Electronic Supplementary Information for:

Long-lived Emissive Intra-ligand Triplet Excited States (^{3}IL): Next Generation Luminescent Oxygen Sensing Scheme and a Case Study With Red Phosphorescent Diimine Pt(II) Bis(acetylide) Complexes Containing Ethynylated Naphthalimide or Pyrene Subunits

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Experimental section

General information

NMR spectra were taken on a 400 MHz Varian Unity Inova spectrophotometer. Mass spectra were recorded with a Q-TOF Micro MS spectrometer. UV-Vis spectra were taken on a HP8453 UV-visible spectrophotometer. Fluorescence spectra were recorded on a JASCO FP-6500 or a Sanco 970 CRT spectrofluorometer. Luminescence quantum yields were measured with $Ru(bpy)_2(Phen)$ as the reference (ϕ = 6.0 % in acetonitrile). Emission decay measurements at RT was performed with a pulsed diode laser (PicoQuant GmbH Model LDH-P-C-375, λex= 372 nm, pulse width 100 ps), attached to the fluorescence spectrophotometer (Jobin Yvon Fluorolog 3).

The structures of the complexes were optimized using density functional theory (DFT) with B3LYP functional and 6-31G(d)/LanL2DZ basis set. The excited state related calculations were carried out with the time dependent DFT (TD-DFT) with the ground state geometry. The 6-31G(d) basis set was employed for C, H, N, O, S and the LanL2DZ basis set was used for Ru(II). There are no imaginary frequencies for all optimized structures. All these calculations were performed with Gaussian 09 (M. J. Frisch, Trucks, et al, Gaussian 09, Revision A. l., Gaussian, Inc., Wallingford CT, 2009.).

Synthesis of Complexes Pt-1, Pt-2 and Pt-3.

All the compounds were synthesized according to reported method (Pomestchenko, I. E.; Luman, C. R.; Hissler, M.; Ziessel, R.; Castellano, F. N. *Inorg. Chem*., 2003, 42(5), 1394-1396). For the detail synthesis of Pt-1, please refer to our recent paper (H. Guo, M. L. Muro-Small, S. Ji, J. Zhao and F.N. Castellano. *Inorg. Chem*., **2010**, DOI:10.1021/ ic101107b.).

For **Pt-1**, ^{1}H NMR (400 MHz, $CDCl_3$): δ 9.68 (d, *J* = 6.0 Hz, 2H), 9.14 (d, *J* = 8.0 Hz, 2H), 8.51 (t, *J* = 7.6 Hz, 4H), 8.05 (s, 2H), 7.88 (d, *J* = 7.6 Hz, 2H), 7.68 (d, *J* = 5.2 Hz, 2H) ,7.48 (t, *J* = 8.0 Hz, 2H), 4.16 (t, *J* = 7.6 Hz, 4H), 1.71 (m, 4H), 1.48 (m, 24H), 0.96 (t, *J* = 7.6 Hz, 4H). ^{13}C NMR (100 MHz, $CDCl_3$): δ164.63, 164.43, 156.40, 151.45, 134.26, 33.26, 133.15, 131.24, 130.99, 130.10, 128.52, 126.64, 125.19, 122.90, 119.60, 119.26, 101.55, 100.12, 40.34, 36.16, 30.44, 20.61, 14.03. HR-MALDI-MS: $C_{54}H_{56}NaN_4Pt$, Calculated *m*/*z* =1038.3534, found, *m*/*z* =1038.3608.

For **Pt-2**, ^{1}H NMR (400 MHz, d_6-acetone): δ 9.64 (d, *J* = 5.6 Hz, 2H), 8.60 (s, 2H), 7.85 (d, *J* = 6.0 Hz, 2H), 7.35 (d, *J* = 6.8 Hz, 4H), 7.19 (t, *J* = 8.0 Hz, 4H), 7.07 (t, *J* = 7.6 Hz, 2H), 1.44 (s, 18H). HR-MALDI-MS: $C_{34}H_{34}N_2Pt$, Calculated, *m*/*z* = 665.2370, found *m*/*z* = 665.2318.

For **Pt-3**, ^{1}H NMR (400 MHz, $CDCl_3$): δ 9.95 (d, *J* = 6.0 Hz, 2H), 9.19 (d, *J* = 9.2 Hz, 2H), 8.29 (d, *J* = 8.0 Hz, 2H), 8.09 (d, *J* = 7.6 Hz, 4H), 8.01 (m, 10H), 7.91(t, *J* = 7.6 Hz, 2H), 7.62 (d, *J* = 6.0 Hz, 2H), 1.45 (s, 18H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 163.73, 156.53, 151.65, 132.53, 131.77, 131.73, 130.40, 129.43, 128.48, 128.03, 127.82, 127.64, 127.29, 126.66, 125.82, 124.97, 124.75, 124.54, 124.50, 124.11, 118.99, 101.31, 93.74, 30.48, 29.90.

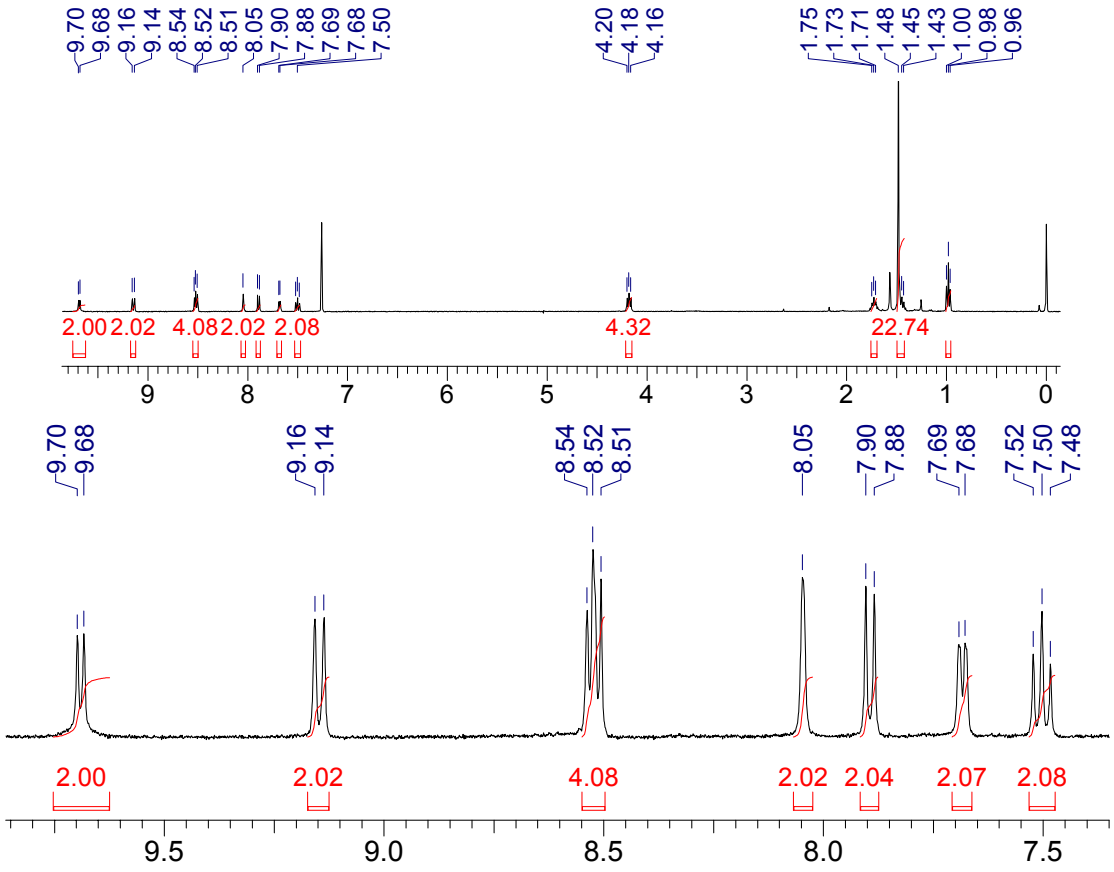


Figure S1. ^{1}H NMR of **Pt-1** ($CDCl_3$, 400 MHz).

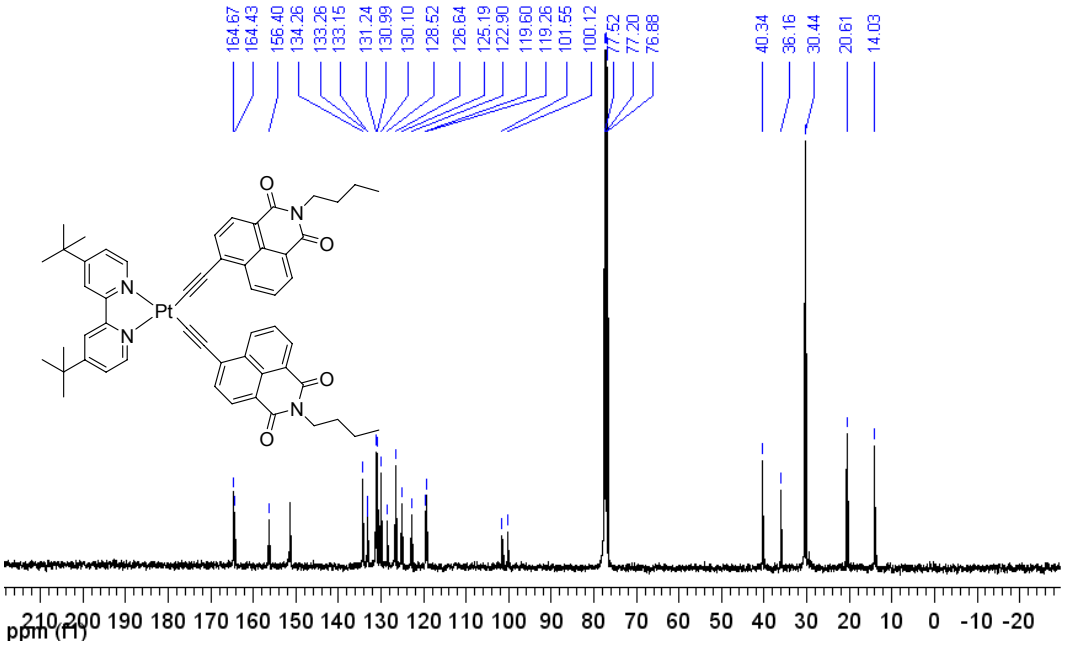


Figure S2. ^{13}C NMR of **Pt-1** ($CDCl_3$, 100 MHz).

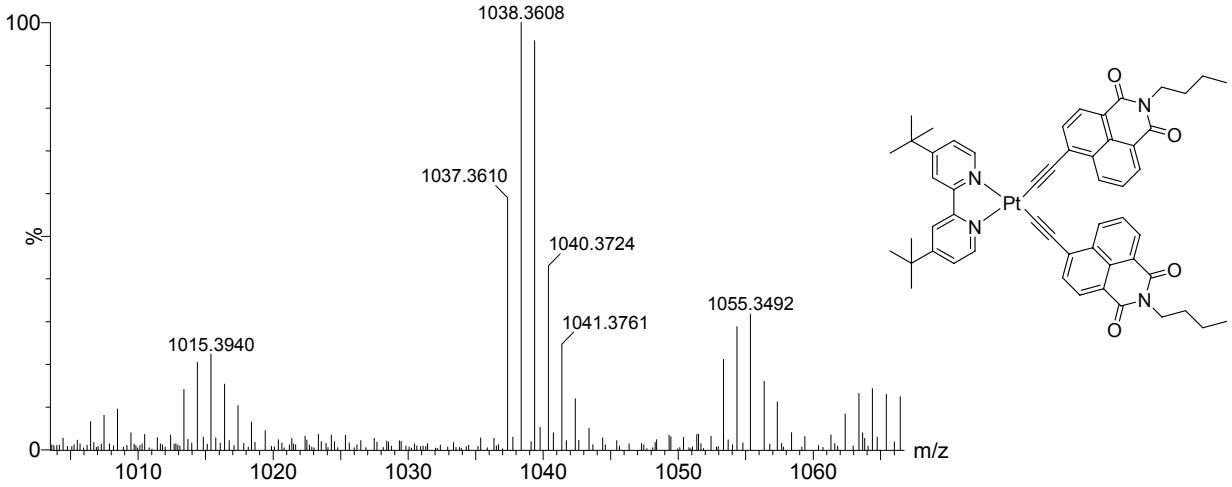


Figure S3. HR-MALDI-MS of **Pt-1**.

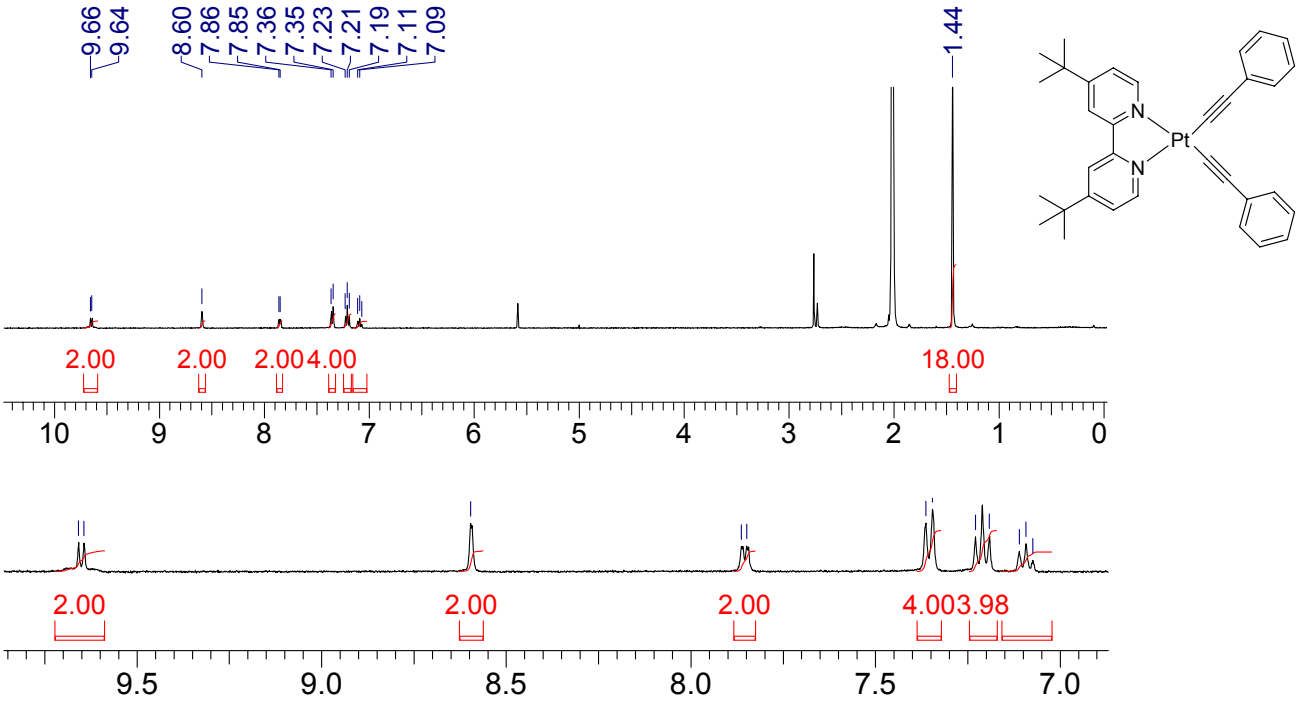


Figure S4. ^{1}NMR of **Pt-2** (d_6-acetone, 400MHz).

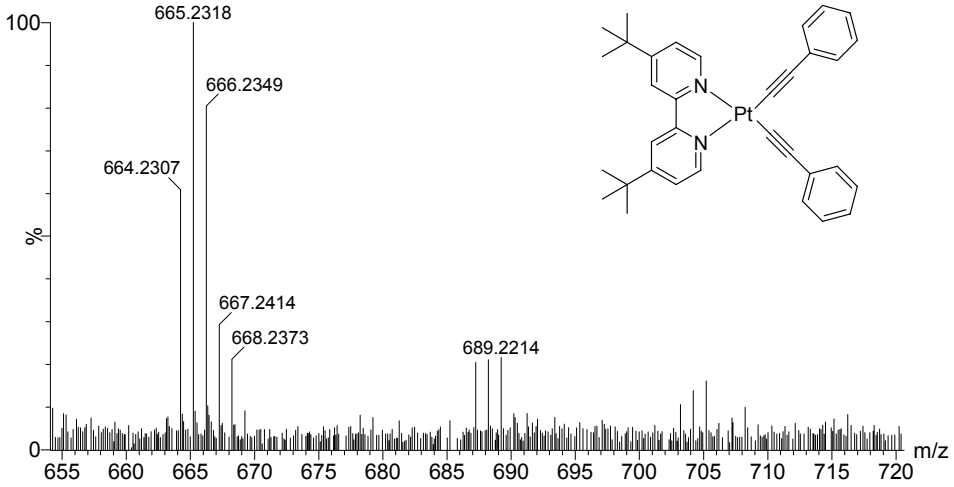


Figure S5. FR-MALDI-MS of **Pt-2**.

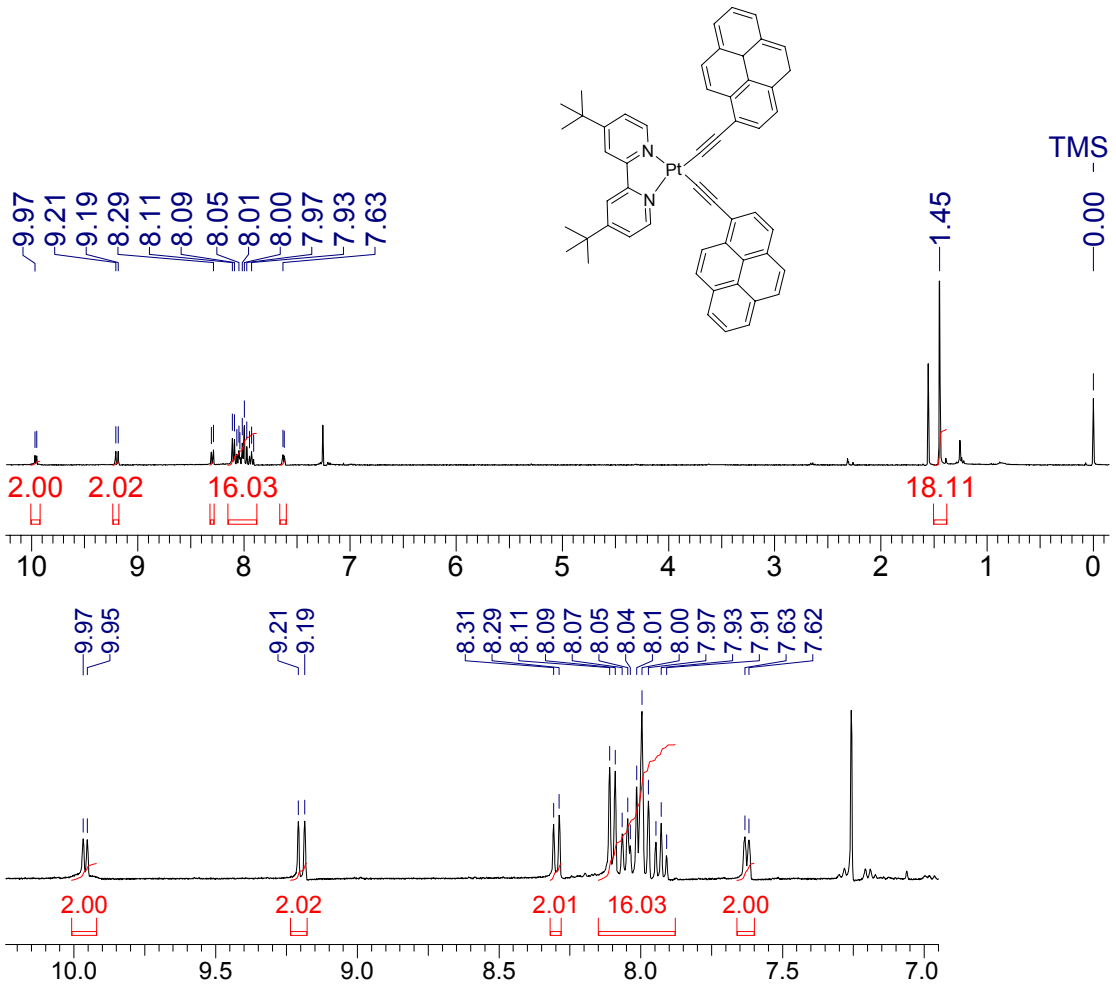


Figure S6. ^{1}HNMR of **Pt-3** ($CDCl_3$, 400 MHz).

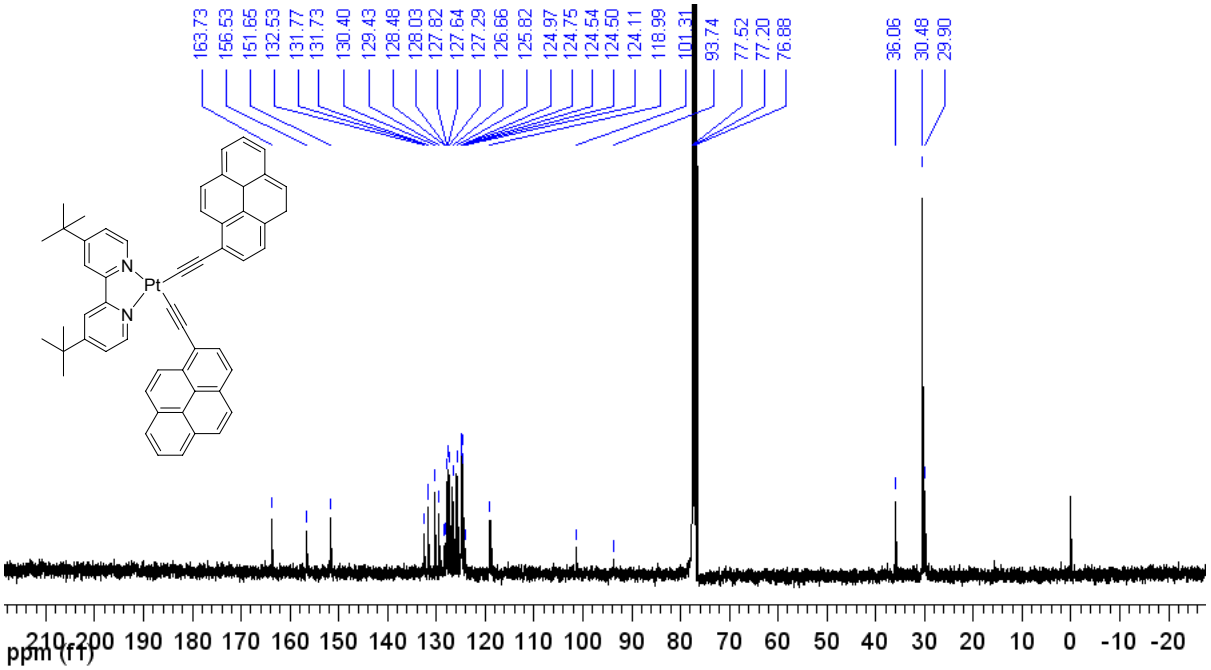


Figure S7. ^{13}CNMR of **Pt-3** ($CDCl_3$, 100 MHz).

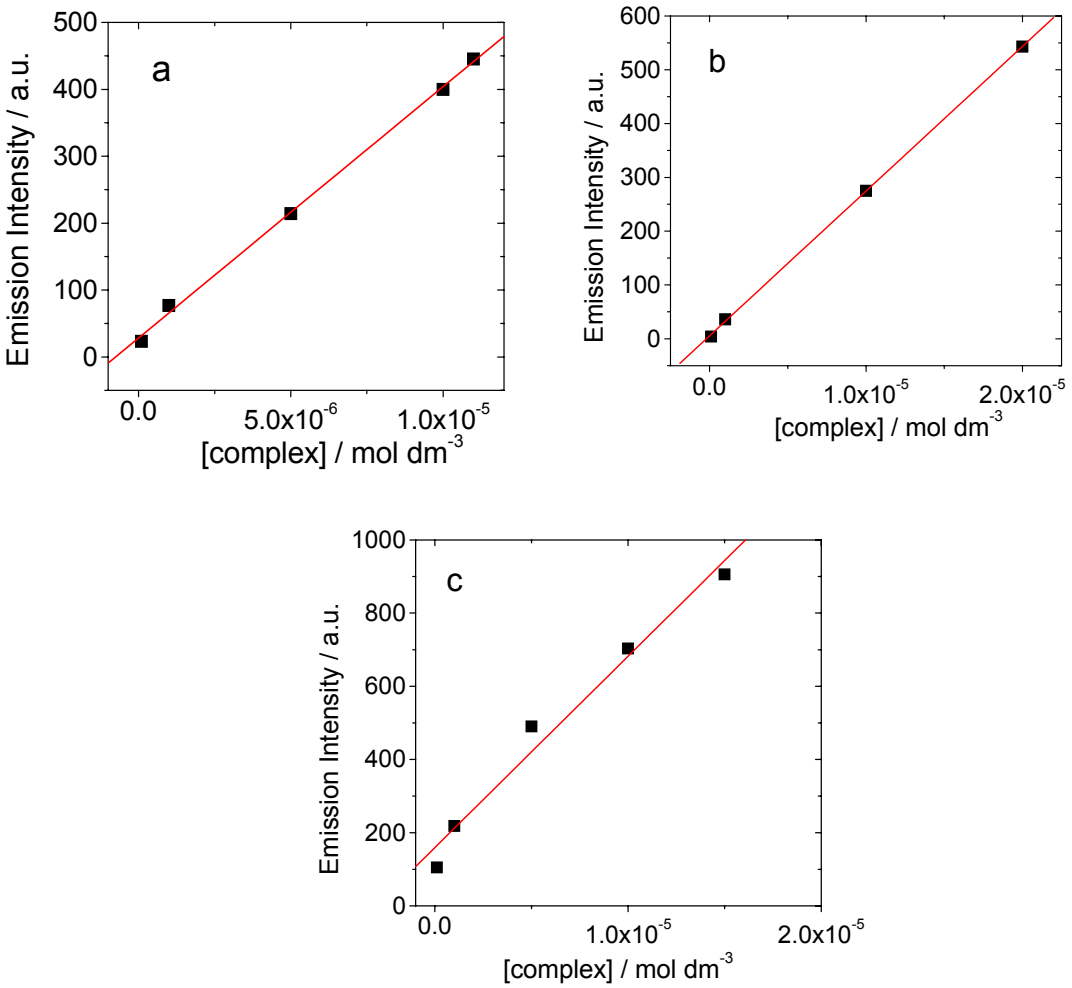
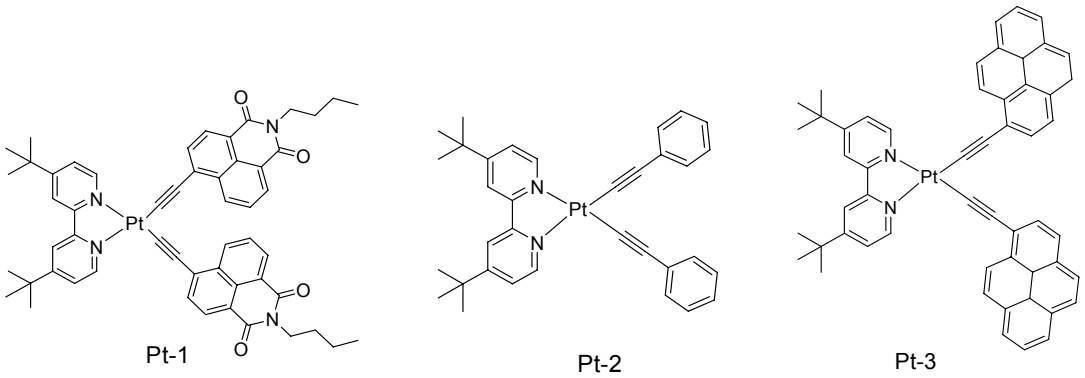


Figure S8. Emission intensity changes of **Pt-1**, **Pt-2** and **Pt-3** with different concentrations in acetonitrile. 25 °C.



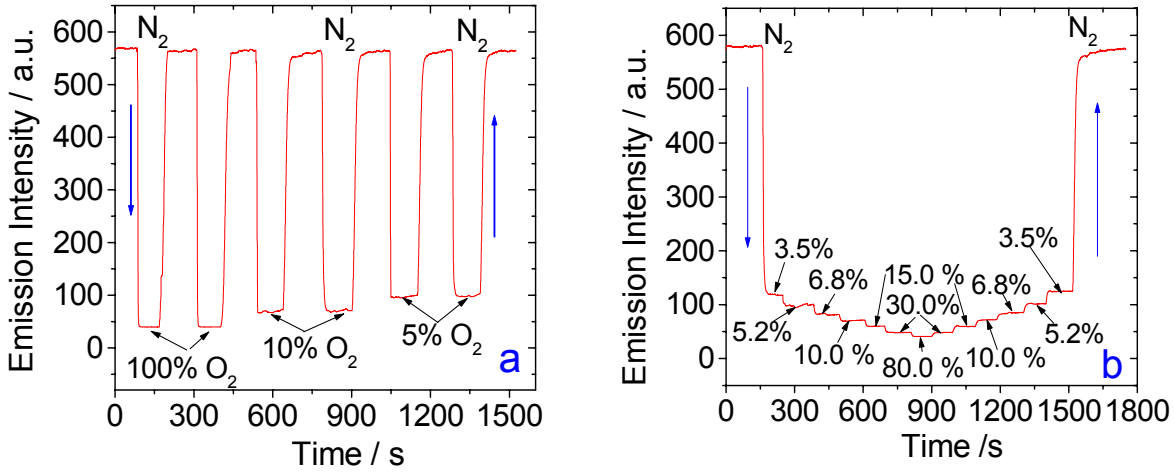


Figure S9. Phosphorescent intensity response of sensing films of the **Pt-1** in IMPEK-C to (a) O_2/N_2 saturation cycles and (b) dynamic response to variation of the oxygen partial pressures. λex= 458 nm, λem = 630 nm. The numbers indicate the O_2 concentration in mixed O_2/N_2 gas (v/v). 25 °C.

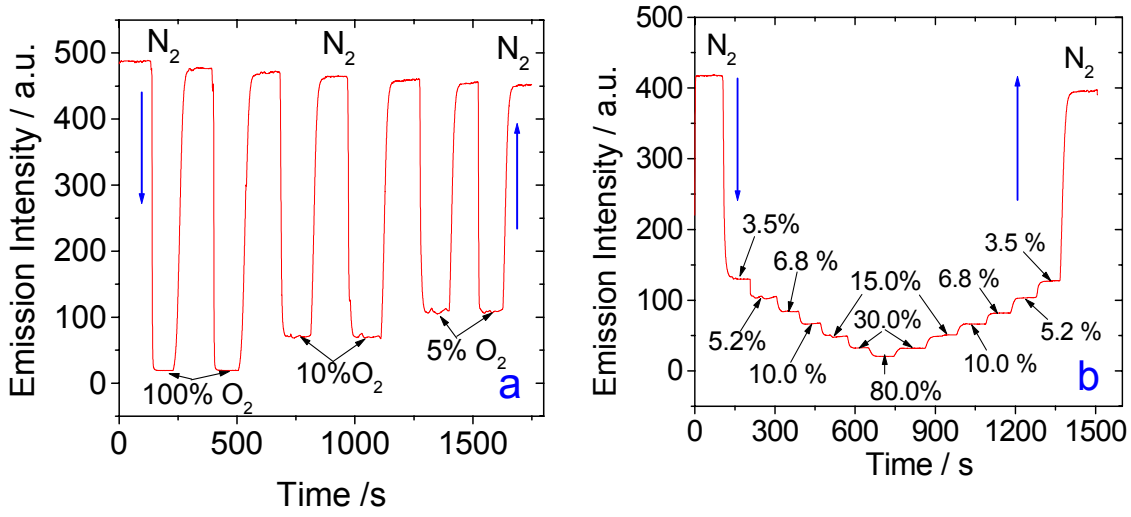
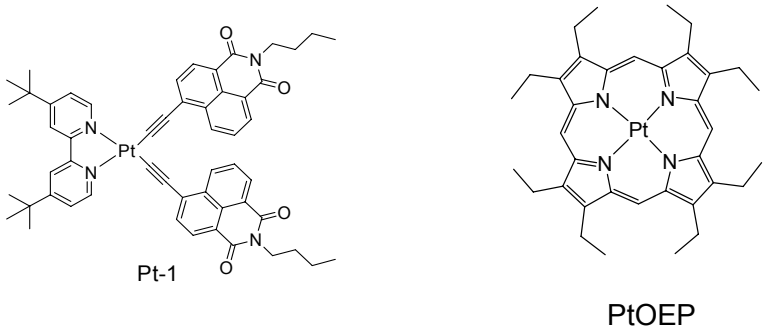


Figure S10. Phosphorescent intensity response of sensing films of the **PtOEP** in IMPEK-C to (a) O_2/N_2 saturation cycles and (b) dynamic response to variation of the oxygen partial pressures. λex= 549 nm, λem = 648 nm. The numbers indicate the O_2 concentration in mixed O_2/N_2 gas (v/v). 25 °C.



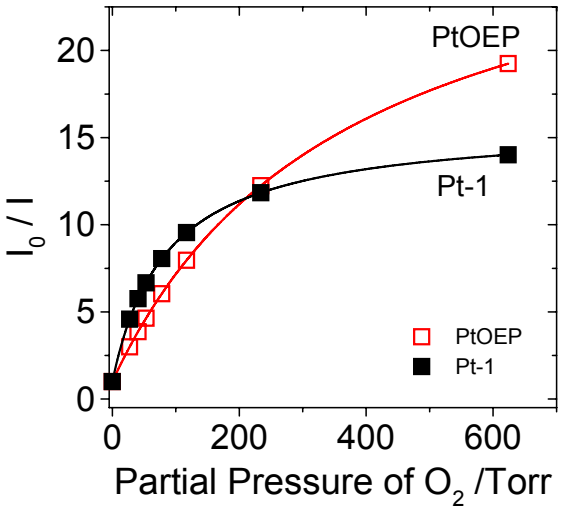


Figure S11. Two-sites model plots for sensing films of **Pt-1** and **PtOEP** in polymer IMPEK-C. The solid lines are the fitting results of the data with the two-site model.

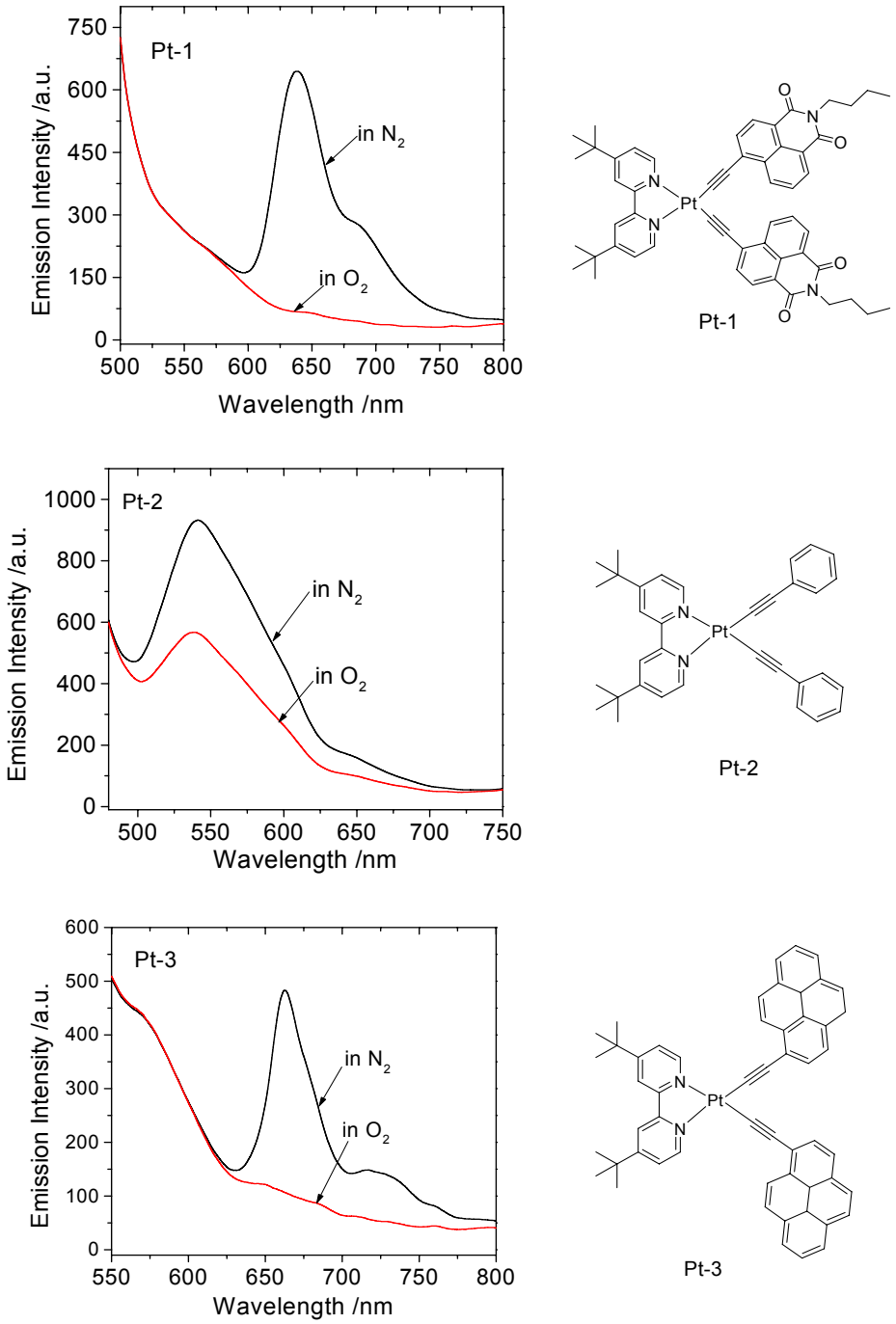
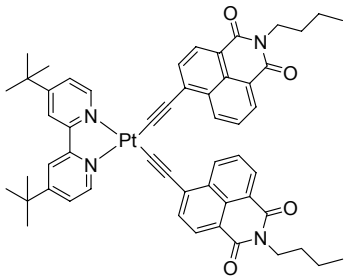


Figure S12. Emission spectra of complexes **Pt-1**, **Pt-2** and **Pt-3** in IMPEK-C films under N_2 and O_2. For **Pt-1**, λex = 458 nm; **Pt-2**, λex = 430 nm; **Pt-3**, λex = 468 nm.

Pt-1



Symbolic Z-matrix:

Charge = 0 Multiplicity = 1

0 1

C						
C	1	B1				
C	2	B2	1	A1		
C	3	B3	2	A2	1	D1
C	1	B4	2	A3	3	D2
C	4	B5	3	A4	2	D3
C	6	B6	4	A5	3	D4
C	7	B7	6	A6	4	D5
C	8	B8	7	A7	6	D6
C	9	B9	8	A8	7	D7
H	1	B10	5	A9	4	D8
H	5	B11	1	A10	2	D9
H	9	B12	8	A11	7	D10
H	10	B13	9	A12	8	D11
N	10	B14	9	A13	8	D12
N	5	B15	1	A14	2	D13
Pt	15	B16	10	A15	9	D14
C	17	B17	15	A16	10	D15
C	18	B18	17	A17	15	D16
C	17	B19	15	A18	10	D17
C	20	B20	17	A19	15	D18
H	7	B21	6	A20	4	D19
H	3	B22	2	A21	1	D20
C	8	B23	7	A22	6	D21
C	2	B24	1	A23	5	D22
C	24	B25	8	A24	7	D23
H	26	B26	24	A25	8	D24
H	26	B27	24	A26	8	D25
H	26	B28	24	A27	8	D26
C	24	B29	8	A28	7	D27
H	30	B30	24	A29	8	D28
H	30	B31	24	A30	8	D29
H	30	B32	24	A31	8	D30
C	24	B33	8	A32	7	D31
H	34	B34	24	A33	8	D32
H	34	B35	24	A34	8	D33
H	34	B36	24	A35	8	D34
C	25	B37	2	A36	1	D35
H	38	B38	25	A37	2	D36
H	38	B39	25	A38	2	D37
H	38	B40	25	A39	2	D38
C	25	B41	2	A40	1	D39

H	42	B42	25	A41	2	D40
H	42	B43	25	A42	2	D41
H	42	B44	25	A43	2	D42
C	25	B45	2	A44	1	D43
H	46	B46	25	A45	2	D44
H	46	B47	25	A46	2	D45
H	46	B48	25	A47	2	D46
C	19	B49	18	A48	17	D47
C	50	B50	19	A49	18	D48
C	50	B51	19	A50	18	D49
C	51	B52	50	A51	19	D50
C	51	B53	50	A52	19	D51
C	52	B54	50	A53	19	D52
H	52	B55	50	A54	19	D53
C	53	B56	51	A55	50	D54
H	53	B57	51	A56	50	D55
C	54	B58	51	A57	50	D56
C	55	B59	52	A58	50	D57
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H	62	B63	59	A62	54	D61
C	21	B64	20	A63	17	D62
C	65	B65	21	A64	20	D63
C	65	B66	21	A65	20	D64
C	66	B67	65	A66	21	D65
C	66	B68	65	A67	21	D66
C	67	B69	65	A68	21	D67
H	67	B70	65	A69	21	D68
C	68	B71	66	A70	65	D69
H	68	B72	66	A71	65	D70
C	69	B73	66	A72	65	D71
C	70	B74	67	A73	65	D72
H	70	B75	67	A74	65	D73
C	74	B76	69	A75	66	D74
H	72	B77	68	A76	66	D75
H	77	B78	74	A77	69	D76
C	59	B79	54	A78	51	D77
C	60	B80	55	A79	52	D78
N	80	B81	59	A80	54	D79
O	81	B82	60	A81	55	D80
O	80	B83	59	A82	54	D81
C	82	B84	80	A83	59	D82
H	85	B85	82	A84	80	D83
H	85	B86	82	A85	80	D84
H	85	B87	82	A86	80	D85
C	75	B88	70	A87	67	D86

C	74	B89	69	A88	66	D87	
O	90	B90	74	A89	69	D88	
O	89	B91	75	A90	70	D89	
N	90	B92	74	A91	69	D90	
C	93	B93	90	A92	74	D91	
H	94	B94	93	A93	90	D92	
H	94	B95	93	A94	90	D93	
H	94	B96	93	A95	90	D94	

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D35	120.44914473

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D38	-60.57405166
D39	-119.84888397
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D50	1.52907678
D51	-178.63834927
D52	178.87789810
D53	-1.08453683
D54	-179.79887837
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D56	179.61757055
D57	-0.09131350
D58	-179.96419927
D59	0.34251836
D60	-179.66234866
D61	179.81263380
D62	-64.48246348
D63	135.00253730
D64	-44.40410938
D65	1.55802348
D66	-178.61297348
D67	178.85423166
D68	-1.10234576
D69	-179.79809700
D70	0.78834608
D71	179.61392113
D72	-0.08914638
D73	-179.96027923
D74	0.34827070
D75	-179.66070361
D76	179.80786034
D77	-179.72945116
D78	-179.58318298
D79	-0.32622425
D80	0.32441185
D81	179.59225505
D82	-179.77595315

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D84	58.93728119
D85	179.52360812
D86	-179.58032349
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D88	179.60746988
D89	0.33241693
D90	-0.31932773
D91	-179.77908453
D92	59.16902298
D93	179.74352019
D94	-59.67259386

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3 4 1.5 23 1.0
4 6 1.0 16 1.5
5 12 1.0 16 1.5
6 7 1.5 15 1.5
7 8 1.5 22 1.0
8 9 1.5 24 1.0
9 10 1.5 13 1.0
10 14 1.0 15 1.5
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15 17 1.0
16 17 1.0
17 18 1.0 20 1.0
18 19 3.0
19 50 1.5
20 21 3.0
21 65 1.5
22
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24 26 1.0 30 1.0 34 1.0
25 38 1.0 42 1.0 46 1.0
26 27 1.0 28 1.0 29 1.0
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30 31 1.0 32 1.0 33 1.0
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34 35 1.0 36 1.0 37 1.0

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38 39 1.0 40 1.0 41 1.0

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42 43 1.0 44 1.0 45 1.0

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46 47 1.0 48 1.0 49 1.0

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50 51 1.5 52 1.5

51 53 1.5 54 1.5

52 55 1.5 56 1.0

53 57 2.0 58 1.0

54 59 1.5 60 1.5

55 60 1.5 61 1.0

56

57 62 1.5 63 1.0

58

59 62 2.0 80 1.0

60 81 1.0

61

62 64 1.0

63

64

65 66 1.5 67 1.5

66 68 1.5 69 1.5

67 70 1.5 71 1.0

68 72 2.0 73 1.0

69 74 1.5 75 1.5

70 75 1.5 76 1.0

71

72 77 1.5 78 1.0

73

74 77 2.0 90 1.0

75 89 1.0

76

77 79 1.0

78

79

80 82 1.0 84 2.0

81 82 1.0 83 2.0

82 85 1.0
83
84
85 86 1.0 87 1.0 88 1.0
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87
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89 92 2.0 93 1.0
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93 94 1.0
94 95 1.0 96 1.0 97 1.0
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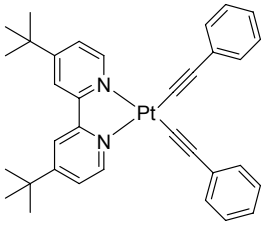
96
97

Pt-2



Symbolic Z-matrix:
Charge = 0 Multiplicity = 1
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0 1

C						
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C	2	B2	1	A1		
C	3	B3	2	A2	1	D1
C	1	B4	2	A3	3	D2
C	4	B5	3	A4	2	D3
C	6	B6	4	A5	3	D4
C	7	B7	6	A6	4	D5
C	8	B8	7	A7	6	D6
C	9	B9	8	A8	7	D7
H	1	B10	5	A9	4	D8
H	5	B11	1	A10	2	D9
H	9	B12	8	A11	7	D10
H	10	B13	9	A12	8	D11
N	10	B14	9	A13	8	D12
N	5	B15	1	A14	2	D13

Pt	16	B16	5	A15	1	D14
C	17	B17	16	A16	5	D15
C	18	B18	17	A17	16	D16
C	17	B19	16	A18	5	D17
C	20	B20	17	A19	16	D18
C	19	B21	18	A20	17	D19
C	22	B22	19	A21	18	D20
C	22	B23	19	A22	18	D21
C	23	B24	22	A23	19	D22
H	23	B25	22	A24	19	D23
C	24	B26	22	A25	19	D24
H	24	B27	22	A26	19	D25
C	27	B28	24	A27	22	D26
H	25	B29	23	A28	22	D27
H	27	B30	24	A29	22	D28
H	29	B31	27	A30	24	D29
C	21	B32	20	A31	17	D30
C	33	B33	21	A32	20	D31
C	33	B34	21	A33	20	D32
C	34	B35	33	A34	21	D33
H	34	B36	33	A35	21	D34
C	35	B37	33	A36	21	D35
H	35	B38	33	A37	21	D36
C	36	B39	34	A38	33	D37
H	36	B40	34	A39	33	D38
H	38	B41	35	A40	33	D39
H	40	B42	36	A41	34	D40
H	7	B43	6	A42	4	D41
H	3	B44	2	A43	1	D42
C	8	B45	7	A44	6	D43
C	2	B46	1	A45	5	D44
C	46	B47	8	A46	7	D45
H	48	B48	46	A47	8	D46
H	48	B49	46	A48	8	D47
H	48	B50	46	A49	8	D48
C	46	B51	8	A50	7	D49
H	52	B52	46	A51	8	D50
H	52	B53	46	A52	8	D51
H	52	B54	46	A53	8	D52
C	46	B55	8	A54	7	D53
H	56	B56	46	A55	8	D54
H	56	B57	46	A56	8	D55
H	56	B58	46	A57	8	D56
C	47	B59	2	A58	1	D57
H	60	B60	47	A59	2	D58
H	60	B61	47	A60	2	D59
H	60	B62	47	A61	2	D60

C	47	B63	2	A62	1	D61
H	64	B64	47	A63	2	D62
H	64	B65	47	A64	2	D63
H	64	B66	47	A65	2	D64
C	47	B67	2	A66	1	D65
H	68	B68	47	A67	2	D66
H	68	B69	47	A68	2	D67
H	68	B70	47	A69	2	D68

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B3	1.39449600
B4	1.39067089
B5	1.48070172
B6	1.39449593
B7	1.40232078
B8	1.40051974
B9	1.39067154
B10	1.08284495
B11	1.08526781
B12	1.08284488
B13	1.08526796
B14	1.34083336
B15	1.34083478
B16	2.12048940
B17	1.95129109
B18	1.22526400
B19	1.95129066
B20	1.22526371
B21	1.42605192
B22	1.41193856
B23	1.41102065
B24	1.39243175
B25	1.08568741
B26	1.39290554
B27	1.08653294
B28	1.39720452
B29	1.08728740
B30	1.08744563
B31	1.08682719
B32	1.42605164
B33	1.41102066
B34	1.41193824
B35	1.39290576
B36	1.08653289
B37	1.39243153
B38	1.08568754

B39	1.39720440
B40	1.08744562
B41	1.08728743
B42	1.08682717
B43	1.08312679
B44	1.08312674
B45	1.53590715
B46	1.53590699
B47	1.54787861
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B49	1.09611789
B50	1.09564522
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B52	1.09611739
B53	1.09531924
B54	1.09564508
B55	1.54057245
B56	1.09585049
B57	1.09585031
B58	1.09520861
B59	1.54787720
B60	1.09531923
B61	1.09611789
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B65	1.09531924
B66	1.09564480
B67	1.54057252
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B69	1.09585042
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A5	123.88227494
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A7	116.20244685
A8	120.26879318
A9	118.25601795
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D3	-180.00000000
D4	0.01227788
D5	-180.00000000
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D42	180.00000000
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D57	120.12921223
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D64	60.46194755
D65	0.00000000
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D68	180.00000000

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2 3 1.5 47 1.0
3 4 1.5 45 1.0
4 6 1.0 16 1.5
5 12 1.0 16 1.5
6 7 1.5 15 1.5
7 8 1.5 44 1.0
8 9 1.5 46 1.0
9 10 1.5 13 1.0
10 14 1.0 15 1.5
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15 17 1.0
16 17 1.0
17 18 1.0 20 1.0
18 19 3.0

19 22 1.0
20 21 3.0
21 33 1.0
22 23 1.5 24 1.5
23 25 1.5 26 1.0
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34 36 1.5 37 1.0
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56 57 1.0 58 1.0 59 1.0
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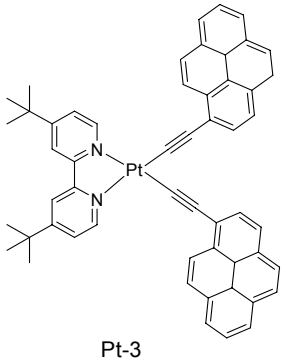
Pt-3



Pt-3

Symbolic Z-matrix:

Charge = 0 Multiplicity = 1

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C	1	B4	2	A3	3	D2
C	4	B5	3	A4	2	D3
C	6	B6	4	A5	3	D4
C	7	B7	6	A6	4	D5
C	8	B8	7	A7	6	D6
C	9	B9	8	A8	7	D7
H	1	B10	5	A9	4	D8
H	5	B11	1	A10	2	D9
H	9	B12	8	A11	7	D10
H	10	B13	9	A12	8	D11
N	10	B14	9	A13	8	D12
N	5	B15	1	A14	2	D13
Pt	16	B16	5	A15	1	D14
C	17	B17	16	A16	5	D15
C	18	B18	17	A17	16	D16
C	17	B19	16	A18	5	D17
C	20	B20	17	A19	16	D18
H	7	B21	6	A20	4	D19
H	3	B22	2	A21	1	D20
C	8	B23	7	A22	6	D21
C	2	B24	1	A23	5	D22
C	24	B25	8	A24	7	D23

H	26	B26	24	A25	8	D24
H	26	B27	24	A26	8	D25
H	26	B28	24	A27	8	D26
C	24	B29	8	A28	7	D27
H	30	B30	24	A29	8	D28
H	30	B31	24	A30	8	D29
H	30	B32	24	A31	8	D30
C	24	B33	8	A32	7	D31
H	34	B34	24	A33	8	D32
H	34	B35	24	A34	8	D33
H	34	B36	24	A35	8	D34
C	25	B37	2	A36	1	D35
H	38	B38	25	A37	2	D36
H	38	B39	25	A38	2	D37
H	38	B40	25	A39	2	D38
C	25	B41	2	A40	1	D39
H	42	B42	25	A41	2	D40
H	42	B43	25	A42	2	D41
H	42	B44	25	A43	2	D42
C	25	B45	2	A44	1	D43
H	46	B46	25	A45	2	D44
H	46	B47	25	A46	2	D45
H	46	B48	25	A47	2	D46
C	19	B49	18	A48	17	D47
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C	50	B51	19	A50	18	D49
C	51	B52	50	A51	19	D50
H	51	B53	50	A52	19	D51
C	52	B54	50	A53	19	D52
C	52	B55	50	A54	19	D53
C	53	B56	51	A55	50	D54
H	53	B57	51	A56	50	D55
C	55	B58	52	A57	50	D56
C	56	B59	52	A58	50	D57
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C	59	B62	55	A61	52	D60
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H	60	B64	56	A63	52	D62
C	62	B65	57	A64	53	D63
H	62	B66	57	A65	53	D64
C	63	B67	59	A66	55	D65
C	64	B68	59	A67	55	D66
H	66	B69	62	A68	57	D67
C	69	B70	64	A69	59	D68
H	68	B71	63	A70	59	D69
H	69	B72	64	A71	59	D70

H	71	B73	69	A72	64	D71
C	21	B74	20	A73	17	D72
C	75	B75	21	A74	20	D73
C	75	B76	21	A75	20	D74
C	76	B77	75	A76	21	D75
H	76	B78	75	A77	21	D76
C	77	B79	75	A78	21	D77
C	77	B80	75	A79	21	D78
C	78	B81	76	A80	75	D79
H	78	B82	76	A81	75	D80
C	80	B83	77	A82	75	D81
C	81	B84	77	A83	75	D82
H	81	B85	77	A84	75	D83
C	82	B86	78	A85	76	D84
C	84	B87	80	A86	77	D85
C	84	B88	80	A87	77	D86
H	85	B89	81	A88	77	D87
C	87	B90	82	A89	78	D88
H	87	B91	82	A90	78	D89
C	88	B92	84	A91	80	D90
C	89	B93	84	A92	80	D91
H	91	B94	87	A93	82	D92
C	94	B95	89	A94	84	D93
H	93	B96	88	A95	84	D94
H	94	B97	89	A96	84	D95
H	96	B98	94	A97	89	D96

B1	1.40010243
B2	1.40284363
B3	1.39435531
B4	1.39076741
B5	1.48160180
B6	1.39435578
B7	1.40284296
B8	1.40010247
B9	1.39076741
B10	1.08282264
B11	1.08510340
B12	1.08282254
B13	1.08510324
B14	1.34101780
B15	1.34101829
B16	2.12084038
B17	1.95130796
B18	1.22599318
B19	1.95130805
B20	1.22599309

B21	1.08309322
B22	1.08309280
B23	1.53574828
B24	1.53574865
B25	1.54795088
B26	1.09533995
B27	1.09606167
B28	1.09567040
B29	1.54805644
B30	1.09600098
B31	1.09534645
B32	1.09567685
B33	1.54038955
B34	1.09576415
B35	1.09578769
B36	1.09514717
B37	1.54795063
B38	1.09534012
B39	1.09606198
B40	1.09567028
B41	1.54805571
B42	1.09600105
B43	1.09534637
B44	1.09567683
B45	1.54039063
B46	1.09576428
B47	1.09578765
B48	1.09514696
B49	1.42284085
B50	1.41078572
B51	1.42480871
B52	1.38689302
B53	1.08544680
B54	1.42764057
B55	1.43499407
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B57	1.08763764
B58	1.42921041
B59	1.36313760
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B61	1.43457369
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B63	1.42891336
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B67	1.40509456

B68	1.40535705
B69	1.08750678
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B71	1.08748410
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B73	1.08696221
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B76	1.42480942
B77	1.38689394
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B79	1.42764077
B80	1.43499478
B81	1.40579590
B82	1.08763767
B83	1.42921103
B84	1.36313738
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B86	1.43457447
B87	1.43005733
B88	1.42891282
B89	1.08786449
B90	1.36294206
B91	1.08769468
B92	1.40509432
B93	1.40535706
B94	1.08750678
B95	1.39376163
B96	1.08748407
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