Table S1. Details of Crystallographic Data for (DMPDA)Pt(AM)·$2H_2O$

formula	$C_{11}H_{20}N_2O_4Pt \cdot 2H_2O$
fw	475.41
temperature, K	293(2)
wavelength, Å	0.71073
crystal system	tetragonal
space group	$P4_2/m$ (no. 84)
a, Å	13.614(3)
b, Å	13.614(3)
c, Å	8.451(4)
V, $Å^3$	1566.3(9)
Z	4
d_{calcd}, g/cm^3	2.016
absorption coefficient, mm^{-1}	8.983
F(000)	920
crystal size, mm	0.45 x 0.45 x 0.35
theta range, deg	1.50 - 24.97
index ranges	$0 \le h \le 16$, $0 \le k \le 16$, $0 \le l \le 10$
reflections collected	1249
independent reflections{$I>2\sigma(I)$}	1153[R(int)=0.0932]
refinement method	full-matrix least-squares on F^2
data to parameter ratio	1153/109
GOF on F^2	1.149
final R indices {$I>2\sigma(I)$}	R_1 = 0.0472, wR_2 = 0.1167
R indices (all data)	R_1 = 0.0477, wR_2 = 0.1173
largest diff. peak and hole	3.003 and -2.261 $e.A^{-3}$

$R_1 = \Sigma||F_o|-|F_c||/\Sigma|F_o|$

$wR_2 = \{\Sigma w(F_o^2-F_c^2)^2/\Sigma wF_o^4\}^{1/2}$, where $w = 1/\{\sigma^2F_o^2 + (0.083P)^2 + 1.12P\}$,

where $P = \{Max(F_o^2,0) + 2F_c^2\}/3$

Table S2. Details of Crystallographic Data for (DMPDA)Pt(DAM)·$2H_2O$

formula	$C_{14}H_{24}N_2O_4Pt_1 \cdot 2H_2O$
fw	515.47
temperature, K	293(2)
wavelength, Å	0.71073
crystal system	monoclinic
space group	$P2_1/n$ (no. 14)
a, Å	11.021(3)
b, Å	8.996(2)
c, Å	18.765(7)
β, deg	106.92(3)
V, $Å^3$	1780.0(9)
Z	4
d_{calcd}, g/cm^3	1.923
absorption coefficient, mm^{-1}	7.913
F(000)	1008
crystal size, mm	0.30 x 0.45 x 0.45
theta range, deg	1.93 - 24.97
index ranges	$0 \le h \le 13$, $0 \le k \le 10$, $-22 \le l \le 21$
reflections collected	2649
independent reflections{$I>2\sigma(I)$}	2510[R(int)=0.0374]
refinement method	full-matrix least-squares on F^2
data to parameter ratio	2510/208
GOF on F^2	1.180
final R indices {$I>2\sigma(I)$}	R_1 = 0.0531, wR_2 = 0.1333
R indices (all data)	R_1 = 0.0535, wR_2 = 0.1338
largest diff. peak and hole	2.036 and -5.369 $e.A^{-3}$

$R_1 = \Sigma||F_o|-|F_c||/\Sigma|F_o|$

$wR_2 = \{\Sigma w(F_o^2-F_c^2)^2/\Sigma wF_o^4\}^{1/2}$, where $w = 1/\{\sigma^2F_o^2 + (0.10P)^2 + 0.00P\}$,

where $P = \{Max(F_o^2,0) + 2F_c^2\}/3$

Table S3. Atomic Coordinates and Equivalent Isotropic Displacement Parameters for (DMPDA)Pt(AM)·2H_2O

	x	y	z	U(eq)
Pt	8494(1)	4421(1)	0	32(1)
O(1)	8340(5)	5466(5)	-1669(8)	45(2)
O(2)	7737(7)	6865(6)	-2417(10)	62(2)
N	8699(6)	3409(6)	1688(10)	40(2)
C(1)	7763(8)	6188(8)	-1464(12)	42(2)
C(2)	7119(14)	6138(15)	0	64(5)
C(3)	6297(15)	6845(22)	0	111(10)
C(4)	5408(22)	6575(27)	-741(35)	95(11)
C(5)	4581(15)	6419(14)	0	77(7)
C(6)	9584(7)	2775(8)	1503(12)	41(2)
C(7)	9552(9)	2147(11)	0	31(3)
C(8)	8658(13)	1443(12)	0	53(4)
C(9)	10497(14)	1558(12)	0	60(5)
OW1	9132(9)	4077(8)	-5000	51(3)
OW2	8900(9)	6134(9)	-5000	58(3)

Table S4. Atomic Coordinates and Equivalent Isotropic Displacement Parameters for (DMPDA)Pt(DAM)·2H_2O

	x	y	z	U(eq)
Pt	6117(1)	778(1)	1166(1)	20(1)
O(1)	4212(7)	951(8)	787(4)	24(2)
O(2)	2391(7)	1905(9)	822(4)	36(2)
O(3)	4774(9)	4360(9)	975(5)	43(2)
O(4)	6089(9)	4175(9)	2115(6)	49(3)
N(1)	6238(8)	1669(10)	173(5)	23(2)
N(2)	8032(10)	532(11)	1484(5)	30(2)
C(1)	5942(13)	-717(13)	2007(8)	41(3)
C(2)	6042(13)	676(12)	2295(7)	34(3)
C(3)	4915(10)	1536(14)	2420(6)	30(3)
C(4)	4237(10)	2652(12)	1803(6)	26(2)
C(5)	3561(10)	1798(12)	1110(6)	26(2)
C(6)	5130(11)	3841(13)	1623(5)	25(2)
C(7)	3274(11)	3546(14)	2092(6)	33(3)
C(8)	2424(11)	2647(18)	2421(7)	44(3)
C(9)	2308(15)	2796(22)	3080(9)	70(5)
C(10)	7125(10)	2930(12)	249(7)	30(3)
C(11)	8508(10)	2527(12)	636(6)	30(2)
C(12)	8712(11)	1939(13)	1429(6)	31(3)
C(13)	9019(12)	1457(15)	180(7)	40(3)
C(14)	9292(15)	3982(14)	745(9)	56(4)
OW1	3981(7)	3430(9)	-517(5)	37(2)
OW2	8381(8)	-2108(10)	769(5)	46(2)

Table S5. Bond Lengths and Angles for (DMPDA)Pt(AM)·2H_2O

Pt-N#1	2.003(8)
Pt-N	2.003(8)
Pt-O(1)#1	2.014(7)
Pt-O(1)	2.014(7)
O(1)-C(1)	1.270(12)
O(2)-C(1)	1.224(12)
N-C(6)	1.490(12)
C(1)-C(2)	1.52(2)
C(2)-C(3)	1.48(3)
C(2)-C(1)#1	1.52(2)
C(3)-C(4)	1.41(3)
C(4)-C(5)	1.31(3)
C(6)-C(7)	1.532(13)
C(7)-C(9)	1.52(2)
C(7)-C(6)#1	1.532(13)
C(7)-C(8)	1.55(2)
N#1-Pt-N	90.8(5)
N#1-Pt-O(1)#1	177.6(3)
N-Pt-O(1)#1	90.1(3)
N#1-Pt-O(1)	90.1(3)
N-Pt-O(1)	177.6(3)
O(1)#1-Pt-O(1)	88.9(4)
C(1)-O(1)-Pt	121.0(6)
C(6)-N-Pt	115.9(6)
O(2)-C(1)-O(1)	120.7(10)
O(2)-C(1)-C(2)	123.6(11)
O(1)-C(1)-C(2)	115.7(10)
C(3)-C(2)-C(1)	114.1(10)
C(3)-C(2)-C(1)#1	114.1(10)
C(1)-C(2)-C(1)#1	109.3(14)
C(4)-C(3)-C(2)	119(3)
C(5)-C(4)-C(3)	125(2)
N-C(6)-C(7)	112.8(8)
C(9)-C(7)-C(6)	105.8(7)
C(9)-C(7)-C(6)#1	105.8(7)
C(6)-C(7)-C(6)#1	112.0(12)
C(9)-C(7)-C(8)	109.9(13)
C(6)-C(7)-C(8)	111.6(7)
C(6)#1-C(7)-C(8)	111.6(7)

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

Table S6. Bond Lengths and Angles for (DMPDA)Pt(DAM)·2H_2O

Pt-O(1)	2.017(8)
Pt-N(2)	2.031(10)
Pt-N(1)	2.068(9)
Pt-C(1)	2.126(11)
Pt-C(2)	2.147(12)
O(1)-C(5)	1.309(13)
O(2)-C(5)	1.249(13)
O(3)-C(6)	1.254(14)
O(4)-C(6)	1.222(14)
N(1)-C(10)	1.476(13)
N(2)-C(12)	1.49(2)
C(1)-C(2)	1.36(2)
C(2)-C(3)	1.54(2)
C(3)-C(4)	1.55(2)
C(4)-C(5)	1.51(2)
C(4)-C(7)	1.550(14)
C(4)-C(6)	1.56(2)
C(7)-C(8)	1.50(2)
C(8)-C(9)	1.29(2)
C(10)-C(11)	1.53(2)
C(11)-C(13)	1.50(2)
C(11)-C(12)	1.53(2)
C(11)-C(14)	1.55(2)
O(1)-Pt-N(2)	176.3(3)
O(1)-Pt-N(1)	89.2(3)
N(2)-Pt-N(1)	88.5(4)
O(1)-Pt-C(1)	90.0(4)
N(2)-Pt-C(1)	91.4(4)
N(1)-Pt-C(1)	163.4(5)
O(1)-Pt-C(2)	90.9(4)
N(2)-Pt-C(2)	92.3(4)
N(1)-Pt-C(2)	159.6(4)
C(1)-Pt-C(2)	37.0(5)
C(5)-O(1)-Pt	122.5(7)
C(10)-N(1)-Pt	115.1(7)
C(12)-N(2)-Pt	112.8(7)
C(2)-C(1)-Pt	72.4(7)
C(1)-C(2)-C(3)	123.4(12)
C(1)-C(2)-Pt	70.6(7)
C(3)-C(2)-Pt	113.1(8)
C(4)-C(3)-C(2)	116.6(9)
C(5)-C(4)-C(7)	110.4(9)

C(5)-C(4)-C(3)	108.9(9)
C(7)-C(4)-C(3)	107.8(9)
C(5)-C(4)-C(6)	110.3(9)
C(7)-C(4)-C(6)	105.1(9)
C(3)-C(4)-C(6)	114.2(9)
O(2)-C(5)-O(1)	118.7(10)
O(2)-C(5)-C(4)	121.5(10)
O(1)-C(5)-C(4)	119.7(9)
O(4)-C(6)-O(3)	126.8(12)
O(4)-C(6)-C(4)	117.8(10)
O(3)-C(6)-C(4)	115.3(9)
C(4)-C(7)-C(8)	116.0(10)
C(9)-C(8)-C(7)	126(2)
N(1)-C(10)-C(11)	113.8(9)
C(13)-C(11)-C(10)	111.7(10)
C(13)-C(11)-C(12)	111.0(10)
C(10)-C(11)-C(12)	112.7(9)
C(13)-C(11)-C(14)	109.3(10)
C(10)-C(11)-C(14)	107.6(10)
C(12)-C(11)-C(14)	104.2(10)
N(2)-C(12)-C(11)	115.2(9)

Table S7. Anisotropic Displacement Parameters for (DMPDA)Pt(AM)·2H_2O

	U_{11}	U_{22}	U_{33}	U_{23}	U_{13}	U_{12}
Pt	37(1)	35(1)	24(1)	0	0	-1(1)
O(1)	61(5)	47(4)	28(4)	7(3)	1(3)	8(4)
O(2)	91(6)	45(4)	49(5)	6(4)	-15(5)	16(4)
N	43(5)	51(5)	24(4)	3(4)	-2(4)	0(4)
C(1)	52(6)	50(6)	23(5)	0(5)	-12(5)	5(5)
C(2)	64(11)	74(12)	52(11)	0	0	42(10)
C(3)	47(13)	133(23)	152(28)	0	0	14(14)
C(4)	66(18)	176(34)	43(14)	17(20)	-16(15)	14(21)
C(5)	47(11)	83(16)	99(18)	0	0	-10(10)
C(6)	39(5)	56(6)	28(5)	3(5)	-6(4)	7(5)
C(7)	17(6)	49(8)	28(7)	0	0	0(6)
C(8)	64(11)	49(10)	45(10)	0	0	-17(8)
C(9)	70(12)	44(9)	66(12)	0	0	11(9)
OW1	62(7)	45(6)	46(7)	0	0	-9(5)
OW2	54(7)	72(8)	48(7)	0	0	14(7)

The anisotropic displacement factor exponent takes the form:

$-2\ \varphi^2\ [\ h^2\ a^2\ U_{11} + \ldots + 2\ h\ k\ a^*b^*\ U_{12}\ ]$

Table S8. Anisotropic Displacement Parameters for (DMPDA)Pt(DAM)·2H_2O

	U_{11}	U_{22}	U_{33}	U_{23}	U_{13}	U_{12}
Pt	20(1)	21(1)	19(1)	2(1)	5(1)	2(1)
O(1)	21(4)	35(4)	15(3)	-1(3)	3(3)	3(3)
O(2)	21(4)	49(5)	32(4)	-9(4)	0(3)	-2(4)
O(3)	47(5)	39(5)	36(5)	7(4)	1(4)	-21(4)
O(4)	46(6)	52(6)	42(5)	-12(4)	2(4)	-27(4)
N(1)	21(4)	26(5)	25(5)	-3(4)	8(4)	1(4)
N(2)	34(5)	47(6)	8(4)	8(4)	1(4)	15(5)
C(1)	43(7)	44(8)	42(7)	26(6)	24(6)	18(6)
C(2)	38(7)	36(7)	32(7)	10(5)	19(6)	2(5)
C(3)	29(6)	37(7)	25(6)	7(5)	6(5)	3(5)
C(4)	26(5)	27(6)	28(5)	-11(5)	12(4)	2(5)
C(5)	22(5)	27(6)	29(6)	7(5)	6(5)	-3(5)
C(6)	33(6)	30(5)	12(5)	-9(4)	4(4)	4(5)
C(7)	37(6)	39(7)	29(6)	-6(5)	17(5)	-1(6)
C(8)	36(6)	55(8)	46(7)	3(7)	20(6)	7(6)
C(9)	69(10)	84(12)	70(11)	13(9)	43(9)	30(10)
C(10)	35(6)	23(6)	33(6)	1(5)	12(5)	2(5)
C(11)	26(5)	24(6)	40(6)	0(5)	11(5)	0(5)
C(12)	31(6)	33(6)	30(6)	-6(5)	8(5)	-6(5)
C(13)	38(7)	49(8)	40(7)	3(6)	21(6)	6(6)
C(14)	57(9)	47(8)	63(10)	-2(7)	17(8)	-29(7)
OW1	35(4)	26(4)	45(5)	5(4)	4(4)	-7(4)
OW2	48(5)	39(5)	48(5)	0(4)	9(4)	-6(4)

The anisotropic displacement factor exponent takes the form:

$-2\ \varphi^2\ [\ h^2\ a^2\ U_{11} + \ldots + 2\ h\ k\ a^*b^*\ U_{12}\ ]$

Table S9. Hydrogen Coordinates and Equivalent Isotropic Displacement Parameters for (DMPDA)Pt(AM)·2H_2O

	x	y	z	U(eq)
H(0A)	8739(6)	3718(6)	2627(10)	48
H(0B)	8165(6)	3019(6)	1719(10)	48
H(2)	6821(14)	5482(15)	0	76
H(3A)	6149(15)	7004(22)	1093	133
H(3B)	6527(15)	7444(22)	-499	133
H(4)	5411(22)	6504(27)	-1836(35)	114
H(5A)	4551(15)	6483(14)	1094	92
H(5B)	4023(15)	6243(14)	-566	92
H(6A)	9638(7)	2347(8)	2416(12)	49
H(6B)	10164(7)	3188(8)	1475(12)	49
H(8A)	8062(13)	1819(12)	0	79
H(8B)	8679(13)	1036(12)	928	79
H(8C)	8679(13)	1036(12)	-928	79
H(9A)	10518(14)	1147(12)	-922	90
H(9B)	10524(14)	1157(12)	933	90
H(9C)	11048(14)	1998(12)	-11	90

Table S10. Hydrogen Coordinates and Equivalent Isotropic Displacement Parameters for (DMPDA)Pt(DAM)·2H_2O

	x	y	z	U(eq)
H(1A)	6479(8)	946(10)	-89(5)	28
H(1B)	5460(8)	1973(10)	-94(5)	28
H(2A)	8288(10)	206(11)	1958(5)	36
H(2B)	8242(10)	-163(11)	1196(5)	36
H(1C)	5410(13)	-898(13)	1531(8)	49
H(1D)	6405(13)	-1491(13)	2286(8)	49
H(2)	6832(13)	1134(12)	2424(7)	40
H(3A)	4293(10)	820(14)	2478(6)	37
H(3B)	5214(10)	2077(14)	2885(6)	37
H(7A)	2746(11)	4124(14)	1682(6)	40
H(7B)	3742(11)	4242(14)	2466(6)	40
H(8)	1935(11)	1914(18)	2122(7)	52
H(9A)	2777(15)	3515(22)	3399(9)	84
H(9B)	1754(15)	2186(22)	3237(9)	84
H(10A)	6868(10)	3713(12)	531(7)	36
H(10B)	7061(10)	3319(12)	-242(7)	36
H(12A)	9612(11)	1782(13)	1655(6)	38
H(12B)	8441(11)	2698(13)	1717(6)	38
H(13A)	9887(12)	1230(15)	438(7)	61
H(13B)	8971(12)	1898(15)	-293(7)	61
H(13C)	8526(12)	560(15)	105(7)	61
H(14A)	8971(15)	4667(14)	1038(9)	84
H(14B)	9227(15)	4416(14)	268(9)	84
H(14C)	10165(15)	3765(14)	996(9)	84

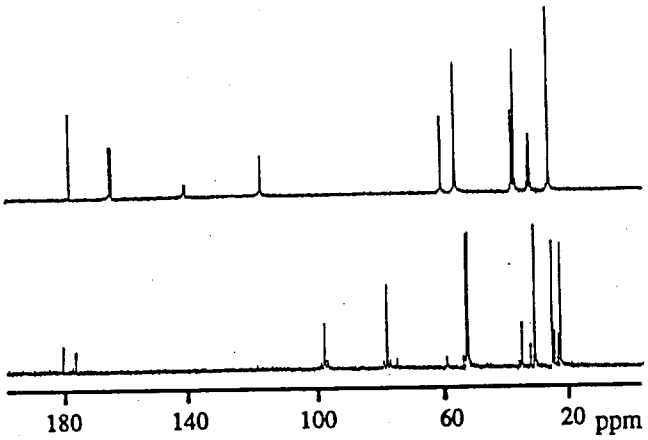

Figure S1. ^{13}C NMR spectra of (DMPDA)Pt(AM) in DMF-d_7 (a) and D_2O (b).

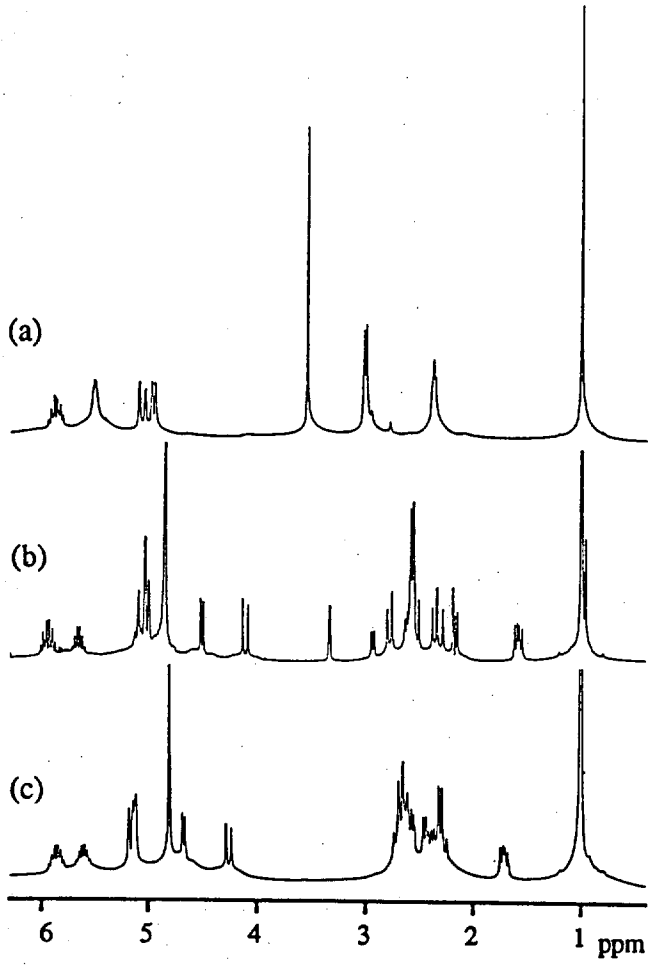

Figure S2. ^{1}H NMR spectra of (DMPDA)Pt(DAM) in DMF-d_7 (a), CD_3OD (b), and D_2O (c).

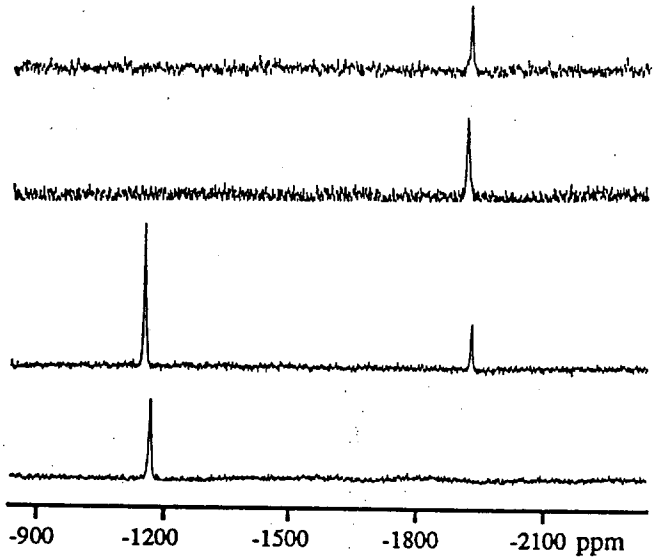

Figure S3. ^{195}Pt NMR spectra of (DMPDA)Pt(DAM) in DMF-d_7 (a), Me_2SO-d_6 (b), CD_3OD (c), and D_2O (d).