

Synthesis, Structure, Magnetism and Theoretical Study of a series of Complexes with Decanuclear Core $[\text{Ln}^{\text{III}}_2\text{Cu}^{\text{II}}_8]$ (Ln = Y, Gd, Tb, Dy)

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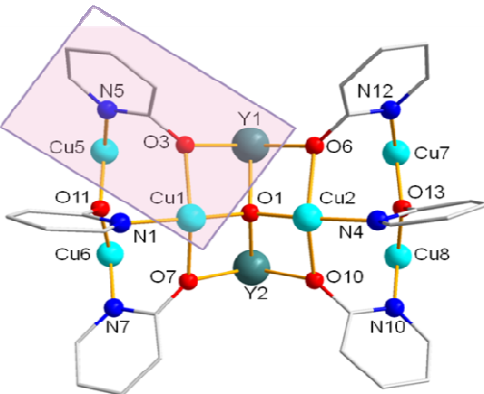
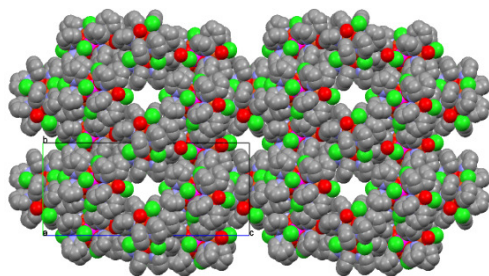
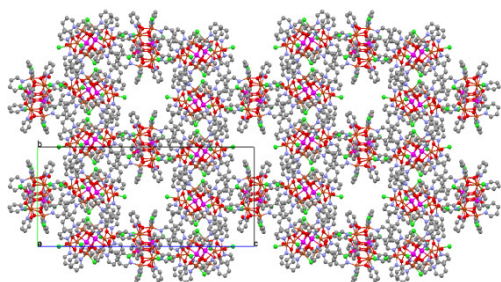
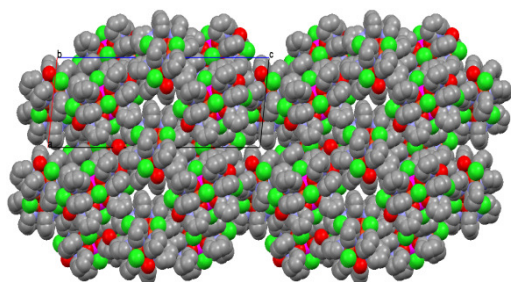
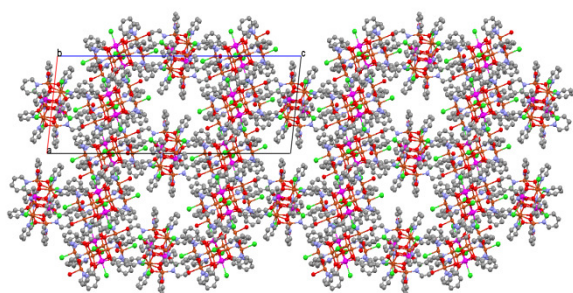


Figure 1S. View showing the coordination mode of the hydroxypyridine ligands..

Along a axis



Along b axis



Along an intermediate axis

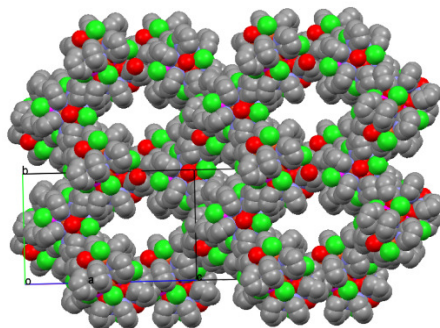
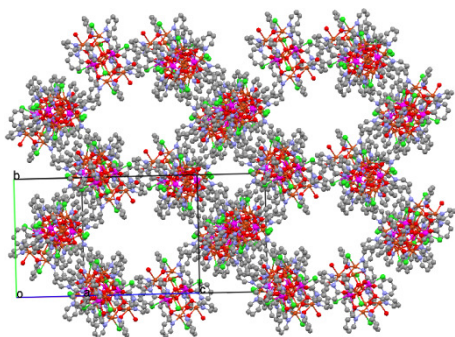


Figure 2S. Representation of the molecular packing showing channels along the *a*, *b*, and an intermediate axes .

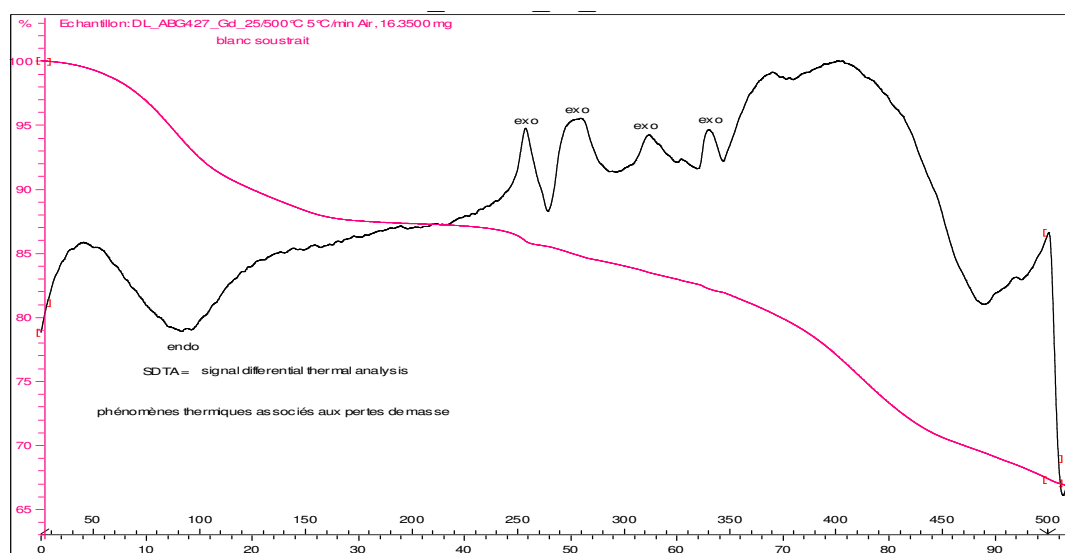
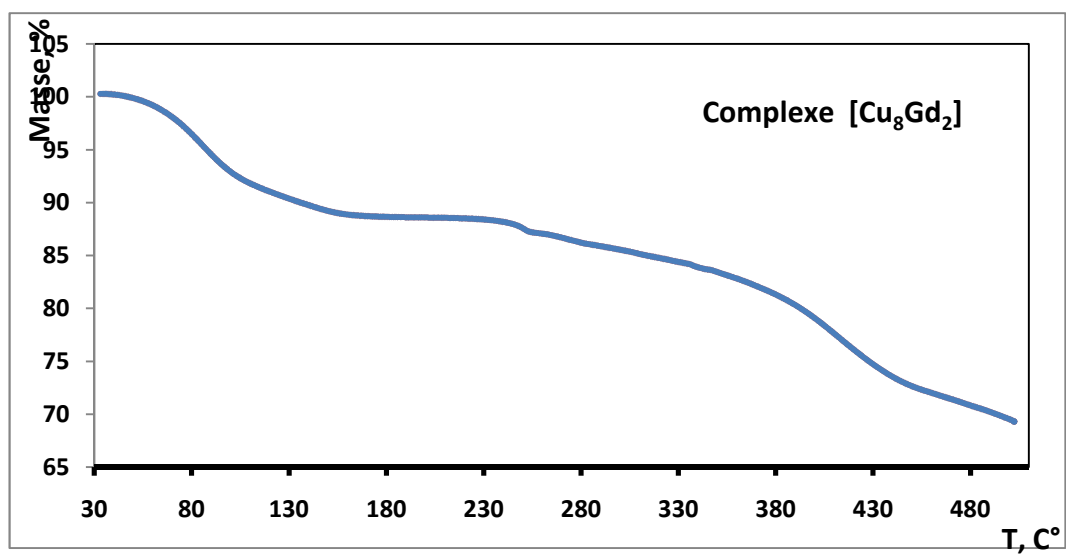


Figure 3S. TGA diagrams for **2**.

Table 4S. Spin free energies for lanthanide fragments (cm⁻¹)

Spin Multiplicity	Energy	Spin Multiplicity	Energy	Spin Multiplicity	Energy
	Gd		Tb		Dy
8	0.000	7	0.000	6	0.000
			139.747		32.924
			166.409		219.282
			253.211		230.139
			456.261		316.691
			476.452		428.622
			1141.298		468.857
					723.000
					764.821
					794.574
					859.855
					7586.682
					7865.316
					7908.239
					7945.620
					7980.488
					7992.088
					8076.780
					34940.954
					35044.128
		35558.626			
6	40747.738	5	25721.695	4	24886.255
	40768.818		25728.557		24886.929
	40774.482		25763.264		24891.411
	43511.786		25794.463		24973.267
	43513.238		25795.708		25001.193
	43533.992		29089.978		25004.495
	43537.516		29102.649		25006.318
	43544.219		29150.909		25063.477
	43546.481		29170.648		25081.874
	43557.834		29173.406		25162.592
	43590.955		29194.152		25224.265
	43601.528		29288.516		25272.823
	43610.487		29309.437		25301.259
	43630.732		29377.469		25331.146
	43637.045		29390.899		25344.675
	43687.547		29450.602		25391.865
	48787.358		29605.877		25420.447
	48792.951		29622.726		25439.136
	48824.568		29701.736		25471.391
	48872.532		29707.838		25495.574
...	...	...			
4	66594.635	3	47121.671	2	37416.449
	66626.461		47125.537		37416.812
	66632.396		47128.412		37425.989
	66643.585		48179.131		37432.358

	66647.264		48188.809		37435.555
	66748.384		48201.910		37437.331
	66748.745		48214.494		37465.018
	66757.147		48240.401		37467.475
	66758.939		48260.915		37720.016
	66762.494		48270.660		37734.570
	66766.909		48279.891		37740.828
	66779.044		48282.861		37756.361
	66779.332		48303.668		37784.098
	66790.033		48307.733		37788.384
	66791.980		48348.733		37796.732
	66792.353		48391.521		37806.061
	66794.986		48409.400		37847.905
	66796.849		48451.126		39081.769
	66811.610		48452.887		39090.335
	66813.667		48479.972		39137.559
	...		...		...
2	77840.520	1	56780.456		
	77840.562		57424.007		
	77846.453		57432.598		
	77846.939		57456.087		
	77854.197		57473.782		
	77854.608		57476.831		
	77857.089		57495.047		
	77857.463		57507.879		
	77862.933		57547.819		
	77863.801		57551.274		
	77870.758		57671.994		
	77875.349		57702.383		
	77876.893		57704.169		
	77877.974		57725.108		
	77882.322		57730.154		
	77885.951		57740.217		
	77888.846		57756.301		
	77890.816		57757.704		
	77892.736		58126.929		
	77893.651		58128.134		
	...		...		