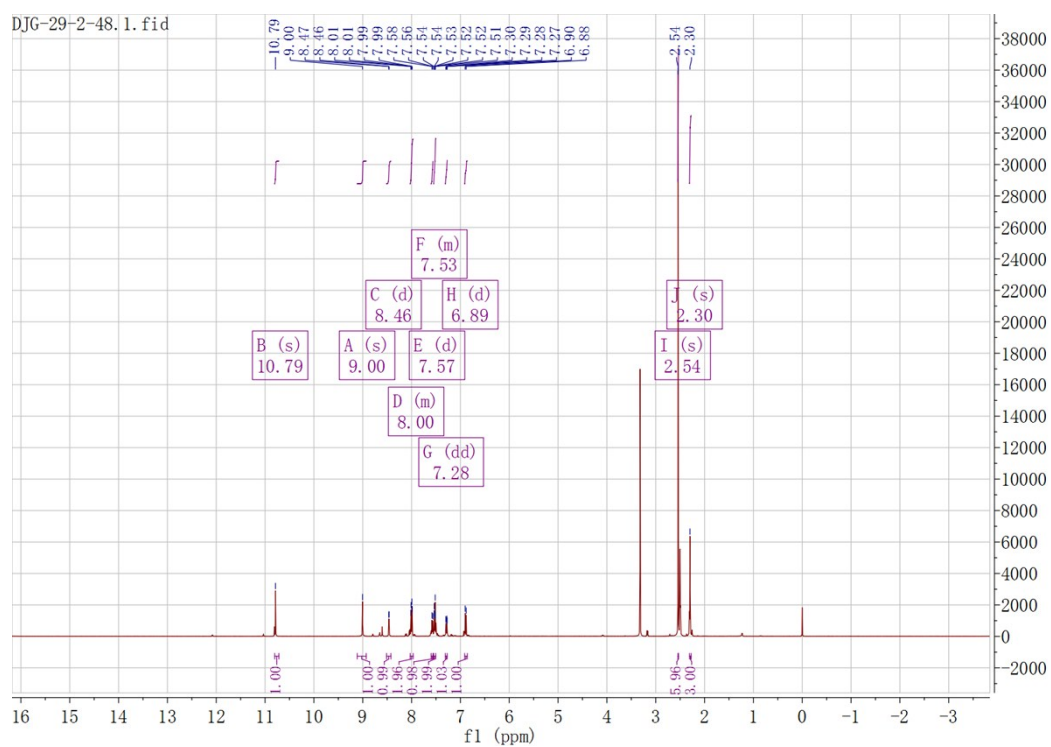


Fig. S34 ^1H -NMR spectrum of C21 in DMSO for 48h

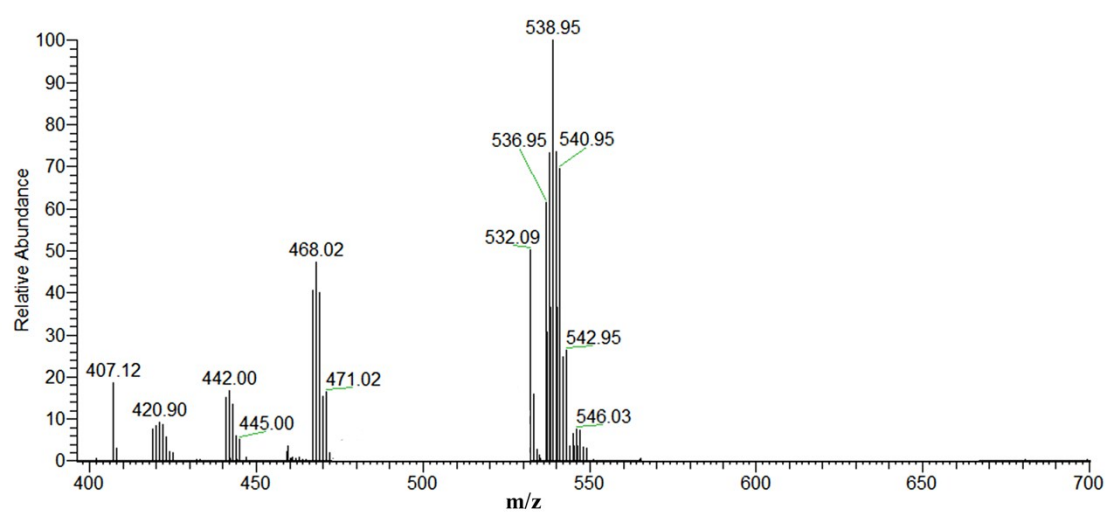


Fig. S35 ESI-mass spectrum of the C1 showing an intense signal at m/z: 468.02 for $[\text{C}_{16}\text{H}_{17}\text{ClN}_2\text{O}_3\text{PtS-H-DMSO}]^-$.

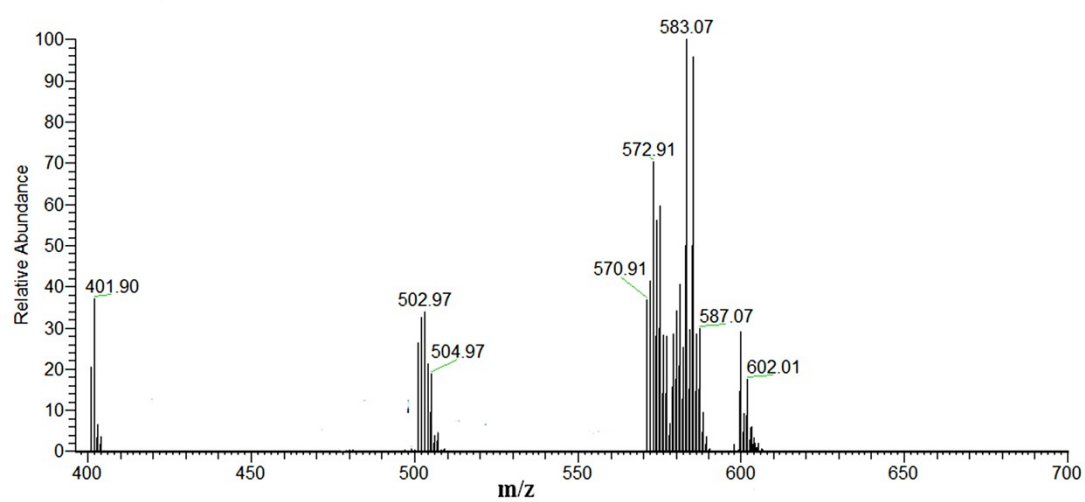


Fig. S36 ESI-mass spectrum of the C2 showing an intense signal at $m/z = 583.07$ for $[C_{16}H_{16}Cl_2N_2O_3PtS+H]^+$.

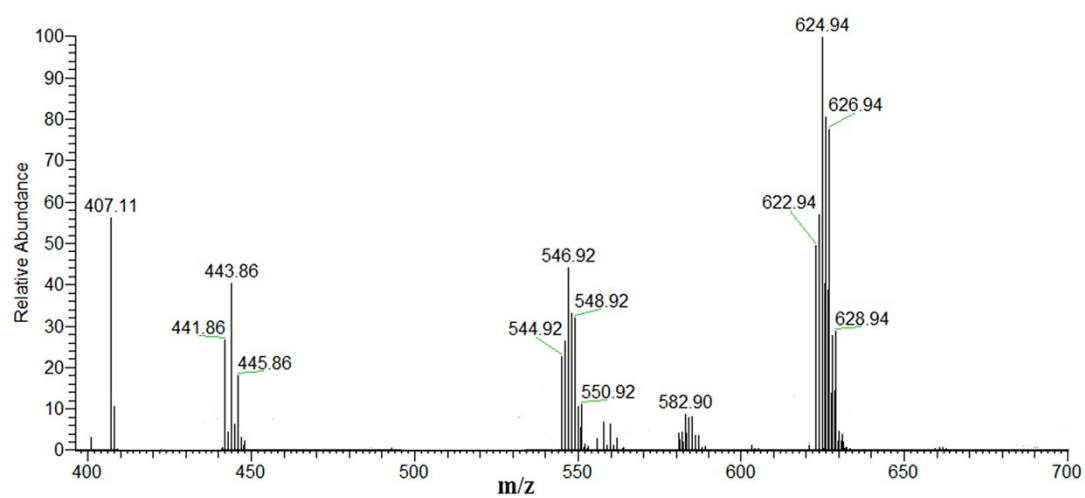


Fig. S37 ESI-mass spectrum of the C3 showing an intense signal at $m/z = 624.94$ for $[\text{C}_{16}\text{H}_{17}\text{BrClN}_2\text{O}_3\text{PtS}-2\text{H}]^-$.

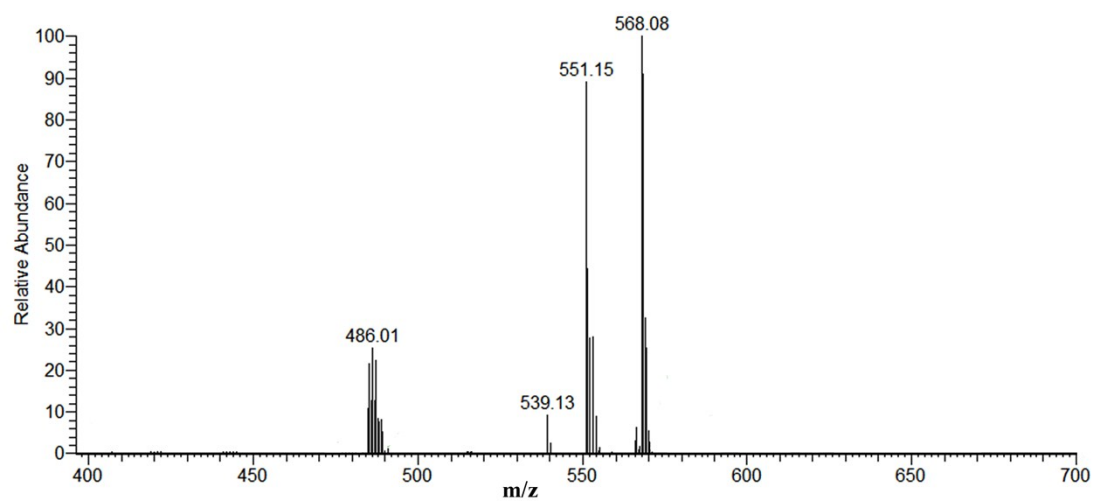


Fig. S38 ESI-mass spectrum of the C4 showing an intense signal at $m/z = 568.08$ for $[\text{C}_{16}\text{H}_{16}\text{ClFN}_2\text{O}_3\text{PtS} + 2\text{H}]^+$.

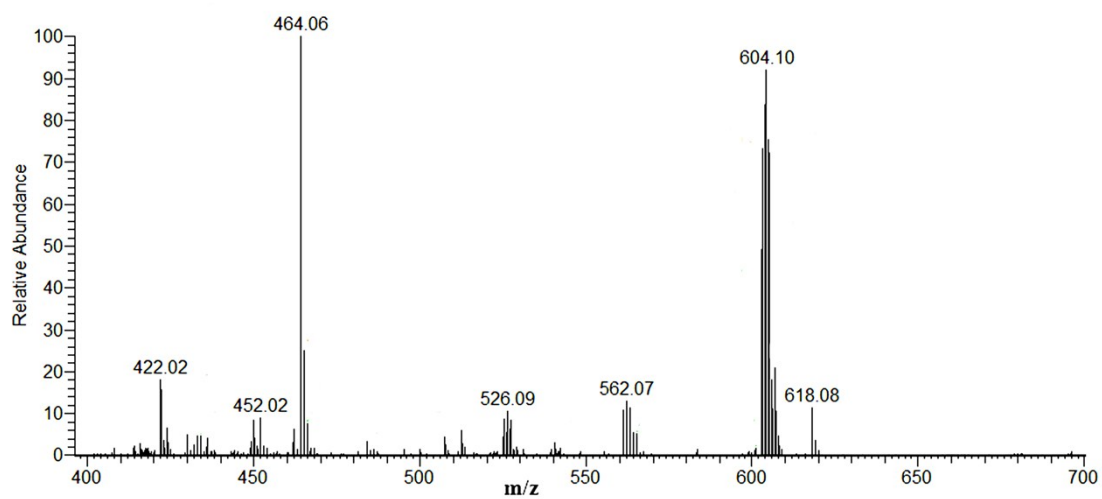


Fig. S39 ESI-mass spectrum of the C5 showing an intense signal at $m/z = 604.10$ for $[C_{17}H_{19}ClN_2O_3PtS + H + C_2H_3N]^+$.