Supporting information for

Five porphyrin-core-dependent metal-organic frameworks and framework-dependent fluorescent property

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Figures:

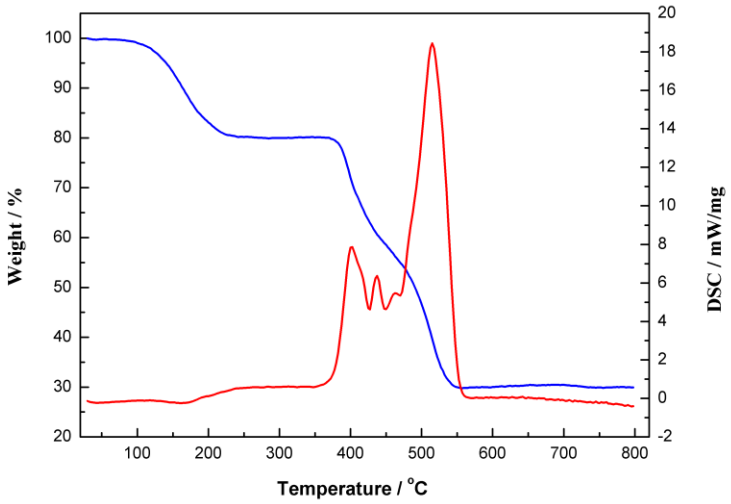

Fig. S1. TGA results of **1**.

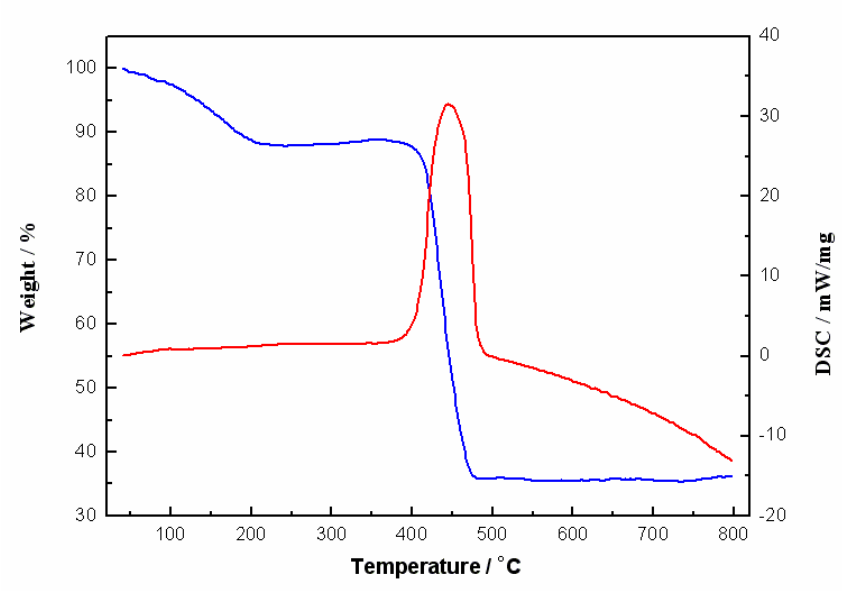

Fig. S2. TGA results of **2**.

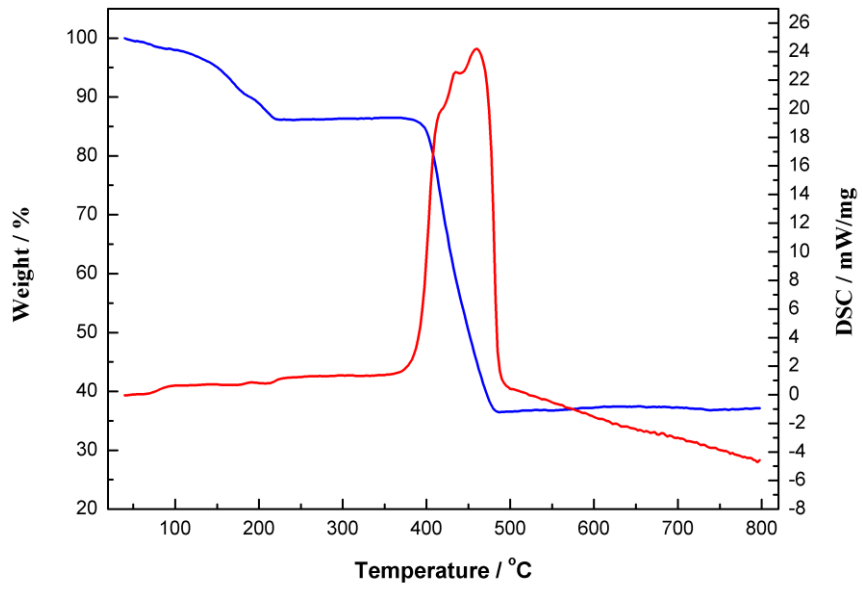

Fig. S3. TGA results of **3**.

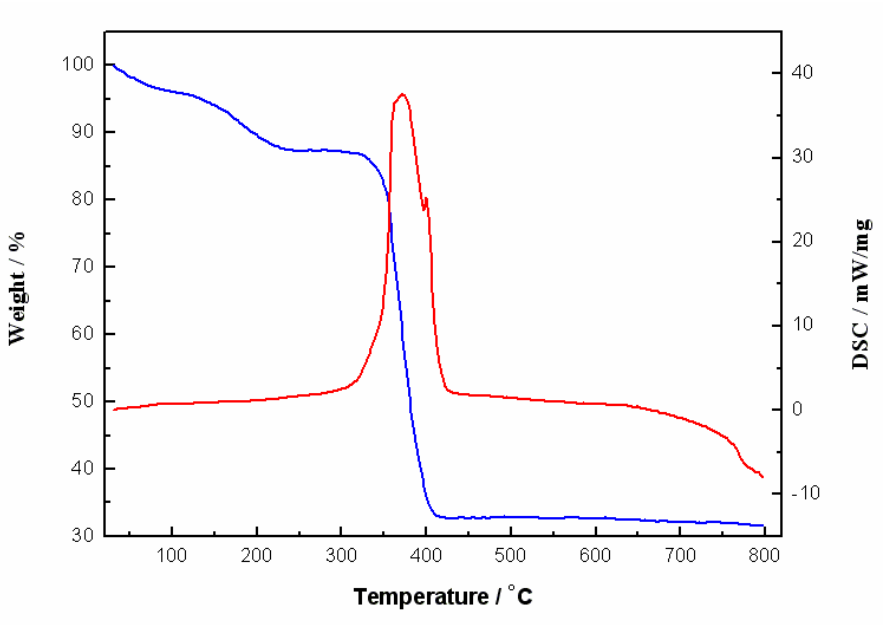

Fig. S4. TGA results of **4**.

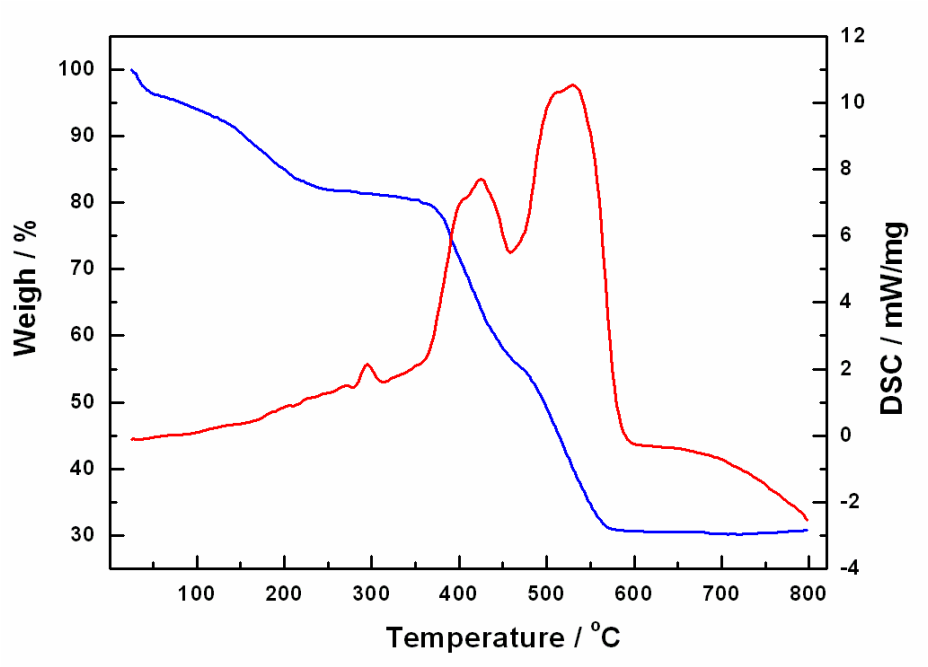

Fig. S5. TGA results of **5**.

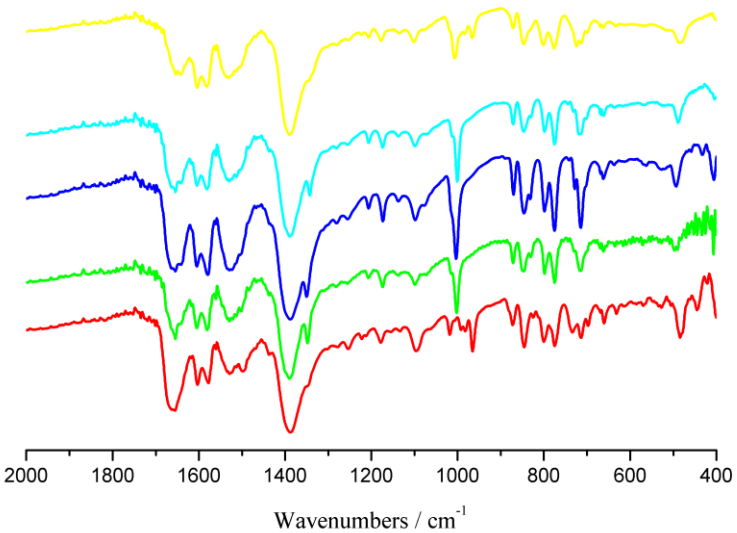

Fig. S6. FT-IR spectra of compounds **1** (red), **2** (green), **3** (blue), **4** (cyan) and **5** (yellow).

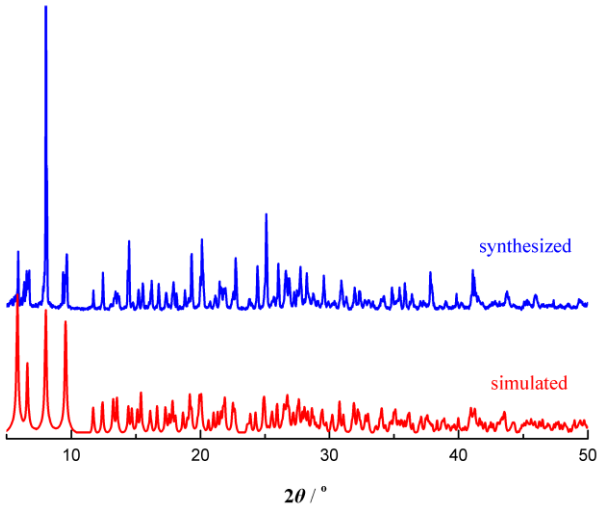

Fig. S7. Powder X-ray diffraction patterns of compound **1**.

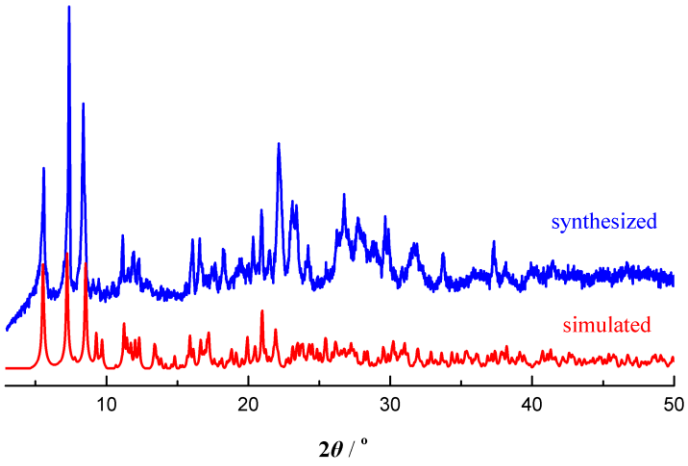

Fig. S8. Powder X-ray diffraction patterns of compound **2**.

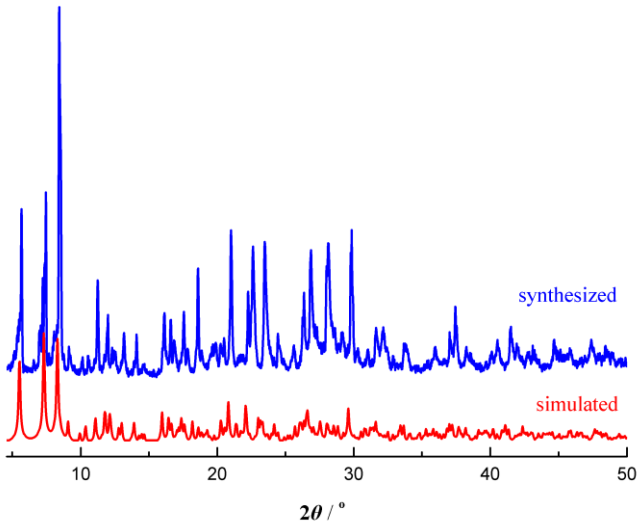

Fig. S9. Powder X-ray diffraction patterns of compound **3**.

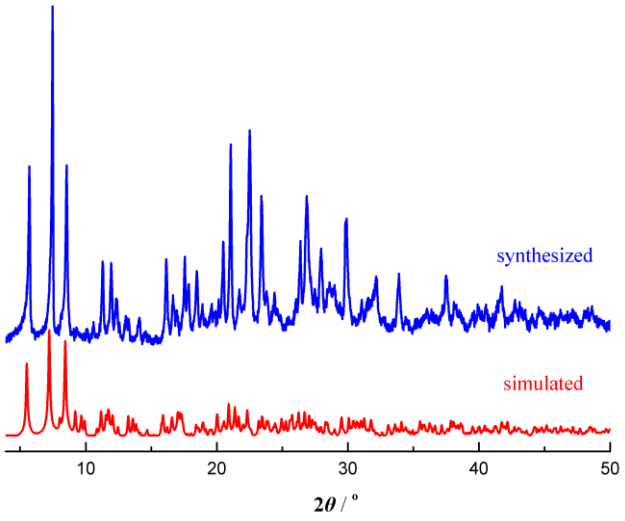

Fig. S10. Powder X-ray diffraction patterns of compound **4**.

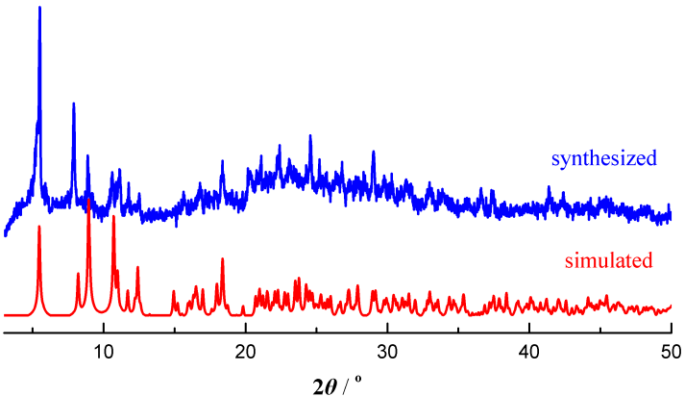

Fig. S11. Powder X-ray diffraction patterns of compound **5**.

Tables:

Table S1. Selected bond lengths (Å) and angles (°) for **1**.

Bond length	(Å)	Bond angle	(°)	Bond angle	(°)
Pb1-O4^{i}	2.424(4)	O4^{i}-Pb1-O1	81.2(8)	O5-Pb1-O3^{i}	110.3(2)
Pb1-O1	2.472(4)	O4^{i}-Pb1-O5	71.7(7)	O4^{i}-Pb1-O5^{ii}	132.8(7)
Pb1-O5	2.530(5)	O1-Pb1-O5	52.4(5)	O1-Pb1-O5^{ii}	73.4(8)
Pb1-O3^{i}	2.640(6)	O4^{i}-Pb1-O3^{i}	50.2(2)	O5-Pb1-O5^{ii}	117.4(6)
Pb1-O5^{ii}	2.684(4)	O1-Pb1-O3^{i}	80.9(2)	O3^{i}-Pb1-O5^{ii}	86.3(6)

Symmetry transformations used to generate equivalent atoms: i) -x, -y+3, -z+1; ii) -x, y-1/2, -z+1/2.

Table S2. Selected bond lengths (Å) and angles (°) for **2**.

Bond length	(Å)	Bond angle	(°)	Bond angle	(°)
Pb1-O5	2.452(1)	O5-Pb1-O7^{i}	87.2(4)	O4^{iii}-Pb2-O2	83.0(4)
Pb1-O7^{i}	2.472(9)	O5-Pb1-O8^{i}	86.8(4)	O4^{iii}-Pb2-O9	79.8(5)
Pb1-O8^{i}	2.520(9)	O7^{i}-Pb1-O8^{i}	52.6(3)	O2-Pb2-O9	74.8(5)
Pb1-O1^{ii}	2.683(1)	O5-Pb1-O1^{ii}	140.5(5)	N2-Co1-N3	91.0(5)
Pb1-O10	2.70(3)	O7^{i}-Pb1-O1^{ii}	69.0(3)	N2-Co1-N1	172.8(6)
Pb2-O4^{iii}	2.354(1)	O8^{i}-Pb1-O1^{ii}	101.5(4)	N3-Co1-N1	89.8(5)
Pb2-O2	2.371(1)	O5-Pb1-O10	70.7(7)	N2-Co1-N4	88.6(5)
Pb2-O9	2.488(1)	O7^{i}-Pb1-O10	130.7(6)	N3-Co1-N4	176.5(6)
Co1-N2	1.971(1)	O8^{i}-Pb1-O10	81.9(6)	N1-Co1-N4	91.0(5)
Co1-N3	1.985(1)	O1^{ii}-Pb1-O10	148.4(6)		
Co1-N1	1.986(1)				
Co1-N4	1.993(1)				

Symmetry transformations used to generate equivalent atoms: i) -x+2, y+1/2, -z+1/2; ii) x-1, y, z+1; iii) -x+3, y-1/2, -z-1/2.

Table S3. Selected bond lengths (Å) and angles (°) for **3**.

Bond length	(Å)	Bond angle	(°)	Bond angle	(°)
Pb1-O4	2.359(1)	O4-Pb1-O5^{i}	81.4(4)	O9-Pb2-O8^{ii}	125.4(3)
Pb1-O5^{i}	2.375(1)	O4-Pb1-O10	78.1(5)	N2-Ni1-N4	171.4(5)
Pb1-O10	2.401(1)	O5^{i}-Pb1-O10	75.4(4)	N2-Ni1-N1	91.1(4)
Pb2-O7^{ii}	2.383(9)	O7^{ii}-Pb2-O1	89.9(4)	N4-Ni1-N1	90.1(4)
Pb2-O1	2.384(1)	O7^{ii}-Pb2-O9	77.0(4)	N2-Ni1-N3	89.6(4)
Pb2-O9	2.543(1)	O1-Pb2-O9	76.7(4)	N4-Ni1-N3	90.6(4)
Pb2-O8^{ii}	2.691(1)	O7^{ii}-Pb2-O8^{ii}	50.6(4)	N1-Ni1-N3	170.3(5)
Ni1-N2	1.931(1)	O1-Pb2-O8^{ii}	88.0(4)		
Ni1-N4	1.934(1)				
Ni1-N1	1.939(1)				
Ni1-N3	1.941(1)				

Symmetry transformations used to generate equivalent atoms: i) -x-1, y-1/2, -z-3/2; ii) -x-2, y-1/2, -z-1/2.

Table S4. Selected bond lengths (Å) and angles (°) for **4**.

Bond length	(Å)	Bond angle	(°)	Bond angle	(°)
Pb1-O2	2.318(7)	O2-Pb1-O7^{i}	83.3(3)	O5-Pb2-O8^{iii}	70.2(2)
Pb1-O7^{i}	2.340(7)	O2-Pb1-O9	79.4(3)	N3-Cu1-N2	90.2(3)
Pb1-O9	2.397(8)	O7^{i}-Pb1-O9	76.6(3)	N3-Cu1-N1	173.5(3)
Pb2-O3^{ii}	2.430(8)	O3^{ii}-Pb2-O6	87.1(3)	N2-Cu1-N1	89.8(3)
Pb2-O6	2.486(7)	O3^{ii}-Pb2-O5	85.5(2)	N3-Cu1-N4	90.2(3)
Pb2-O5	2.518(6)	O6-Pb2-O5	52.4(2)	N2-Cu1-N4	174.7(3)
Pb2-O8^{iii}	2.693(8)	O3^{ii}-Pb2-O8^{iii}	143.5(3)	N1-Cu1-N4	90.4(3)
Cu1-N3	1.992(7)	O6-Pb2-O8^{iii}	98.2(2)		
Cu1-N2	1.995(7)				
Cu1-N1	1.998(7)				
Cu1-N4	1.999(7)				

Symmetry transformations used to generate equivalent atoms: i) -x+1, y-1/2, -z+3/2; ii) -x+2, y+1/2, -z+1/2; iii) -x+1, y+1/2, -z+3/2.

Table S5. Selected bond lengths (Å) and angles (°) for **5**.

Bond length	(Å)	Bond angle	(°)	Bond angle	(°)
Pb1-O4^{i}	2.463(1)	O4^{i}-Pb1-O2	82.5(4)	O1-Pb1-O2^{ii}	116.9(5)
Pb1-O2	2.481(1)	O4^{i}-Pb1-O1	83.2(5)	O3^{i}-Pb1-O2^{ii}	117.6(4)
Pb1-O1	2.551(1)	O2-Pb1-O1	51.1(5)	O5-V1-N1^{iii}	104.8(1)
Pb1-O3^{i}	2.597(1)	O4^{i}-Pb1-O3^{i}	51.3(4)	O5-V1-N2	104.8(1)
Pb1-O2^{ii}	2.712(1)	O2-Pb1-O3^{i}	117.4(4)	N1^{iii}-V1-N2	89.0(6)
V1-O5	1.50(3)	O1-Pb1-O3^{i}	80.3(5)	O5-V1-N2^{iii}	102.7(1)
V1-N1^{iii}	2.027(1)	O4^{i}-Pb1-O2^{ii}	70.7(4)	N1^{iii}-V1-N2^{iii}	87.2(6)
V1-N2	2.063(1)	O2-Pb1-O2^{ii}	68.8(4)		
V1-N2^{iii}	2.125(1)				
V1-N1	2.136(2)				

Symmetry transformations used to generate equivalent atoms: i) x+2, y+1, z; ii) –x+4, -y+1, -z+2; iii) –x+2, -y, -z+1.