Electronic Supplementary Material (ESI) for RSC Advances.


# Supporting Information

# Efficient and tunable multi-color and white light Ln-MOFs with high luminescent quantum yields

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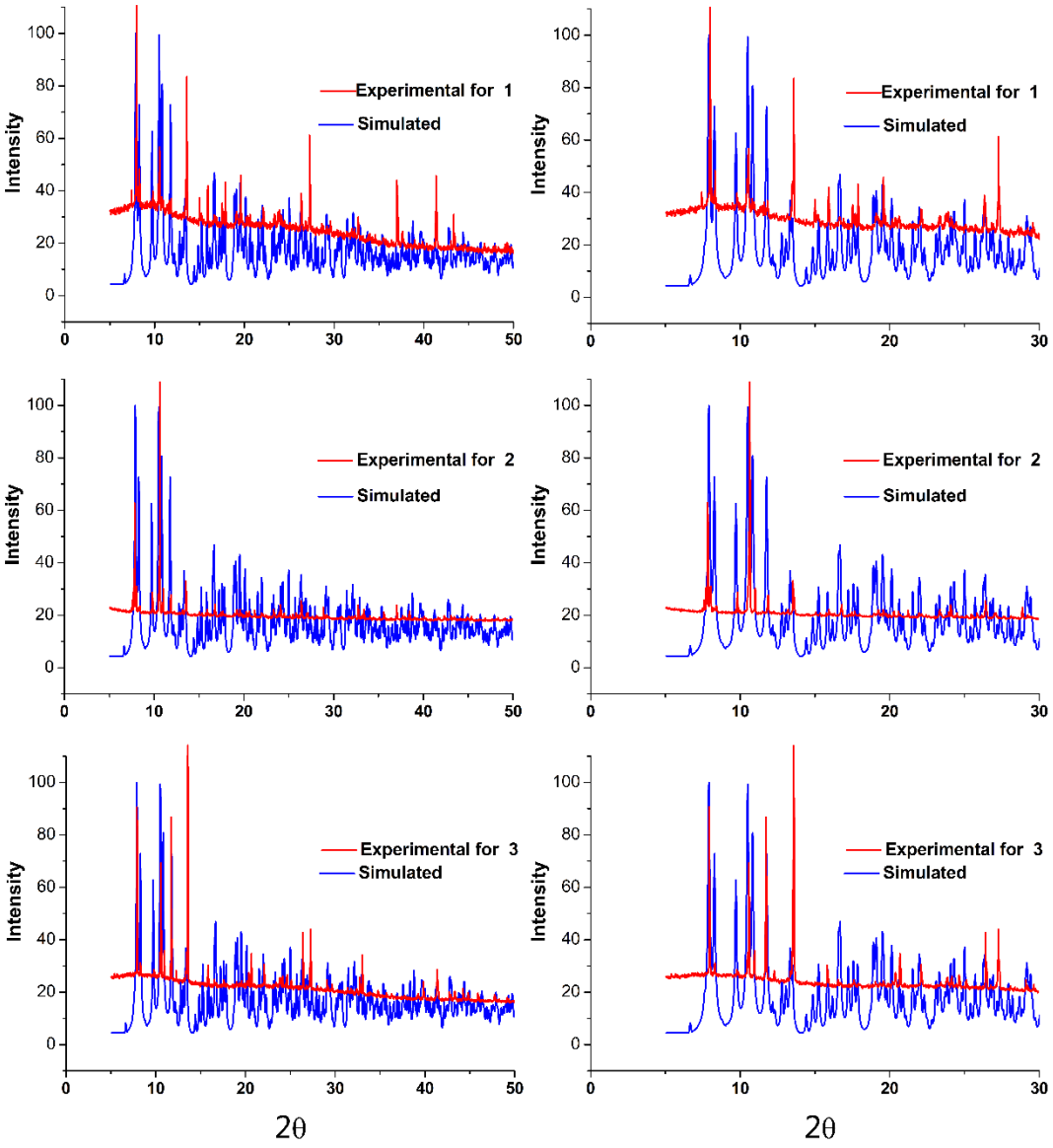
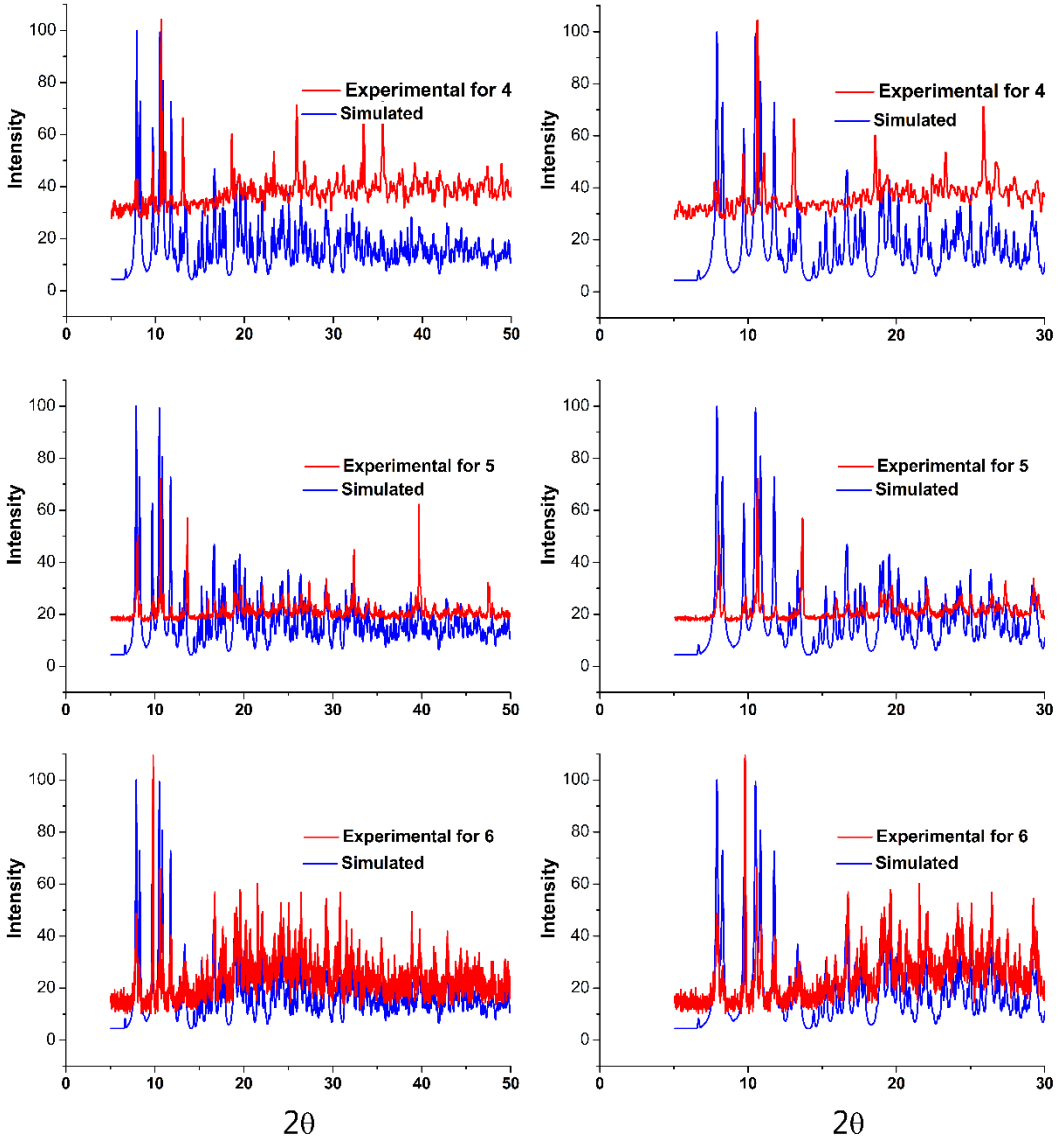

Intensity
Experimental for 1
Simulated
Experimental for 2
Simulated
Experimental for 3
Simulated
2θ
2θ


Intensity
Experimental for 4
Simulated
Experimental for 5
Simulated
Experimental for 6
Simulated
2θ
2θ

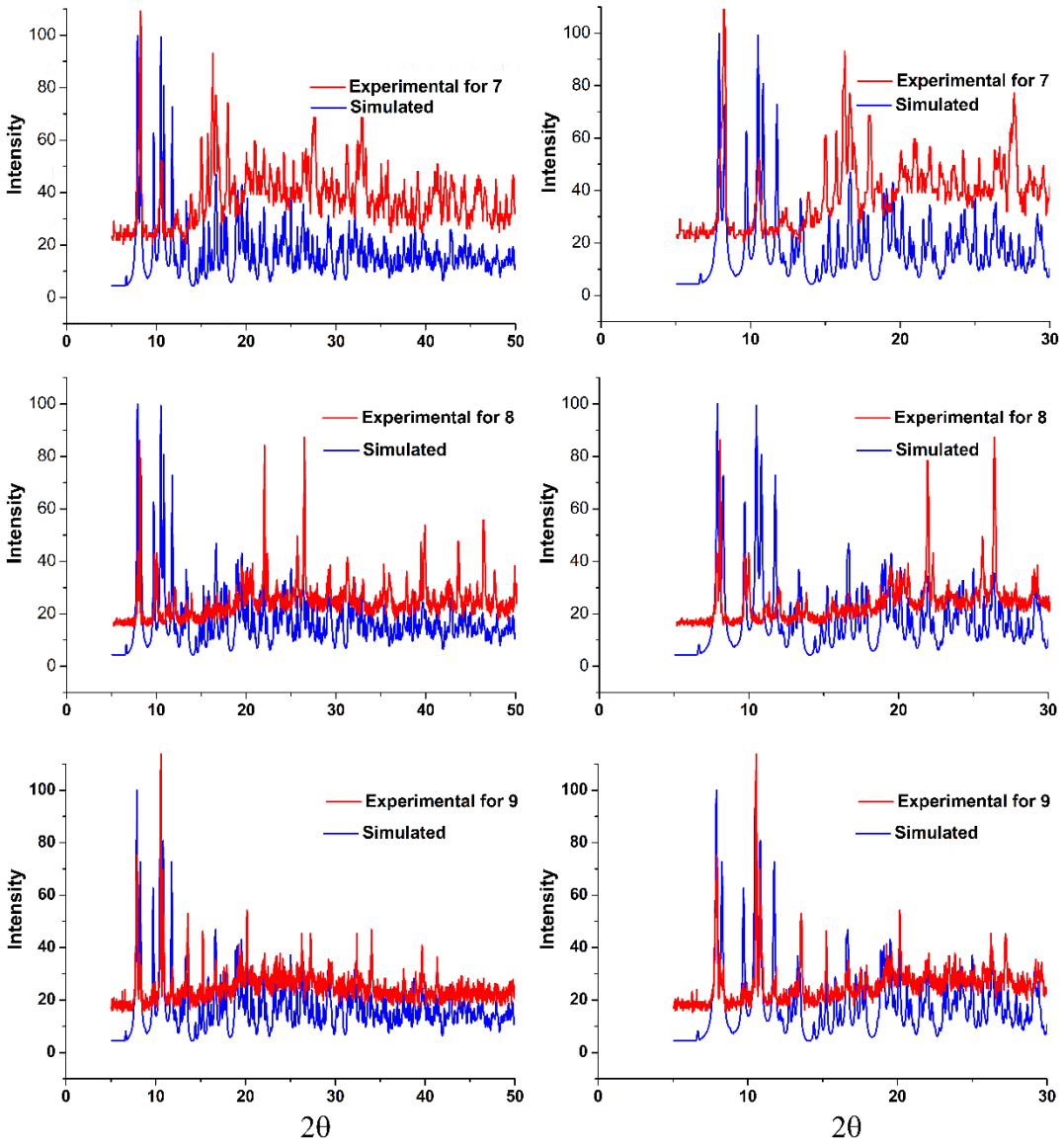



**Fig. S1** Powder XRD patterns (top, red) and simulated patterns (bottom, blue) of compounds **1–9**(left, 0-50 degree, right, 0-30 degree).

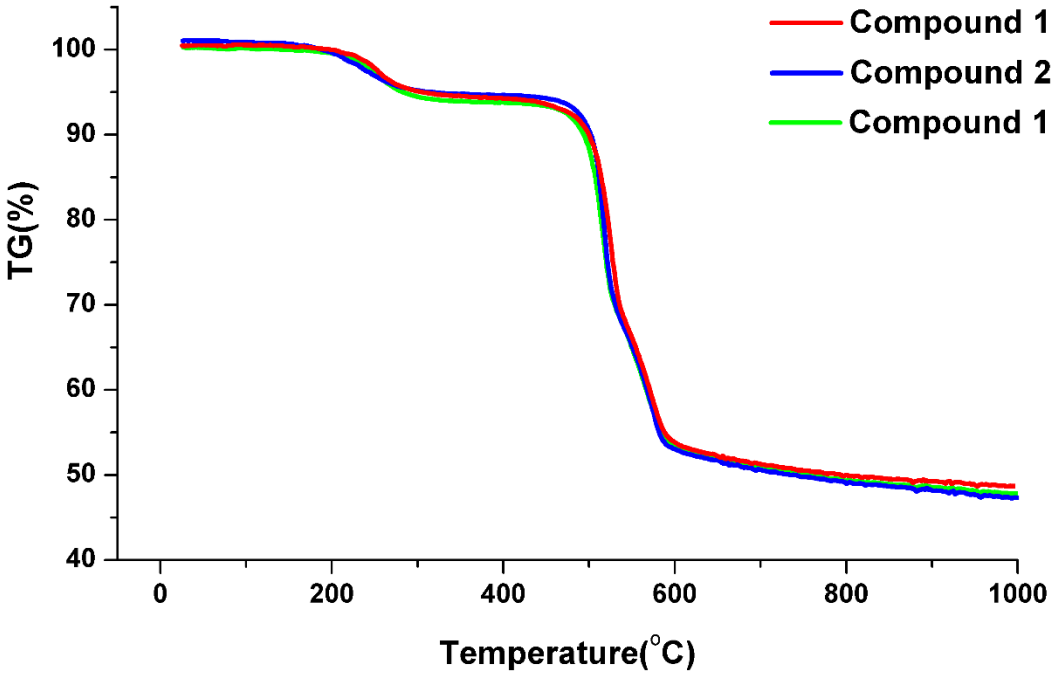



**Fig. S2** TGA curves of compounds **1**–**3**.

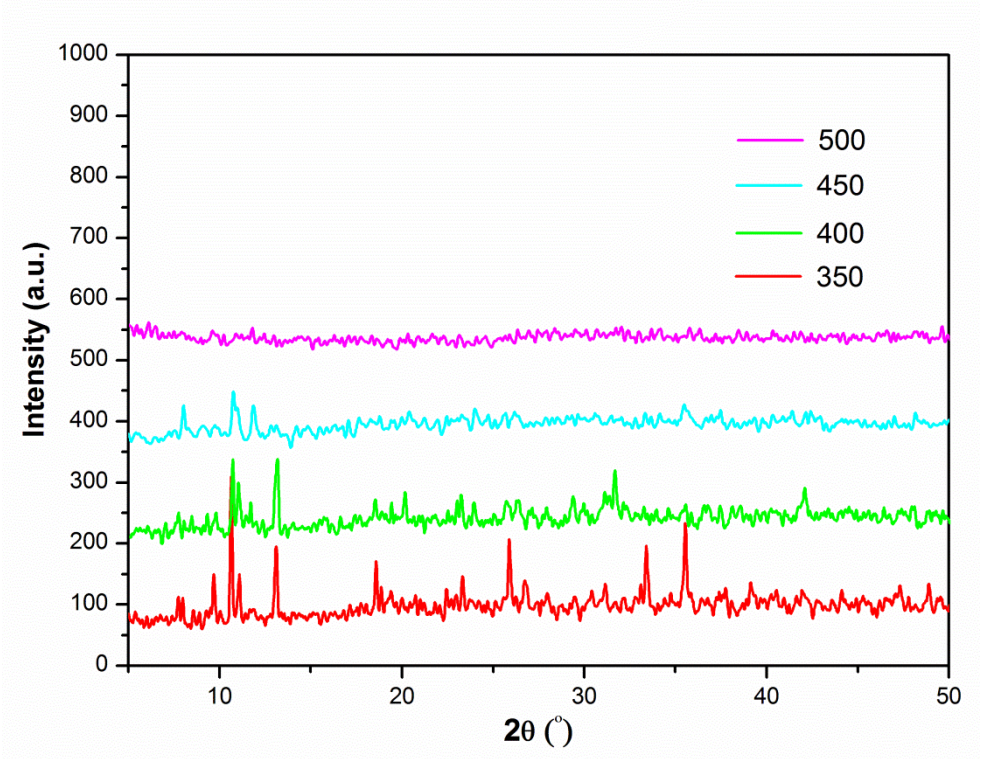
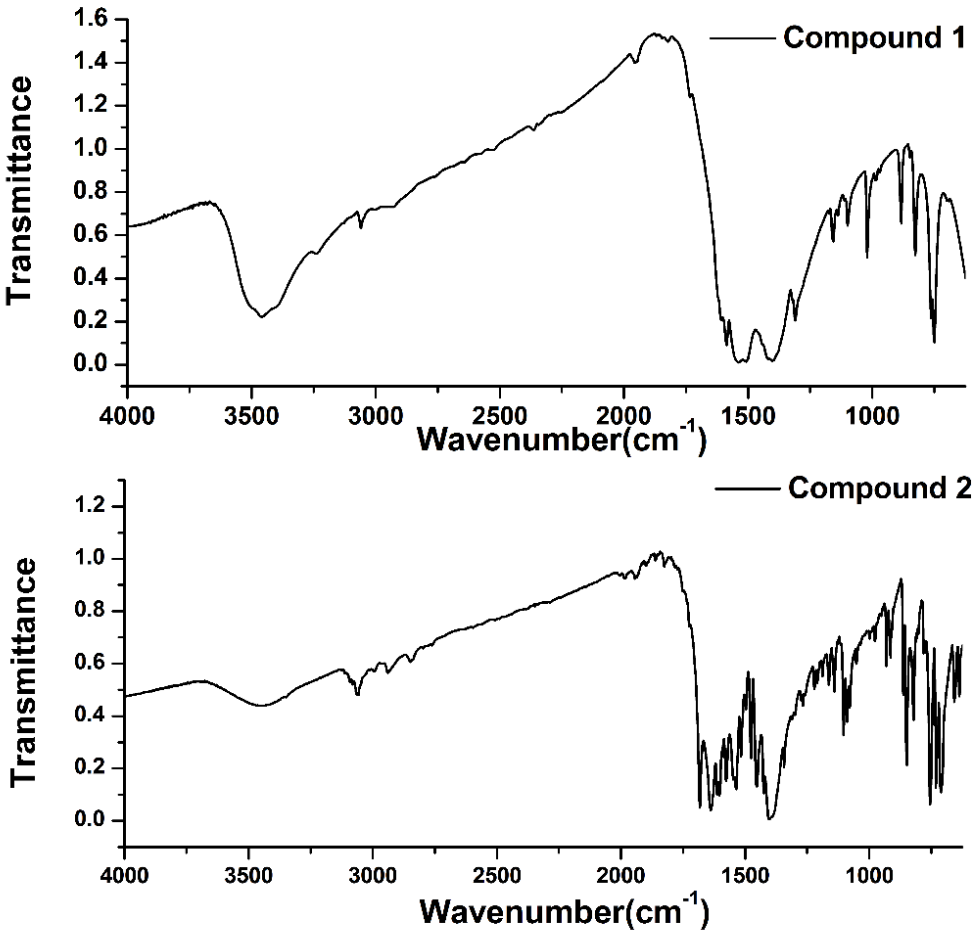
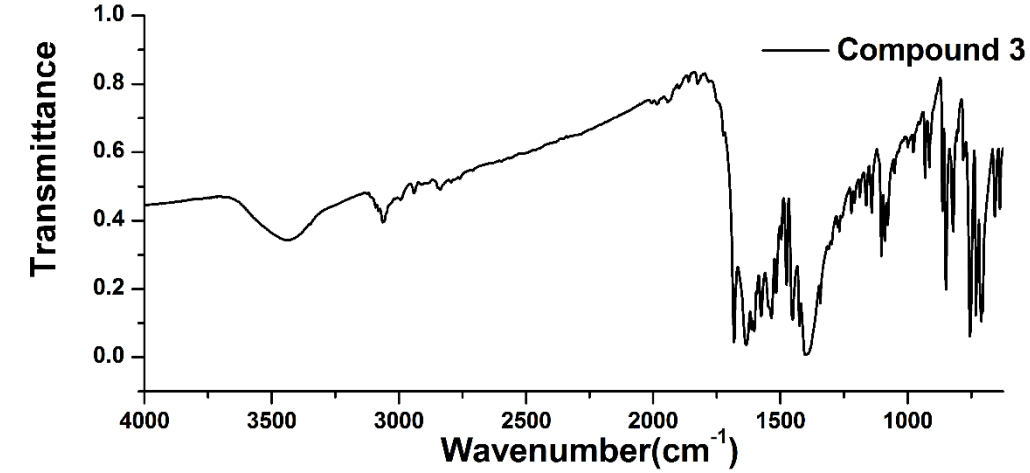
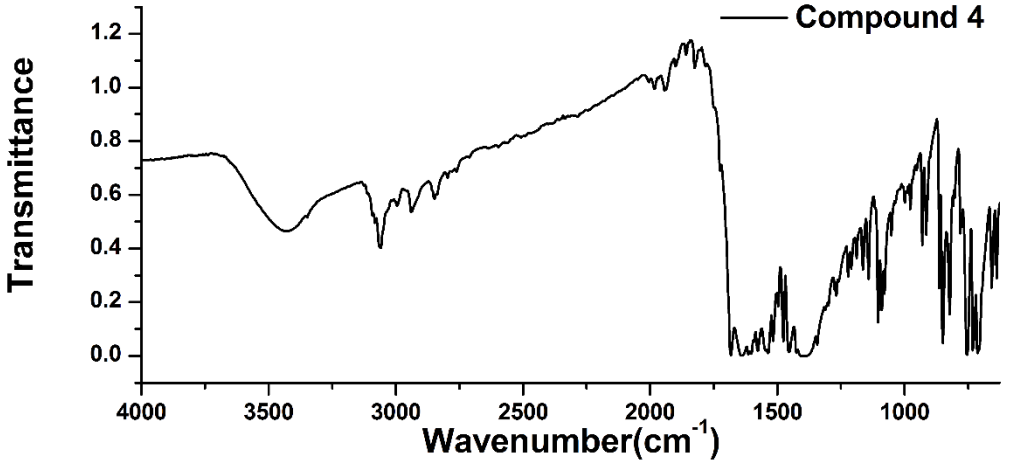
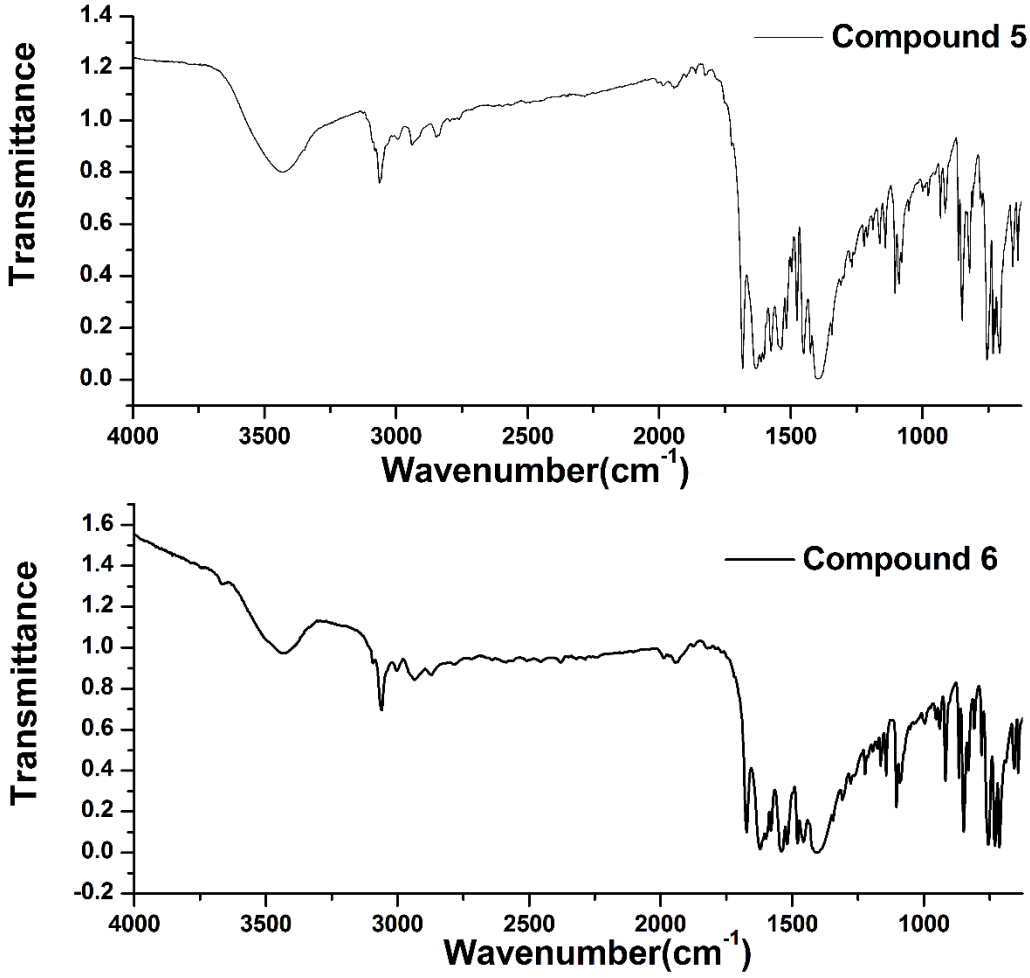



**Fig. S3** Variable temperature XRD spectra for compound **1**.


Compound 1
Transmittance
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
4000
3500
3000
2500
2000
1500
1000
Wavenumber(cm-1)
Compound 2
Transmittance
1.2
1.0
0.8
0.6
0.4
0.2
0.0
4000
3500
3000
2500
2000
1500
1000
Wavenumber(cm-1)


Compound 3
Transmittance
1.0
0.8
0.6
0.4
0.2
0.0
4000
3500
3000
2500
2000
1500
1000
Wavenumber(cm-1)


Compound 4
Transmittance
1.2
1.0
0.8
0.6
0.4
0.2
0.0
4000
3500
3000
2500
2000
1500
1000
Wavenumber(cm-1)


Compound 5
Transmittance
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
4000
3500
3000
2500
2000
1500
1000
Wavenumber(cm-1)
Compound 6
Transmittance
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
4000
3500
3000
2500
2000
1500
1000
Wavenumber(cm-1)

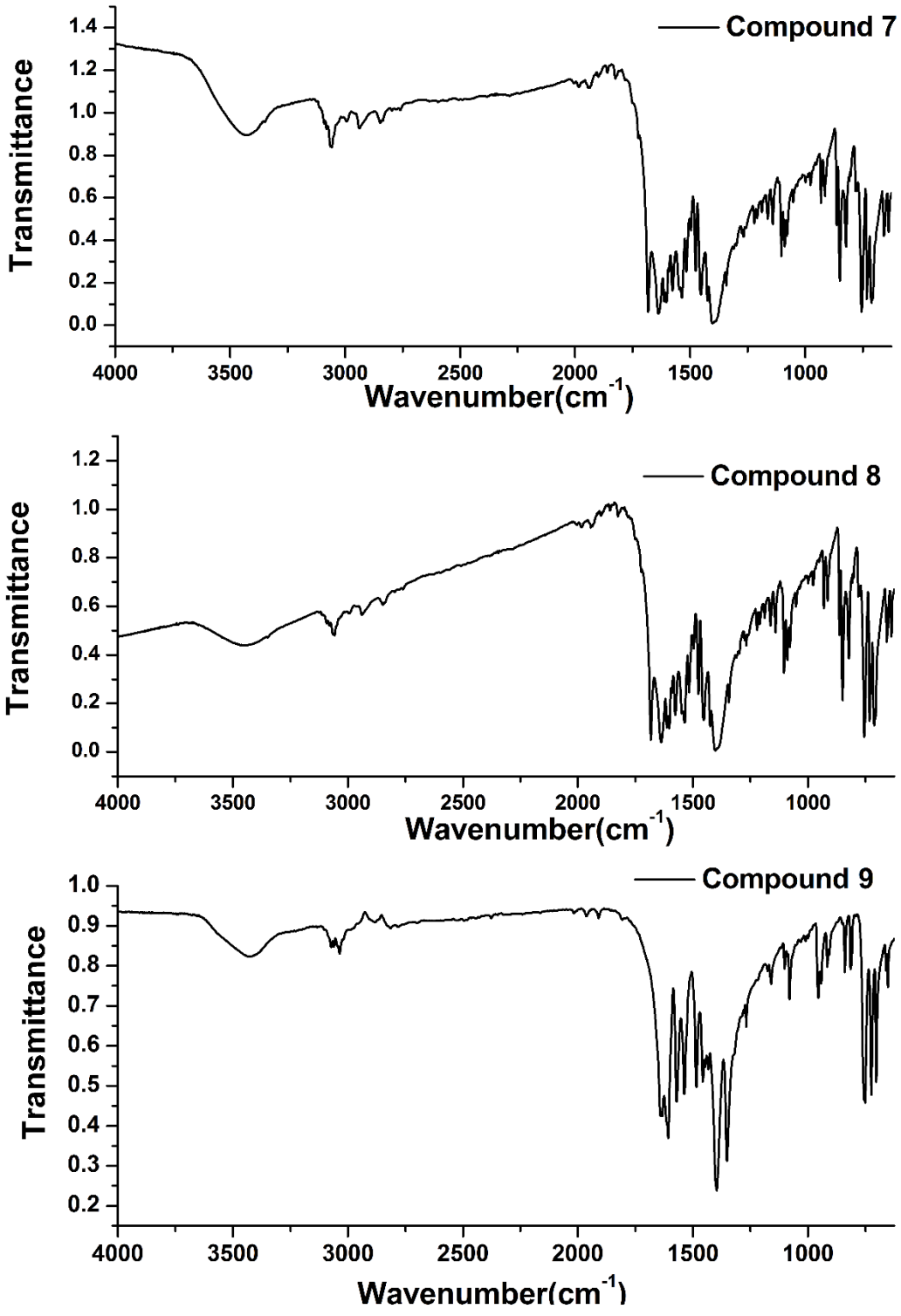



**Fig. S4** IR spectra of compounds **1**–**9**.

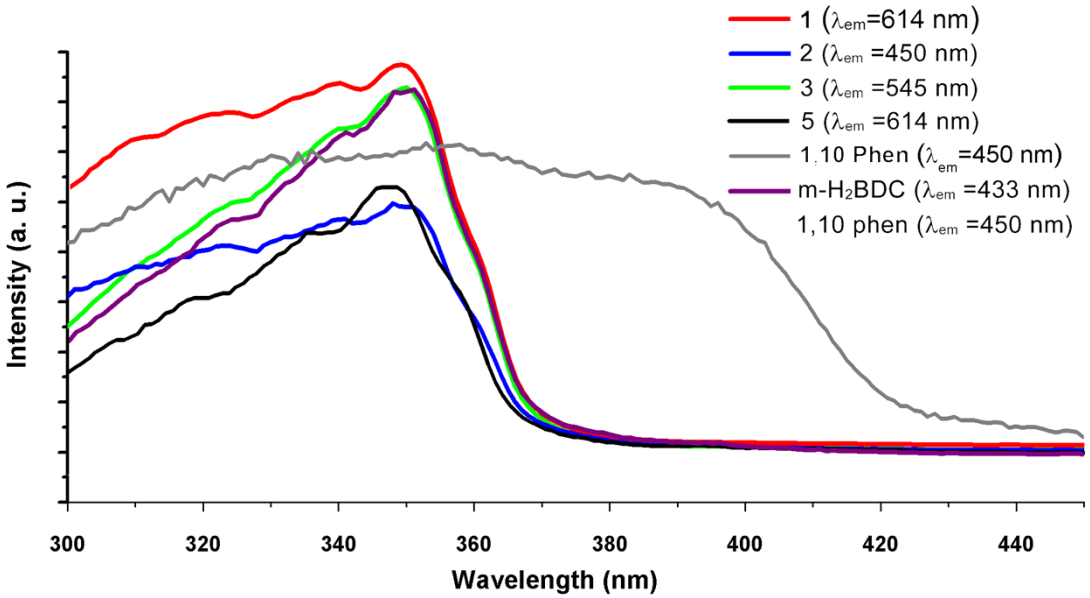



**Fig. S5** Excitation spectra of compounds **1**–**3**, **5** and ligands *m*-$H_2$BDC and Phen.