Supporting Information

Linear Bimetallic Alkynylplatinum(II) Terpyridyl Complexes Bearing *para*-Phenylene Ethynylene Oligomers: Synthesis, Characterization, Aggregation and Photophysical Properties

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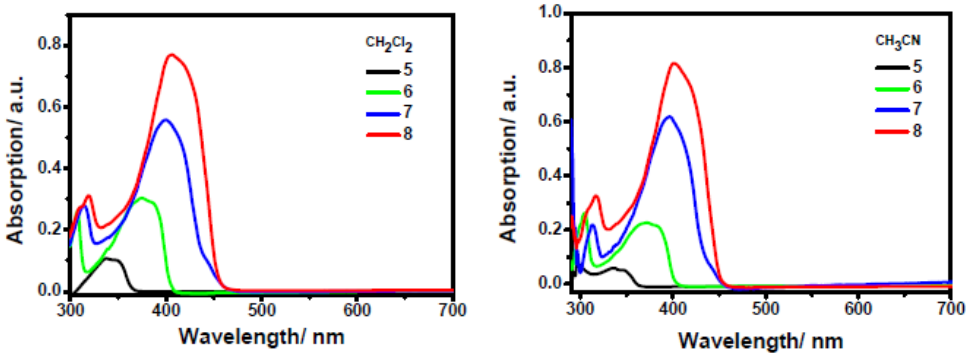
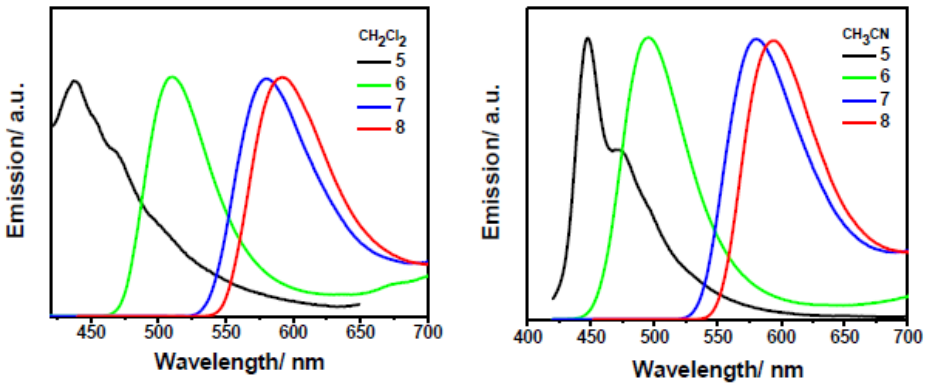
1. Additional photophysical data



(a) (b)

Figure S1. Absorption spectra of compounds **5-8** at 298 K (concentration = 1×10^{-5} M) (a) in CH_2Cl_2; (b) in CH_3CN.

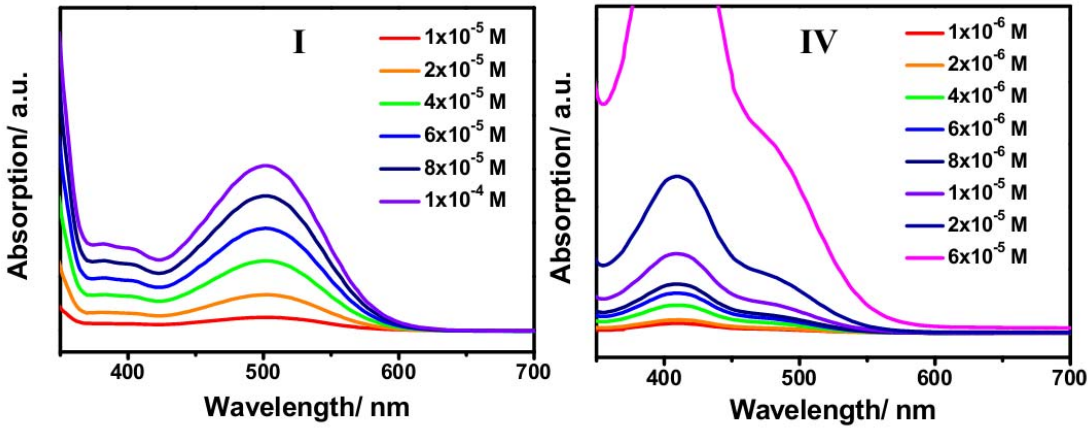


(a) (b)

Figure S2. Normalized emission spectra of compounds **5-8** at 298 K (λ_{ex} = 400 nm, concentration = 1×10^{-5} M) (a) in CH_2Cl_2; (b) in CH_3CN.

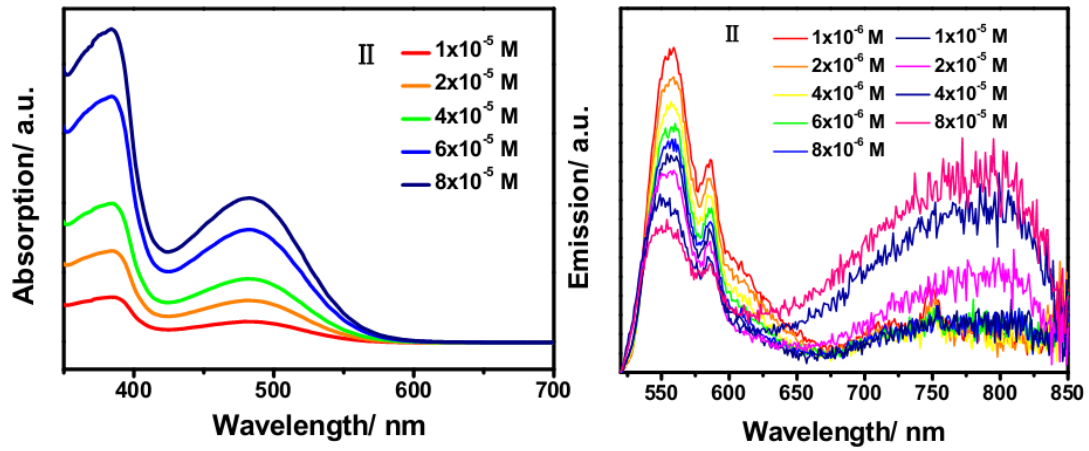
Table S1. Electronic absorption and emission data for compounds **5-8**

	medium	λ_{abs}/nm (ε/dm^3 mol^{-1} cm^{-1})	λ_{em}/nm
5	CH_2Cl_2	336 (11667)	437
	CH_3CN	336 (6658)	448
6	CH_2Cl_2	375 (31224)	510
	CH_3CN	372 (23634)	495
7	CH_2Cl_2	400 (56557)	580
	CH_3CN	395 (62627)	580
8	CH_2Cl_2	406 (78075)	592
	CH_3CN	401 (82423)	594



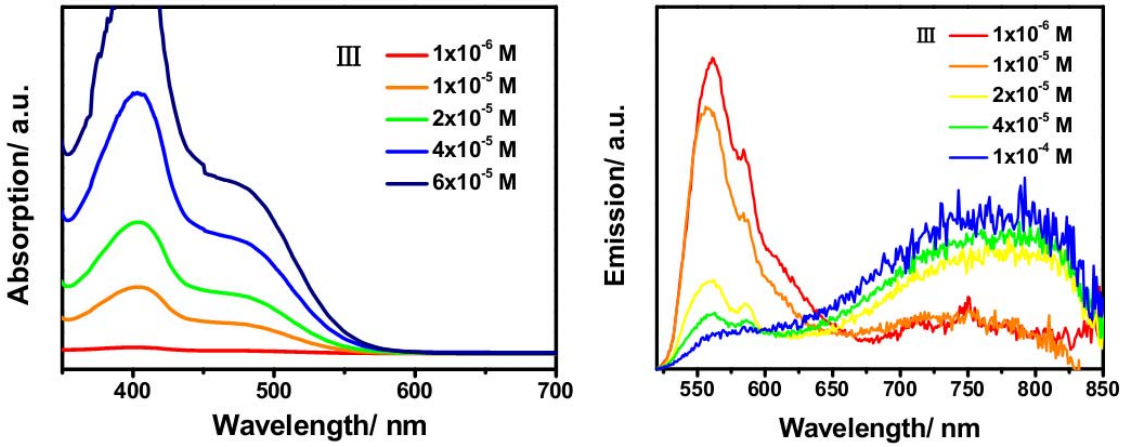
(a) (b)

Figure S3. Absorption spectra of complex **I** (a) and **IV** (b) in CH_3CN under different concentrations at 298 K.



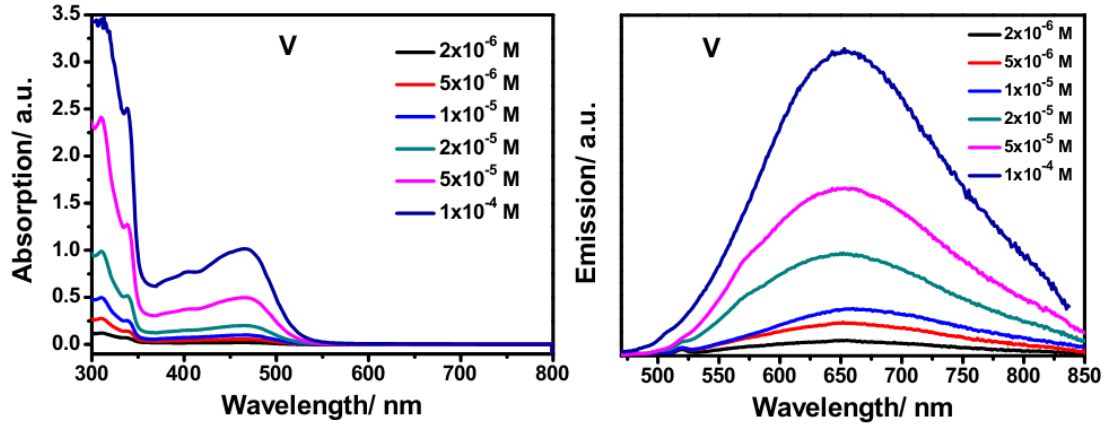
(a) (b)

Figure S4. (a) Absorption spectra of complex **II** in CH_3CN under different concentrations at 298 K; (b) Normalized emission spectra of complex **II** in CH_3CN under different concentrations at 298 K (λ_{ex} = 500 nm).



(a) (b)

Figure S5. (a) Absorption spectra of complex **III** in CH_3CN and at different concentrations at 298 K; (b) Normalized emission spectra of complex **III** in CH_3CN at different concentrations at 298 K (λ_{ex} = 500 nm).



(a) (b)

Figure S6. (a) Absorption spectra of complex **V** in CH_3CN and at different concentrations at 298 K; (b) Normalized emission spectra of complex **V** in CH_3CN at different concentrations excited at 450 nm at 298 K.

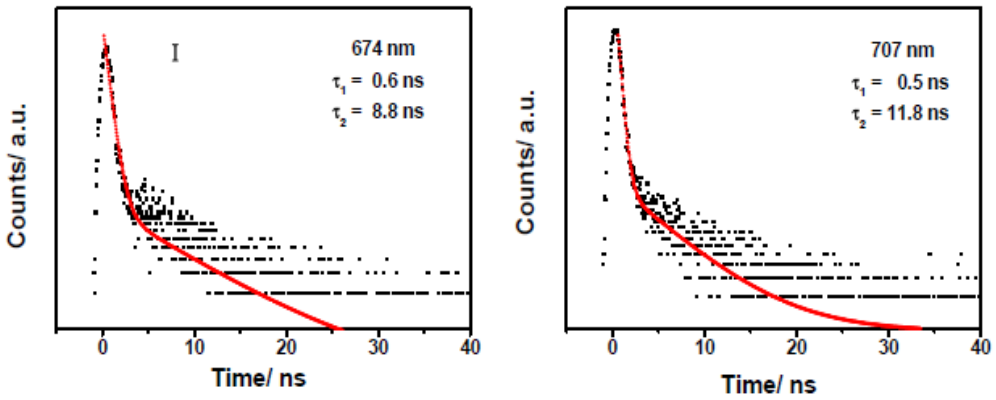


Figure S7. The luminescent lifetimes of complex **I** in CH_2Cl_2 solution at 298 K. The red lines are the fitting curves (concentration = 1×10^{-6} M).

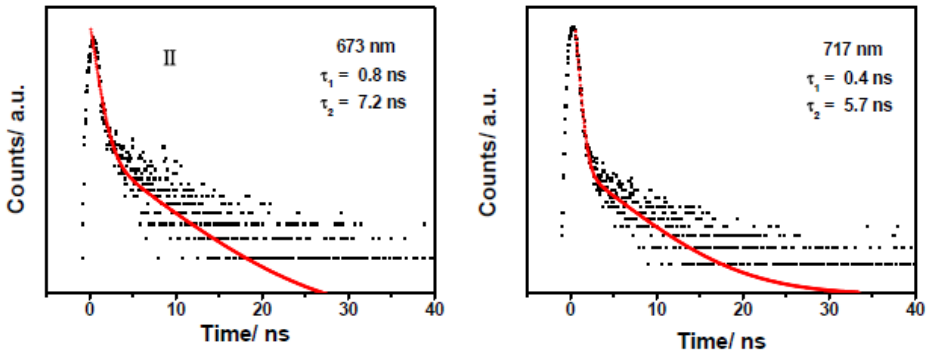


Figure S8. The luminescent lifetimes of complex **II** in CH_2Cl_2 solution at 298 K (concentration = 1×10^{-6} M).

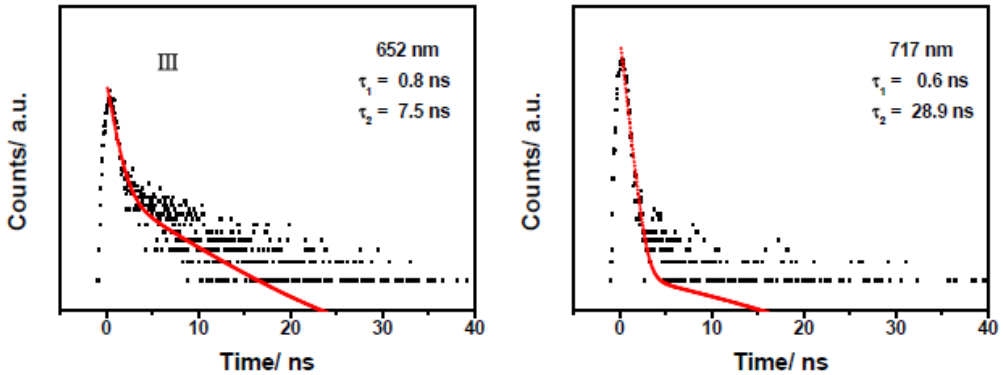


Figure S9. The luminescent lifetimes of complex **III** in CH_2Cl_2 solution at 298 K (concentration = 1×10^{-6} M).

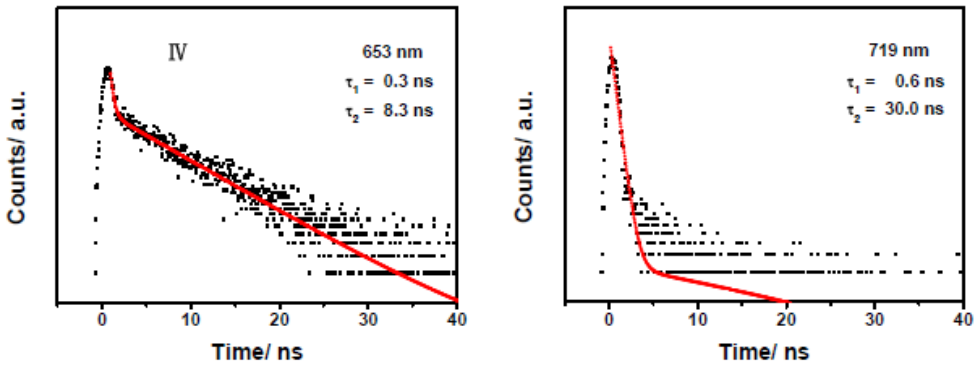


Figure S10. The luminescent lifetimes of complex **IV** in CH_2Cl_2 solution at 298 K (concentration = 1×10^{-6} M).

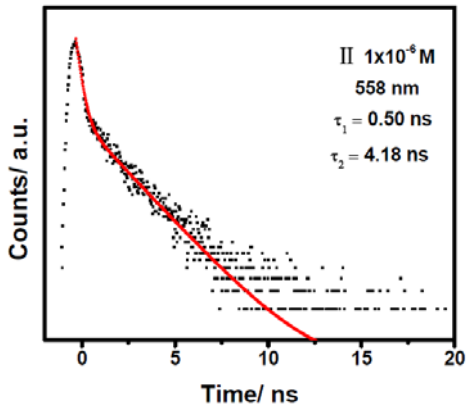


Figure S11. The luminescent lifetimes of complex **II** in CH_3CN collected at 558 nm at 298 K (concentration = 1×10^{-6} M).

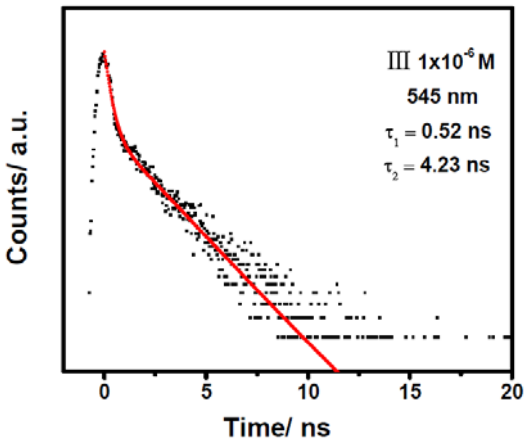


Figure S12. The luminescent lifetimes of complex **III** in CH_3CN collected at 545 nm at 298 K (concentration = 1×10^{-6} M).

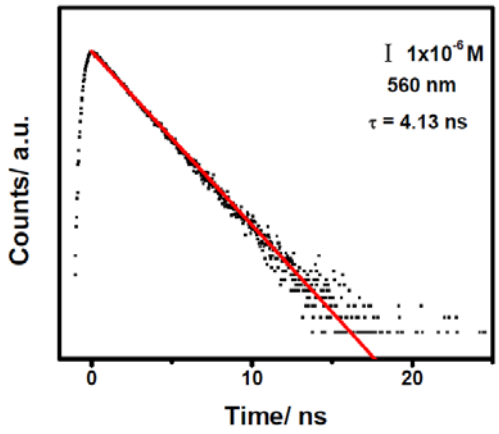


Figure S13 The luminescent lifetimes of complex **I** in CH_3CN collected at 560 nm at 298 K (concentration = 1×10^{-6} M).

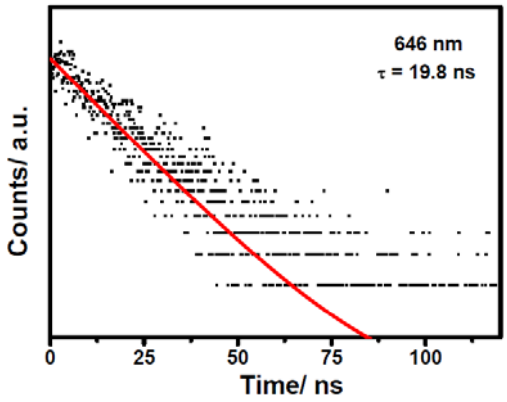


Figure S14. The luminescent lifetimes of complex **V** in CH_3CN at 298 K (concentration = 1×10^{-5} M).

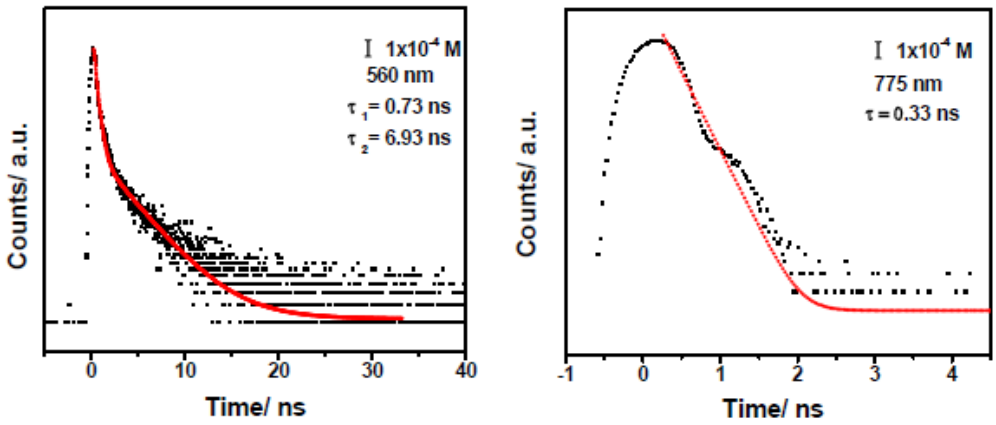
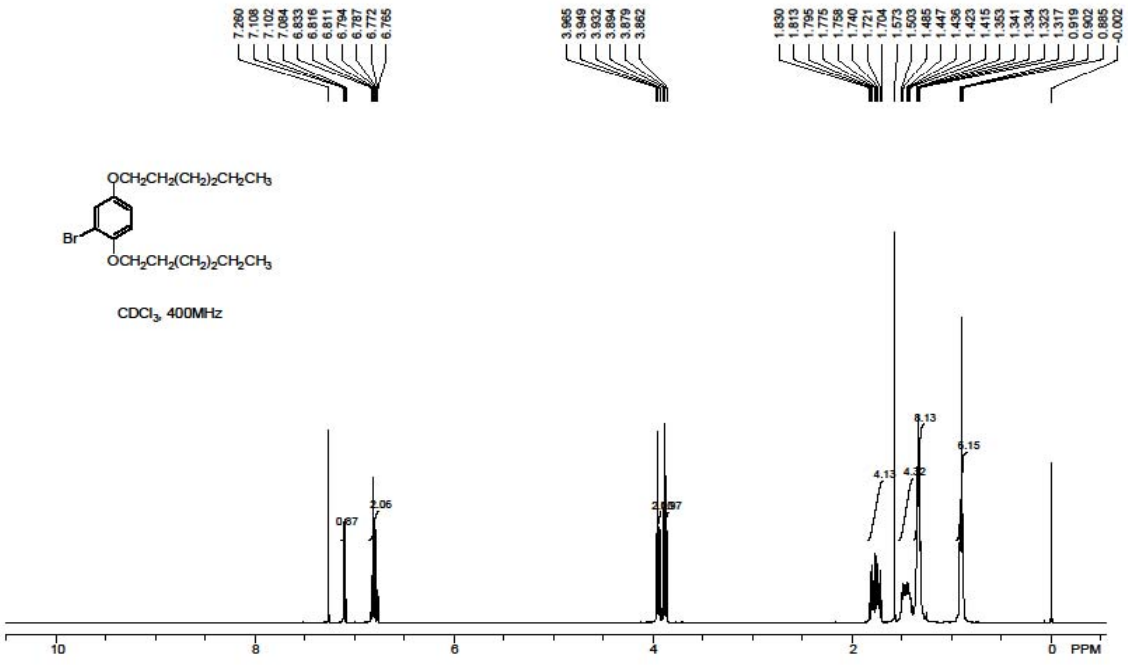
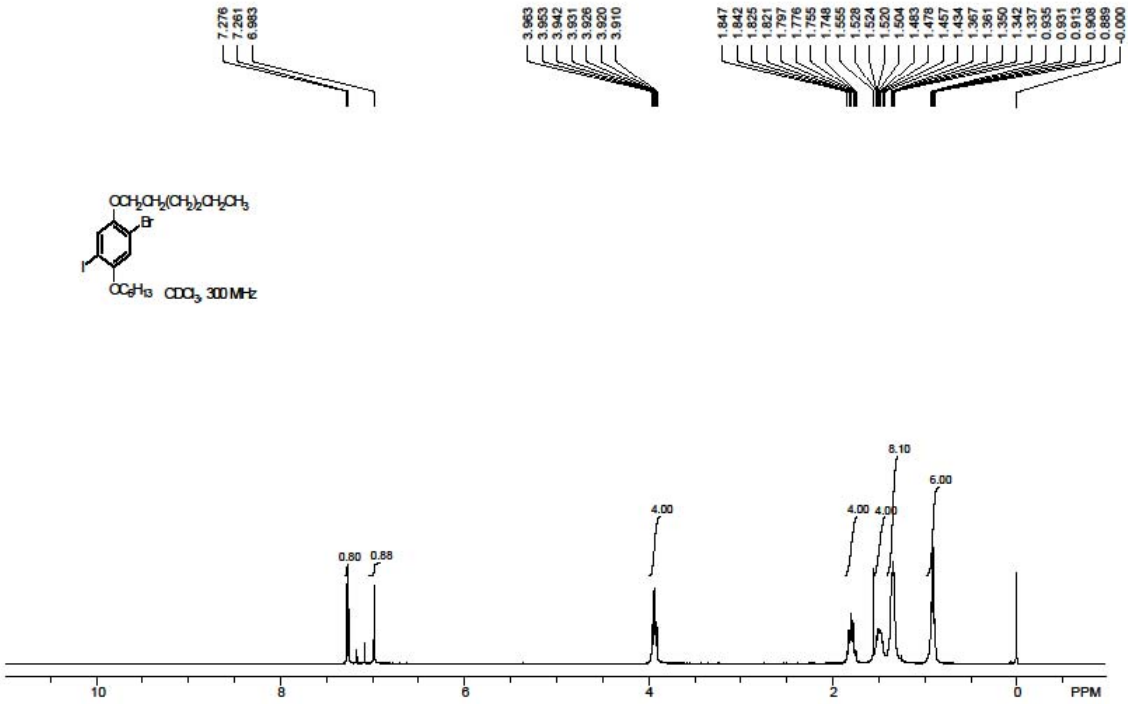
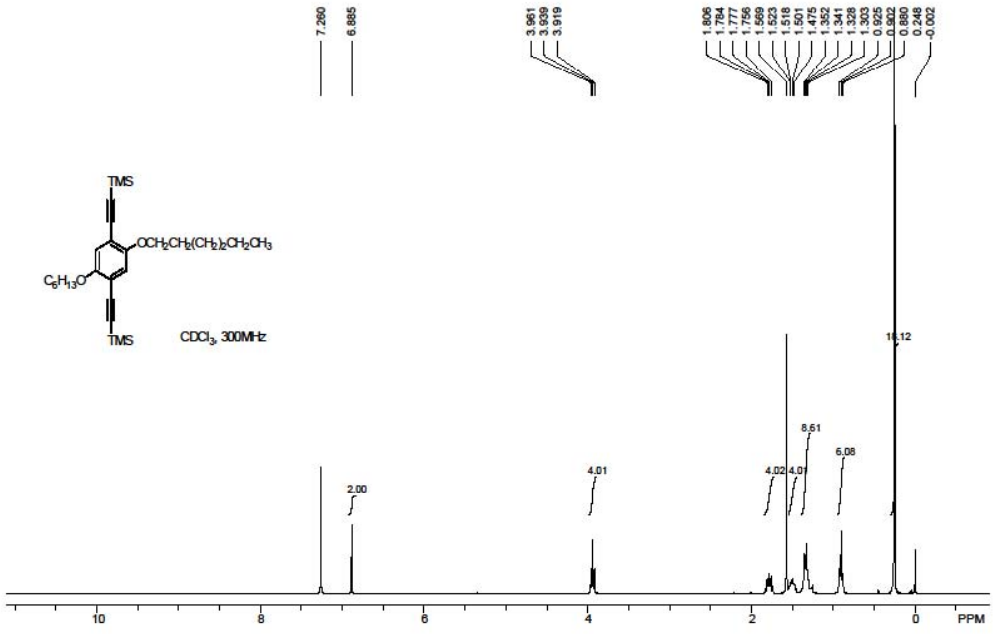


Figure S15. The luminescent lifetimes of complex **I** in CH_3CN at 298 K (concentration = 1×10^{-4} M).

2. ^{1}H NMR and ^{13}C NMR spectra copies



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1.341
1.328
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TMS
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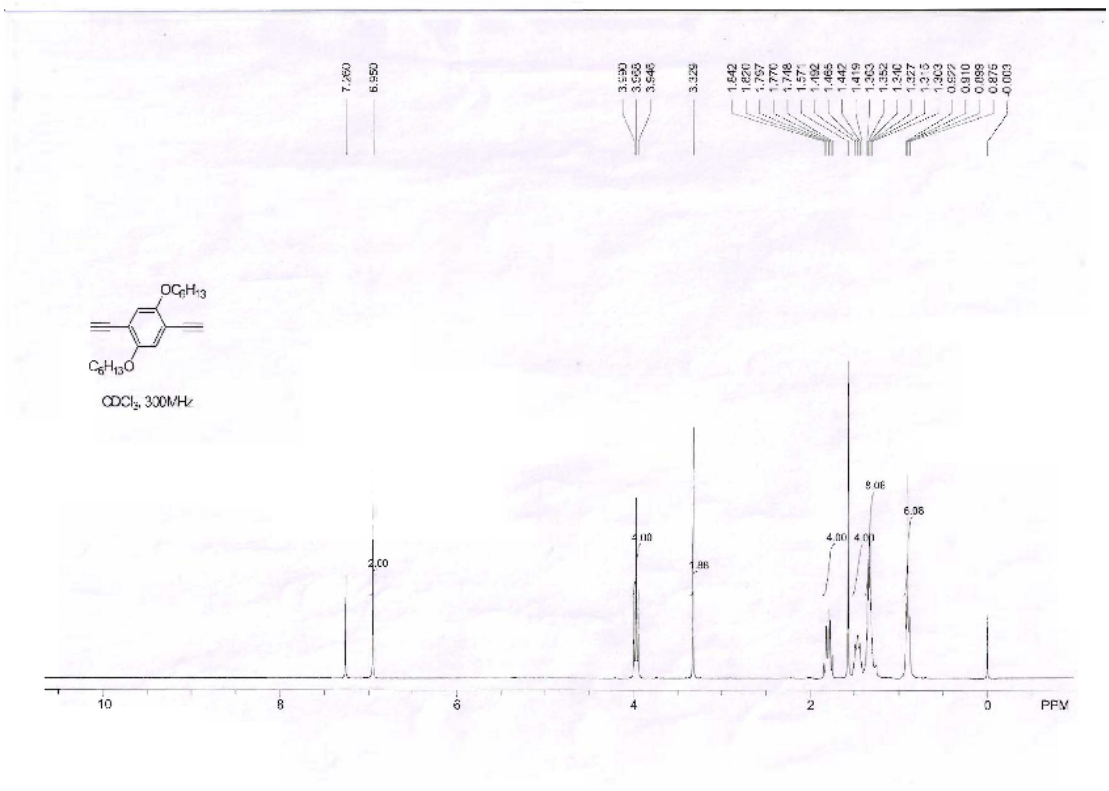
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0.003
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C6H13O
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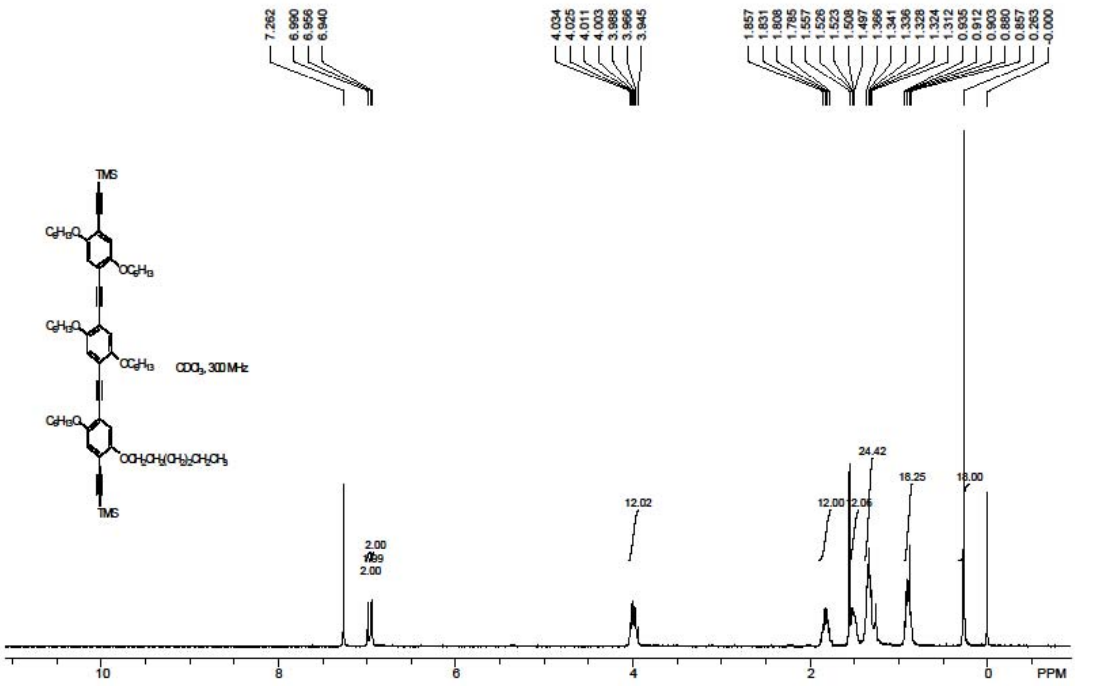
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1.523
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1.497
1.366
1.341
1.336
1.328
1.324
1.312
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0.903
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0.857
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CDCl3, 300 MHz
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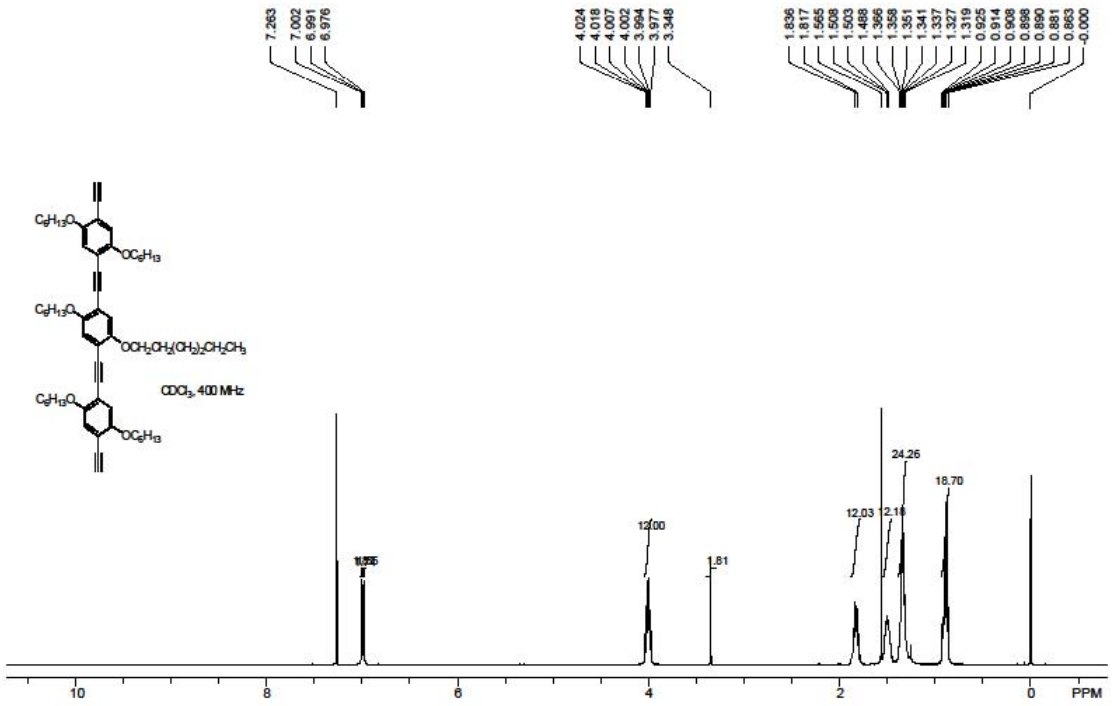
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1.488
1.366
1.358
1.351
1.341
1.337
1.327
1.319
0.925
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0.890
0.881
0.863
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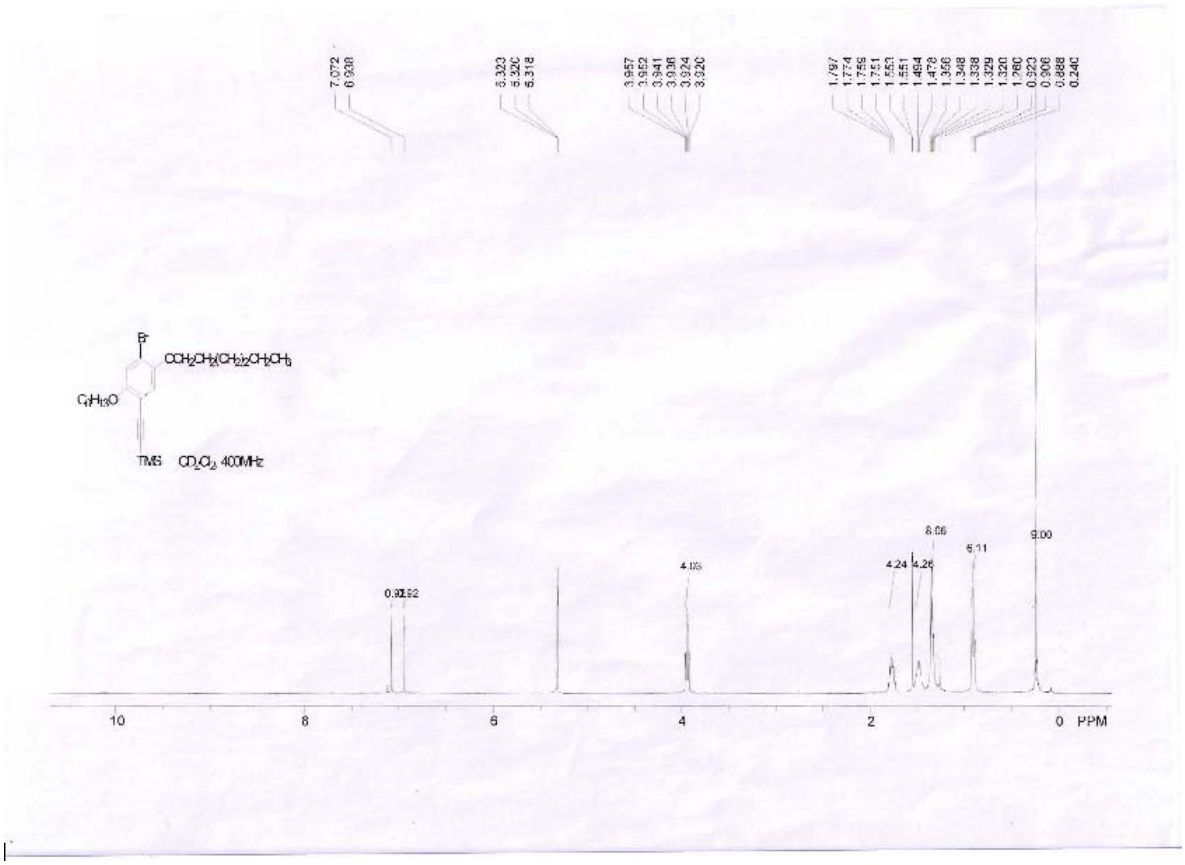

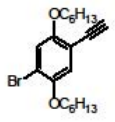

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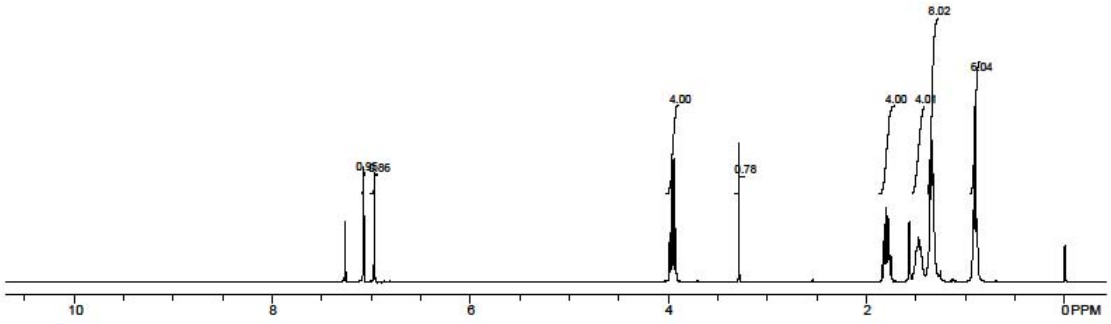

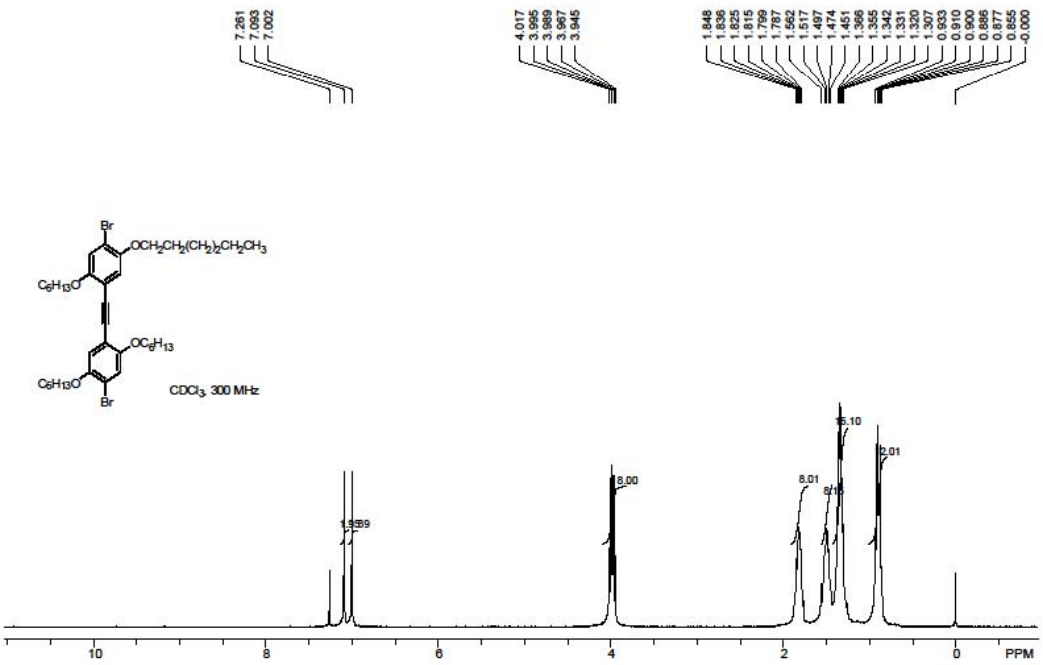
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1.331
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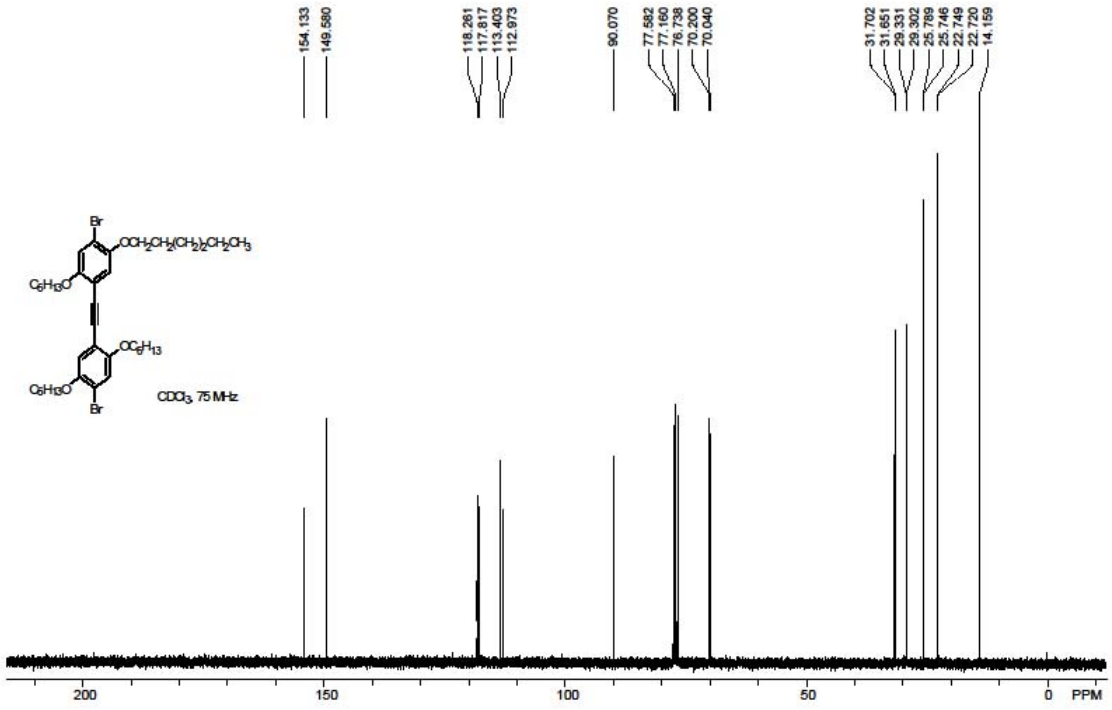
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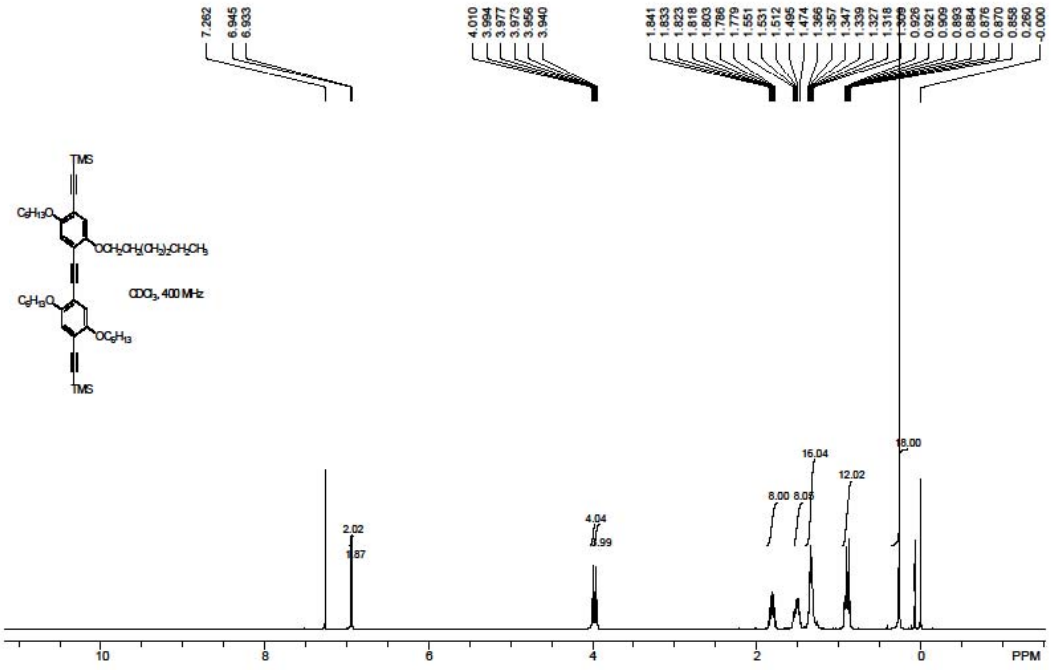
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1.309
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0.870
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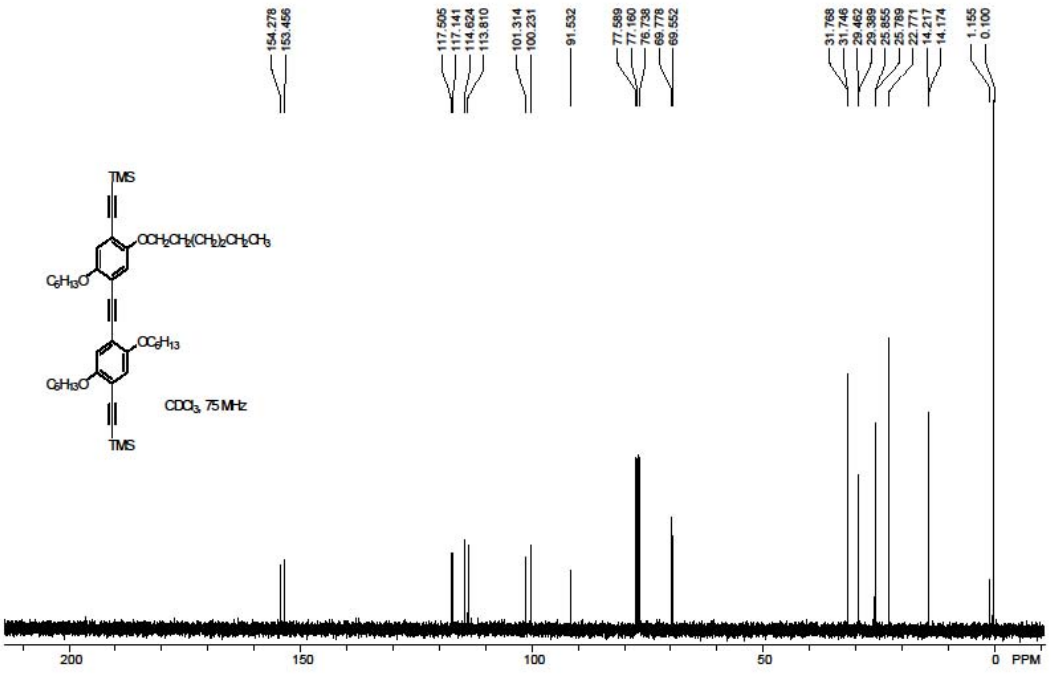
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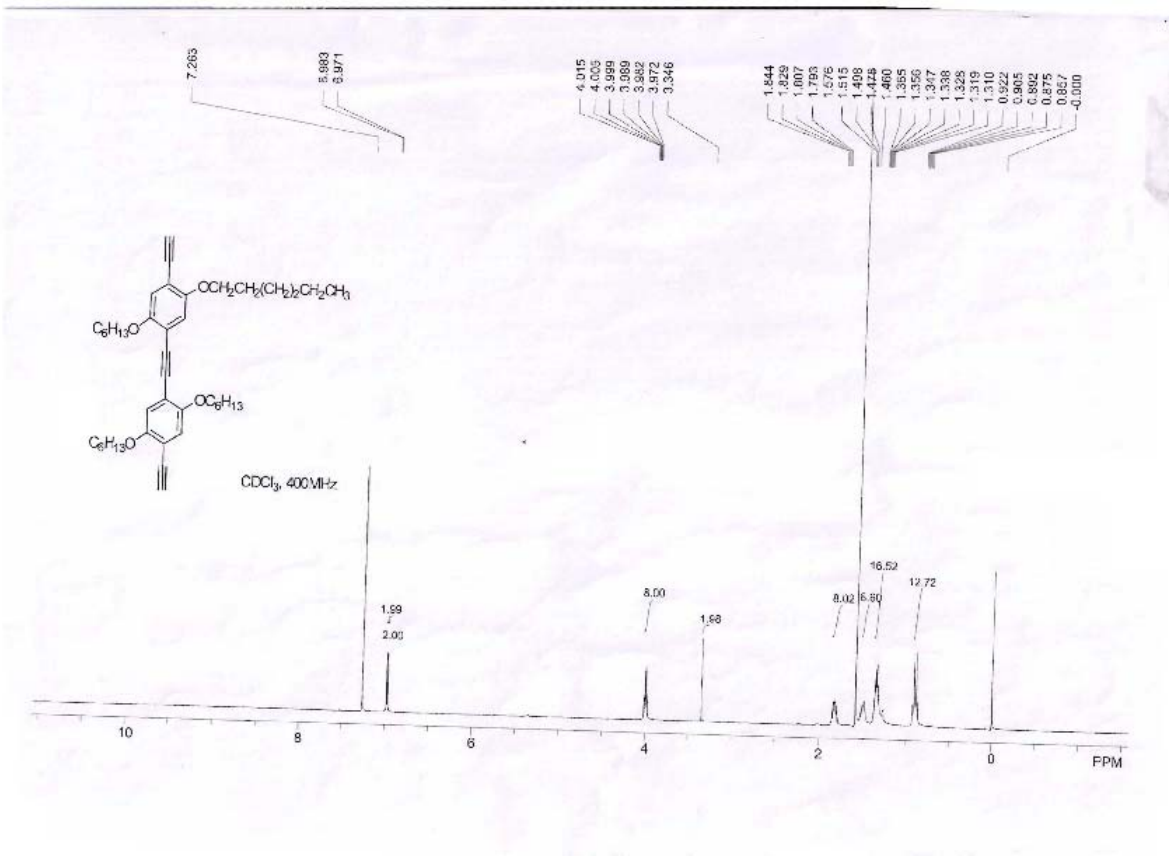
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0.857
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OC6H13
C6H13O
CDCl3, 400 MHz
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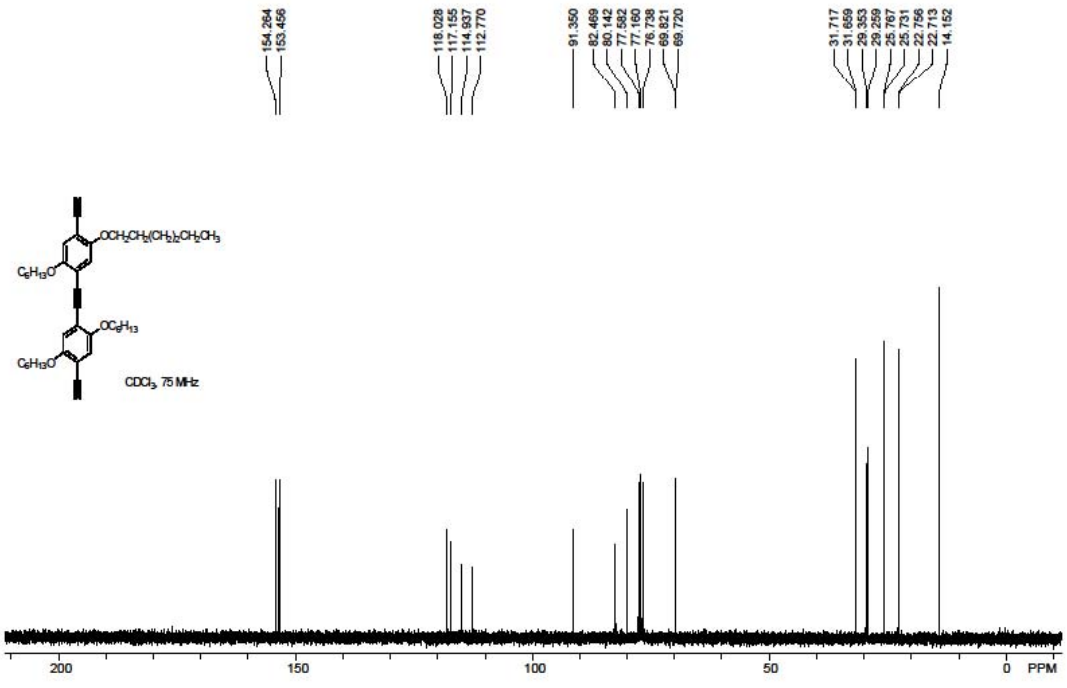
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22.713
14.152
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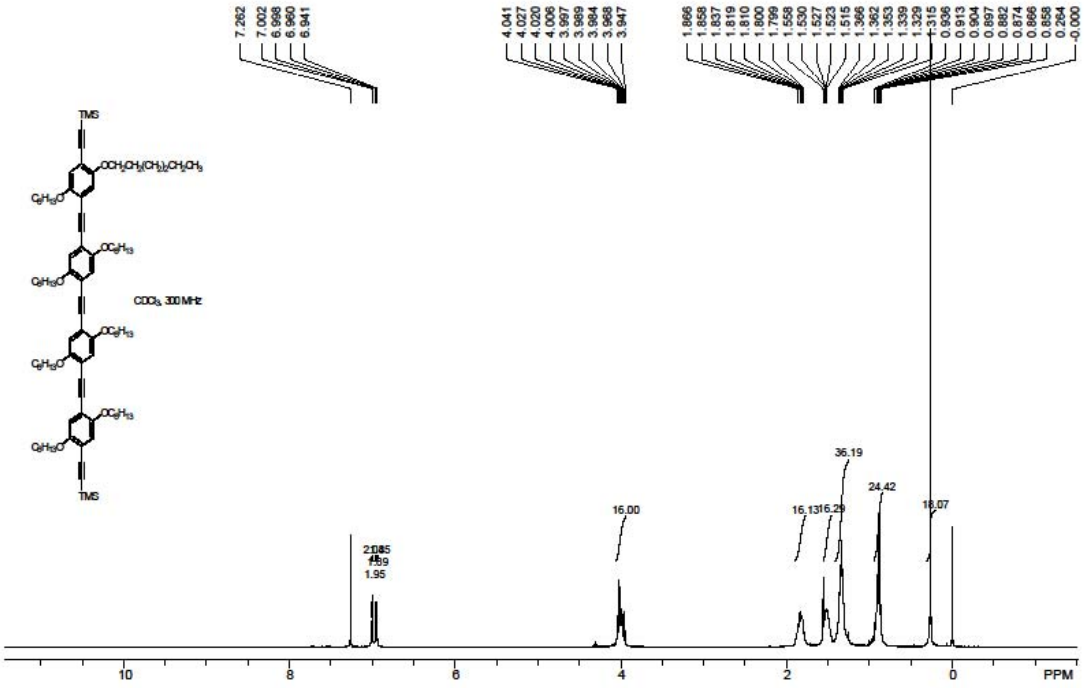
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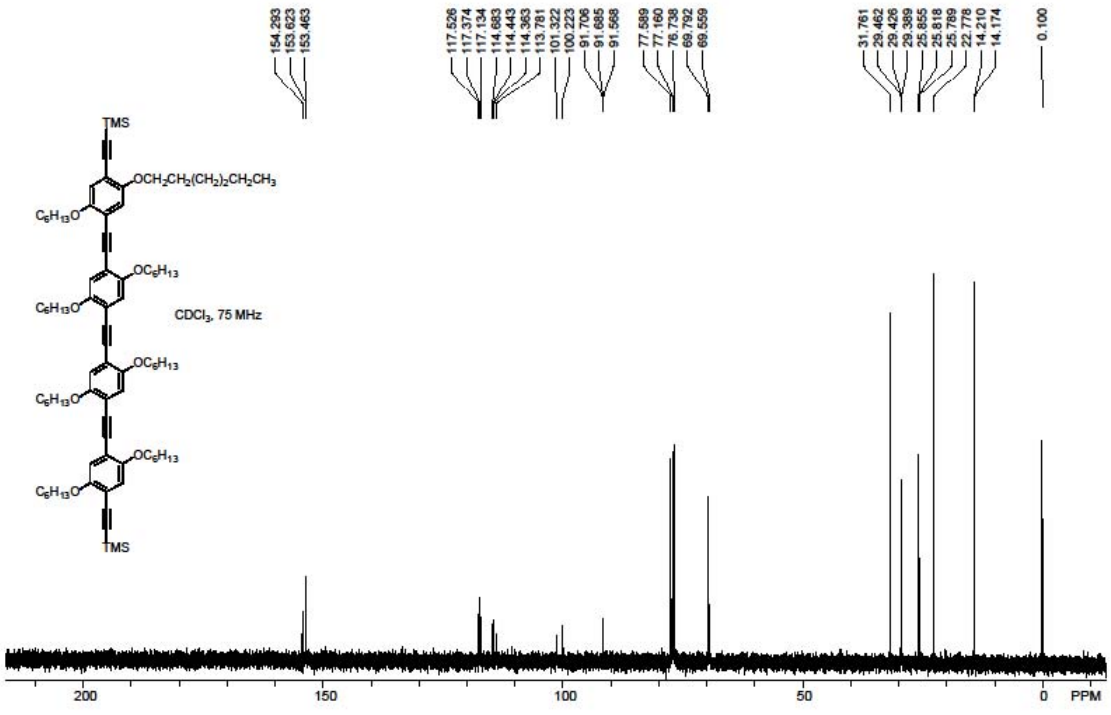
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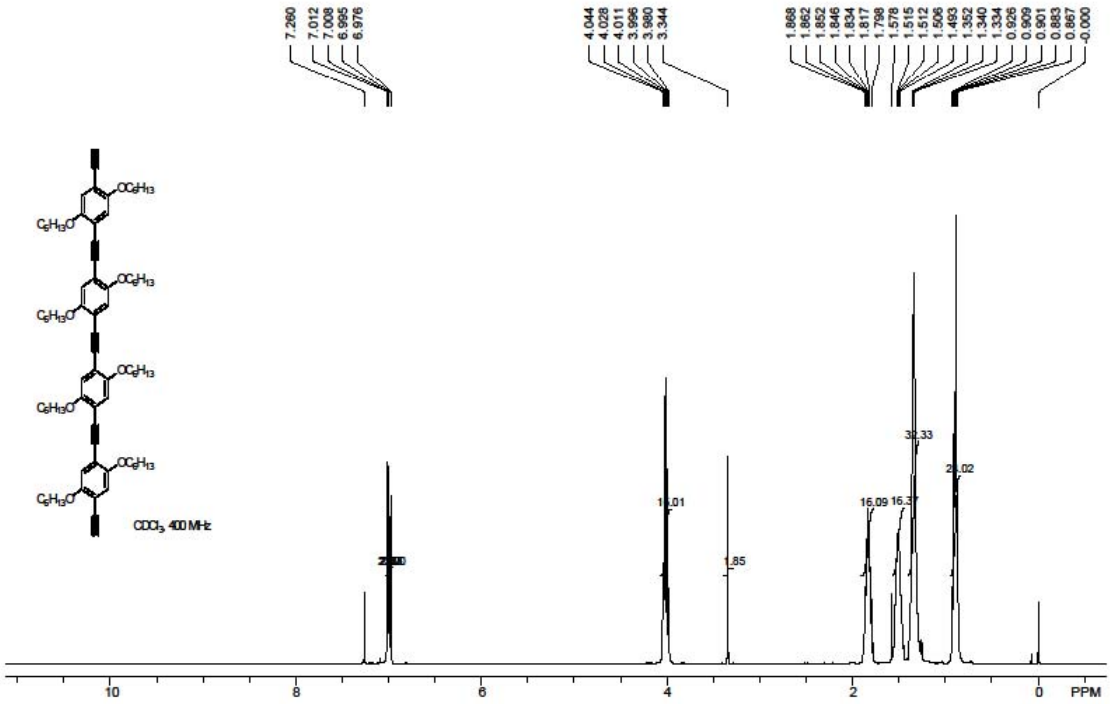
PPM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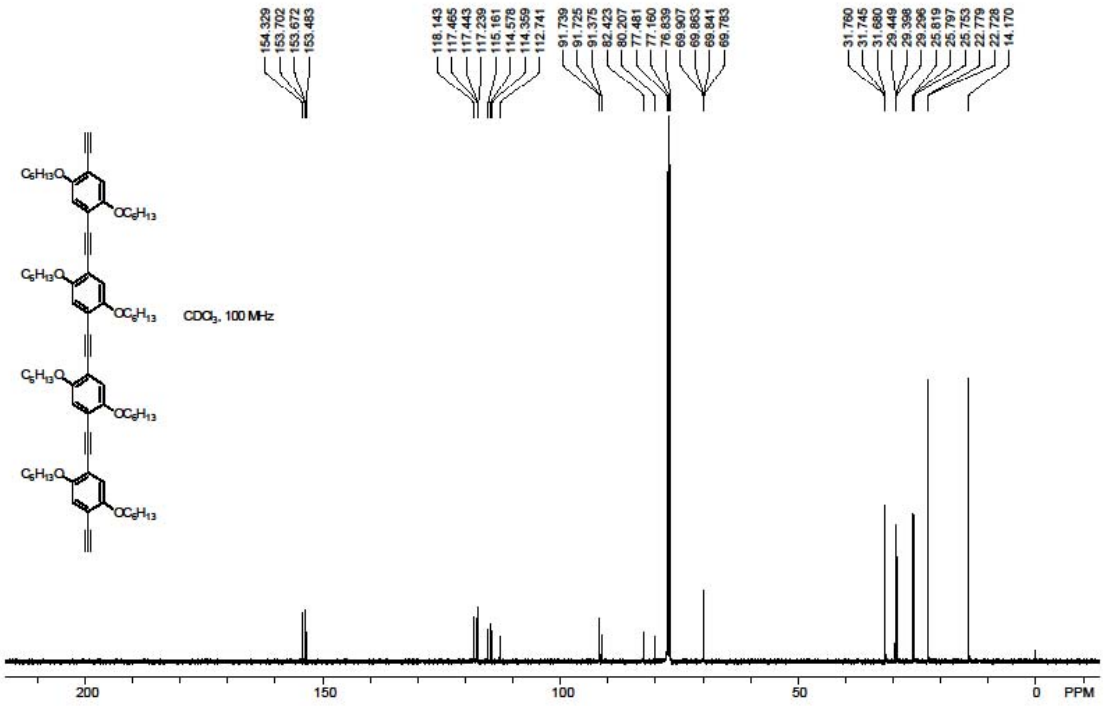
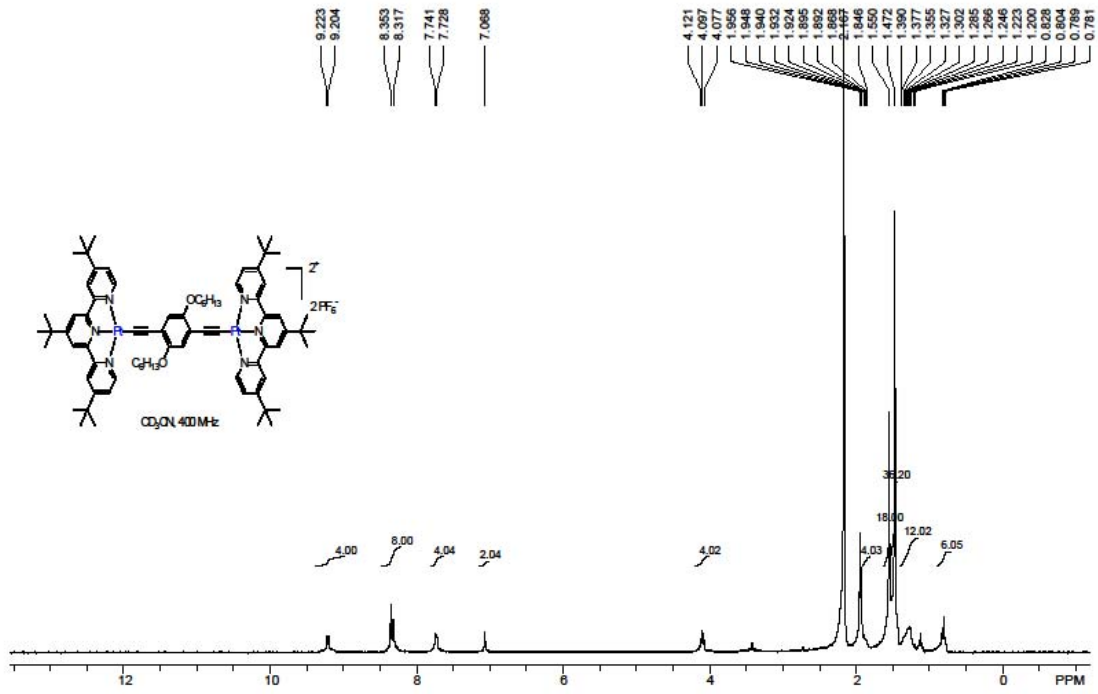
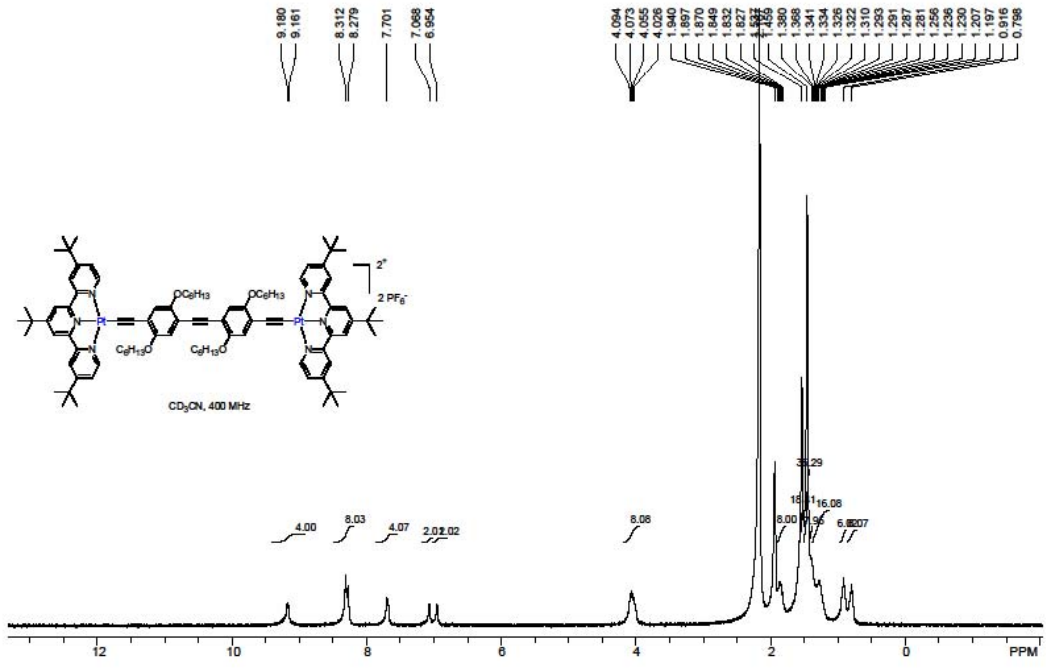
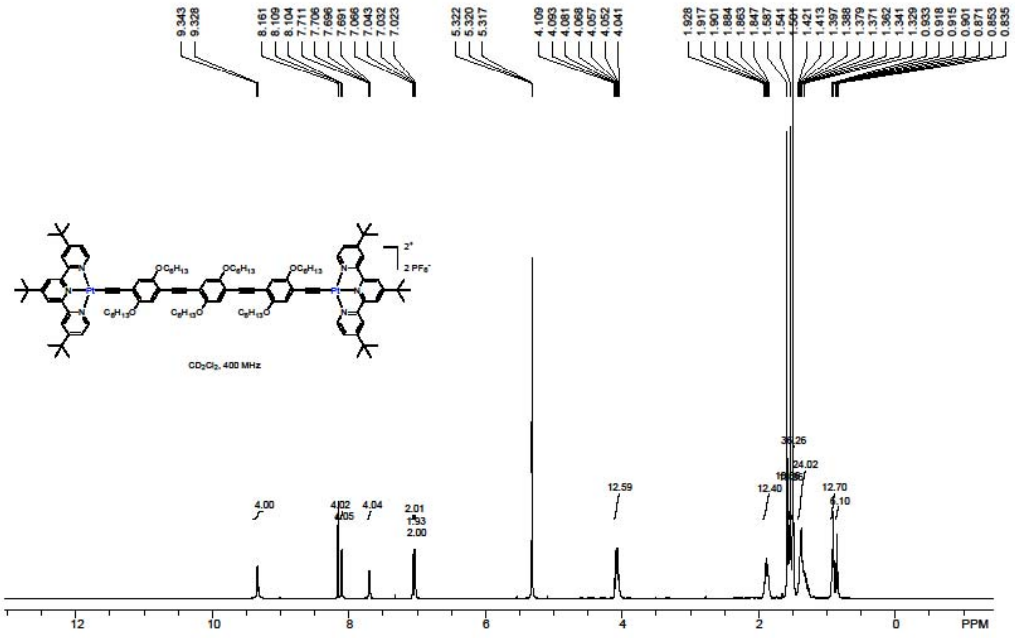
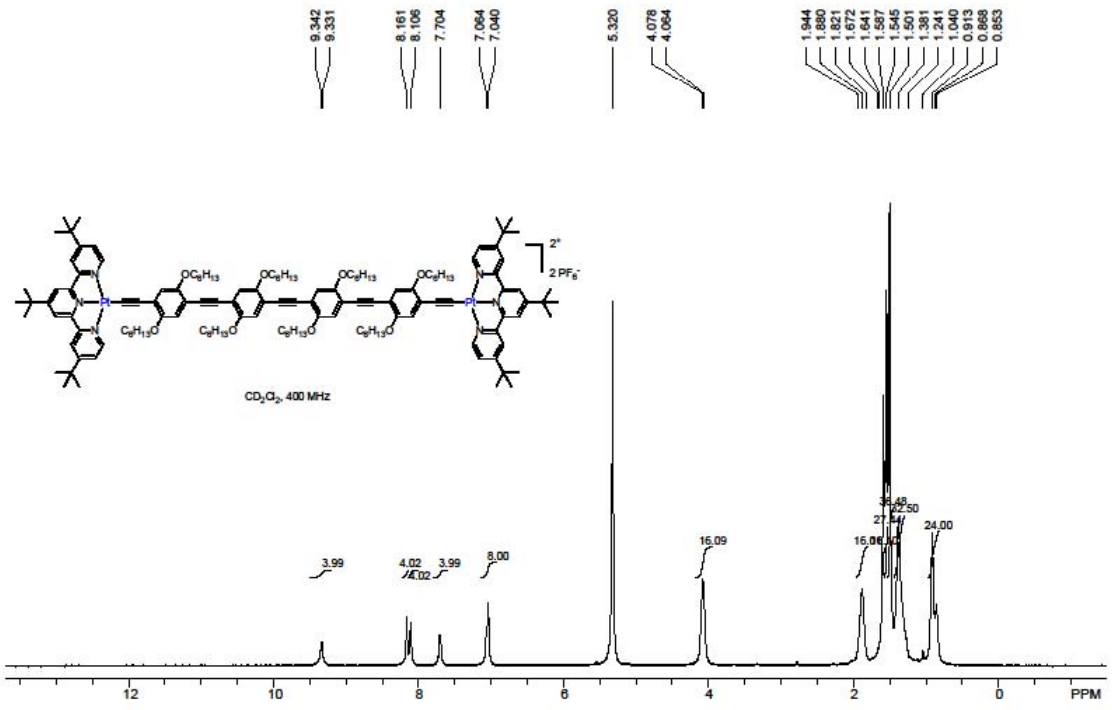
CDCl3, 400 MHz
16.09
16.37
38.33
21.02
1.85
10
8
6
4
2
0
PPM

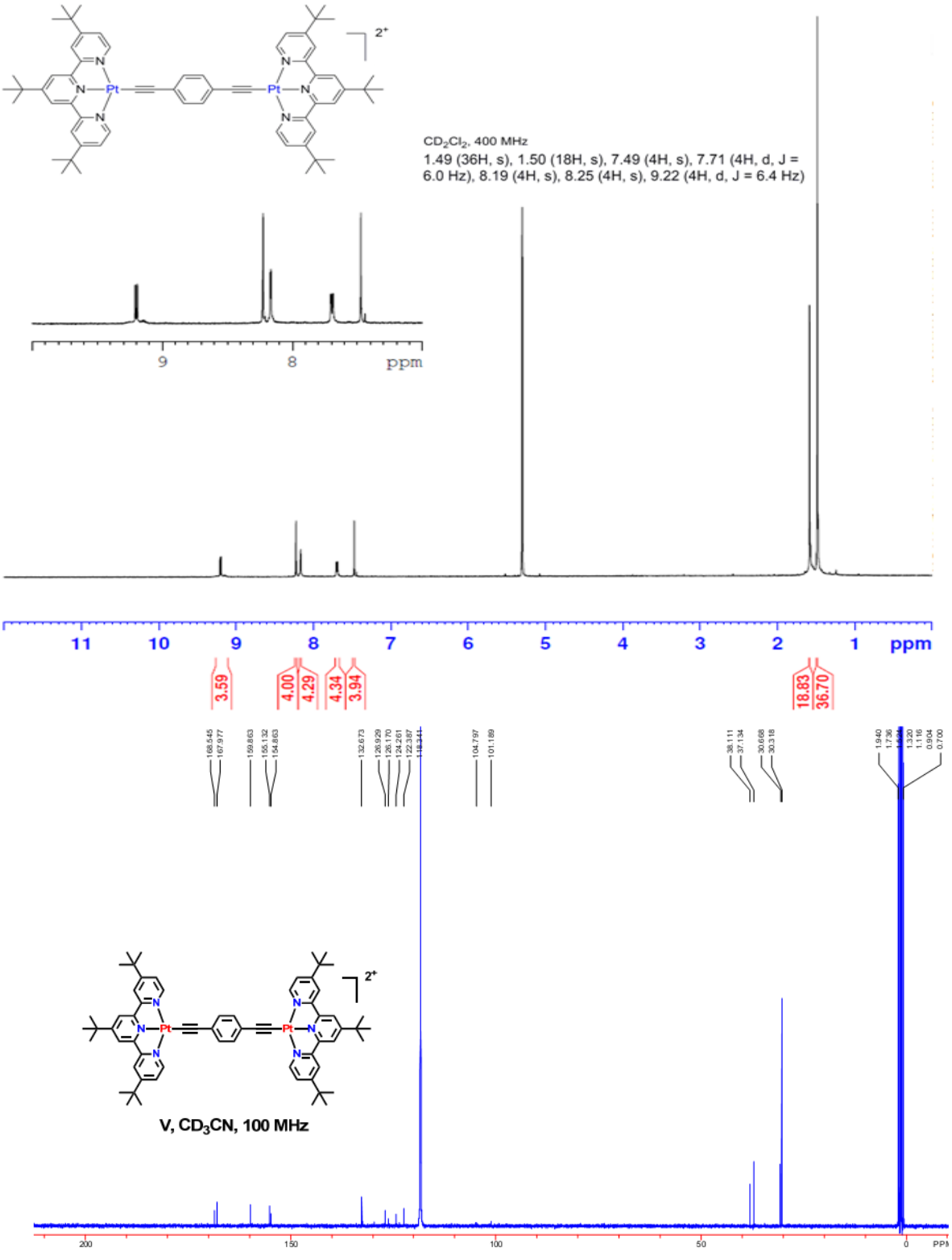

154.329
153.702
153.672
153.483
118.143
117.465
117.443
117.239
115.161
114.578
114.359
112.741
91.739
91.725
91.375
82.423
80.207
77.461
77.160
76.839
69.907
69.863
69.841
69.783
31.760
31.745
31.680
29.449
29.398
29.296
25.819
25.797
25.753
22.779
22.728
14.170
CDCl3, 100 MHz
200
150
100
50
0
PPM

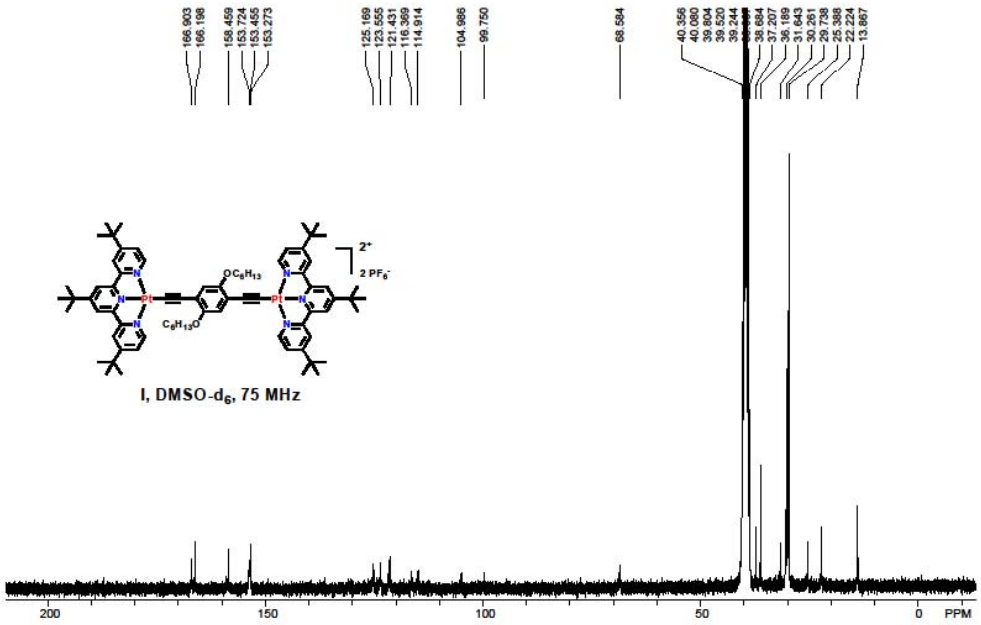

9.223
9.204
8.353
8.317
7.741
7.728
7.068
4.121
4.097
4.077
1.956
1.948
1.940
1.932
1.924
1.895
1.892
1.868
1.846
1.550
1.472
1.390
1.377
1.355
1.327
1.302
1.285
1.266
1.246
1.223
1.200
0.828
0.804
0.799
0.781
2+
2PF6-
OC6H13
C6H13O
CD3CN, 400 MHz
4.00
8.00
4.04
2.04
4.02
36.20
18.00
4.03
12.02
6.05
12
10
8
6
4
2
0
PPM


9.180
9.161
8.312
8.279
7.701
7.068
6.954
4.084
4.073
4.055
4.026
1.940
1.897
1.870
1.849
1.832
1.827
1.380
1.368
1.341
1.334
1.326
1.322
1.310
1.293
1.291
1.287
1.281
1.256
1.236
1.230
1.207
1.197
0.916
0.798
2+
2 PF6-
OC6H13
OC6H13
C6H13O
C6H13O
CD3CN, 400 MHz
4.00
8.03
4.07
2.02
2.02
8.08
36.29
16.08
8.00
12
10
8
6
4
2
0
PPM

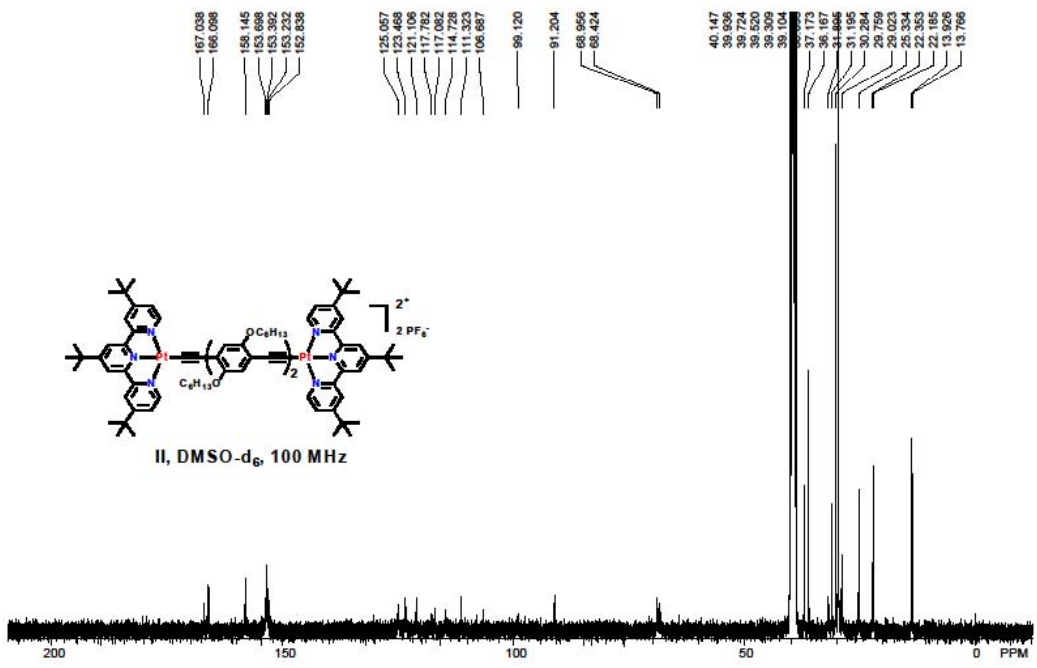

CD2Cl2, 400 MHz
PPM


CD2Cl2, 400 MHz
PPM


2+
CD2Cl2, 400 MHz
1.49 (36H, s), 1.50 (18H, s), 7.49 (4H, s), 7.71 (4H, d, J = 6.0 Hz), 8.19 (4H, s), 8.25 (4H, s), 9.22 (4H, d, J = 6.4 Hz)
9
8
ppm
11 10 9 8 7 6 5 4 3 2 1 ppm
3.59
4.00
4.29
4.34
3.94
18.83
36.70
V, CD3CN, 100 MHz
200
150
100
50
0
PPM

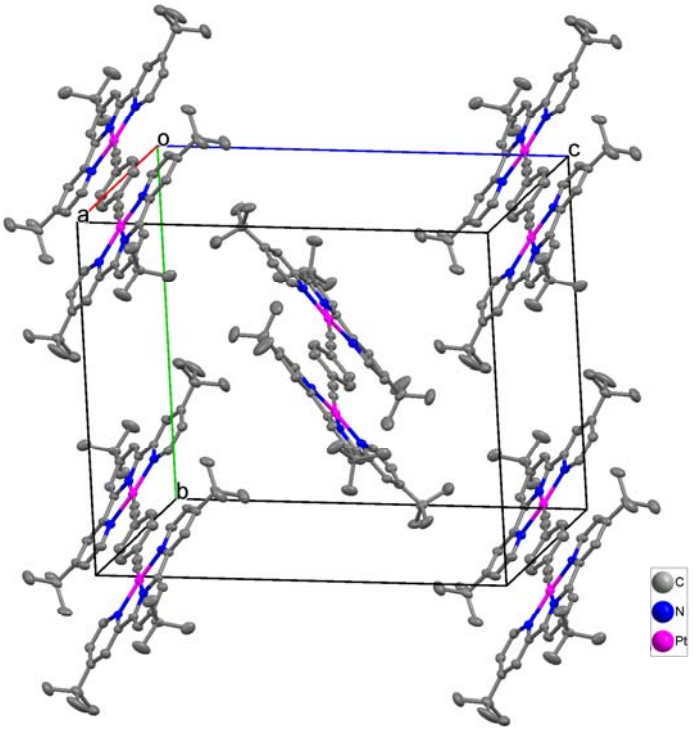


I, DMSO-d_6, 75 MHz



II, DMSO-d_6, 100 MHz

3. Crystal data and structure refinement for complex V



Scheme S1. Crystal packing diagram of compound **V**. Anions and hydrogen atoms have been omitted for clarity. Thermal ellipsoids were shown at the 50% probability level.

Table S2. Crystal data and structure refinement for **V**.

Empirical formula	C68 H76 Cl14 N6 O8 Pt2	
Formula weight	1991.83	
Temperature	100(2) K	
Wavelength	0.71073 Å	
Crystal system	Monoclinic	
Space group	P2(1)/c	
Unit cell dimensions	a = 10.4183(4) Å	α= 90°.
	b = 18.7275(6) Å	β= 101.3560(10)°.
	c = 20.6091(8) Å	γ = 90°.
Volume	3942.3(2) $Å^3$	
Z	2	
Density (calculated)	1.678 Mg/m^3	
Absorption coefficient	4.074 mm^{-1}	
F(000)	1968	
Crystal size	0.25 x 0.22 x 0.20 mm^3	
Theta range for data collection	2.27 to 26.43°.	
Index ranges	-11<=h<=13, -23<=k<=23, -25<=l<=25	
Reflections collected	23777	
Independent reflections	8006 [R(int) = 0.0197]	
Completeness to theta = 26.43°	98.8 %	
Absorption correction	Semi-empirical from equivalents	
Max. and min. transmission	0.4963 and 0.4291	
Refinement method	Full-matrix least-squares on F^2	
Data / restraints / parameters	8006 / 0 / 474	
Goodness-of-fit on F^2	1.086	
Final R indices [I>2sigma(I)]	R1 = 0.0297, wR2 = 0.0701	
R indices (all data)	R1 = 0.0382, wR2 = 0.0756	
Largest diff. peak and hole	1.932 and -1.051 $e.Å^{-3}$	

Table S3. Atomic coordinates (x 10^4) and equivalent isotropic displacement parameters ($Å^2$x 10^3) for **V**. U(eq) is defined as one third of the trace of the orthogonalized U^{ij} tensor.

	x	y	z	U(eq)
C(1)	833(4)	11193(2)	294(2)	26(1)
C(2)	1428(4)	11765(2)	53(2)	29(1)
C(3)	2721(4)	11945(2)	323(2)	29(1)
C(4)	3377(4)	11506(2)	827(2)	28(1)
C(5)	2747(4)	10931(2)	1046(2)	23(1)
C(6)	3398(4)	10423(2)	1561(2)	23(1)
C(7)	4671(4)	10429(2)	1912(2)	26(1)
C(8)	5100(4)	9890(2)	2376(2)	25(1)
C(9)	4206(4)	9359(2)	2473(2)	25(1)
C(10)	2937(4)	9376(2)	2114(2)	22(1)
C(11)	1824(4)	8901(2)	2175(2)	23(1)
C(12)	1907(4)	8341(2)	2616(2)	25(1)
C(13)	795(4)	7953(2)	2681(2)	27(1)
C(14)	-375(4)	8143(2)	2257(2)	29(1)
C(15)	-413(4)	8698(2)	1818(2)	27(1)
C(16)	-1121(4)	10015(2)	792(2)	24(1)
C(17)	-2276(4)	10041(2)	562(2)	27(1)
C(18)	-3652(4)	10025(2)	282(2)	26(1)
C(19)	-4488(4)	9552(2)	517(2)	32(1)
C(20)	-5803(4)	9523(2)	239(2)	32(1)
C(21)	3338(5)	12607(2)	79(2)	39(1)
C(22)	2625(7)	13267(3)	289(3)	58(2)
C(23)	3122(7)	12597(3)	-675(3)	63(2)
C(24)	4778(6)	12655(4)	372(4)	85(3)
C(25)	6501(4)	9878(2)	2781(2)	28(1)
C(26)	7373(5)	10423(3)	2534(3)	56(2)
C(27)	7088(4)	9131(3)	2751(3)	44(1)
C(28)	6424(5)	10043(3)	3501(3)	42(1)
C(29)	789(4)	7379(2)	3204(2)	33(1)
C(30)	2166(5)	7200(3)	3573(3)	47(1)
C(31)	129(5)	6700(2)	2885(3)	42(1)
C(32)	-10(6)	7676(3)	3697(3)	54(1)
C(1S)	7751(5)	2894(3)	9107(3)	45(1)

C(2S)	8029(15)	5173(8)	1183(8)	158(5)
Cl(1)	5357(1)	7365(1)	2306(1)	40(1)
Cl(2)	9109(2)	3104(1)	8776(1)	84(1)
Cl(3)	7875(2)	2014(1)	9404(1)	70(1)
Cl(4)	7639(2)	3498(1)	9741(1)	78(1)
Cl(4S)	7436(5)	5747(2)	1721(2)	81(1)
Cl(5S)	6609(7)	4949(3)	600(4)	124(2)
Cl(6S)	9356(5)	5013(3)	816(5)	181(3)
Cl(7S)	6778(5)	4547(3)	886(3)	116(2)
Cl(8S)	9229(6)	4743(4)	1409(5)	93(2)
Cl(9S)	8501(11)	5481(6)	1818(4)	133(5)
N(1)	1458(3)	10788(2)	787(2)	22(1)
N(2)	2579(3)	9902(2)	1669(2)	20(1)
N(3)	658(3)	9087(2)	1779(2)	22(1)
O(1)	4981(4)	7914(2)	1834(2)	56(1)
O(2)	6728(4)	7247(2)	2423(2)	65(1)
O(3)	4995(5)	7576(3)	2911(2)	86(2)
O(4)	4700(5)	6729(2)	2056(4)	128(3)
Pt(1)	749(1)	9947(1)	1207(1)	19(1)

Table S4. Bond lengths [Å] and angles [°] for **V**.

C(1)-N(1)	1.330(5)
C(1)-C(2)	1.380(6)
C(1)-H(1)	0.9500
C(2)-C(3)	1.393(6)
C(2)-H(2)	0.9500
C(3)-C(4)	1.395(6)
C(3)-C(21)	1.525(6)
C(4)-C(5)	1.381(5)
C(4)-H(4)	0.9500
C(5)-N(1)	1.370(5)
C(5)-C(6)	1.487(5)
C(6)-N(2)	1.342(5)
C(6)-C(7)	1.380(5)
C(7)-C(8)	1.400(6)
C(7)-H(7)	0.9500
C(8)-C(9)	1.405(5)
C(8)-C(25)	1.532(5)
C(9)-C(10)	1.382(5)
C(9)-H(9)	0.9500
C(10)-N(2)	1.348(5)
C(10)-C(11)	1.486(5)
C(11)-N(3)	1.368(5)
C(11)-C(12)	1.381(5)
C(12)-C(13)	1.395(5)
C(12)-H(12)	0.9500
C(13)-C(14)	1.397(6)
C(13)-C(29)	1.524(5)
C(14)-C(15)	1.374(6)
C(14)-H(14)	0.9500
C(15)-N(3)	1.348(5)
C(15)-H(15)	0.9500
C(16)-C(17)	1.205(6)
C(16)-Pt(1)	1.972(4)
C(17)-C(18)	1.436(6)
C(18)-C(19)	1.393(6)
C(18)-C(20)#1	1.397(6)

C(19)-C(20)	1.379(6)
C(19)-H(19)	0.9500
C(20)-C(18)#1	1.397(6)
C(20)-H(20)	0.9500
C(21)-C(24)	1.506(7)
C(21)-C(23)	1.525(7)
C(21)-C(22)	1.548(7)
C(22)-H(22A)	0.9800
C(22)-H(22B)	0.9800
C(22)-H(22C)	0.9800
C(23)-H(23A)	0.9800
C(23)-H(23B)	0.9800
C(23)-H(23C)	0.9800
C(24)-H(24A)	0.9800
C(24)-H(24B)	0.9800
C(24)-H(24C)	0.9800
C(25)-C(26)	1.520(6)
C(25)-C(27)	1.532(6)
C(25)-C(28)	1.534(7)
C(26)-H(26A)	0.9800
C(26)-H(26B)	0.9800
C(26)-H(26C)	0.9800
C(27)-H(27A)	0.9800
C(27)-H(27B)	0.9800
C(27)-H(27C)	0.9800
C(28)-H(28A)	0.9800
C(28)-H(28B)	0.9800
C(28)-H(28C)	0.9800
C(29)-C(30)	1.524(6)
C(29)-C(31)	1.531(6)
C(29)-C(32)	1.539(7)
C(30)-H(30A)	0.9800
C(30)-H(30B)	0.9800
C(30)-H(30C)	0.9800
C(31)-H(31A)	0.9800
C(31)-H(31B)	0.9800
C(31)-H(31C)	0.9800
C(32)-H(32A)	0.9800

C(32)-H(32B)	0.9800
C(32)-H(32C)	0.9800
C(1S)-Cl(2)	1.733(6)
C(1S)-Cl(4)	1.750(5)
C(1S)-Cl(3)	1.754(5)
C(1S)-H(1S)	1.0000
C(2S)-Cl(9S)	1.426(16)
C(2S)-Cl(8S)	1.483(16)
C(2S)-Cl(6S)	1.727(16)
C(2S)-Cl(4S)	1.743(15)
C(2S)-Cl(5S)	1.762(16)
C(2S)-Cl(7S)	1.770(16)
Cl(1)-O(1)	1.417(4)
Cl(1)-O(2)	1.418(4)
Cl(1)-O(4)	1.419(4)
Cl(1)-O(3)	1.427(5)
Cl(4S)-Cl(9S)	1.196(13)
Cl(5S)-Cl(7S)	0.951(7)
Cl(6S)-Cl(8S)	1.352(10)
Cl(8S)-Cl(9S)	1.857(15)
N(1)-Pt(1)	2.007(3)
N(2)-Pt(1)	1.958(3)
N(3)-Pt(1)	2.009(3)

N(1)-C(1)-C(2)	122.1(4)
N(1)-C(1)-H(1)	119.0
C(2)-C(1)-H(1)	119.0
C(1)-C(2)-C(3)	120.8(4)
C(1)-C(2)-H(2)	119.6
C(3)-C(2)-H(2)	119.6
C(2)-C(3)-C(4)	116.6(4)
C(2)-C(3)-C(21)	120.1(4)
C(4)-C(3)-C(21)	123.2(4)
C(5)-C(4)-C(3)	120.5(4)
C(5)-C(4)-H(4)	119.7
C(3)-C(4)-H(4)	119.7
N(1)-C(5)-C(4)	121.2(4)
N(1)-C(5)-C(6)	115.2(3)

C(4)-C(5)-C(6)	123.6(4)
N(2)-C(6)-C(7)	119.7(4)
N(2)-C(6)-C(5)	111.6(3)
C(7)-C(6)-C(5)	128.7(4)
C(6)-C(7)-C(8)	119.8(4)
C(6)-C(7)-H(7)	120.1
C(8)-C(7)-H(7)	120.1
C(7)-C(8)-C(9)	118.4(4)
C(7)-C(8)-C(25)	121.7(4)
C(9)-C(8)-C(25)	119.9(4)
C(10)-C(9)-C(8)	119.9(4)
C(10)-C(9)-H(9)	120.0
C(8)-C(9)-H(9)	120.0
N(2)-C(10)-C(9)	119.2(3)
N(2)-C(10)-C(11)	112.3(3)
C(9)-C(10)-C(11)	128.4(4)
N(3)-C(11)-C(12)	121.3(4)
N(3)-C(11)-C(10)	114.5(3)
C(12)-C(11)-C(10)	124.2(4)
C(11)-C(12)-C(13)	120.8(4)
C(11)-C(12)-H(12)	119.6
C(13)-C(12)-H(12)	119.6
C(12)-C(13)-C(14)	116.6(4)
C(12)-C(13)-C(29)	123.6(4)
C(14)-C(13)-C(29)	119.7(4)
C(15)-C(14)-C(13)	120.7(4)
C(15)-C(14)-H(14)	119.6
C(13)-C(14)-H(14)	119.6
N(3)-C(15)-C(14)	122.1(4)
N(3)-C(15)-H(15)	119.0
C(14)-C(15)-H(15)	119.0
C(17)-C(16)-Pt(1)	177.2(4)
C(16)-C(17)-C(18)	176.4(4)
C(19)-C(18)-C(20)#1	117.7(4)
C(19)-C(18)-C(17)	121.1(4)
C(20)#1-C(18)-C(17)	121.2(4)
C(20)-C(19)-C(18)	121.2(4)
C(20)-C(19)-H(19)	119.4

C(18)-C(19)-H(19)	119.4
C(19)-C(20)-C(18)#1	121.1(4)
C(19)-C(20)-H(20)	119.5
C(18)#1-C(20)-H(20)	119.5
C(24)-C(21)-C(3)	111.6(4)
C(24)-C(21)-C(23)	110.2(5)
C(3)-C(21)-C(23)	109.8(4)
C(24)-C(21)-C(22)	109.5(5)
C(3)-C(21)-C(22)	107.5(4)
C(23)-C(21)-C(22)	108.2(4)
C(21)-C(22)-H(22A)	109.5
C(21)-C(22)-H(22B)	109.5
H(22A)-C(22)-H(22B)	109.5
C(21)-C(22)-H(22C)	109.5
H(22A)-C(22)-H(22C)	109.5
H(22B)-C(22)-H(22C)	109.5
C(21)-C(23)-H(23A)	109.5
C(21)-C(23)-H(23B)	109.5
H(23A)-C(23)-H(23B)	109.5
C(21)-C(23)-H(23C)	109.5
H(23A)-C(23)-H(23C)	109.5
H(23B)-C(23)-H(23C)	109.5
C(21)-C(24)-H(24A)	109.5
C(21)-C(24)-H(24B)	109.5
H(24A)-C(24)-H(24B)	109.5
C(21)-C(24)-H(24C)	109.5
H(24A)-C(24)-H(24C)	109.5
H(24B)-C(24)-H(24C)	109.5
C(26)-C(25)-C(8)	112.1(4)
C(26)-C(25)-C(27)	109.3(4)
C(8)-C(25)-C(27)	109.7(3)
C(26)-C(25)-C(28)	109.6(4)
C(8)-C(25)-C(28)	107.3(3)
C(27)-C(25)-C(28)	108.7(4)
C(25)-C(26)-H(26A)	109.5
C(25)-C(26)-H(26B)	109.5
H(26A)-C(26)-H(26B)	109.5
C(25)-C(26)-H(26C)	109.5

H(26A)-C(26)-H(26C)	109.5
H(26B)-C(26)-H(26C)	109.5
C(25)-C(27)-H(27A)	109.5
C(25)-C(27)-H(27B)	109.5
H(27A)-C(27)-H(27B)	109.5
C(25)-C(27)-H(27C)	109.5
H(27A)-C(27)-H(27C)	109.5
H(27B)-C(27)-H(27C)	109.5
C(25)-C(28)-H(28A)	109.5
C(25)-C(28)-H(28B)	109.5
H(28A)-C(28)-H(28B)	109.5
C(25)-C(28)-H(28C)	109.5
H(28A)-C(28)-H(28C)	109.5
H(28B)-C(28)-H(28C)	109.5
C(30)-C(29)-C(13)	112.0(3)
C(30)-C(29)-C(31)	109.2(4)
C(13)-C(29)-C(31)	110.3(4)
C(30)-C(29)-C(32)	109.2(4)
C(13)-C(29)-C(32)	106.9(4)
C(31)-C(29)-C(32)	109.2(4)
C(29)-C(30)-H(30A)	109.5
C(29)-C(30)-H(30B)	109.5
H(30A)-C(30)-H(30B)	109.5
C(29)-C(30)-H(30C)	109.5
H(30A)-C(30)-H(30C)	109.5
H(30B)-C(30)-H(30C)	109.5
C(29)-C(31)-H(31A)	109.5
C(29)-C(31)-H(31B)	109.5
H(31A)-C(31)-H(31B)	109.5
C(29)-C(31)-H(31C)	109.5
H(31A)-C(31)-H(31C)	109.5
H(31B)-C(31)-H(31C)	109.5
C(29)-C(32)-H(32A)	109.5
C(29)-C(32)-H(32B)	109.5
H(32A)-C(32)-H(32B)	109.5
C(29)-C(32)-H(32C)	109.5
H(32A)-C(32)-H(32C)	109.5
H(32B)-C(32)-H(32C)	109.5

Cl(2)-C(1S)-Cl(4)	109.1(3)
Cl(2)-C(1S)-Cl(3)	109.9(3)
Cl(4)-C(1S)-Cl(3)	111.0(3)
Cl(2)-C(1S)-H(1S)	108.9
Cl(4)-C(1S)-H(1S)	108.9
Cl(3)-C(1S)-H(1S)	108.9
Cl(9S)-C(2S)-Cl(8S)	79.3(11)
Cl(9S)-C(2S)-Cl(6S)	108.0(11)
Cl(8S)-C(2S)-Cl(6S)	49.1(6)
Cl(9S)-C(2S)-Cl(4S)	42.9(7)
Cl(8S)-C(2S)-Cl(4S)	121.2(11)
Cl(6S)-C(2S)-Cl(4S)	143.1(10)
Cl(9S)-C(2S)-Cl(5S)	144.4(12)
Cl(8S)-C(2S)-Cl(5S)	128.9(10)
Cl(6S)-C(2S)-Cl(5S)	107.4(9)
Cl(4S)-C(2S)-Cl(5S)	103.0(8)
Cl(9S)-C(2S)-Cl(7S)	133.1(11)
Cl(8S)-C(2S)-Cl(7S)	105.4(9)
Cl(6S)-C(2S)-Cl(7S)	109.4(8)
Cl(4S)-C(2S)-Cl(7S)	107.4(8)
Cl(5S)-C(2S)-Cl(7S)	31.2(4)
O(1)-Cl(1)-O(2)	111.2(3)
O(1)-Cl(1)-O(4)	108.2(3)
O(2)-Cl(1)-O(4)	109.2(3)
O(1)-Cl(1)-O(3)	108.3(3)
O(2)-Cl(1)-O(3)	109.0(3)
O(4)-Cl(1)-O(3)	111.0(4)
Cl(9S)-Cl(4S)-C(2S)	54.3(6)
Cl(7S)-Cl(5S)-C(2S)	74.8(8)
Cl(8S)-Cl(6S)-C(2S)	56.0(6)
Cl(5S)-Cl(7S)-C(2S)	73.9(7)
Cl(6S)-Cl(8S)-C(2S)	74.9(7)
Cl(6S)-Cl(8S)-Cl(9S)	104.6(5)
C(2S)-Cl(8S)-Cl(9S)	49.0(7)
Cl(4S)-Cl(9S)-C(2S)	82.8(9)
Cl(4S)-Cl(9S)-Cl(8S)	133.0(6)
C(2S)-Cl(9S)-Cl(8S)	51.7(7)
C(1)-N(1)-C(5)	118.7(3)

C(1)-N(1)-Pt(1)	127.6(3)
C(5)-N(1)-Pt(1)	113.7(2)
C(6)-N(2)-C(10)	123.0(3)
C(6)-N(2)-Pt(1)	118.6(3)
C(10)-N(2)-Pt(1)	118.3(3)
C(15)-N(3)-C(11)	118.4(3)
C(15)-N(3)-Pt(1)	127.1(3)
C(11)-N(3)-Pt(1)	114.5(2)
N(2)-Pt(1)-C(16)	176.50(14)
N(2)-Pt(1)-N(1)	80.62(13)
C(16)-Pt(1)-N(1)	100.26(15)
N(2)-Pt(1)-N(3)	80.51(13)
C(16)-Pt(1)-N(3)	98.59(14)
N(1)-Pt(1)-N(3)	161.13(13)

Symmetry transformations used to generate equivalent atoms:
#1 -x-1,-y+2,-z