Supporting Information

Supramolecular Polymer and Sheet and a Double Cubane Structure in Platinum(IV) Iodide Chemistry: Solution of a Longstanding Puzzle

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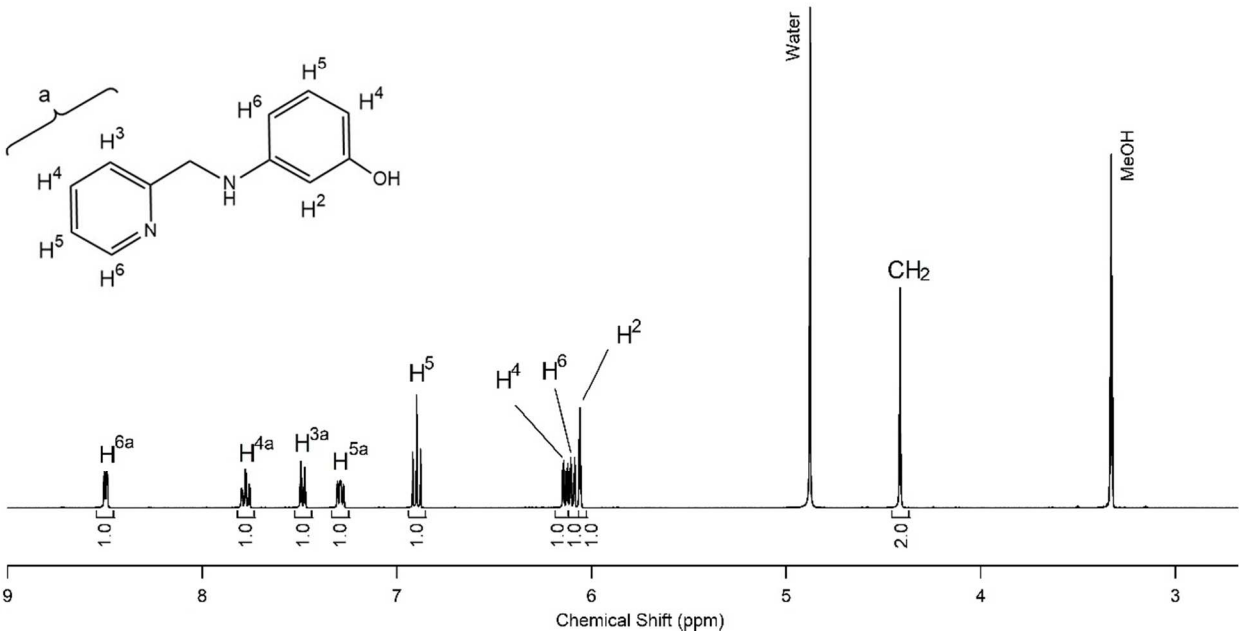

Figure S1- ^{1}H NMR Spectrum of **L2** (400 MHz, CD_3OD)

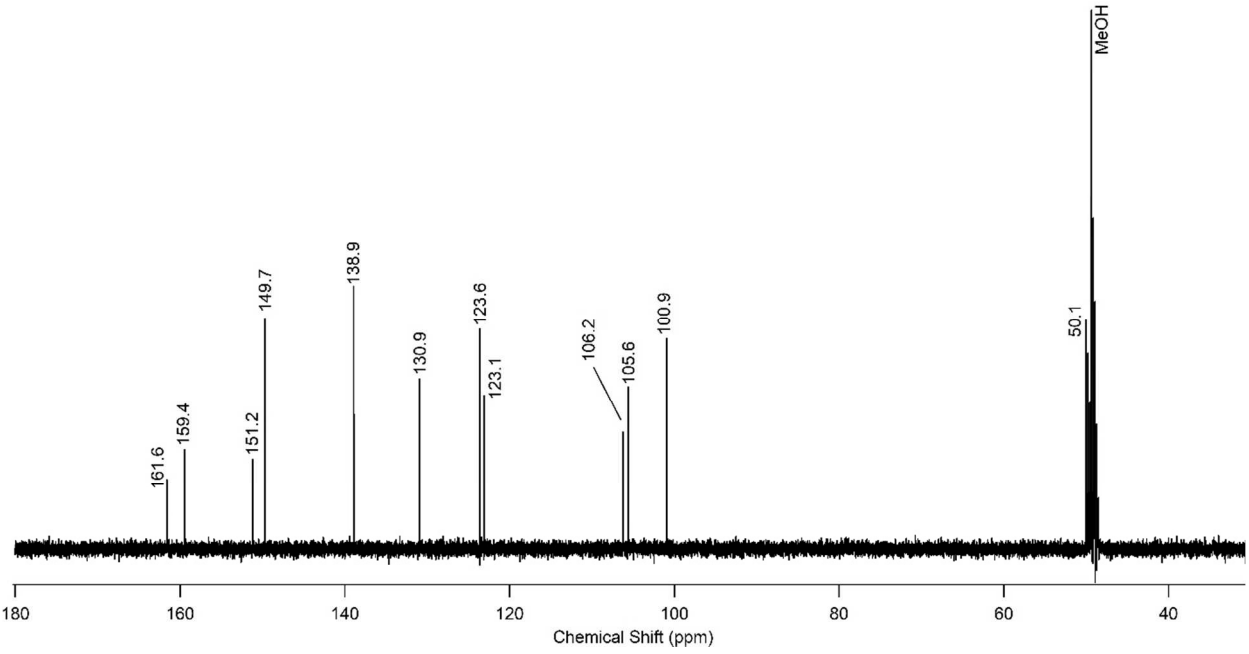

Figure S2- ^{13}C NMR Spectrum of **L2** (100 MHz, CD_3OD)

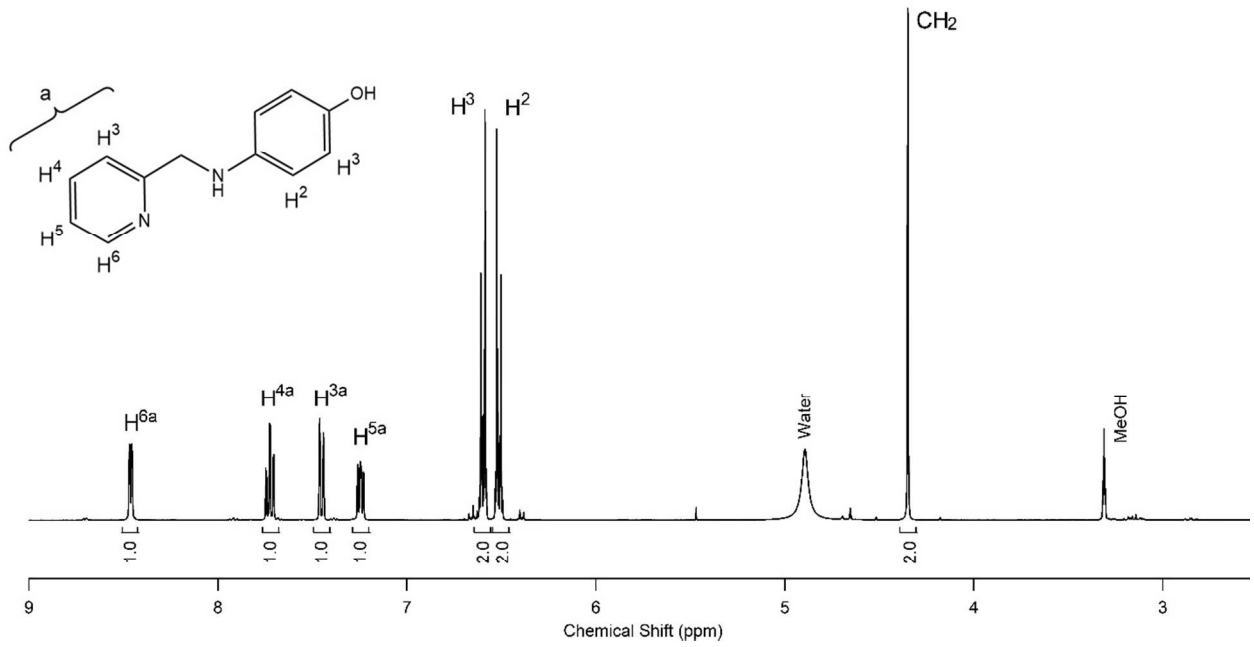

Figure S3- ^{1}H NMR Spectrum of **L3** (400 MHz, CD_3OD)

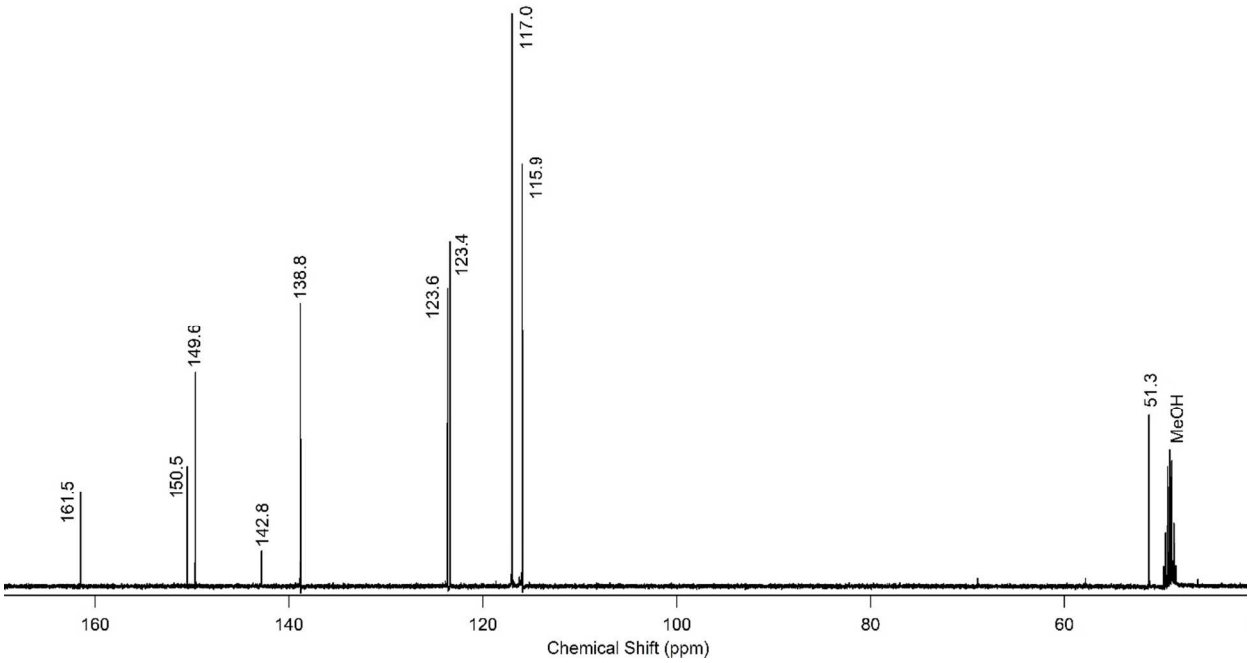

Figure S4- ^{13}C NMR Spectrum of **L3** (100 MHz, CD_3OD)

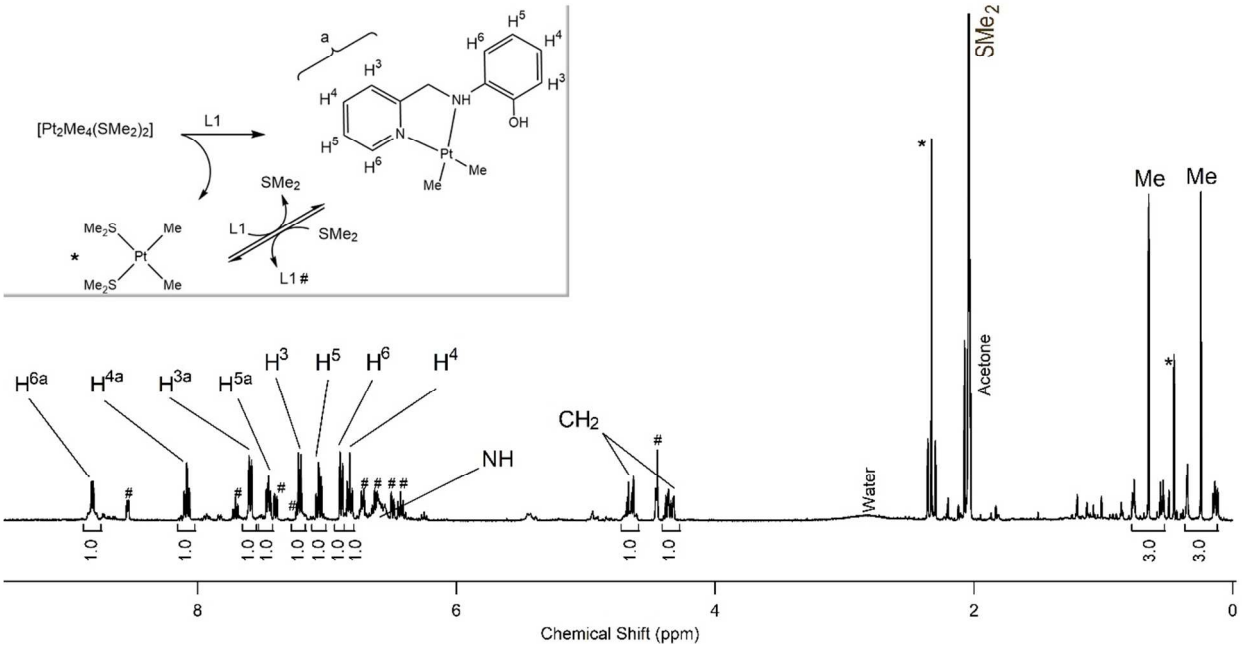

Figure S5- ^{1}H NMR Spectrum of [$PtMe_2$(**L1**)] (400 MHz, acetone-d_6)

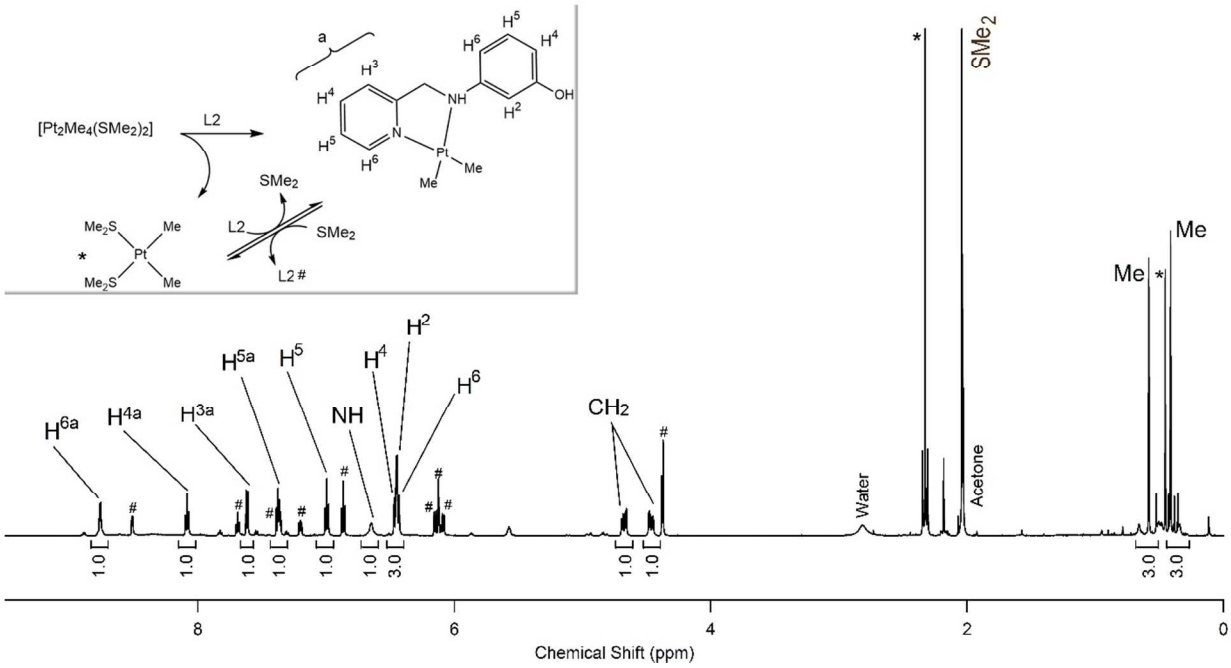

Figure S6- ^{1}H NMR Spectrum of [$PtMe_2$(**L2**)] (400 MHz, acetone-d_6)

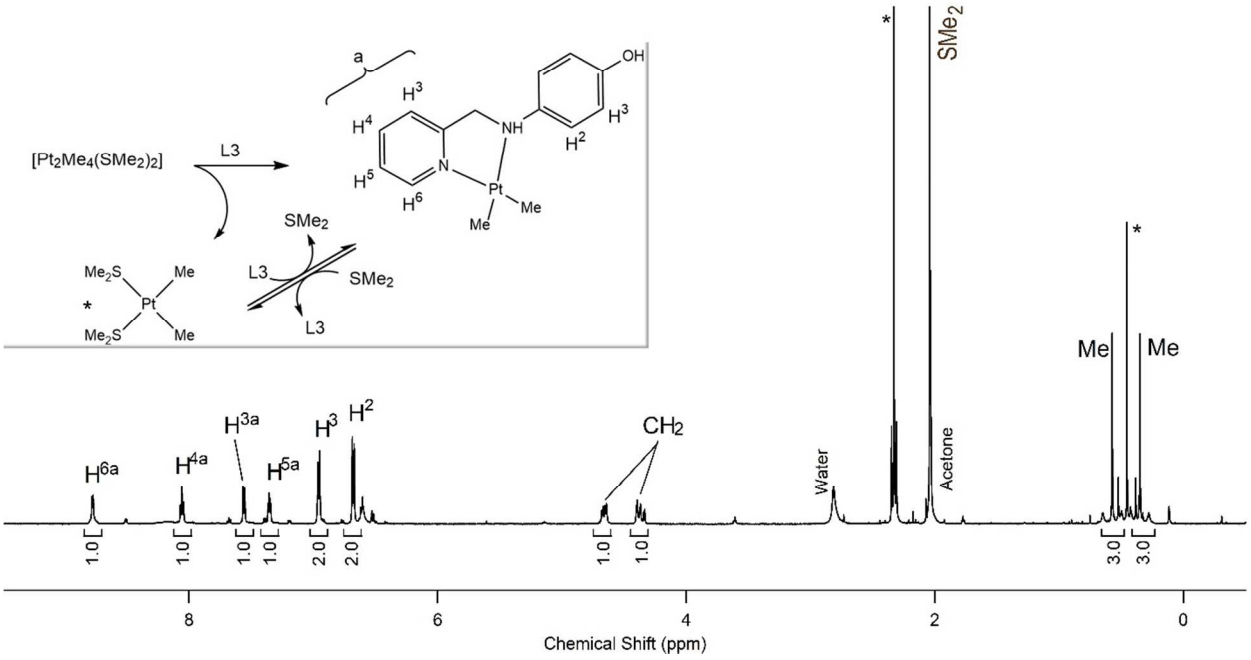

Figure S7- ^{1}H NMR Spectrum of [$PtMe_2$(**L3**)] (600 MHz, acetone-d_6)

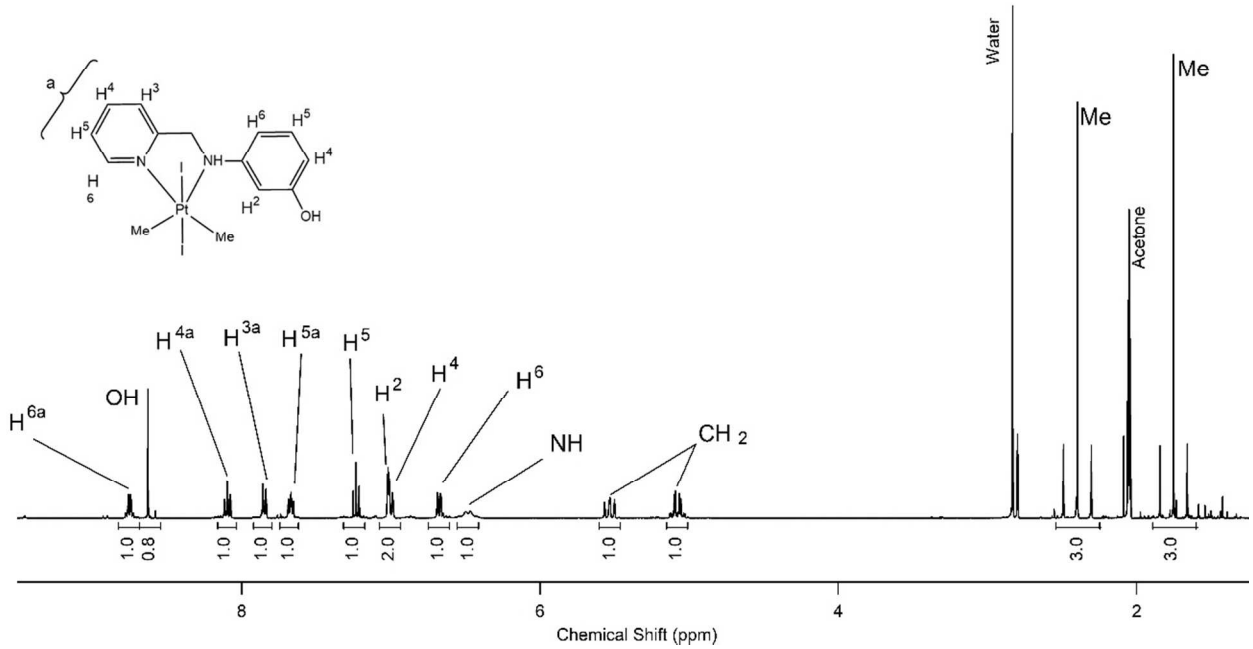

Figure S8- ^{1}H NMR Spectrum of [$PtMe_2I_2$(**L2**)], **6** (400 MHz, acetone-d_6)

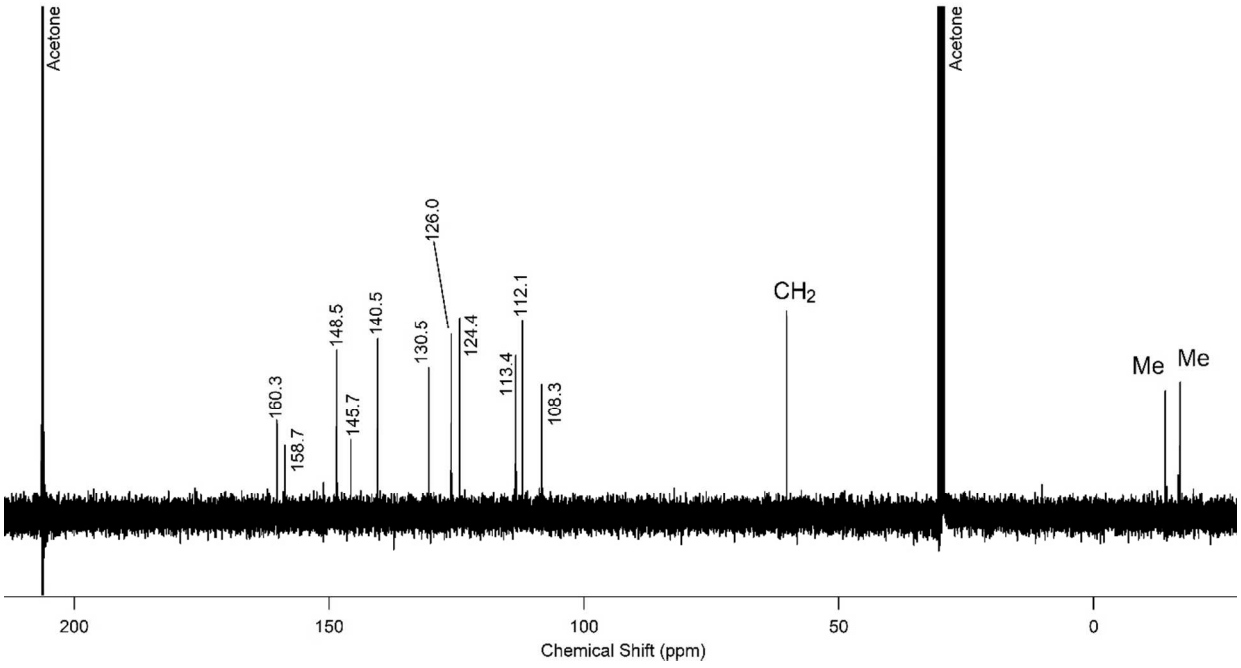

Figure S9- ^{13}C NMR Spectrum of [$PtMe_2I_2$(**L2**)], **6** (100 MHz, acetone-d_6)

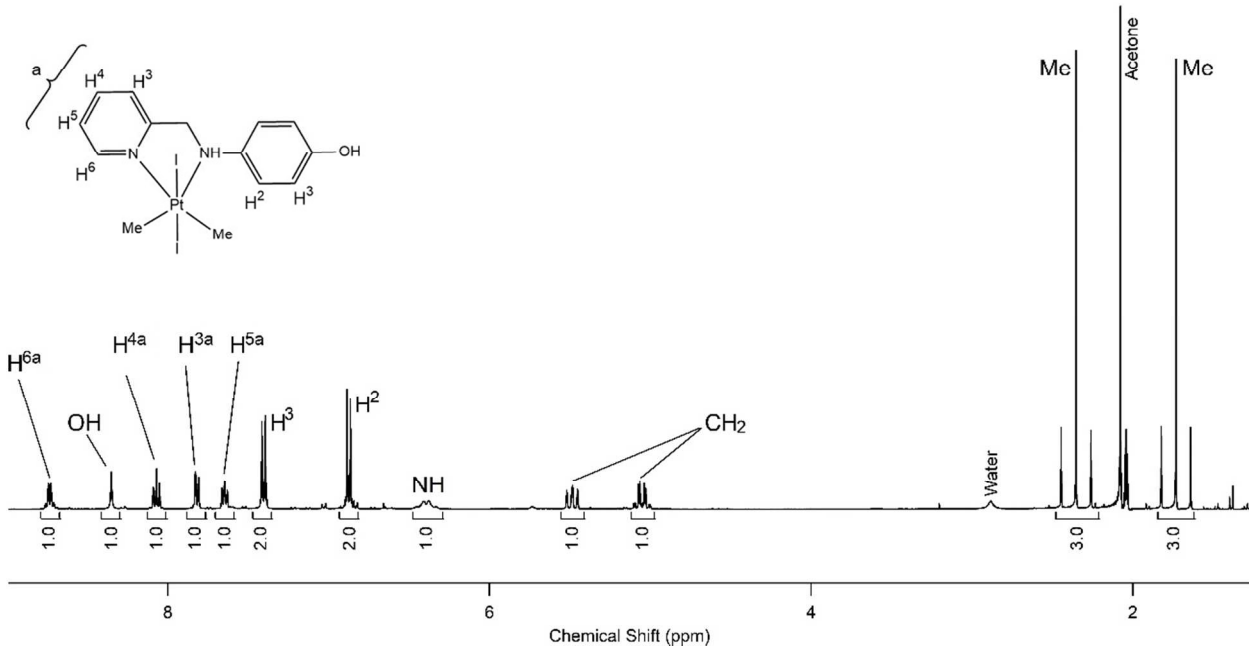

Figure S10- ^{1}H NMR Spectrum of [$PtMe_2I_2$(**L3**)], **7** (400 MHz, acetone-d_6)

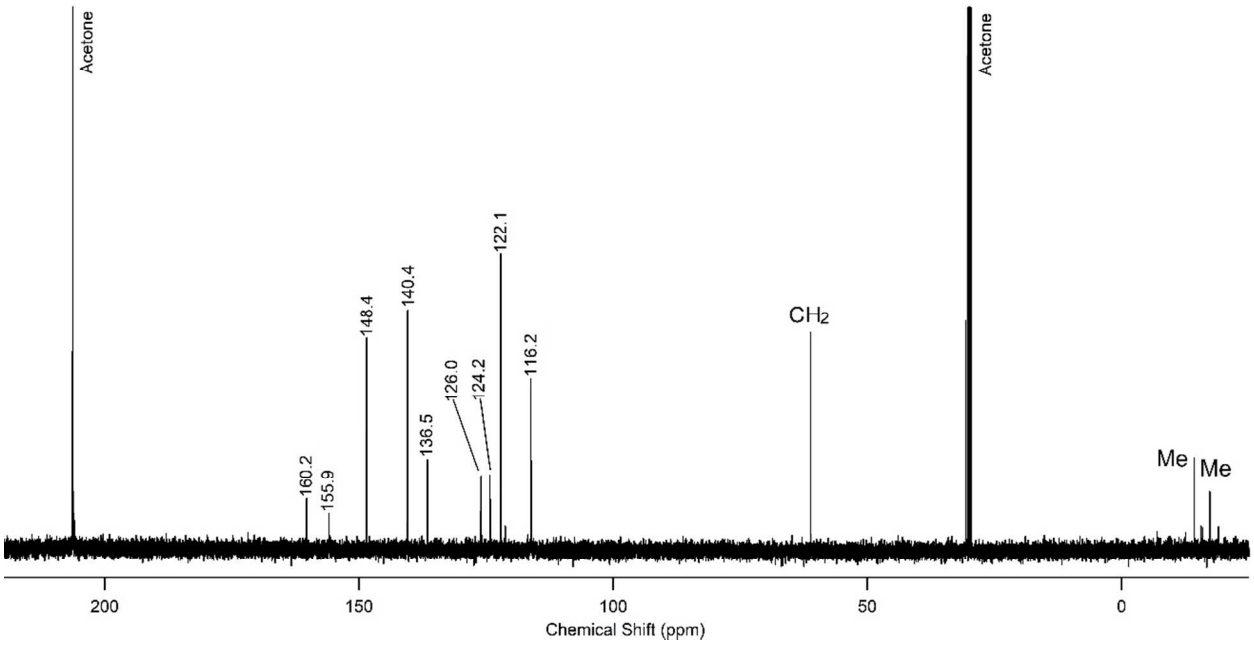

Figure S11- ^{13}C NMR Spectrum of [$PtMe_2I_2$(**L3**)], **7** (150 MHz, acetone-d_6)

Table S1. Crystallographic data and parameters of **6**-**8**

	6	**7**	**8**
Formula	$C_{14}H_{18}I_2N_2OPt$	$C_{14}H_{18}I_2N_2OPt \cdot Me_2CO$	$C_{10}H_{30}I_6Pt_4$
Formula weight	679.19	737.27	1692.10
Crystal system	monoclinic	monoclinic	triclinic
Space group	*Pbca*	$P2_1/c$	$P\bar{1}$
a [Å]	7.942(5)	11.333(4)	8.361(3)
b [Å]	19.31(2)	13.086(4)	8.630(4)
c [Å]	22.77(2)	14.249(4)	10.095(4)
α [°]	90	90	92.018(17)
β [°]	90	94.272(7)	113.755(14)
γ [°]	90	90	106.974(19)
V [Å^3]	3492(5)	2107.4(11)	627.8(4)
Z	8	4	1
ρ_{cal} [g cm^{-3}]	2.584	2.324	4.476
μ ($Mo_{K\alpha}$) [mm^{-1}]	11.569	9.599	29.581
F(000)	2464	1360	720
T [K]	110	110	163
θ_{min}, θ_{max} [°]	2.29, 33.56	2.38, 32.31	2.51, 35.01
Total reflns	63821	35082	19503
Unique reflns	2816	3510	5528
R_1	0.0329	0.0258	0.0332
wR_2 [$I \geq 2\sigma(I)$]	0.1014	0.0790	0.0611
R_1 (all data)	0.0346	0.0264	0.0461
wR_2 (all data)	0.1024	0.0793	0.0644
GOF	1.104	1.195	1.057