

Supporting Information.

Supramolecular lanthanide coordination polymers with cucurbit[6]uril: from synthesis and crystal structure to application

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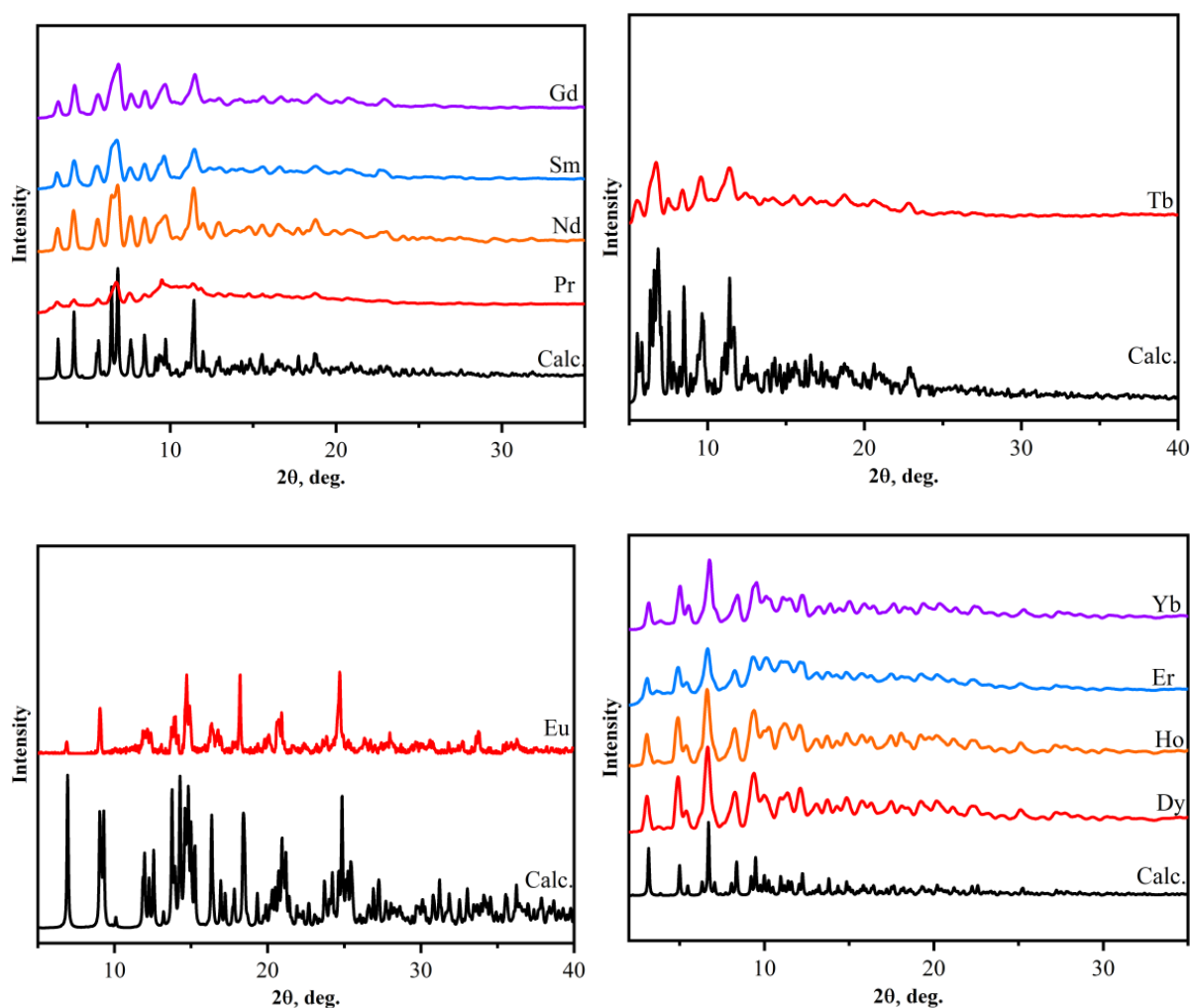


Figure 1S. Comparison of the theoretical (Calc.) and practical (Pr (Compound 1), Nd (Compound 2), Sm (Compound 3), Eu (Compound 4), Gd(Compound 5), Tb (Compound 6), Dy (Compound 7), Ho (Compound 8), Er (Compound 9), Yb (Compound 10)) PXRD patterns.

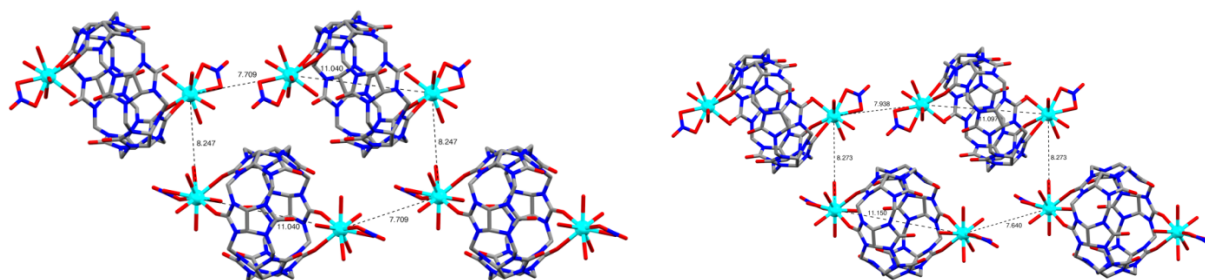


Figure 2S. The comparison of crystal packing fragments in compounds **5** and **6**.

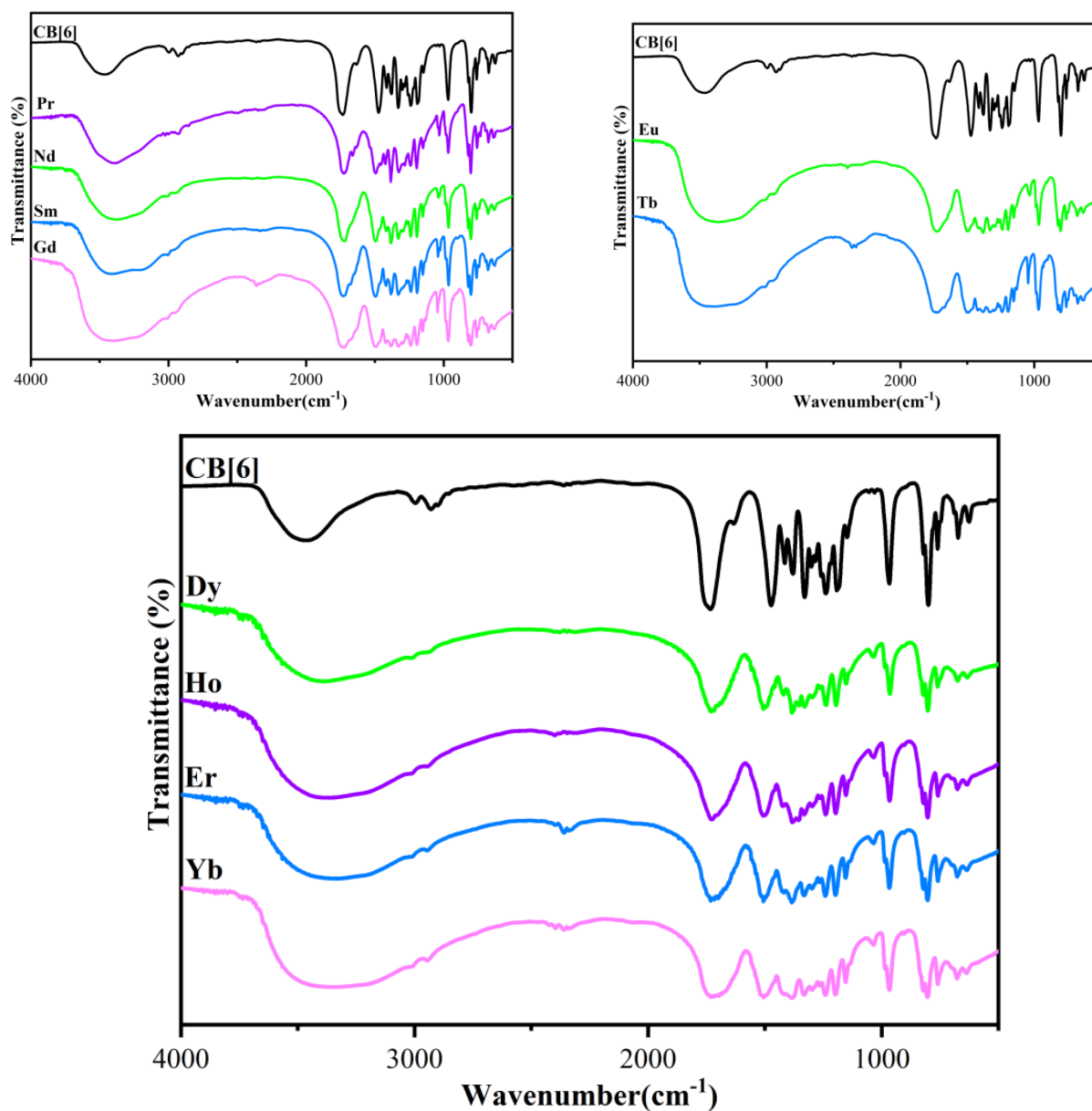
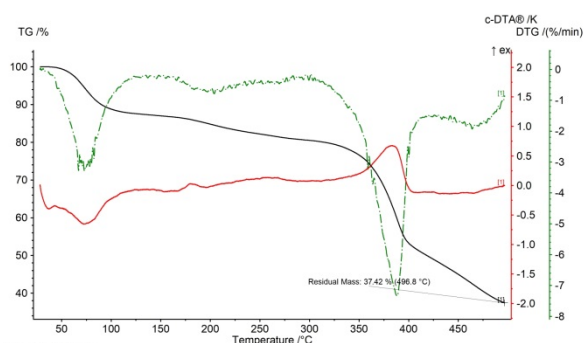
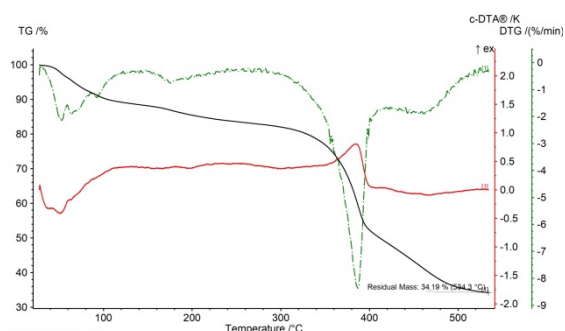


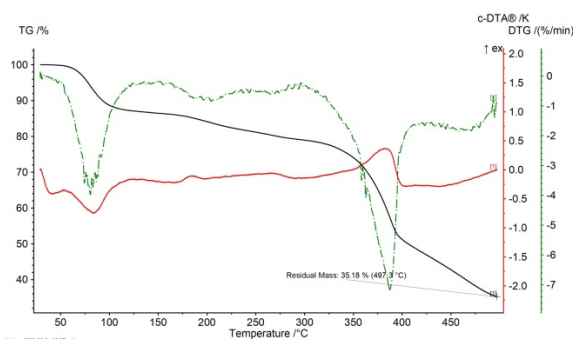
Figure 3S. Comparison of the IR spectra of pure CB[6] and compounds **1** – **10** (Pr (Compound **1**), Nd (Compound **2**), Sm (Compound **3**), Eu (Compound **4**), Gd(Compound **5**), Tb (Compound **6**), Dy (Compound **7**), Ho (Compound **8**), Er (Compound **9**), Yb (Compound **10**)).



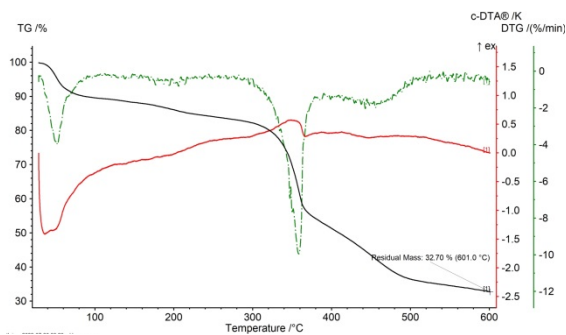
Compound 1



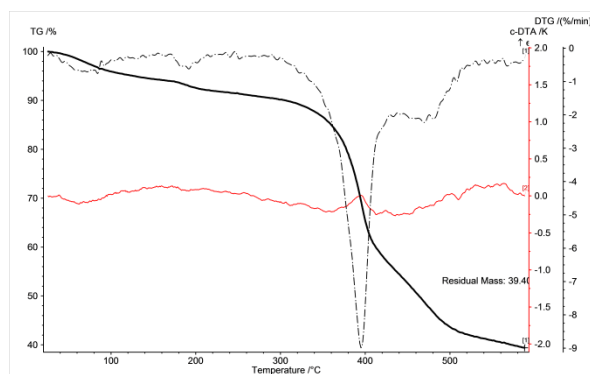
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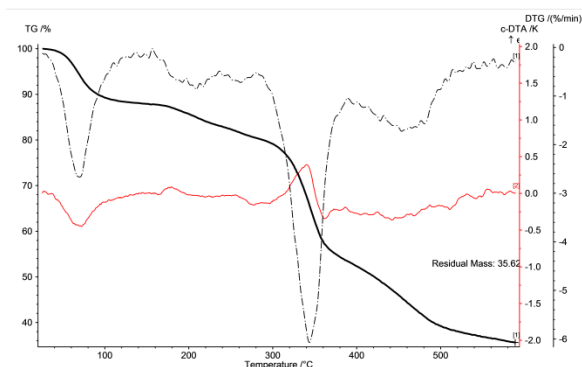
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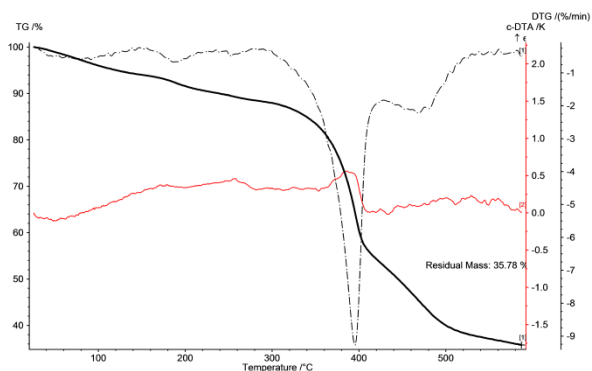
Compound 4



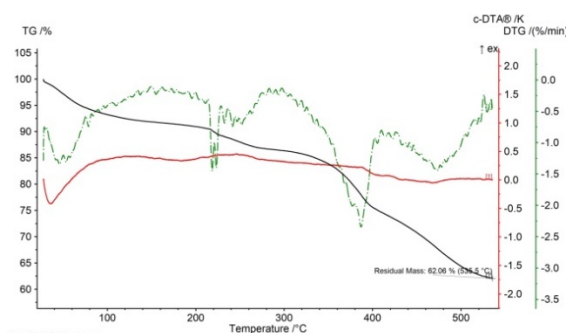
Compound 5



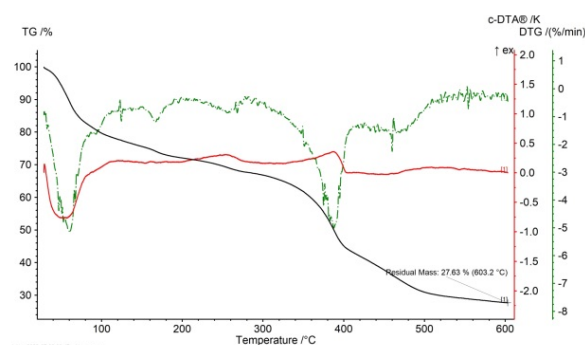
Compound 6



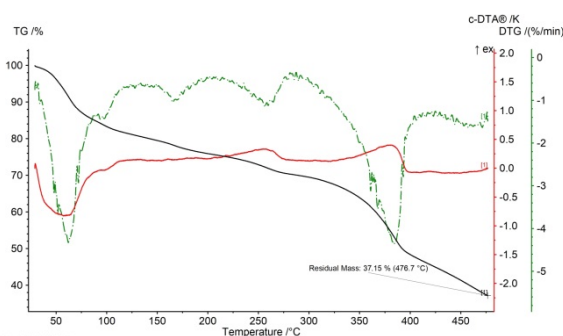
Compound 7



Compound 8



Compound **9**



Compound **10**

Figure 4S. TGA and DTG curves of compounds **1-4** and **8-10**.

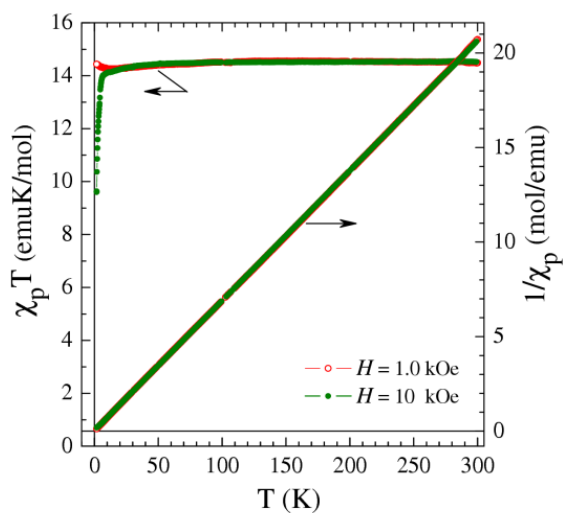
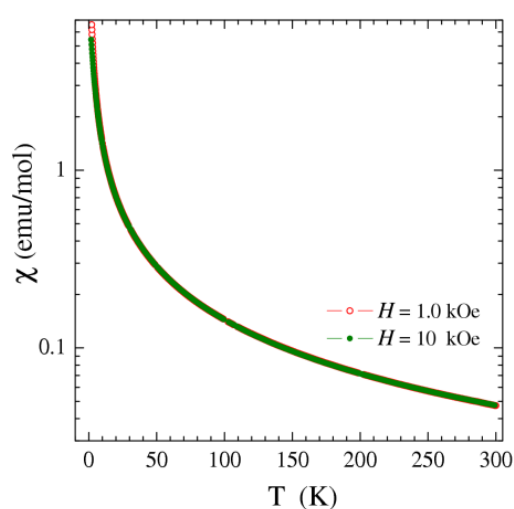


Figure 5S. Temperature dependences of $1/\chi_p$ and $\chi_p T$ measured at $H=1$ kOe for the complex **5** (●) and $H=10$ kOe (○).

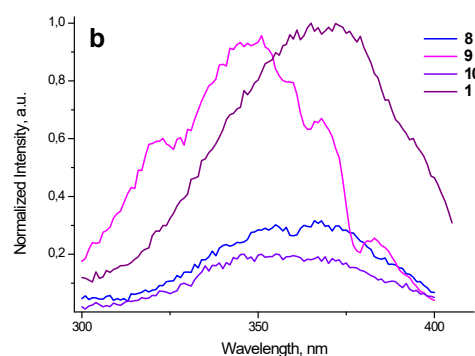
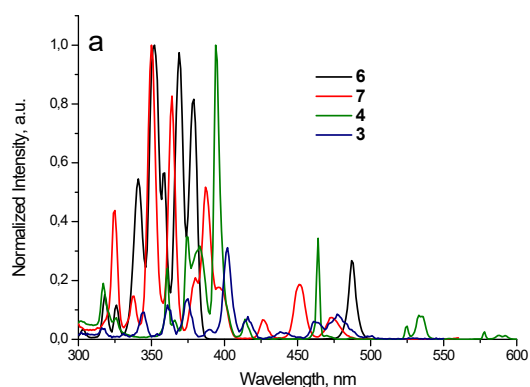


Fig 6S. Normalized excitation spectra (a) - complexes **6** with 545 nm emission wavelength, **7** with 575 nm emission wavelength, **4** with 615 nm emission wavelength and **3** with 645 nm emission wavelength; (b) – complexes **8**, **9**, **10** and **1** with 430 nm emission wavelength.

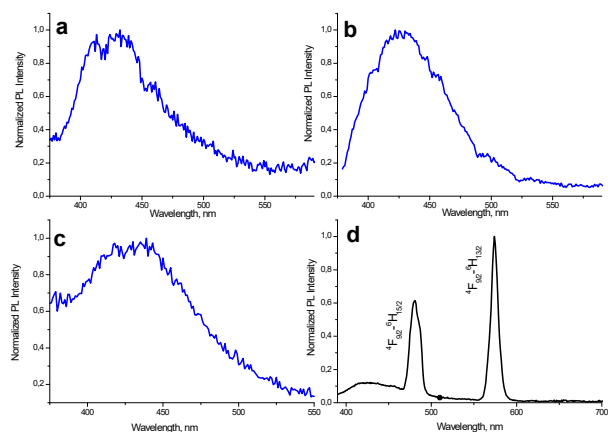


Fig. 7S. Normalized emission spectra of compound **8** (a), compound **9** (b), compound **10** (c), and compound **7** (d) recorded in solid state at 298 K excited at 325 nm and the CIE 1931 coordinates for complexes.

Pr (1)	Nd (2)	Sm (3)	Eu (4)	Gd (5)	Tb (6)	Dy (7)	Ho (8)	Er (9)	Yb (10)

Fig. 8S. Photographs of the 365 nm ultraviolet LED lighting the crystals of compounds 1-10 when the LED is tuned off (up) and tuned on (down).