Table S1. Selected Bond distance (Å) and angle (°) data for **1**.

Cd1–O7	2.319(7)	O4–Cd1–O3	52.9(2)
Cd1–N3	2.325(9)	O7–Cd1–O6	85.6(2)
Cd1–O5	2.335(6)	N3–Cd1–O6	91.2(3)
Cd1–N1^{i}	2.377(8)	O5–Cd1–O6	54.0(2)
Cd1–O4	2.391(7)	N1^{i} –Cd1–O6	83.2(2)
Cd1–O3	2.468(7)	O4–Cd1–O6	167.8(2)
Cd1–O6	2.507(7)	O3–Cd1–O6	138.6(2)
Cd2–O12	2.288(8)	O12–Cd2–O10^{i}	82.4(3)
Cd2–O10^{i}	2.317(7)	O12–Cd2–O11	169.1(3)
Cd2–O11	2.337(8)	O10^{i} –Cd2–O11	87.2(3)
Cd2–N2	2.342(8)	O12–Cd2–N2	98.4(3)
Cd2–O2	2.375(8)	O10^{i} –Cd2–N2	137.8(3)
Cd2–O1	2.457(7)	O11–Cd2–N2	87.4(3)
Cd2–O9^{i}	2.559(7)	O12–Cd2–O2	100.3(3)
O7–Cd1–N3	174.3(3)	O10^{i} –Cd2–O2	137.2(3)
O7–Cd1–O5	81.6(2)	O11–Cd2–O2	89.4(3)
N3–Cd1–O5	100.3(3)	N2–Cd2–O2	84.5(3)
O7–Cd1–N1^{i}	86.7(2)	O12–Cd2–O1	87.5(3)
N3–Cd1–N1^{i}	88.2(3)	O10^{i} –Cd2–O1	84.6(2)
O5–Cd1–N1^{i}	136.2(2)	O11–Cd2–O1	94.5(3)
O7–Cd1–O4	89.0(2)	N2–Cd2–O1	137.5(3)
N3–Cd1–O4	93.2(3)	O2–Cd2–O1	53.1(2)
O5–Cd1–O4	135.8(2)	O12–Cd2–O9^{i}	87.0(3)
N1^{i} –Cd1–O4	85.6(2)	O10^{i} –Cd2–O9^{i}	53.6(2)
O7–Cd1–O3	96.7(2)	O11–Cd2–O9^{i}	84.4(2)
N3–Cd1–O3	88.8(3)	N2–Cd2–O9^{i}	84.3(2)
O5–Cd1–O3	85.3(2)	O2–Cd2–O9^{i}	167.4(3)
N1^{i} –Cd1–O3	138.1(2)	O1–Cd2–O9^{i}	138.2(2)

Symmetry code to generate equivalent atoms: *i*: $x + 1, y, z$.

Table S2. Hydrogen bonding parameters in **1**–**4.**

D–H···*A*	*d*(H···*A*)	*d*(*D*···*A*)	∠*D*H*A*	symmetry transformation for *A*
1				
O3W–H3WA•••O11	2.00(4)	2.838(12)	170(15)	-x + 1, -y + 1, -z + 2
O3W–H3WB•••O2W	2.37(6)	3.157(18)	156(11)	
O4W–H4WA•••O5W	1.89(3)	2.723(11)	166(11)	
O4W–H4WB•••O3W	2.16(10)	2.784(13)	131(11)	
O5W–H5WA•••O7	2.06(5)	2.852(10)	154(8)	-x + 1, -y + 1, -z + 1
O5W–H5WB•••O3	1.92(3)	2.773(10)	177(12)	x + 1, y, z
O7–H7A•••O4	1.83(3)	2.674(9)	170(8)	-x + 1, -y + 1, -z + 1
O7–H7B•••O5	1.88(3)	2.728(9)	171(10)	-x, -y + 1, -z + 1
O11–H11A•••O10	1.89(3)	2.723(10)	167(9)	-x, -y + 1, -z + 2
O11–H11B•••O2	1.90(2)	2.747(11)	176(11)	-x, -y + 1, -z + 2
O12–H12A•••O4W	1.90(3)	2.741(11)	172(12)	-x + 1, -y + 1, -z + 2
O12–H12B•••O2W	1.93(5)	2.733(13)	158(11)	
N4–H4NA•••O5W	2.27(5)	3.088(13)	152(10)	-x + 1, -y + 2, -z + 1
N4–H4NB•••O9	2.32(6)	3.064(12)	141(9)	x + 1, y, z – 1
2				
O1W–H1WA•••O2	2.12(2)	2.933(4)	166(4)	x + 1, y, z
O1W–H1WB•••O6	1.92(2)	2.748(4)	168(5)	
O2W–H2WA•••O3	1.95(2)	2.768(4)	167(4)	
O2W–H2WB•••O1W	2.08(2)	2.921(4)	170(4)	-x+1/2, y+1/2, -z+1/2
N2–H2N•••O2W	1.98(2)	2.855(5)	163(4)	-x + 2, -y + 1, -z + 1
3				
N2–H2N•••O5	2.09	2.892(8)	151.4	-x + 3, -y + 1, -z
N5–H5N•••O6	2.06	2.867(8)	151.3	
O1W–H1WA•••O2W	2.00(4)	2.815(8)	159(8)	-x + 3, -y + 2, -z
O1W–H1WB•••O3	1.97(3)	2.820(8)	168(9)	
O2W–H2WA•••O2	2.08	2.933(8)	179.5	
O2W–H2WA•••O10	1.99(5)	2.766(8)	150(9)	-x + 1, -y + 1, -z + 1
4				
O1W–H1WA•••O2	2.047(16)	2.868(2)	170(2)	
O1W–H1WB•••N3	2.038(15)	2.865(2)	172(2)	-x + 1, -y – 1, -z + 1
O4–H4A•••O2	1.836(15)	2.668(2)	168(2)	-x, -y, -z
O4–H4B•••O3	1.918(15)	2.7312(19)	168(2)	-x + 1, -y, -z
N2–H2N•••O1W	2.029(17)	2.837(2)	156(2)	x, y – 1, z

Table S3. Selected Bond distance (Å) and angle (°) data for **2**.

Cd1–N4^{i}	2.340(3)	O5–Cd1–N3^{ii}	139.16(10)
Cd1–O5	2.348(3)	N1–Cd1–N3^{ii}	88.75(11)
Cd1–N1	2.349(3)	O2–Cd1–N3^{ii}	137.70(9)
Cd1–O2	2.370(2)	N4^{i}–Cd1–O6	95.96(10)
Cd1–N3^{ii}	2.380(3)	O5–Cd1–O6	53.58(9)
Cd1–O6	2.478(3)	N1–Cd1–O6	91.14(10)
Cd1–O3	2.514(2)	O2–Cd1–O6	136.71(9)
N4^{i}–Cd1–O5	98.15(11)	N3^{ii}–Cd1–O6	85.58(9)
N4^{i}–Cd1–N1	170.02(11)	N4^{i}–Cd1–O3	88.28(10)
O5–Cd1–N1	91.71(11)	O5–Cd1–O3	136.21(9)
N4^{i}–Cd1–O2	88.79(11)	N1–Cd1–O3	83.49(10)
O5–Cd1–O2	83.13(9)	O2–Cd1–O3	53.60(8)
N1–Cd1–O2	90.85(11)	N3^{ii}–Cd1–O3	84.39(9)
N4i–Cd1–N3^{ii}	84.83(11)	O6–Cd1–O3	168.72(9)

Symmetry codes to generate equivalent atoms: *i*: $-x + 1/2, y - 1/2, -z + 1/2$. *ii*: $x + 1, y, z$.

Table S4. Selected Bond distance (Å) and angle (°) data for **3**.

Cd1–O1^{i}	2.319(5)	N1–Cd2–O4^{iii}	99.9(2)
Cd1–N4	2.322(6)	N1–Cd2–O7^{iv}	84.8(2)
Cd1–O9	2.333(5)	O4^{iii}–Cd2–O7^{iv}	128.10(17)
Cd1–N3	2.352(6)	N1–Cd2–N6^{v}	164.9(2)
Cd1–O6^{ii}	2.386(5)	O4^{iii}–Cd2–N6^{v}	94.7(2)
Cd1–O10^{ii}	2.461(5)	O7^{iv}–Cd2–N6	83.4(2)
Cd1–O1	2.475(5)	N1–Cd2–O5	96.28(19)
Cd2–N1	2.317(6)	O4–Cd2–O5	86.77(17)
Cd2–O4^{iii}	2.346(5)	O7^{iv}–Cd2–O5	144.55(17)
Cd2–O7^{iv}	2.346(5)	N6^{v}–Cd2–O5	88.1(2)
Cd2–N6^{v}	2.347(6)	N1–Cd2–O7^{iii}	95.1(2)
Cd2–O5	2.365(5)	O4–Cd2–O7^{iii}	52.84(17)
Cd2–O7^{iii}	2.467(5)	O7^{iv}–Cd2–O7^{iii}	75.29(19)
Cd2–O3	2.470(5)	N6^{v}–Cd2–O7^{iii}	90.8(2)
O1^{i}–Cd1–N4	86.7(2)	O5–Cd2–O7^{iii}	139.37(16)
O1^{i}–Cd1–O9	128.14(19)	N1–Cd2–O3	81.8(2)
N4–Cd1–O9	99.9(2)	O4^{iii}–Cd2–O3	140.39(17)
O1^{i}–Cd1–N3	83.8(2)	O7^{iv}–Cd2–O3	91.51(17)
N4–Cd1–N3	167.2(2)	N6^{v}–Cd2–O3	89.2(2)
O9–Cd1–N3	92.7(2)	O5–Cd2–O3	53.92(16)
O1^{i}–Cd1–O6^{ii}	143.24(18)	O7^{iii}–Cd2–O3	166.71(16)
N4–Cd1–O6^{ii}	93.2(2)	Cd1^{i}–O1–Cd1	105.3(2)
O9–Cd1–O6^{ii}	88.12(18)	Cd2^{vi}–O7–Cd2^{iii}	104.70(19)
N3–Cd1–O6^{ii}	89.27(19)	O4–Cd2–O5	86.77(17)
O1^{i}–Cd1–O10^{ii}	89.46(18)	O7^{iv}–Cd2–O5	144.55(17)
N4–Cd1–O10^{ii}	83.3(2)	N6^{v}–Cd2–O5	88.1(2)
O9–Cd1–O10^{ii}	142.27(18)	N1–Cd2–O7^{iii}	95.1(2)
N3–Cd1–O10^{ii}	88.0(2)	O4–Cd2–O7^{iii}	52.84(17)
O6^{ii}–Cd1–O10^{ii}	54.16(17)	O7^{iv}–Cd2–O7^{iii}	75.29(19)
O1^{i}–Cd1–O1	74.7(2)	N6^{v}–Cd2–O7^{iii}	90.8(2)
N4–Cd1–O1	92.7(2)	O5–Cd2–O7^{iii}	139.37(16)
O9–Cd1–O1	53.81(17)	N1–Cd2–O3	81.8(2)
N3–Cd1–O1	93.0(2)	O4^{iii}–Cd2–O3	140.39(17)
O6^{ii}–Cd1–O1	141.92(17)	O7^{iv}–Cd2–O3	91.51(17)
O10^{ii}–Cd1–O1	163.85(16)	N6^{v}–Cd2–O3	89.2(2)
Cd1^{i}–O1–Cd1	105.3(2)	O5–Cd2–O3	53.92(16)
Cd2^{vi}–O7–Cd2^{iii}	104.70(19)	O7^{iii}–Cd2–O3	166.71(16)

Symmetry codes to generate equivalent atoms: *i*: $-x + 2, -y, -z + 1$; ii: $-x + 1, -y, -z + 1$; iii: $-x + 3, -y + 1, -z$; iv: $x + 1, y, z$; v: $x + 2, y + 1, z - 1$; vi: $x - 1, y, z$.

Table S5. Selected Bond distance (Å) and angle (°) data for **4**.

Cd1–O4	2.3022(14)
Cd1–N1	2.3045(15)
Cd1–O3	2.3269(13)
$O4^{i}$–Cd1–O4	180.0
O4–Cd1–$N1^{i}$	85.90(5)
O4–Cd1–N1	94.11(5)
$N1^{i}$–Cd1–N1	180.0
N1–Cd1–$O3^{i}$	87.36(5)
$O4^{i}$–Cd1–O3	90.36(5)
O4–Cd1–O3	89.64(5)
N1–Cd1–O3	92.64(5)
$O3^{i}$–Cd1–O3	180.0

Symmetry code to generate equivalent atoms: *i*: *–x*, *–y*, *–z*.

Infrared Spectral Bands for **1**–**4**:

1: IR (cm^{-1}): 3224 (m, br), 2968 (m, br), 2229 (w, br), 1645 (w), 1586 (m), 1543 (s), 1417 (m), 1384 (s), 1230 (m), 1058 (m), 1021 (m), 887 (w), 864 (w), 820 (w), 769 (s), 687 (s), 665 (s).

2: IR (cm^{-1}): 3361 (m, br), 1687 (w), 1609 (s), 1584 (m), 1547 (s), 1486 (m), 1395 (s), 1335 (m), 1307 (m), 1263 (w), 1196 (s), 1158 (w), 1119 (w), 1098 (w), 1048 (m), 1033 (m), 930 (w), 862 (s), 799 (w), 767 (s), 716 (s), 702 (s).

3: IR (cm^{-1}): 3224 (m, br), 1673 (w), 1609 (s), 1585 (w), 1541 (s), 1395 (s), 1307 (m), 1263 (w), 1196 (m), 1157 (w), 1118 (w), 1098 (w), 1048 (m), 1032 (m), 863 (s), 796 (w), 769 (s), 716 (s), 702 (s).

4: IR (cm^{-1}): 3066 (w, br), 1692 (m), 1595 (s), 1516 (s), 1431 (w), 1385 (m), 1335 (m), 1310 (s), 1275 (m), 1214 (s), 1130 (m), 1030 (w), 1016 (m), 964 (w), 900 (w), 834 (s), 729 (s), 698 (s).

Figure S1. Stacking diagram for coordination polymer ribbons in **1**, viewed down the *a* crystal axis.

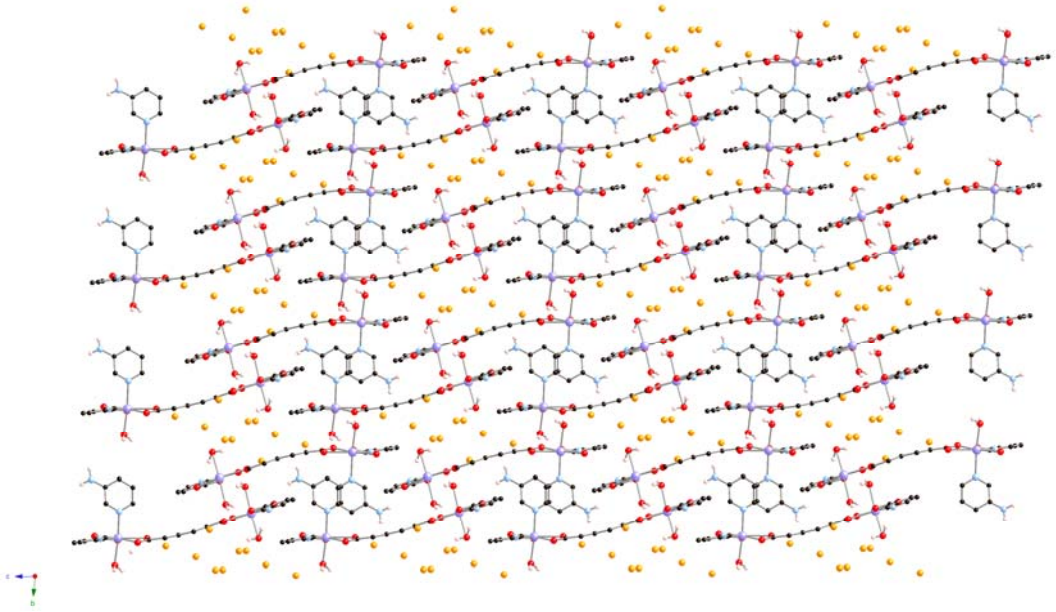

Figure S2. Stacking diagram for coordination polymer layers in **3**.

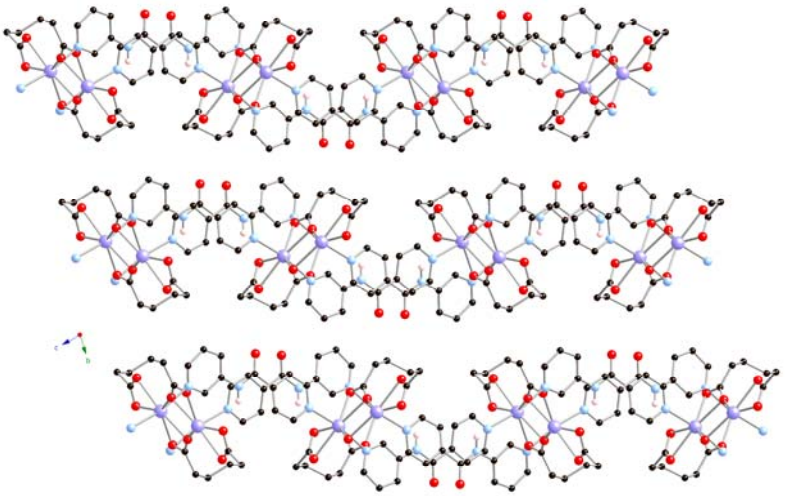

Figure S3. Stacking of coordination polymer chains in **4**. Hydrogen bonding is shown as dashed lines.

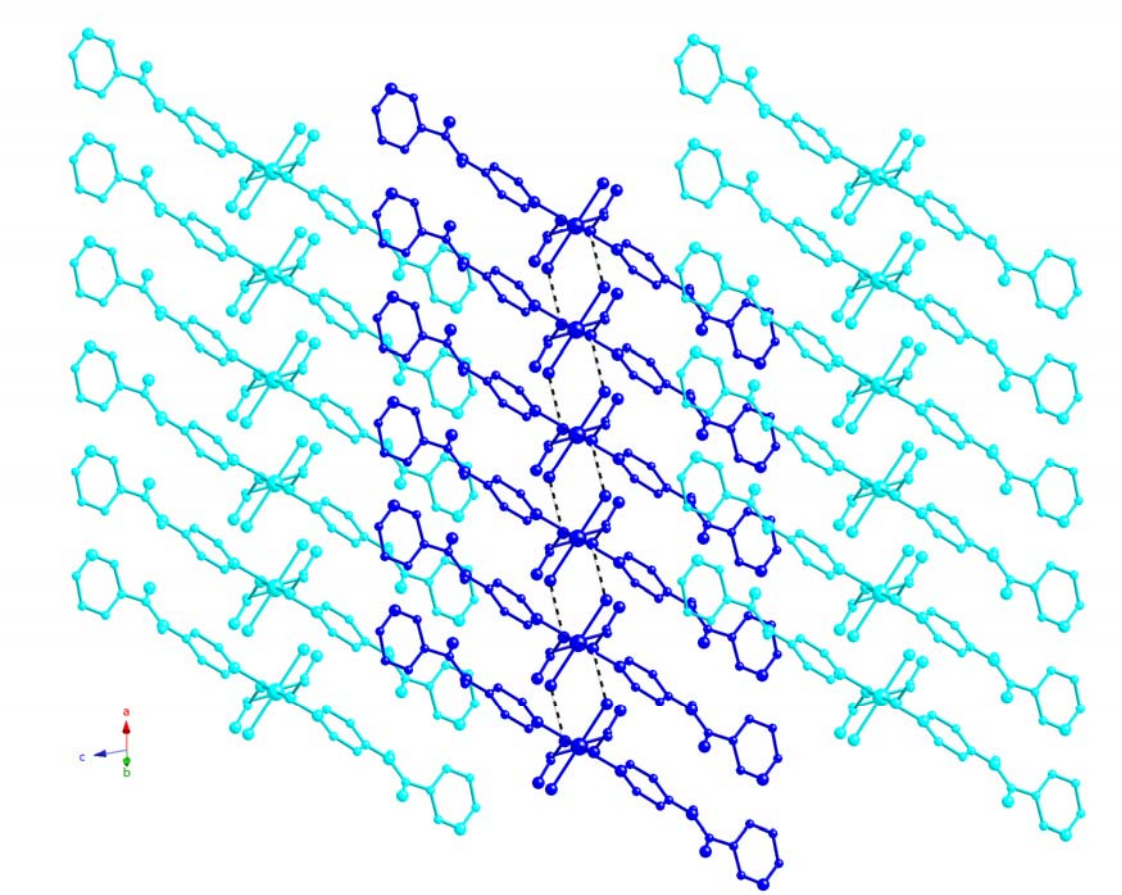

Figure S4. Emission spectrum of **1**.

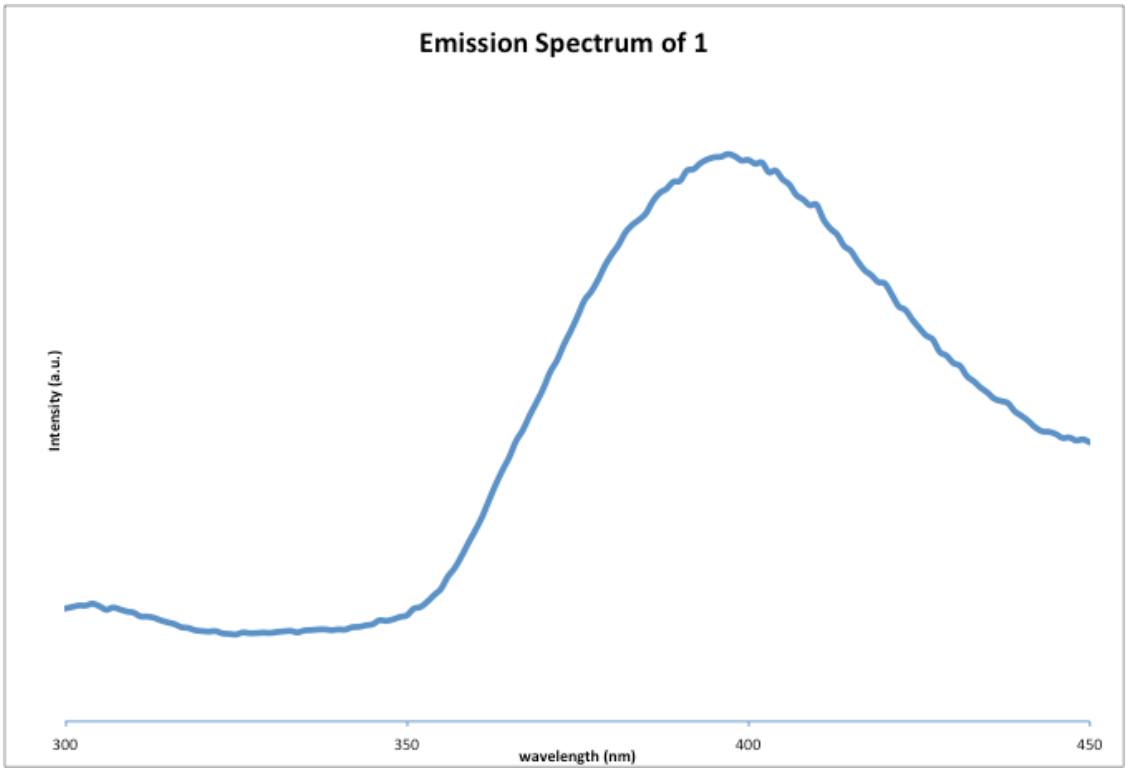

Figure S5. Emission spectrum of **2**.

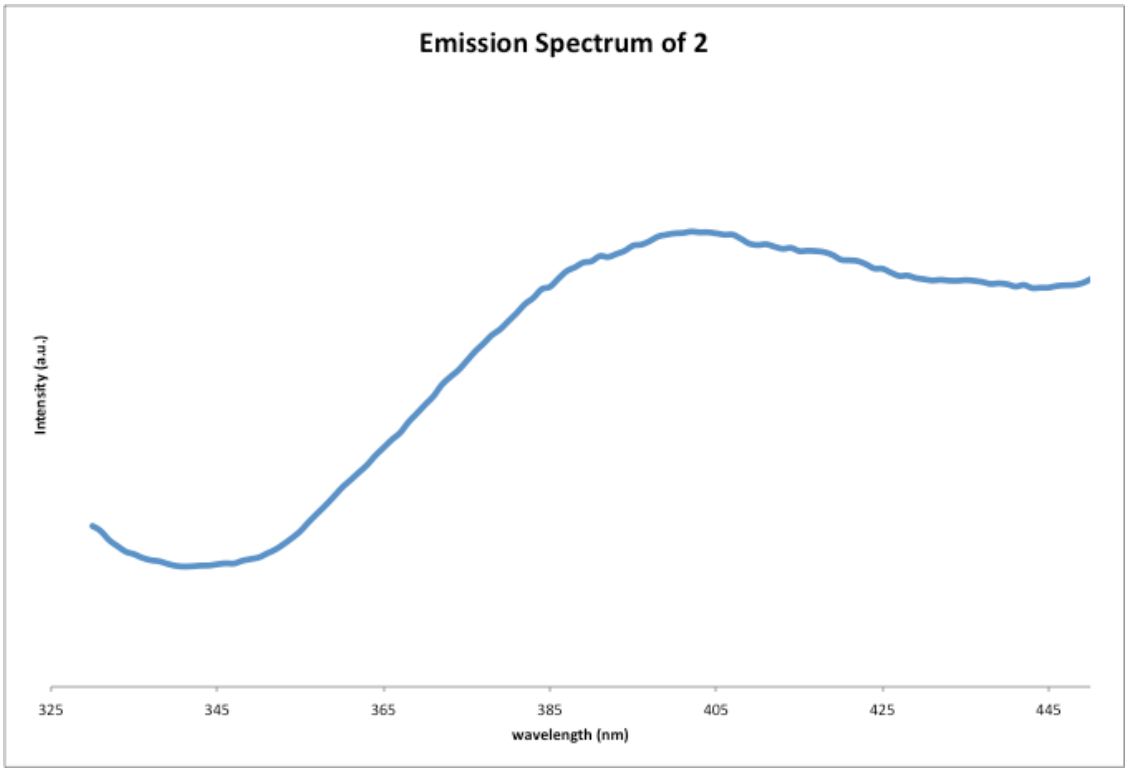

Figure S6. Emission spectrum of **3**.

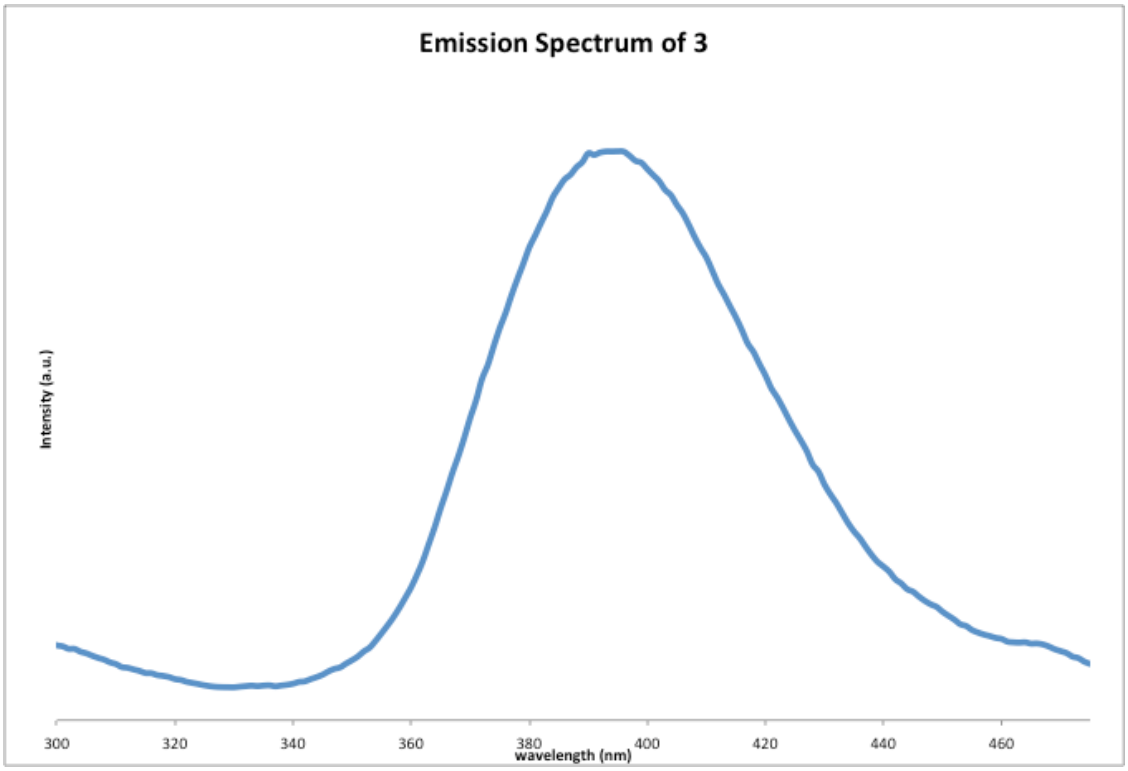

Figure S7. Emission spectrum of **4**.

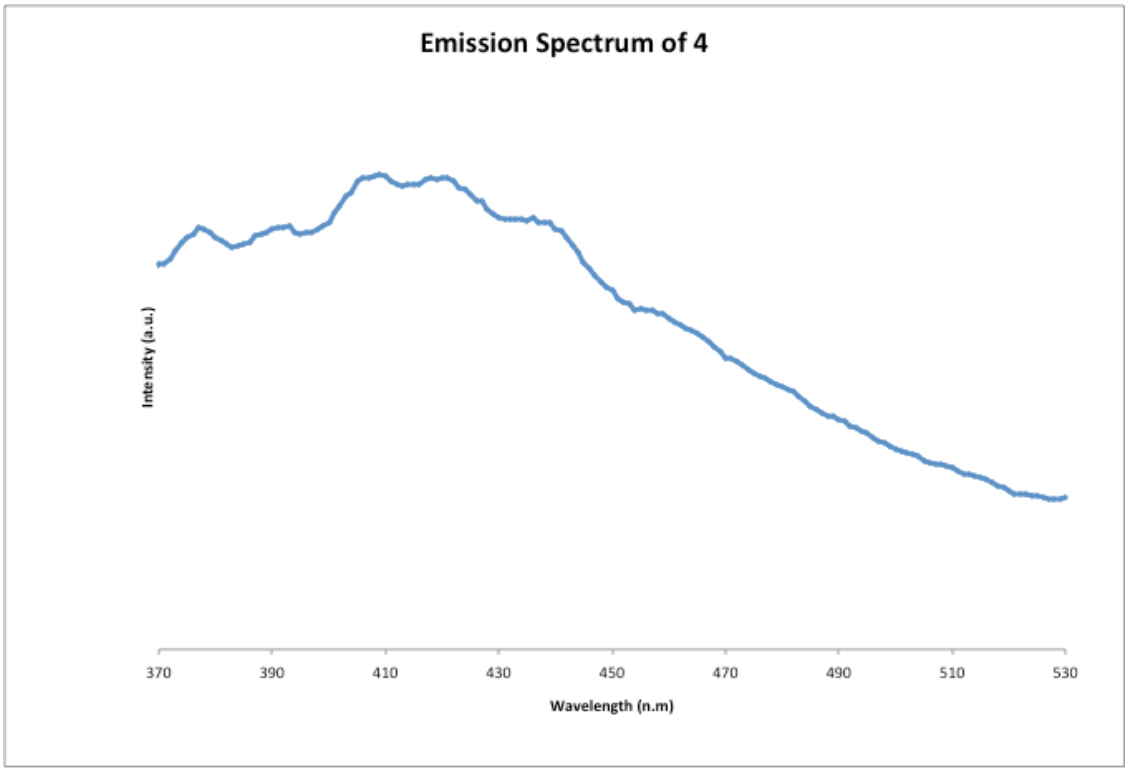

Figure S8. TGA trace for **1**.

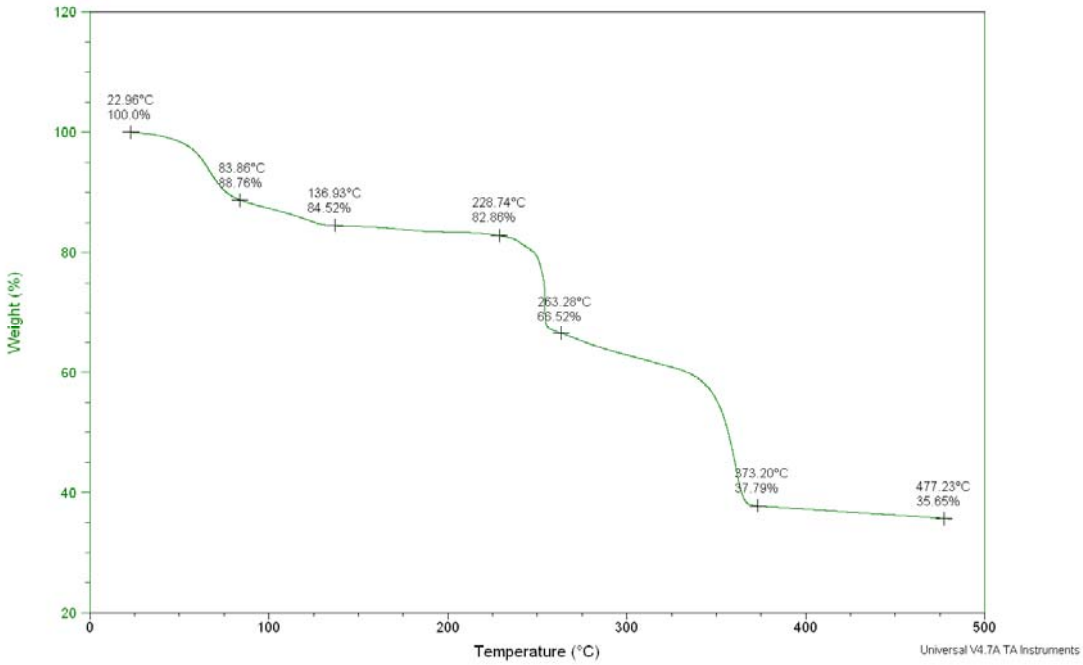

Figure S9. TGA trace for **2**.

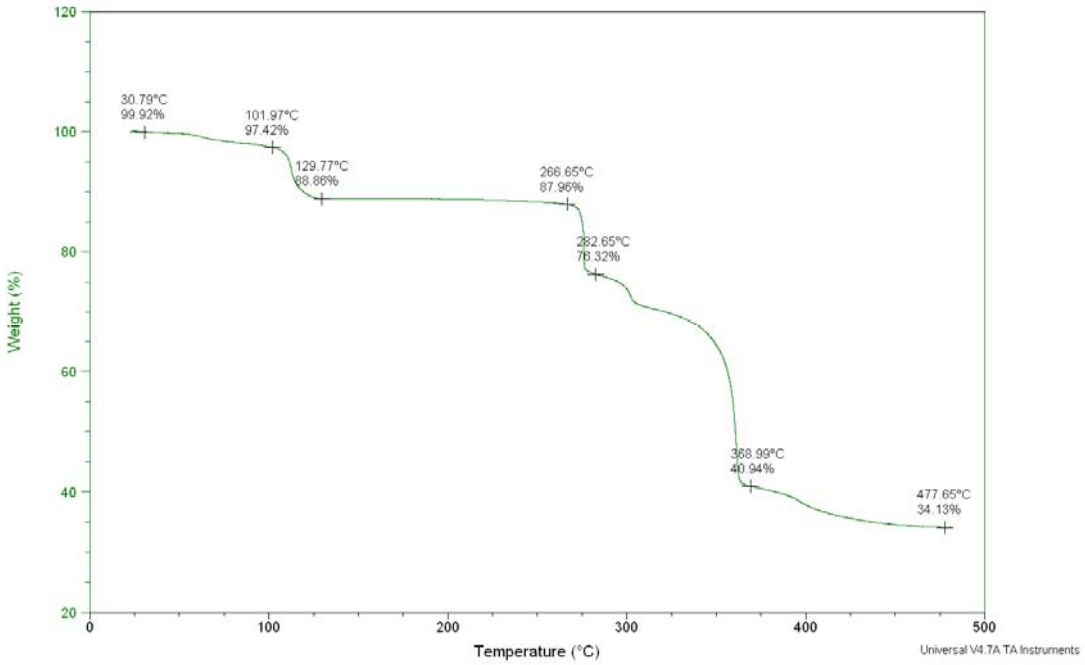

Figure S10. TGA trace for **3**.

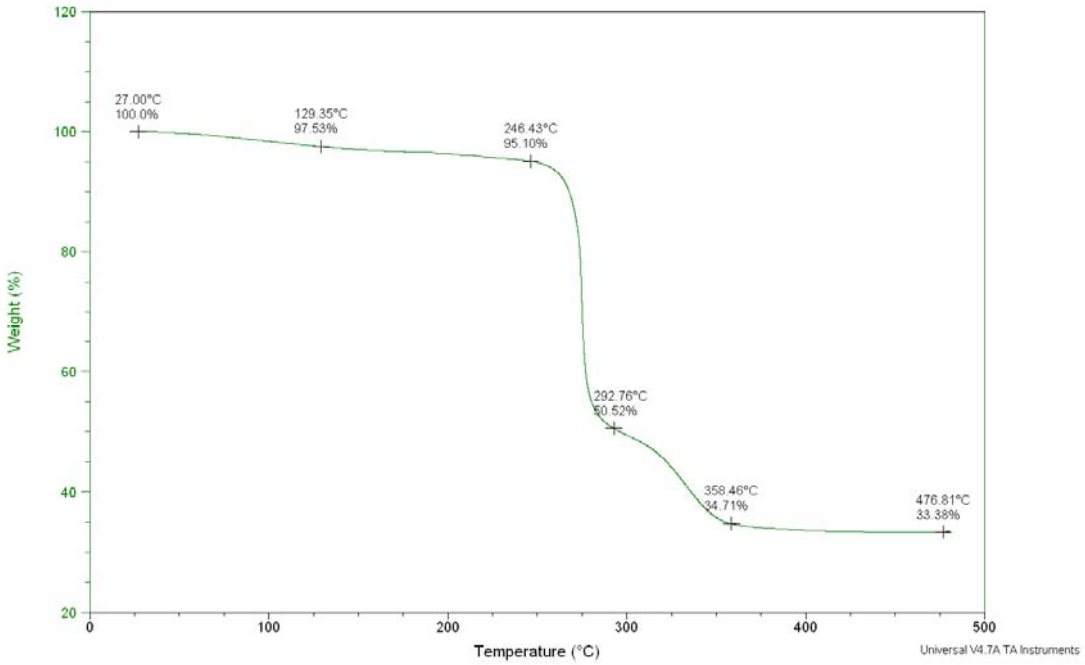

Figure S11. TGA trace for **4**.