

## Supplementary Material

### Synthesis and Characterization of Three New Emissive Mononuclear Cu<sup>I</sup> Heteroleptic Complexes with Functionalized 6-Cyano-2,2'-bipyridine Chelating Ligands

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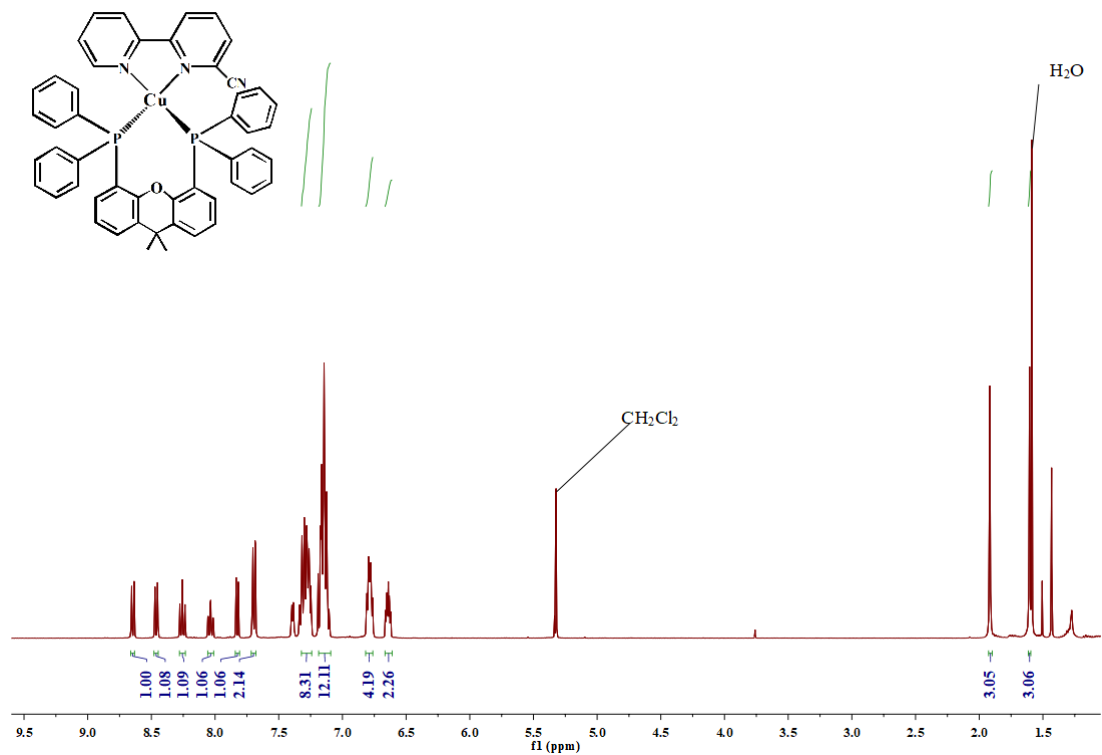


Fig. S1  $^1\text{H}$  NMR spectrum of **1** in  $\text{CD}_2\text{Cl}_2$ .

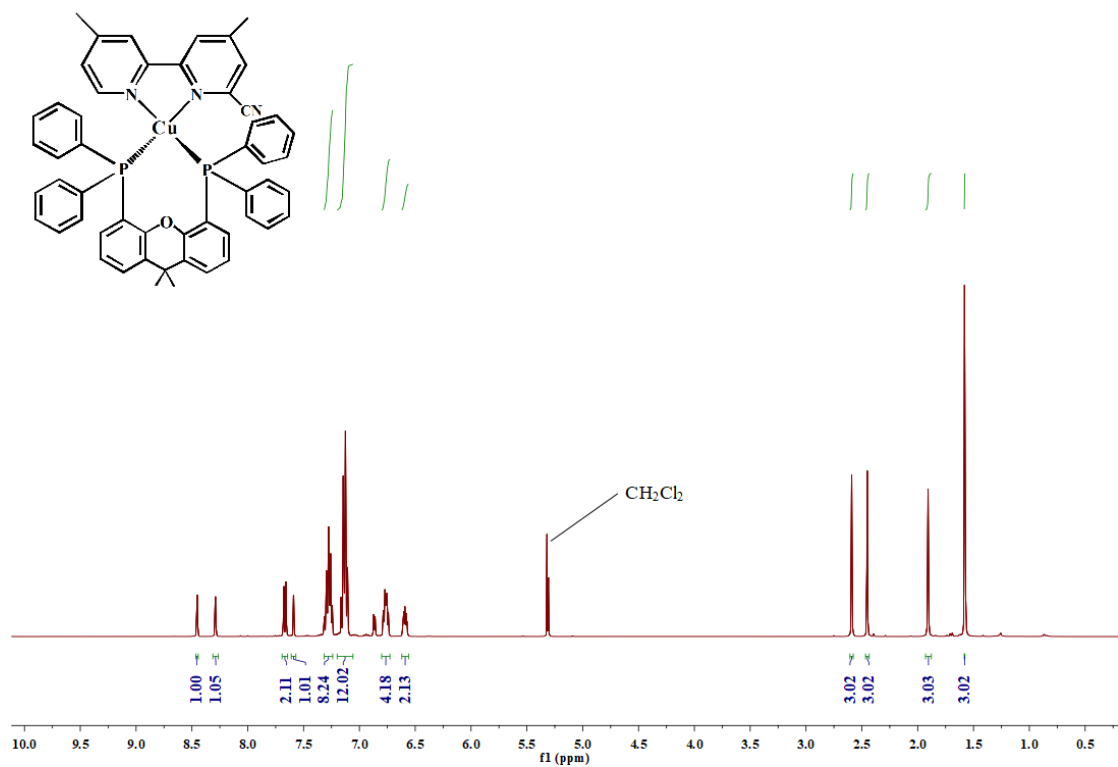


Fig. S2  $^1\text{H}$  NMR spectrum of **2** in  $\text{CD}_2\text{Cl}_2$ .

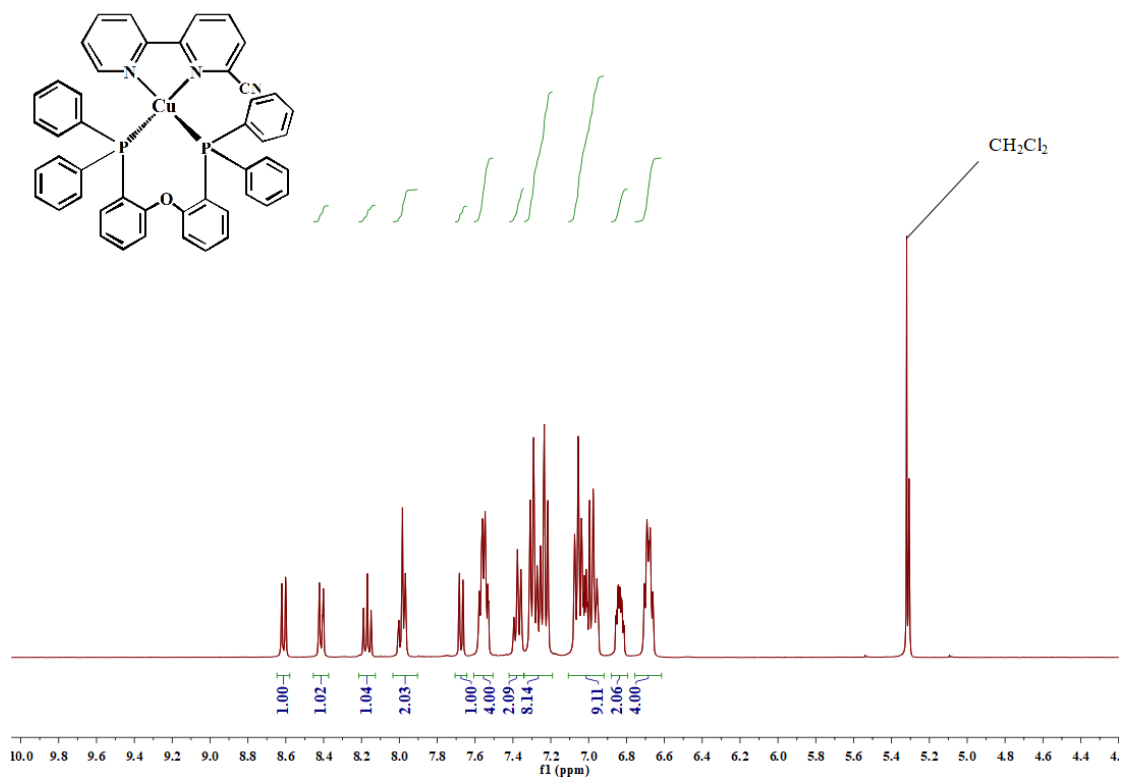


Fig. S3  $^1\text{H}$  NMR spectrum of **3** in  $\text{CD}_2\text{Cl}_2$ .

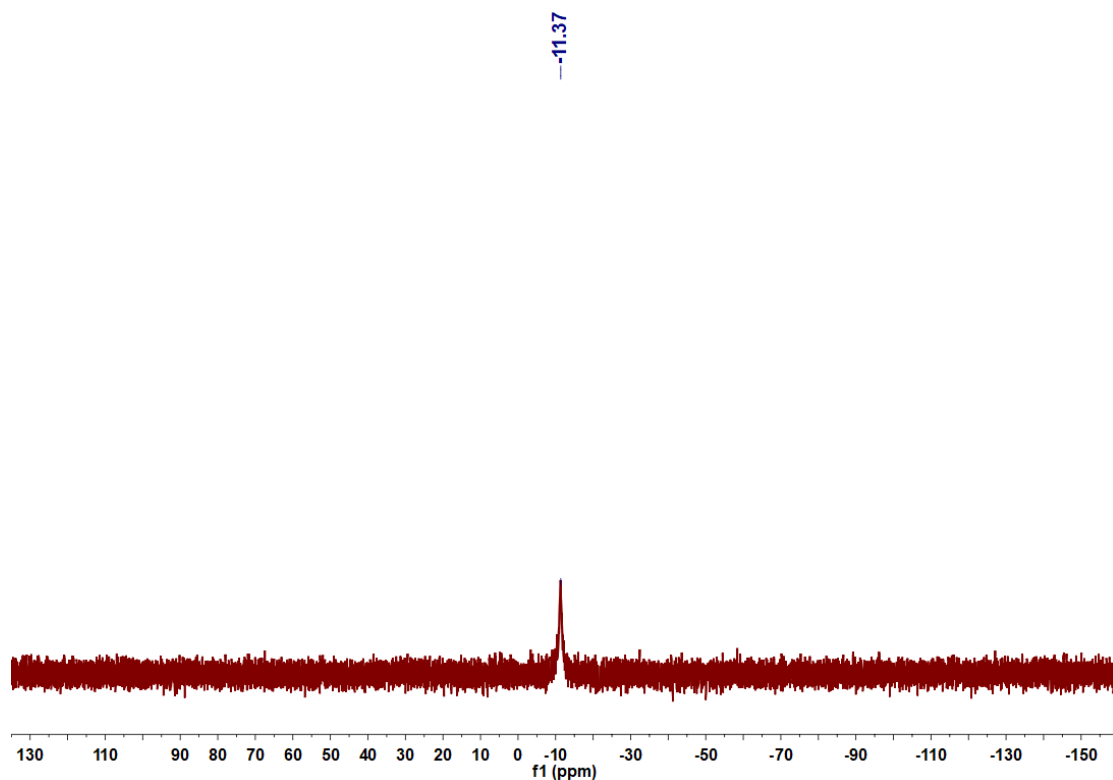


Fig. S4  $^{31}\text{P}$  NMR spectrum of **1** in  $\text{CD}_2\text{Cl}_2$ .

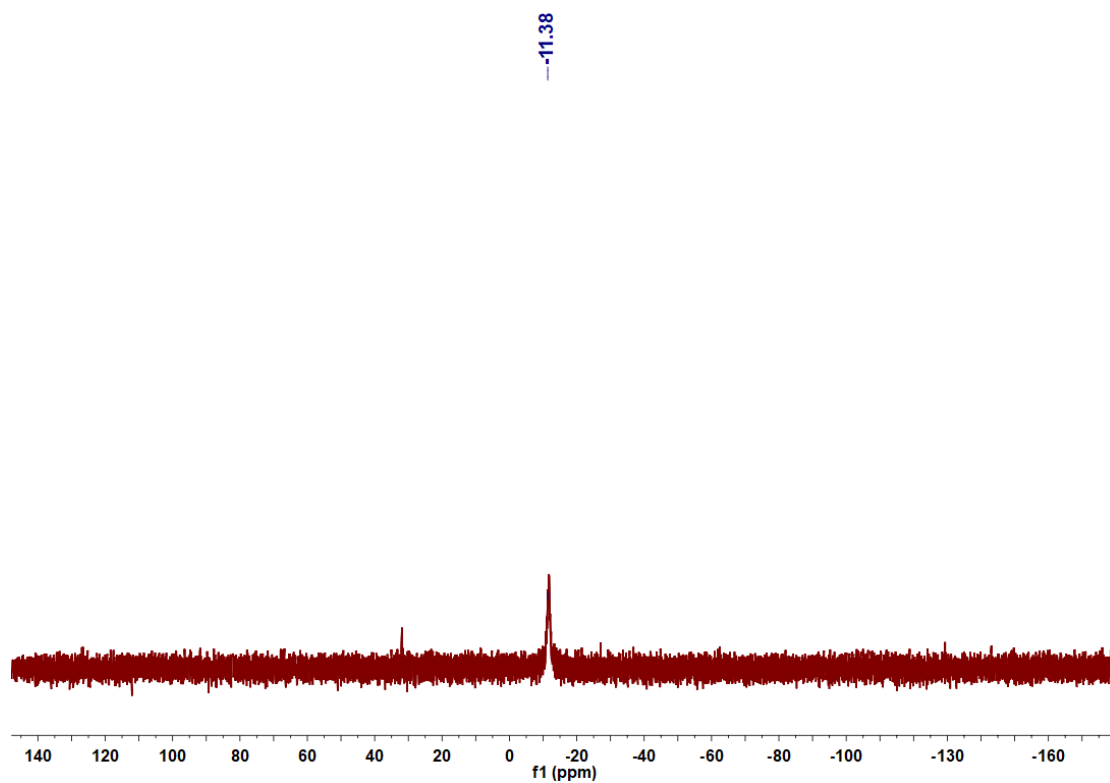


Fig. S5  $^{31}\text{P}$  NMR spectrum of **2** in  $\text{CD}_2\text{Cl}_2$ .

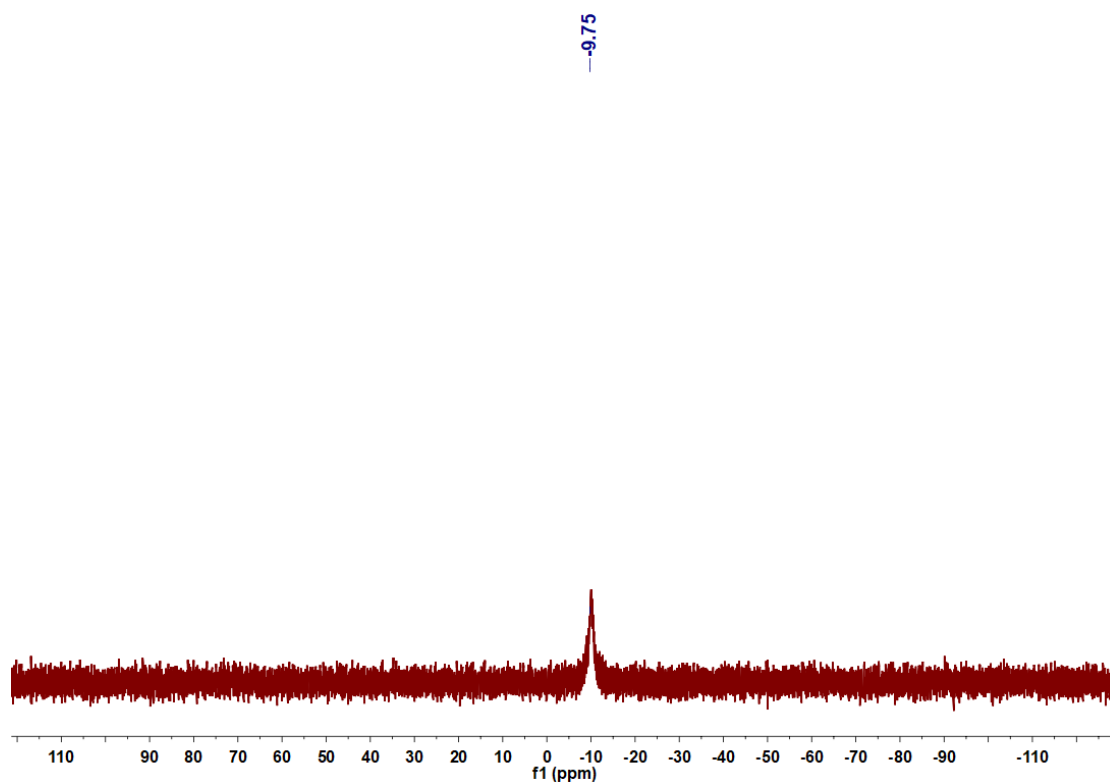


Fig. S6  $^{31}\text{P}$  NMR spectrum of **3** in  $\text{CD}_2\text{Cl}_2$ .

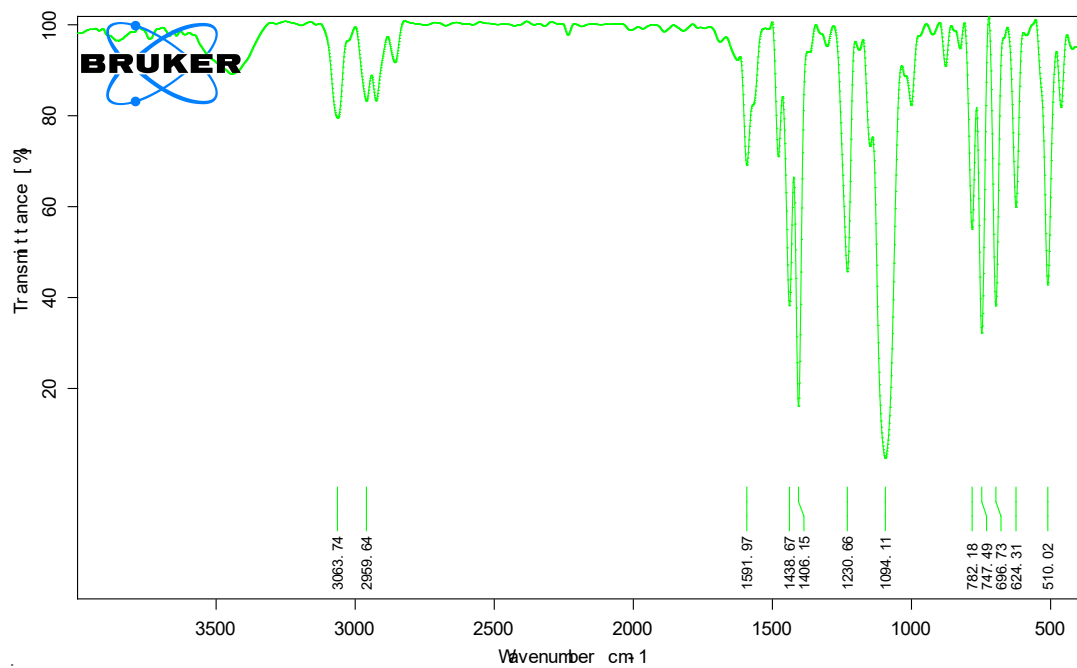


Fig. S7 IR spectrum of 1.

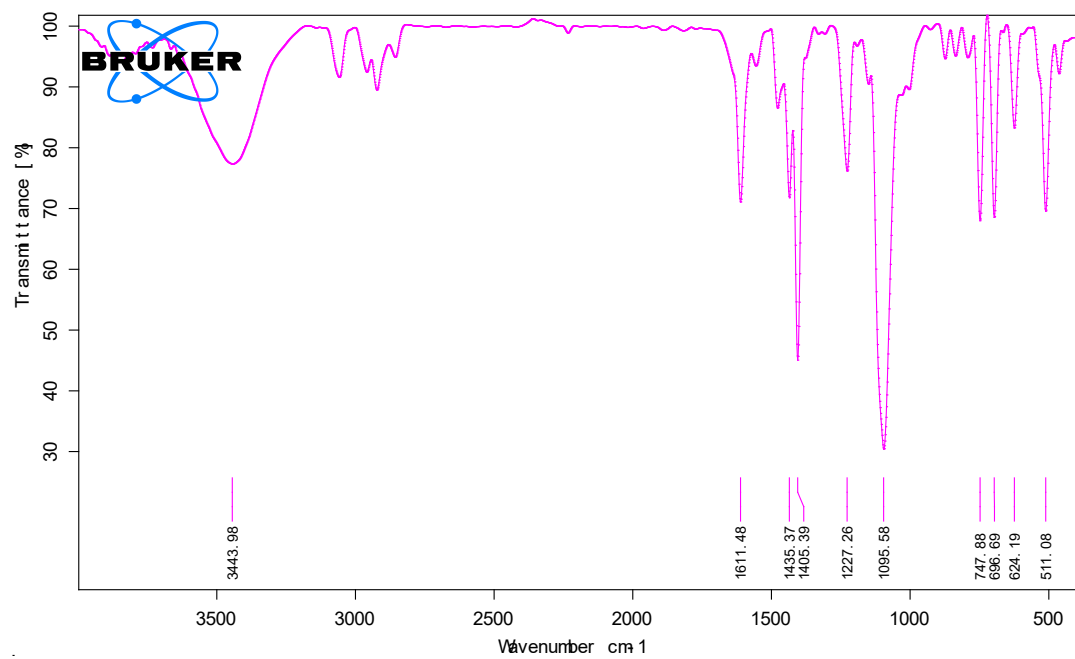


Fig. S8 IR spectrum of 2.

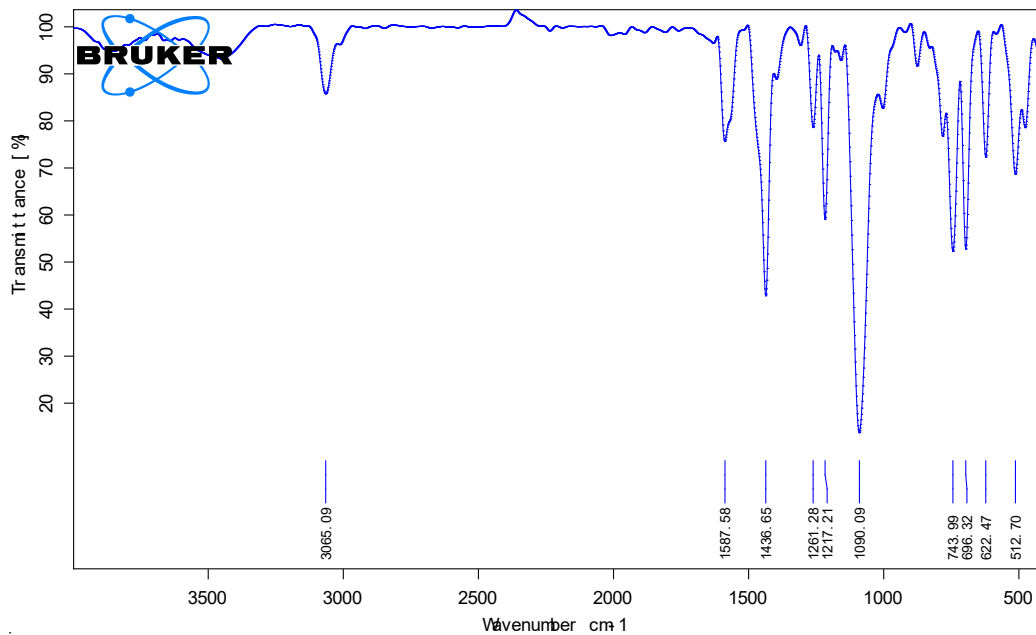


Fig. S9 IR spectrum of 3.

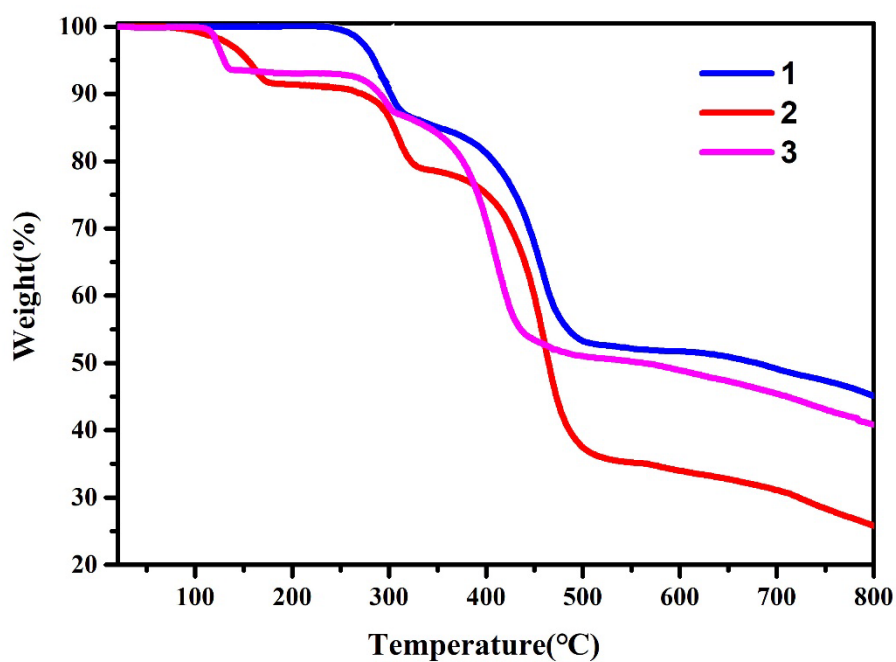
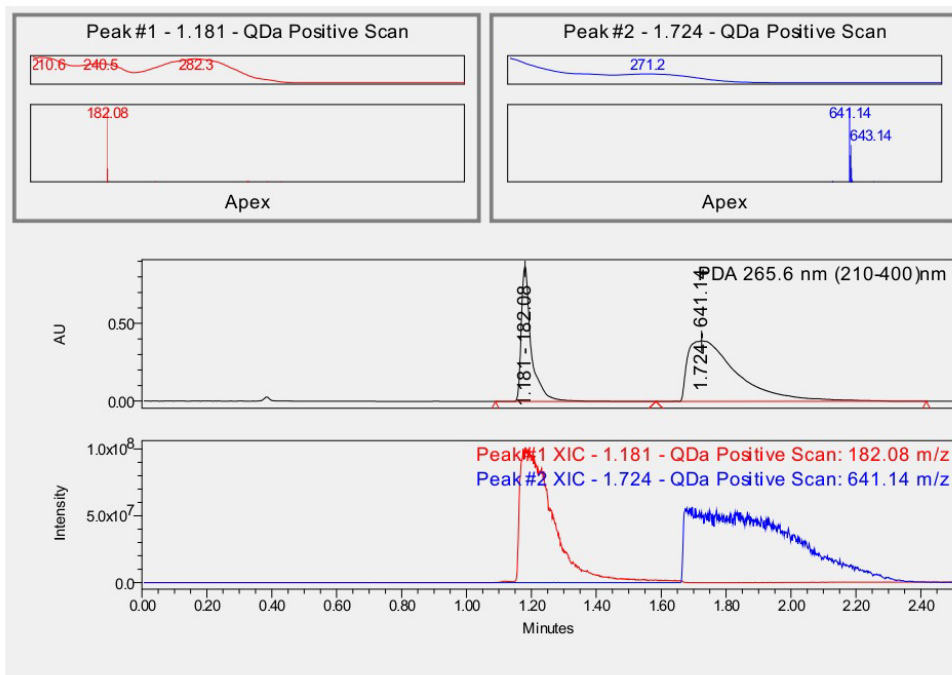


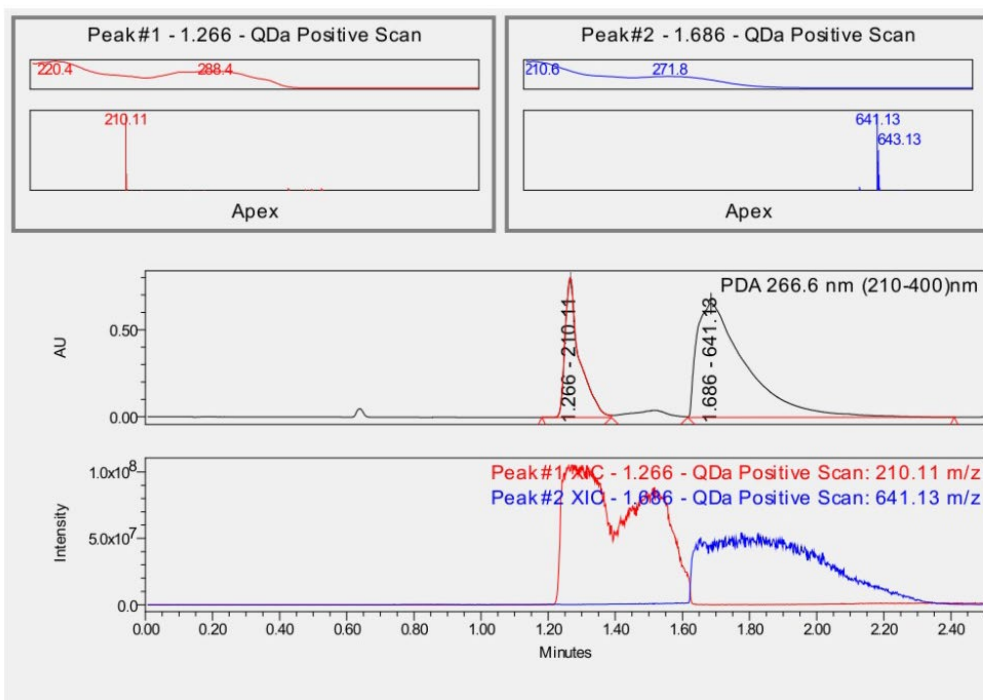
Fig. S10 Thermogravimetric analysis (TGA) curves for 1-3.



**Peak Results**

Name	RT	Area	Height	% Area
1	1.181	1862365	869845	30.94
2	1.724	4157051	388832	69.06

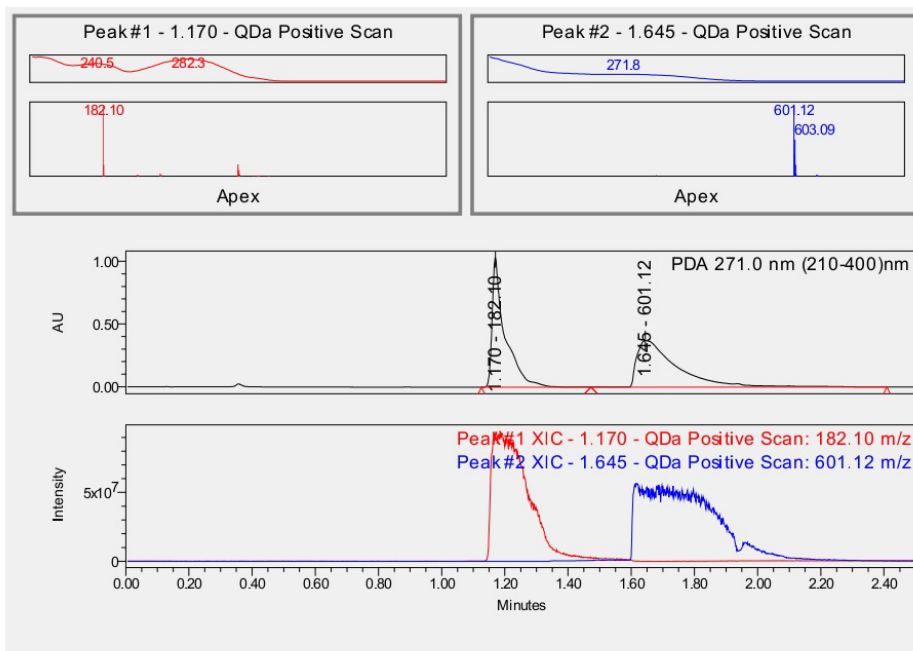
**Fig. S11 LC-MS of complex 1**



**Peak Results**

Name	RT	Area	Height	% Area
1	1.266	2418078	802249	26.65
2	1.686	6654767	653754	73.35

**Fig. S12 LC-MS of complex 2**



**Peak Results**

Name	RT	Area	Height	% Area
1	1.170	2938279	1035230	47.16
2	1.645	3291705	371287	52.84

**Fig. S13** LC-MS of complex 3