

Supporting Information

Syntheses, photoluminescence and electroluminescence of two novel platinum(II) complexes

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Fig. S1 ¹H NMR spectrum of **Pt-tpip**.

Fig. S2 The MALDI-TOF spectrum of **Pt-ftpip**.

Fig. S3 ¹H NMR spectrum of **Pt-ftpip**.

Fig. S4 The MALDI-TOF spectrum of **Pt-ftpip**.

Fig. S5 The atoms' displacement values from the mean plane of **Pt-tpip**.

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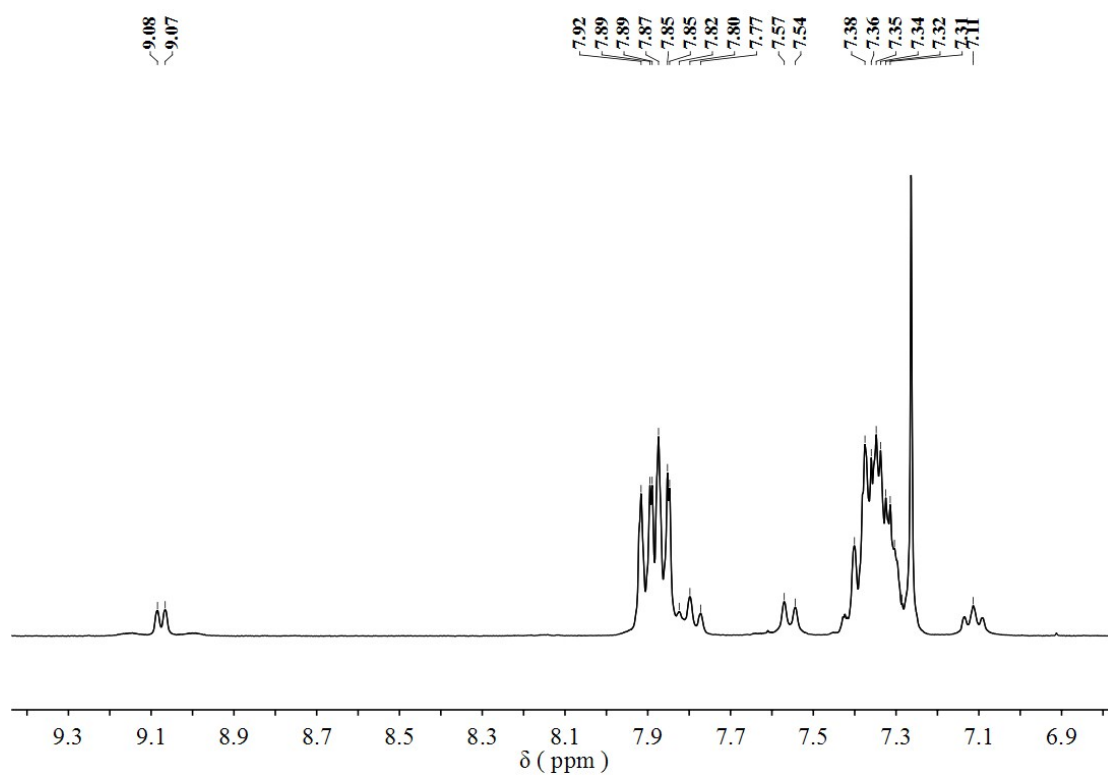


Fig. S1 ¹H NMR spectrum of Pt-tpip.

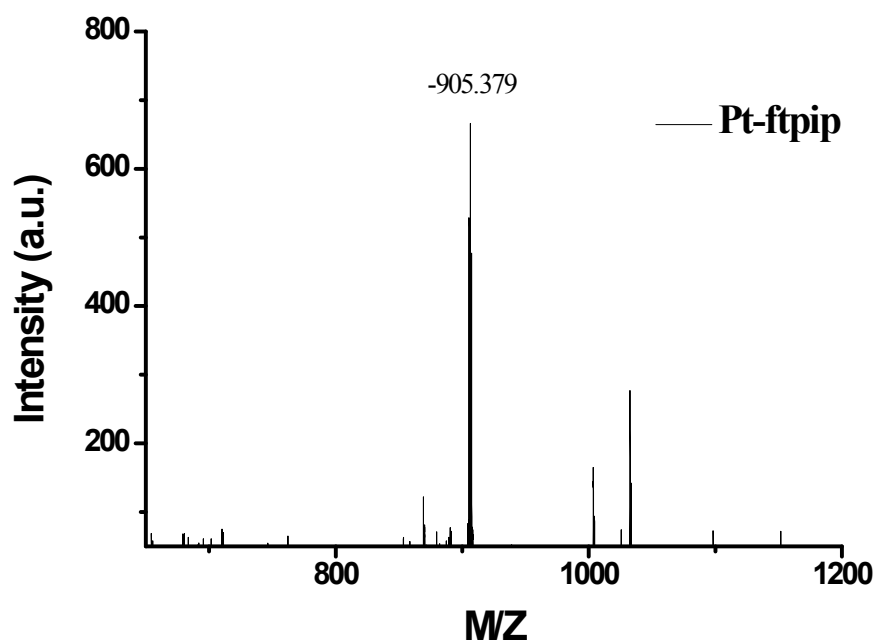


Fig. S2 The MALDI-TOF spectrum of Pt-ftpip.

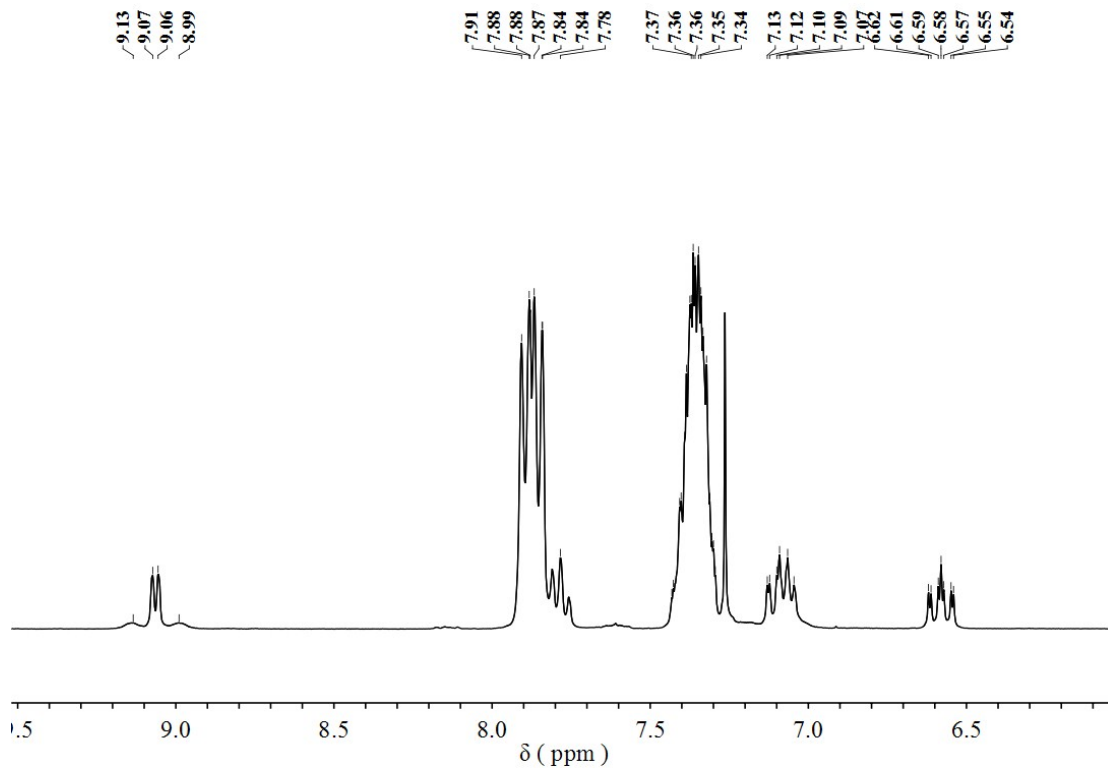


Fig. S3 ^1H NMR spectrum of Pt-ftpip.

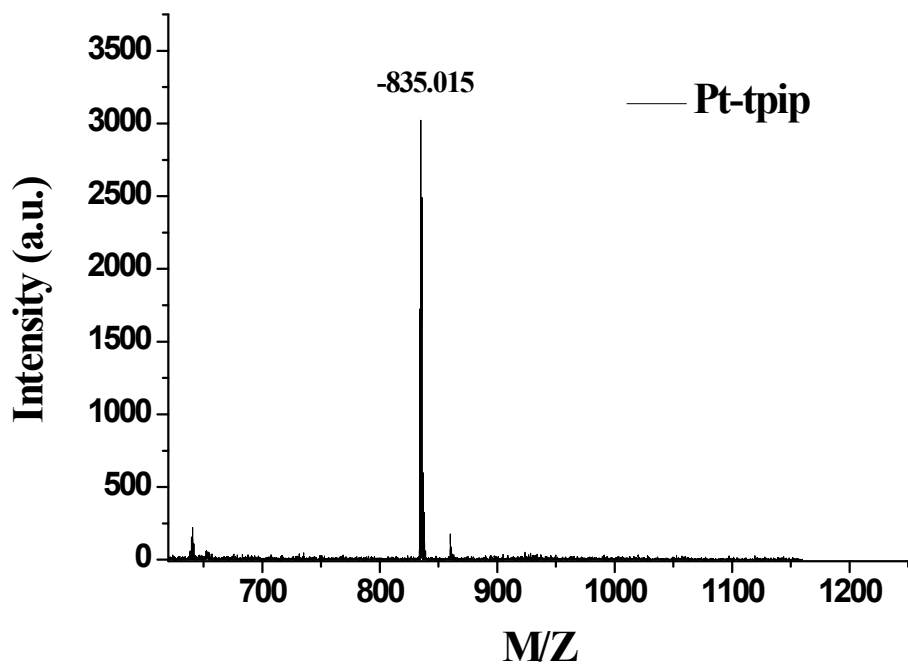


Fig. S4 The MALDI-TOF spectrum of Pt-tpip.

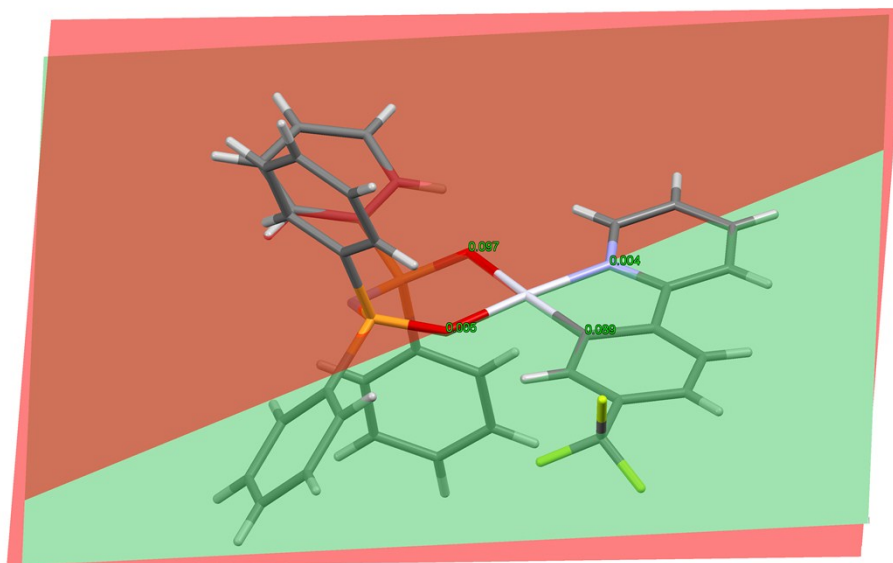


Fig. S5 The atoms' displacement values from the mean plane of **Pt-tpip**.

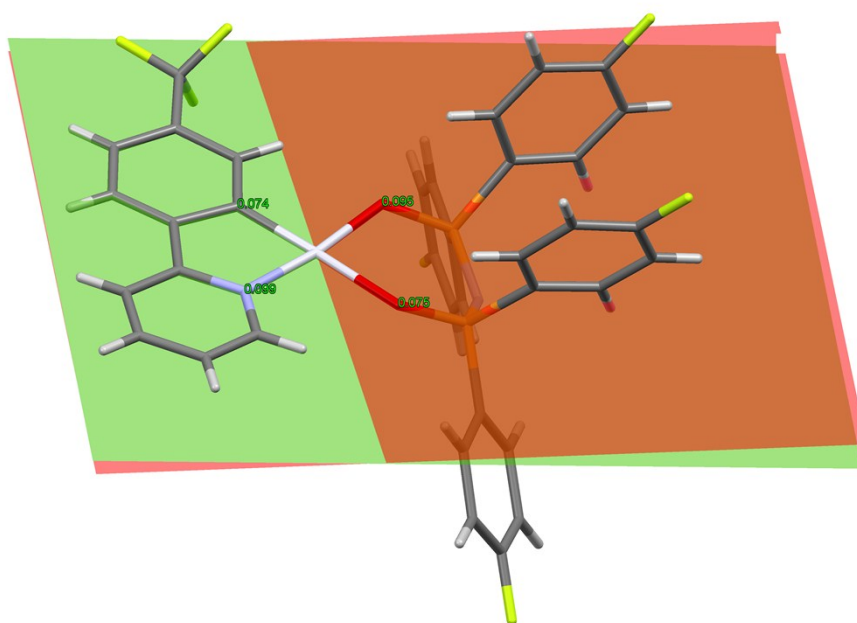


Fig. S6 The atoms' displacement values from the mean plane of **Pt-ftpip**.

Table S1. Crystallographic data and structure refinement for complexes **Pt-tpip** and **Pt-ftpip**

	Pt-tpip	Pt-ftpip
Formula	C ₃₆ H ₂₇ F ₃ N ₂ O ₂ P ₂ Pt	C ₃₆ H ₂₃ F ₇ N ₂ O ₂ P ₂ Pt
FW	833.41	905.41
T (K)	296(2)	296(2)
Wavelength (Å)	0.71073	0.71073
Cryst syst	Triclinic	Monoclinic
Space group	<i>P1</i>	<i>P2(1)/n</i>
<i>a</i> (Å)	11.1019(7)	13.6958(14)
<i>b</i> (Å)	11.4751(8)	11.3423(12)
<i>c</i> (Å)	14.0486(9)	21.827(2)
α (deg)	77.9640(10)	90
β (deg)	81.1010(10)	94.556(2)
γ (deg)	89.9710(10)	90
<i>V</i> (Å ³)	1728.4(2)	3379.9(6)
<i>Z</i>	2	27
ρ_{calcd} (g/cm ³)	1.550	3.822
μ (Mo K α) (mm ⁻¹)	4.200	28.220
<i>F</i> (000)	762	3348
Range of transm factors (deg)	1.82-28.28	1.70-27.52
Reflns collected	12478	22212
Unique	8470	7743
GOF on <i>F</i> ²	1.376	1.051
<i>R</i> ₁ ^a , <i>wR</i> ₂ ^b (<i>I</i> > 2 σ (<i>I</i>))	0.0713, 0.1892	0.0478, 0.1241
<i>R</i> ₁ ^a , <i>wR</i> ₂ ^b (all data)	0.0740, 0.1909	0.0638, 0.1326
CCDC NO.	1509840	1509843

$$R_1^a = \frac{\sum ||F_o| - |F_c||}{\sum F_o}, \quad wR_2^b = [\frac{\sum w(F_o^2 - F_c^2)^2}{\sum w(F_o^2)}]^{1/2}$$

Table S2. The table of selected bond lengths and angles of **Pt-tpip** and **Pt-ftpip**.

Pt-tpip		Pt-ftpip	
Selected bonds			
Pt2-O4	2.025(6)	Pt1-C6	1.947(6)
Pt2-O3	2.135(6)	Pt1-N1	1.980(5)
Pt2-N2	1.972(7)	Pt1-O3	2.164(4)
Pt2-C54	1.939(7)	Pt1-O4	2.030(4)
P1-O4	1.544(6)	O4-P5	1.532(4)
P7-O3	1.542(5)	O3-P4	1.515(5)
P1-N3	1.581(6)	P5-N2	1.594(5)
P7-N3	1.595(7)	P4-N2	1.591(5)
Selected angels			
C54-Pt2-N2	82.3(3)	C6-Pt1-N1	82.0(2)
N2-Pt2-O3	92.4(2)	N1-Pt1-O3	93.47(19)
O3-Pt2-O4	93.7(2)	O3-Pt1-O4	92.42(17)
O4-Pt2-C54	91.6(3)	O4-Pt1-C6	92.0(2)
Selected torsion angels			
C54-Pt2-N2-O3	177.411(256)	C6-Pt1-N1-O3	-177.934(211)
N2-Pt2-O3-O4	-179.745(279)	N1-Pt1-O3-O4	-177.259(183)
O3-Pt2-O4-C54	177.457(264)	O3-Pt1-O4-C6	-177.739(209)

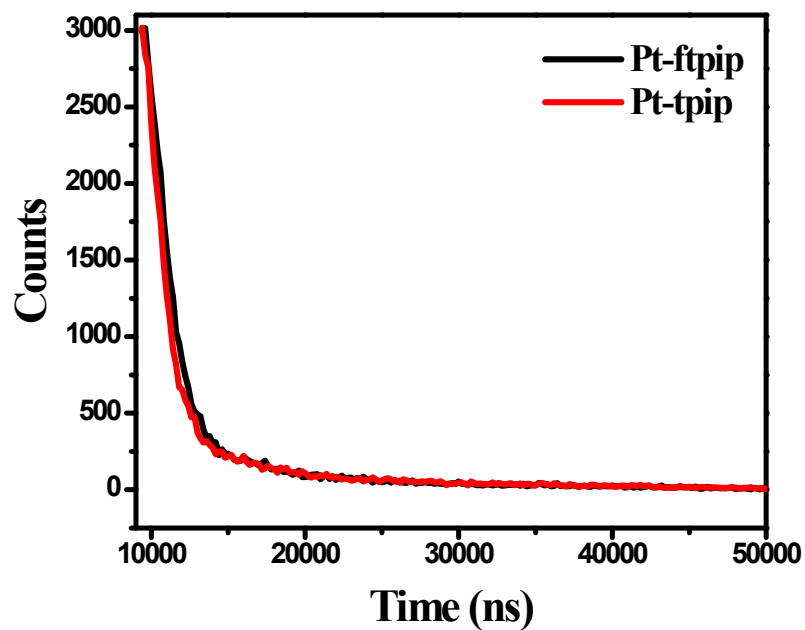


Fig. S7 The selected lifetime curves of Pt-tpip and Pt-ftpip in degassed CH_2Cl_2 solution.

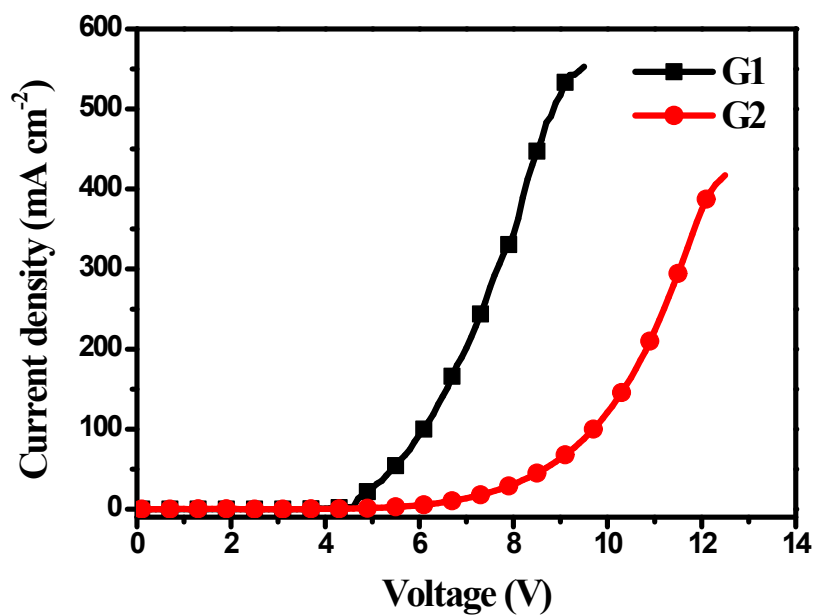


Fig. S8 The current density (J) versus voltage (V) curves for G1 and G2.