Electronic Supplementary Information

Blue and White-light emitting 2D Metal-organic frameworks of *cis*-5-Norbornene-endo-2,3-dicarboxylic acid

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X-ray Crystallography

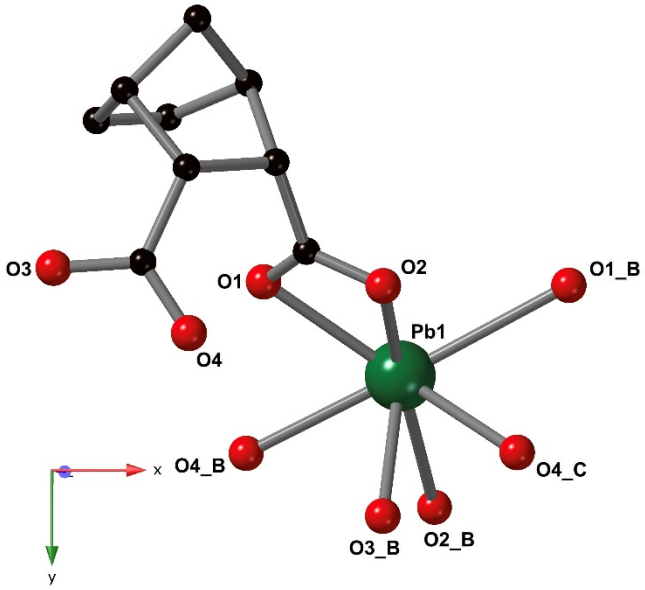

Figure S1. An illustration of coordination environment in **1** along *z* axis.

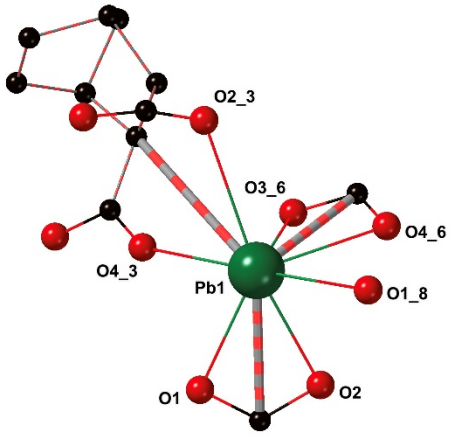

*Figure S2***.** Schematic representation of seven-coordinated geometry in **1** and its reduction to a simple, planar trigonal description using VBV model as described in Miguel A. H et al. *Acta Cryst*. 2006. **B62**, 1038–1042.

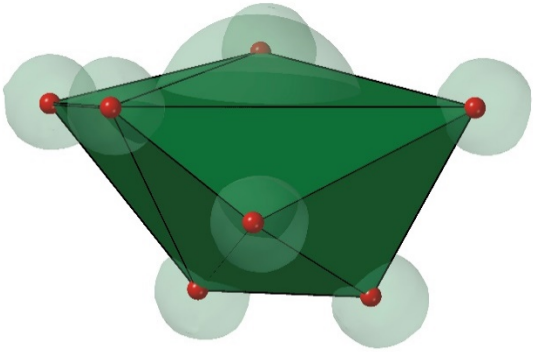

*Figure S3***.** An illustration of mapping of surface space-filling in a polyhedra of Pb(II) in **1**. The surface space-filling clearly shows the hemi-directed coordination geometry.

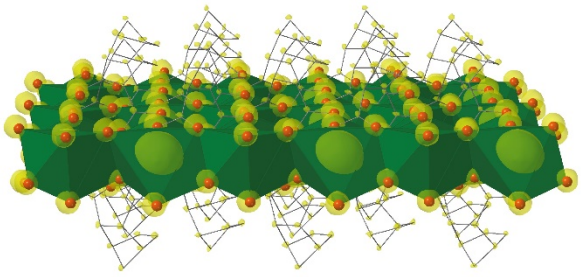

*Figure S4***.** An illustration of mapping of surface space-filling in a 2D layer in **1**.

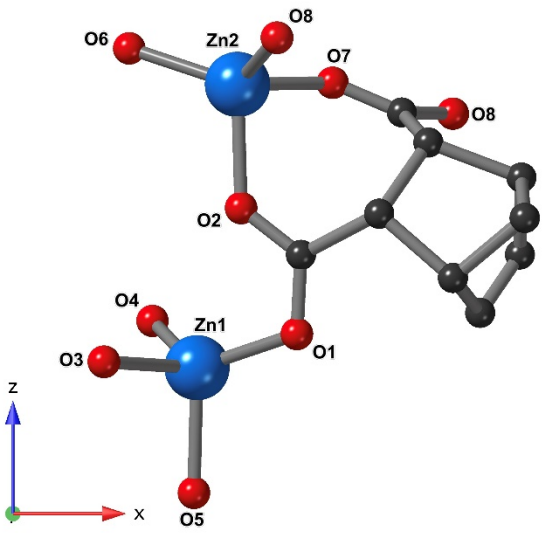

*Figure S5***.** An illustration of coordination environment in **2** along ***y*** axis.

Table S1. Selected bond length (Å) and bond angles (°) in **1**

Pb(1)-O(3)#1	2.405(8)
Pb(1)-O(2)	2.503(8)
Pb(1)-O(1)	2.551(11)
Pb(1)-O(4)#1	2.602(10)
Pb(1)-O(4)#2	2.619(10)
Pb(1)-C(4)#1	2.849(13)
Pb(1)-C(1)	2.860(14)
O(1)-C(1)	1.231(18)
O(2)-C(1)	1.29(2)
O(3)-C(4)	1.30(3)
O(4)-C(4)	1.247(16)
C(1)-C(2)	1.517(19)
C(2)-C(3)	1.557(18)
C(2)-C(8)	1.574(18)
C(3)-C(4)	1.504(18)
C(3)-C(5)	1.535(18)
C(5)-C(6)	1.50(2)
C(5)-C(9)	1.517(19)
C(6)-C(7)	1.30(2)
C(7)-C(8)	1.53(2)
C(8)-C(9)	1.536(19)
O(3)#1-Pb(1)-O(2)	89.6(3)
O(3)#1-Pb(1)-O(1)	102.4(5)
O(2)-Pb(1)-O(1)	51.8(4)
O(3)#1-Pb(1)-O(4)#1	52.0(6)
O(2)-Pb(1)-O(4)#1	75.9(4)
O(1)-Pb(1)-O(4)#1	123.4(3)
O(3)#1-Pb(1)-O(4)#2	70.2(6)
O(2)-Pb(1)-O(4)#2	110.2(4)

O(1)-Pb(1)-O(4)#2	68.2(3)
O(4)#1-Pb(1)-O(4)#2	122.0(4)
O(3)#1-Pb(1)-C(4)#1	26.9(6)
O(2)-Pb(1)-C(4)#1	86.8(4)
O(1)-Pb(1)-C(4)#1	120.0(4)
O(4)#1-Pb(1)-C(4)#1	26.0(3)
O(4)#2-Pb(1)-C(4)#1	96.2(3)
O(3)#1-Pb(1)-C(1)	99.9(4)
O(2)-Pb(1)-C(1)	26.7(4)
O(1)-Pb(1)-C(1)	25.5(4)
O(4)#1-Pb(1)-C(1)	101.7(4)
O(4)#2-Pb(1)-C(1)	90.5(4)
C(4)#1-Pb(1)-C(1)	107.2(4)
C(1)-O(1)-Pb(1)	91.4(9)
C(1)-O(2)-Pb(1)	92.3(9)
C(4)-O(3)-Pb(1)#3	96.0(10)
C(4)-O(4)-Pb(1)#3	88.1(8)
C(4)-O(4)-Pb(1)#4	150.6(9)
Pb(1)#3-O(4)-Pb(1)#4	116.0(4)
O(1)-C(1)-O(2)	122.6(13)
O(1)-C(1)-C(2)	120.2(13)
O(2)-C(1)-C(2)	116.9(12)
O(1)-C(1)-Pb(1)	63.1(8)
O(2)-C(1)-Pb(1)	61.0(7)
C(2)-C(1)-Pb(1)	161.5(9)
C(1)-C(2)-C(3)	116.5(11)
C(1)-C(2)-C(8)	114.8(10)
C(3)-C(2)-C(8)	100.6(10)
C(4)-C(3)-C(5)	116.0(11)
C(4)-C(3)-C(2)	115.6(11)
C(5)-C(3)-C(2)	104.2(10)
O(4)-C(4)-O(3)	119.7(12)
O(4)-C(4)-C(3)	122.1(12)
O(3)-C(4)-C(3)	118.1(11)
O(4)-C(4)-Pb(1)#3	65.9(7)
O(3)-C(4)-Pb(1)#3	57.1(6)
C(3)-C(4)-Pb(1)#3	157.2(8)
C(6)-C(5)-C(9)	100.8(12)
C(6)-C(5)-C(3)	107.0(11)
C(9)-C(5)-C(3)	100.1(11)
C(7)-C(6)-C(5)	107.9(16)
C(6)-C(7)-C(8)	107.6(13)
C(7)-C(8)-C(9)	99.6(12)
C(7)-C(8)-C(2)	107.9(10)
C(9)-C(8)-C(2)	99.3(11)
C(5)-C(9)-C(8)	93.6(10)

Symmetry transformations used to generate equivalent atoms:
#1 -x+3/2,-y+1/2,z-1/2 #2 x-1/2,-y+1/2,z #3 -x+3/2,-y+1/2,z+1/2
#4 x+1/2,-y+1/2,z

Table S2. Selected bond length (Å) and bond angles (°) in **2**

Zn(1)-O(2)	1.9394(19)
Zn(1)-O(4)#1	1.9610(18)
Zn(1)-O(3)#2	1.967(2)
Zn(1)-O(1)#2	1.980(2)
O(1)-C(1)	1.258(3)
O(2)-C(1)	1.266(3)
O(3)-C(9)	1.261(3)
O(4)-C(9)	1.254(3)
C(1)-C(2)	1.516(3)
C(2)-C(3)	1.563(3)
C(2)-C(6)	1.585(3)
C(9)-C(6)	1.520(3)
C(3)-C(7)	1.511(4)
C(3)-C(4)	1.533(4)
C(6)-C(5)	1.555(4)
C(8)-C(7)	1.331(4)
C(8)-C(5)	1.504(4)
C(5)-C(4)	1.533(4)
O(2)-Zn(1)-O(4)#1	122.92(8)
O(2)-Zn(1)-O(3)#2	112.41(9)
O(4)#1-Zn(1)-O(3)#2	105.92(9)
O(2)-Zn(1)-O(1)#2	110.02(8)
O(4)#1-Zn(1)-O(1)#2	108.96(9)
O(3)#2-Zn(1)-O(1)#2	92.26(9)
C(1)-O(1)-Zn(1)#3	126.02(17)
C(1)-O(2)-Zn(1)	111.17(17)
C(9)-O(3)-Zn(1)#3	125.84(18)
C(9)-O(4)-Zn(1)#1	113.13(17)
O(1)-C(1)-O(2)	120.4(2)
O(1)-C(1)-C(2)	121.5(2)
O(2)-C(1)-C(2)	117.9(2)
C(1)-C(2)-C(3)	113.8(2)
C(1)-C(2)-C(6)	120.39(19)
C(3)-C(2)-C(6)	101.93(18)
O(4)-C(9)-O(3)	120.5(2)
O(4)-C(9)-C(6)	117.8(2)
O(3)-C(9)-C(6)	121.5(2)
C(7)-C(3)-C(4)	100.6(2)
C(7)-C(3)-C(2)	106.7(2)
C(4)-C(3)-C(2)	100.2(2)
C(9)-C(6)-C(5)	113.1(2)
C(9)-C(6)-C(2)	120.4(2)
C(5)-C(6)-C(2)	102.23(19)
C(7)-C(8)-C(5)	107.8(3)
C(8)-C(7)-C(3)	107.2(3)
C(8)-C(5)-C(4)	100.5(2)
C(8)-C(5)-C(6)	106.8(2)
C(4)-C(5)-C(6)	100.4(2)
C(5)-C(4)-C(3)	93.8(2)

Symmetry transformations used to generate equivalent atoms:
#1 -x+1,-y+1,-z+1 #2 -x+1,y-1/2,-z+3/2 #3 -x+1,y+1/2,-z+3/2

X-ray Powder Pattern

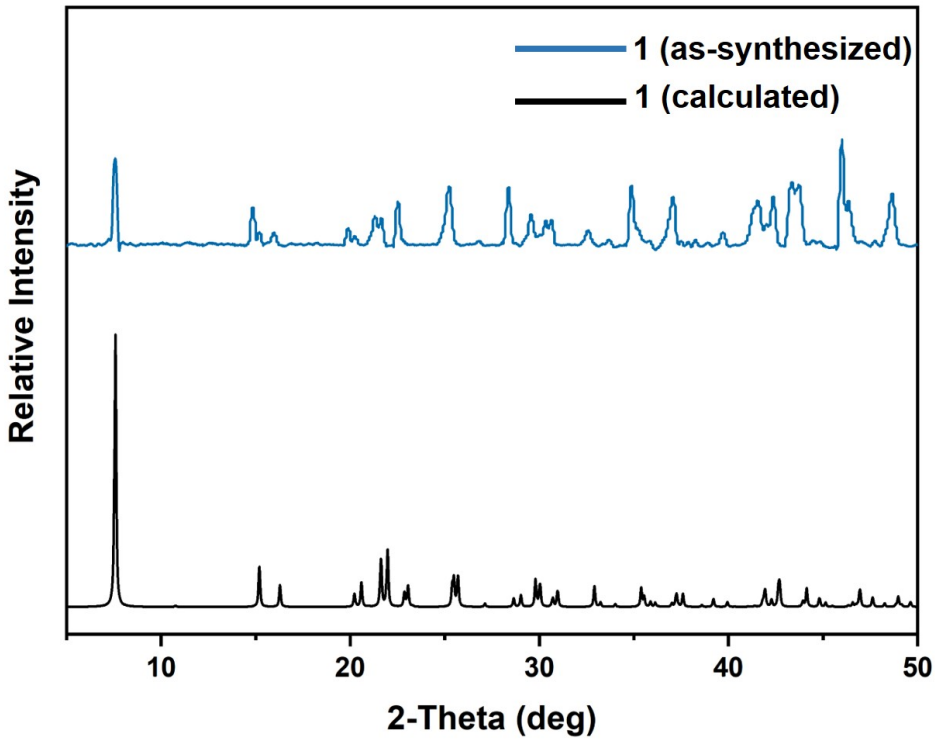

*Figure S6***.** X-ray powder patterns of compounds **1**.

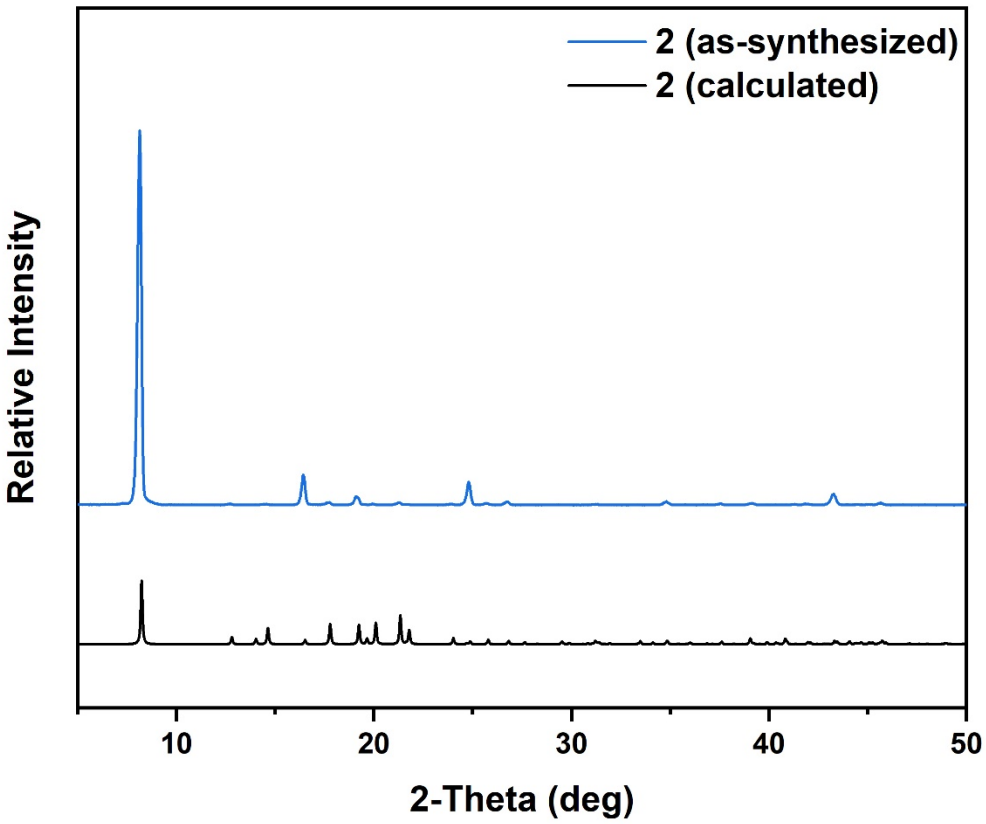

Figure S7. X-ray powder patterns of compounds **2**.

FT-IR Spectra

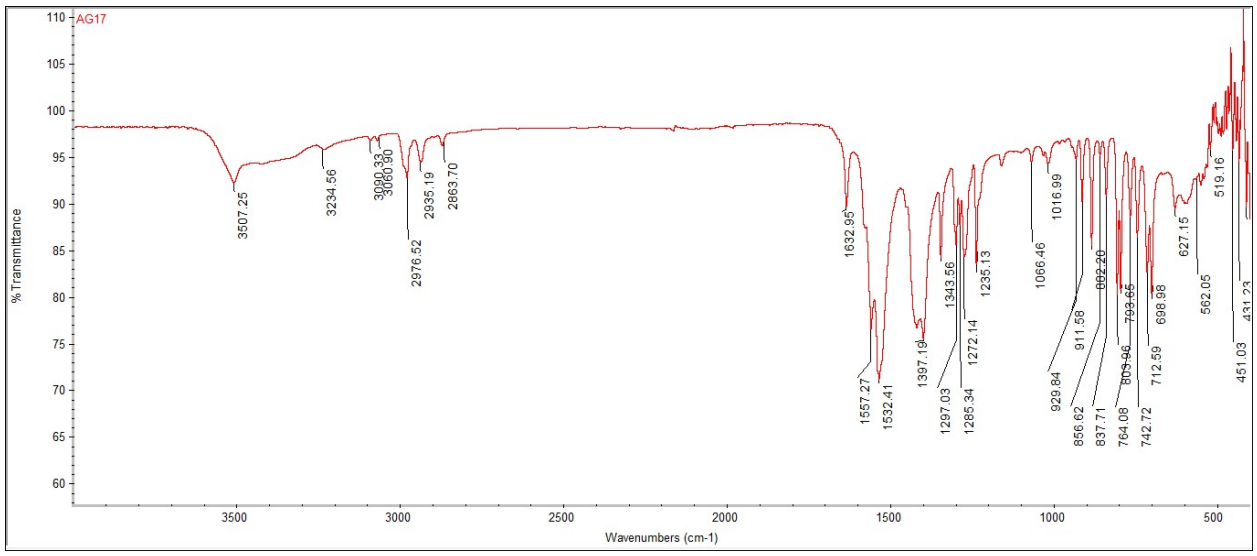

Figure S8. FT-IR Spectra of **1**.

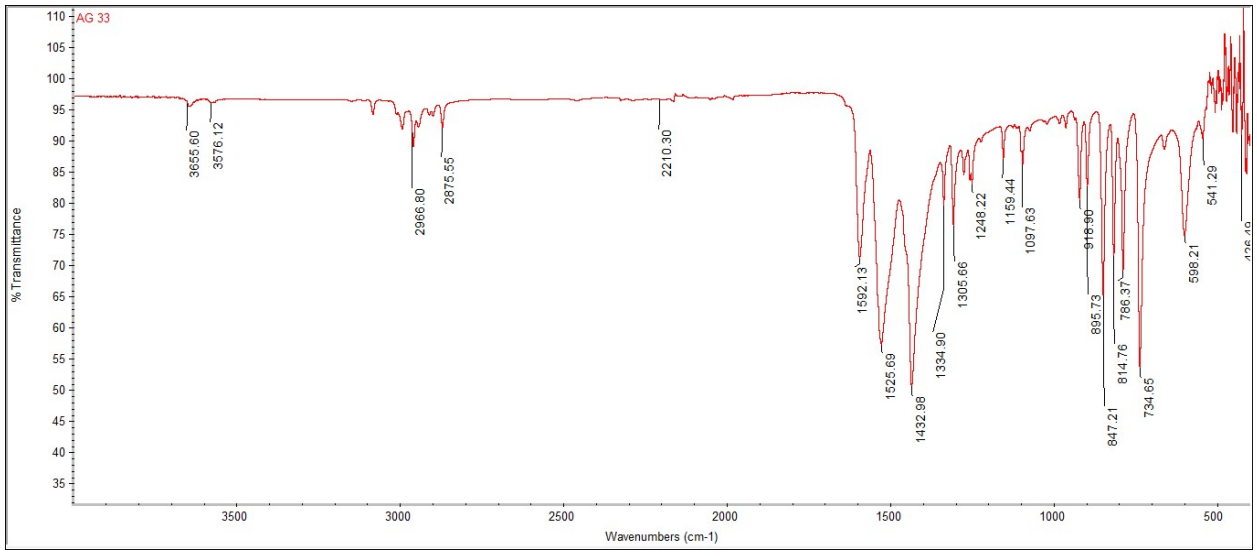

Figure S9. FT-IR Spectra of **2**.

TGA analysis

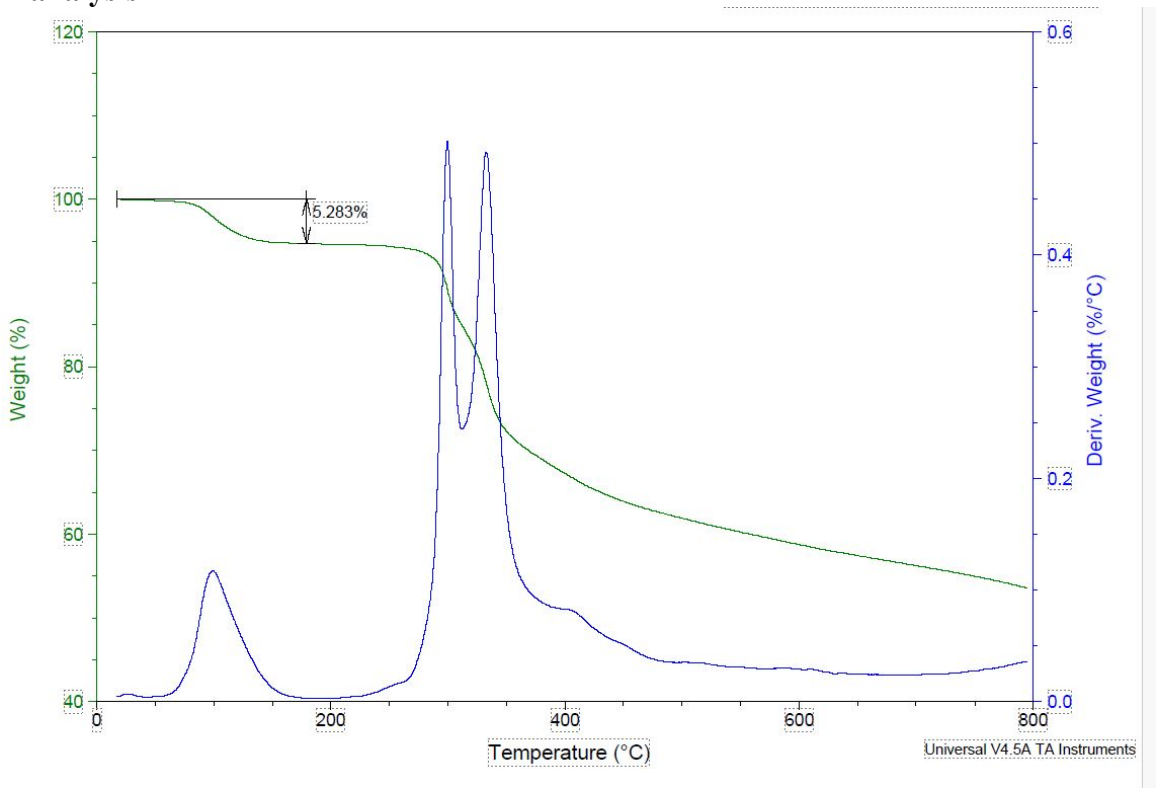

Figure S10. TGA Analysis of **1**.

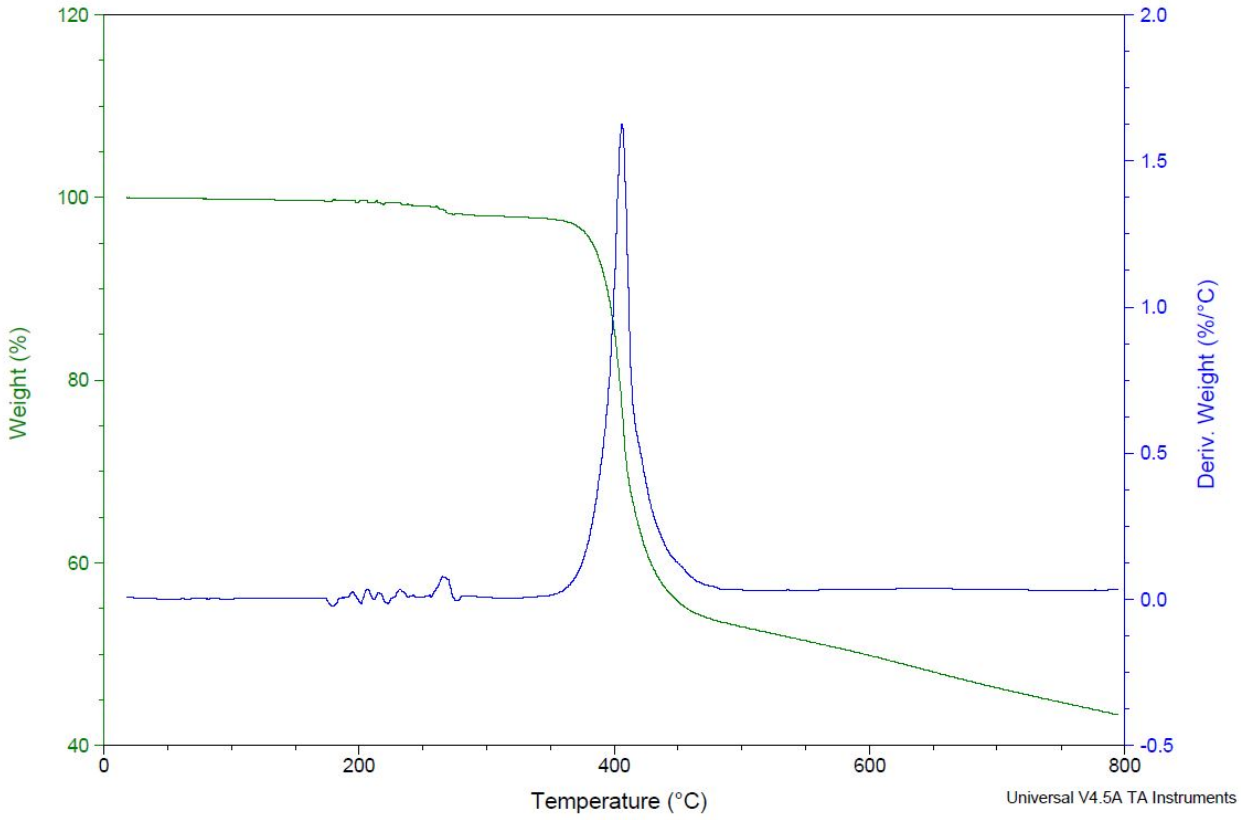

Figure S11. TGA Analysis of **2.**

Solid-state UV-vis spectra

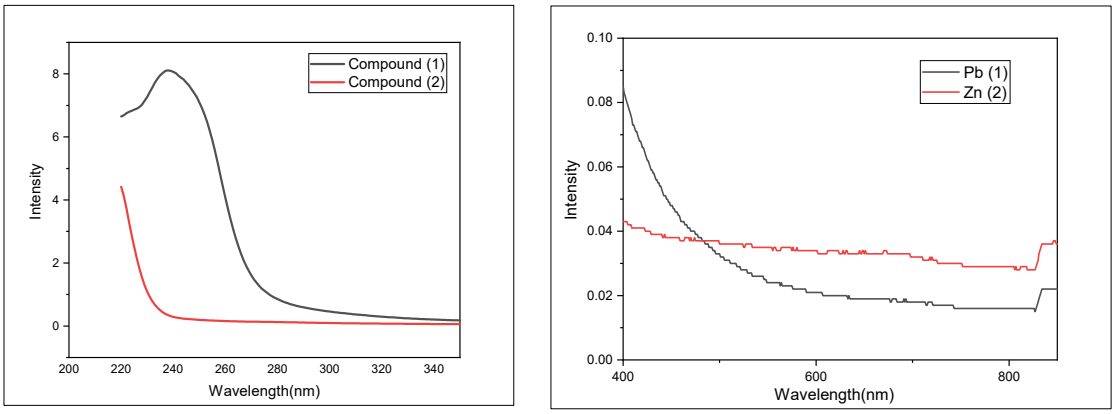

Figure S12. Solid-state UV-vis spectra of compounds **1**-**2**.