

Supporting Information

Series of Di-, Tri- and Tetranuclear Lanthanide Clusters with Slow Magnetic Relaxation for Dy₂ and Dy₄

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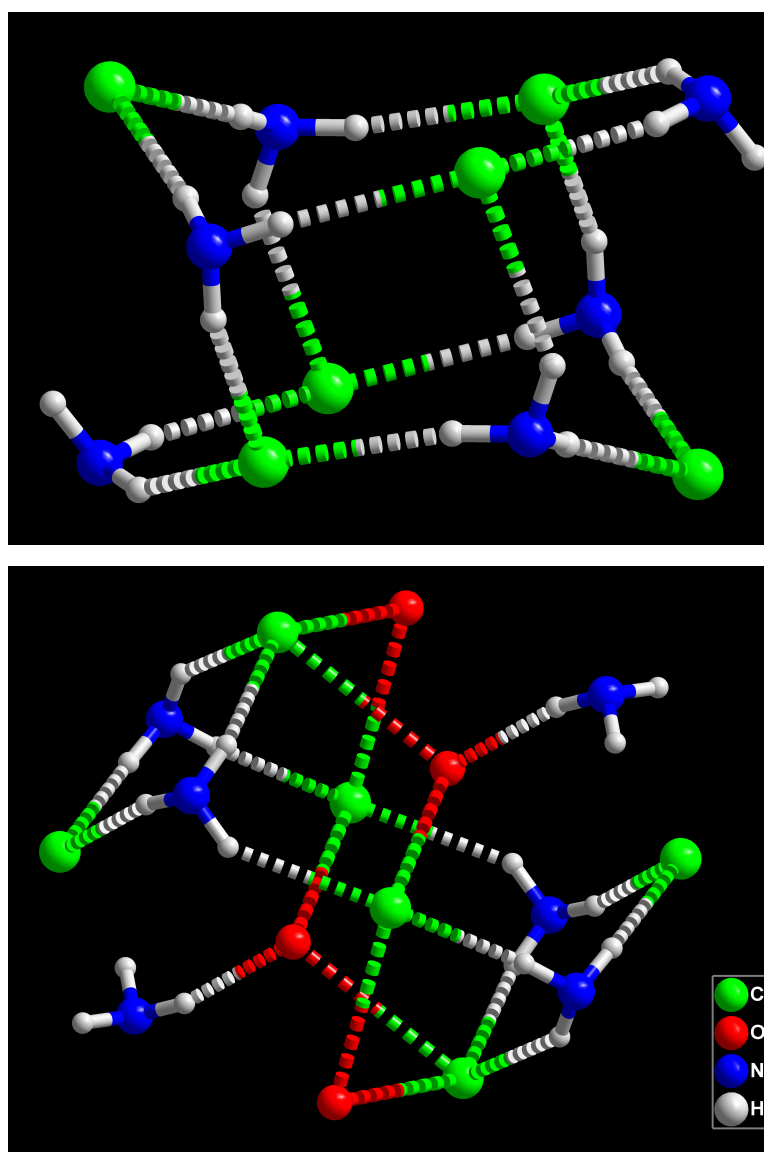


Fig.S1 Ball and stick view of Cl₆(NH₃)₆ cluster and [Cl₆(NH₃)₆(H₂O)₄] cluster in **1**.

Thermogravimetric analysis (TGA)

Thermogravimetric analysis (TGA) studies were performed in a N₂ atmosphere at a heating rate of 10 °C min⁻¹ for complexes **1–6**. As shown in Fig.S2, the TGA diagram of **1** displays an initial the weight loss of 8.0% between room temperature and 220 °C, which correspond to the removal of 8 guest water molecules and 16 aqua ligand (calcd 7.9%). Between 220 and 270 °C, **1** shows no weight loss, which is an indication of its stability up to 270 °C. When the temperature is higher than 270 °C, **1** rapidly decomposes. Similarly, the TGA curve of **2–6** display the first weight loss of 18.2 % (calcd 18.3% for **2**), 6.5% (calcd. 6.2% for **3**), 8.1% (calcd. 8.0% for **4** based on 7 guest water molecules), 7.6% (calcd. 7.3% for **5** based on 4 guest water molecules) and 7.1% (calcd 7.2% for **6** based on 4 guest water molecules), respectively, for the loss of the guest water molecules and aqua ligands. All the cluster of **2–6** are stable up to 250 °C.

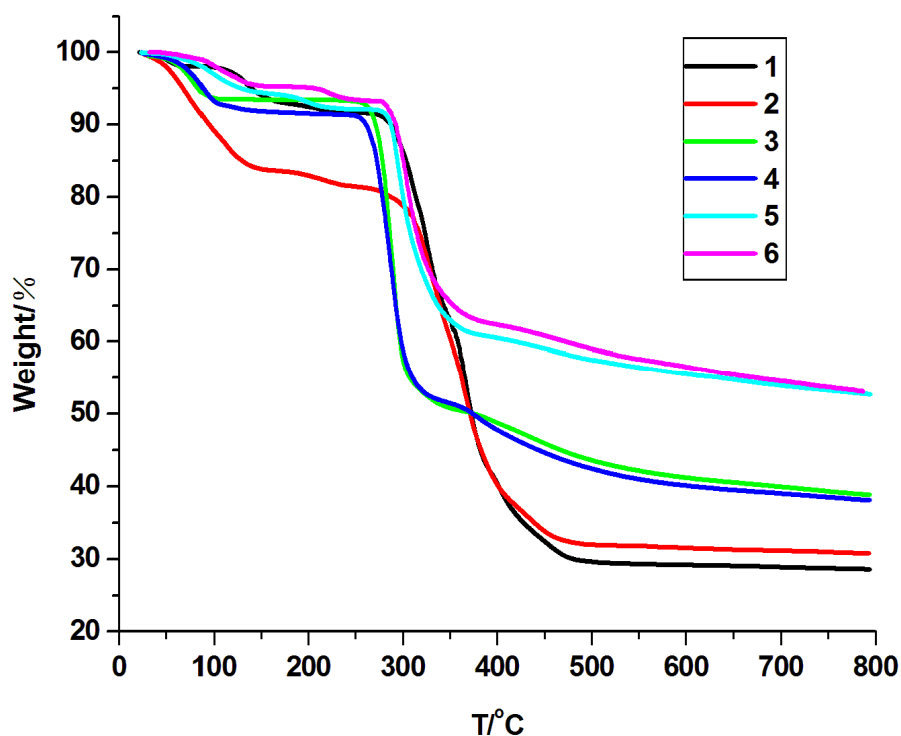


Fig.S2 TG Curves for complexes **1-6**.

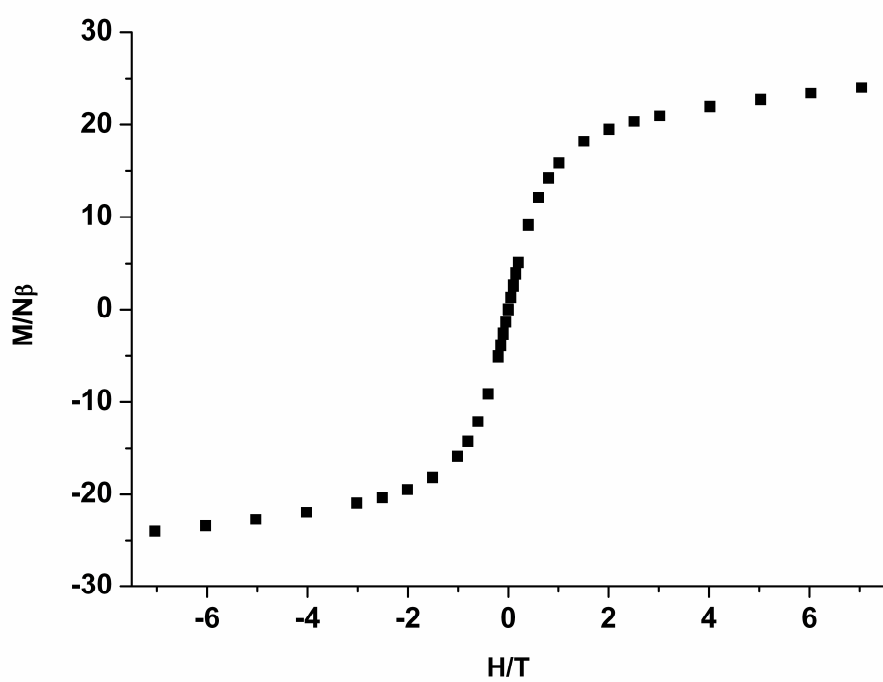


Fig.S3 Field dependence of the magnetization of **2** at 2 K.

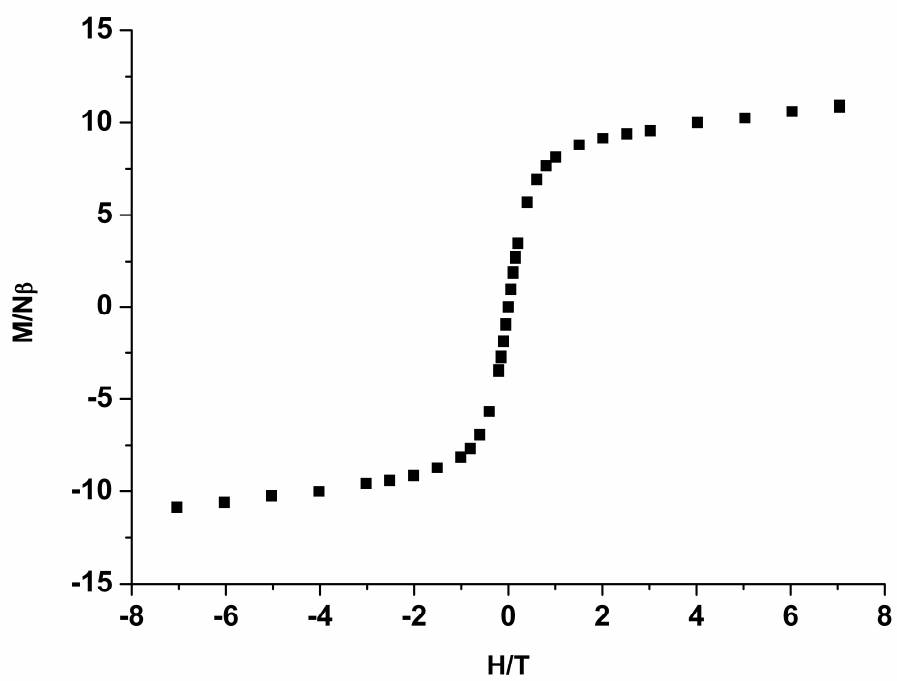


Fig.S4 Field dependence of the magnetization of **5** at 2 K.