

Supplementary Information

Single molecule magnetism in a μ -phenolato dinuclear lanthanide motif ligated by heptadentate Schiff base ligands

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S1. Magnetization plots for 2-4.

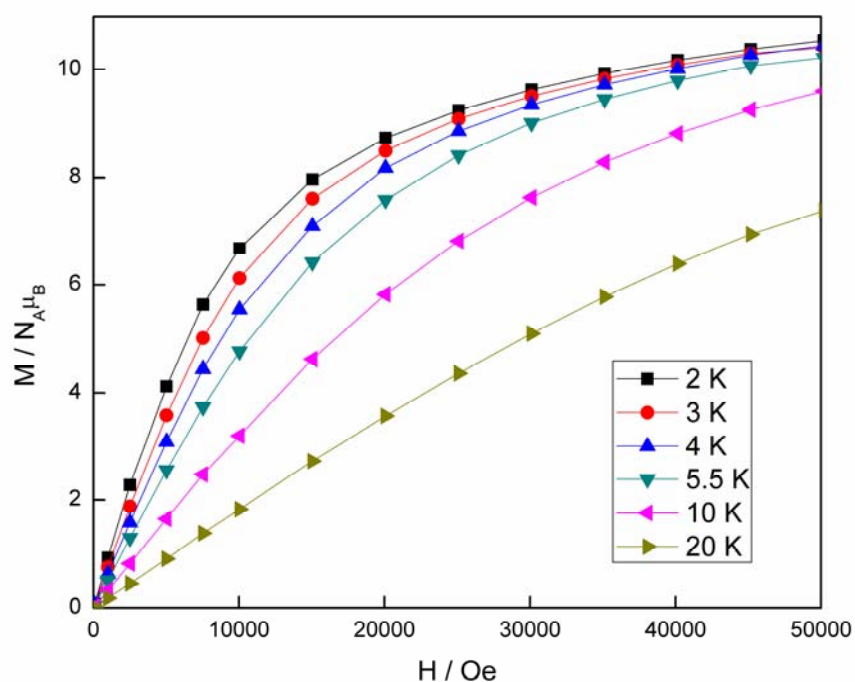


Fig. S1: Isothermal M vs H plot for compound 2 at temperatures; 2 (top), 3, 4, 5.5, 10 and 20 (bottom) K. The solid lines just join the points.

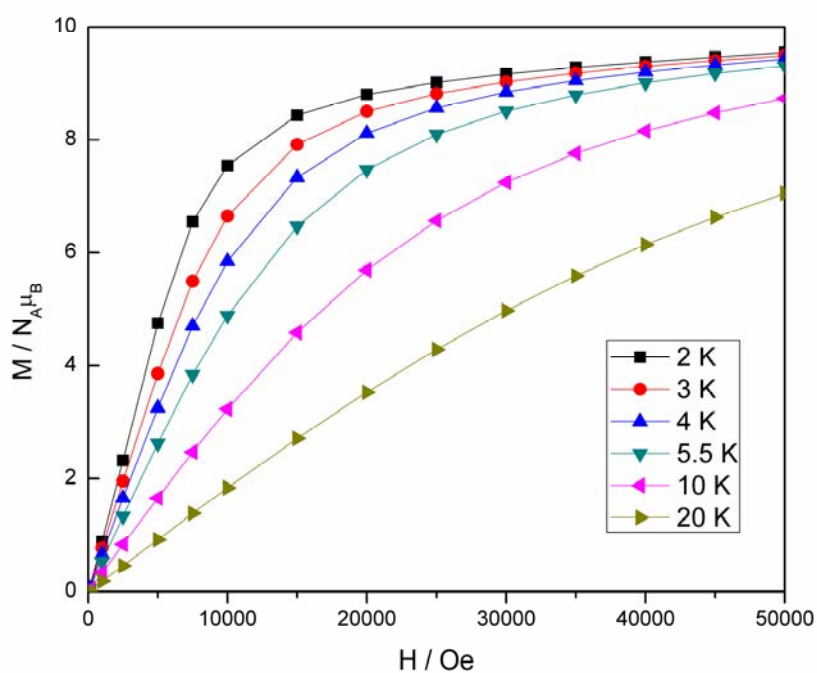


Fig. S2: Isothermal M vs H plot for compound 3 at temperatures; 2 (top), 3, 4, 5.5, 10 and 20 (bottom) K. The solid lines just join the points.

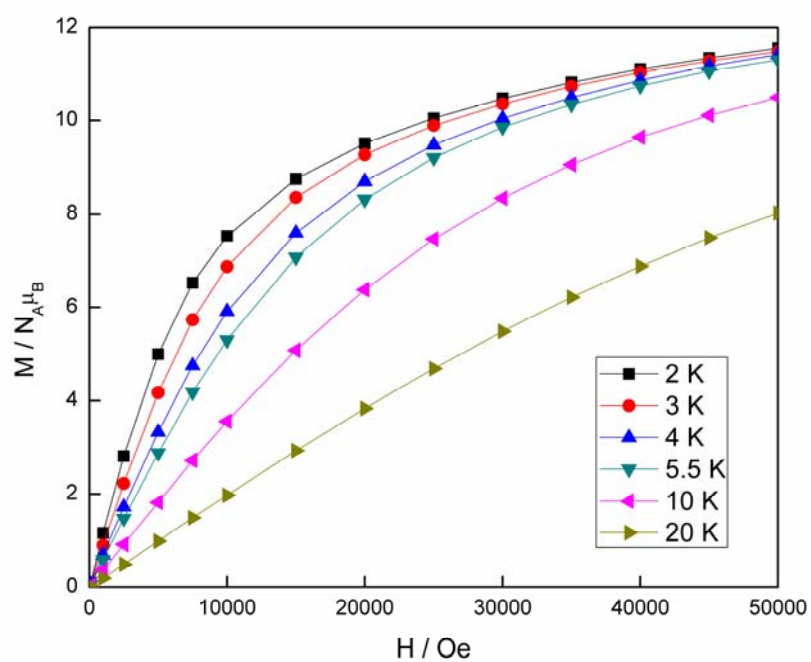


Fig. S3: Isothermal M vs H plot for compound **4** at temperatures; 2 (top), 3, 4, 5.5, 10 and 20 (bottom) K. The solid lines just join the points.

S2. Ac data for 2 and 4.

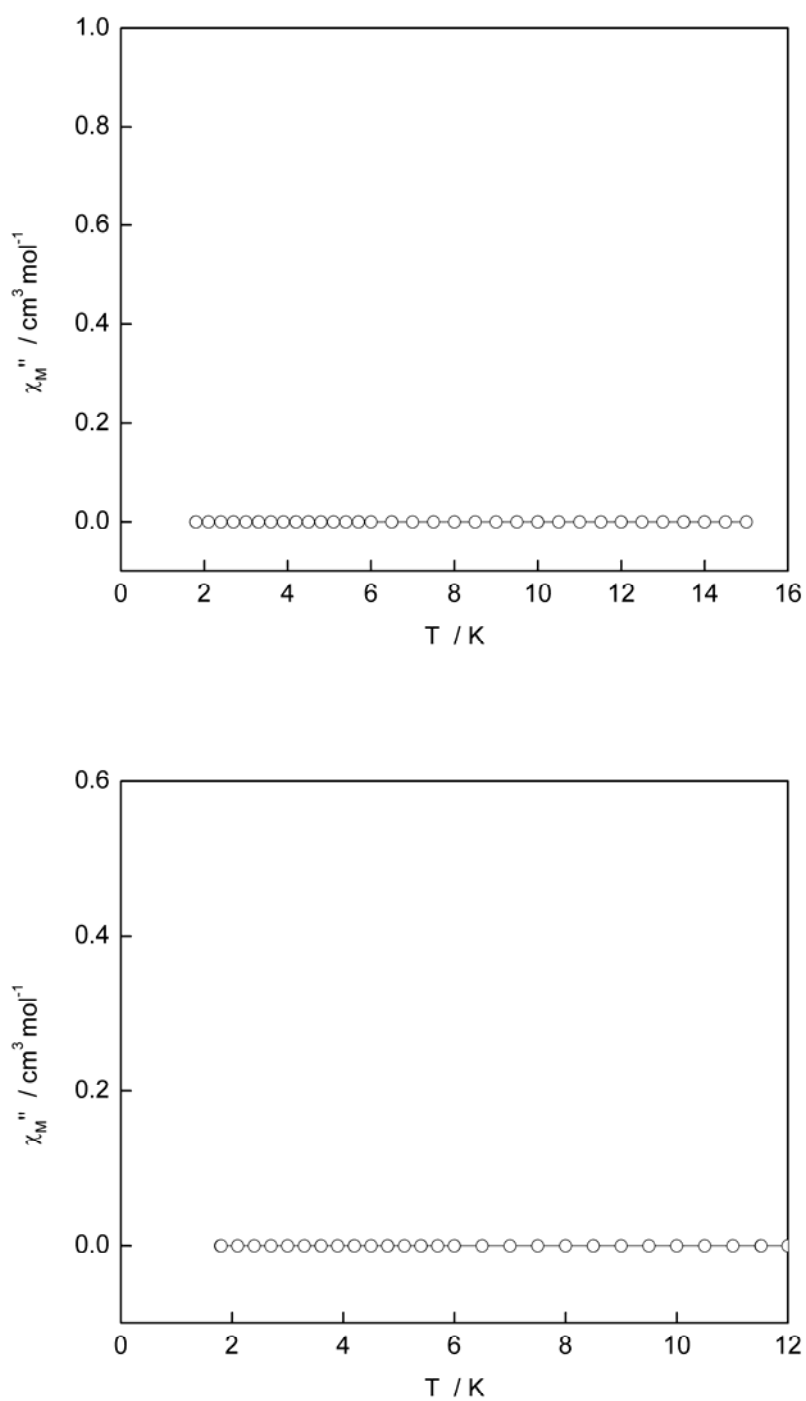


Fig. S4: Plots of χ_M'' vs T for complexes **4** (top) and **2** (bottom) with frequencies between 50 and 1500 Hz in zero DC field.

S3. Ac data for 3.

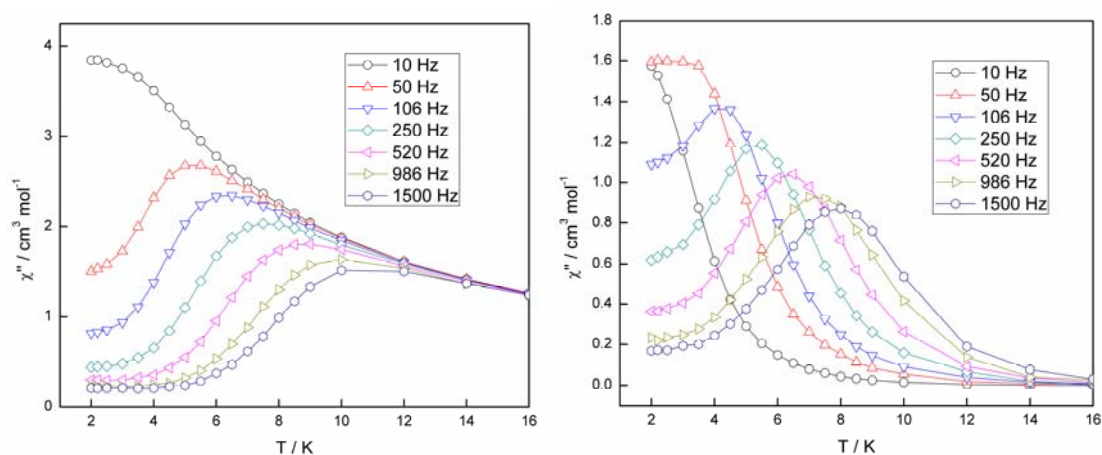


Fig. S5: AC data plots for compound **3** under a zero applied dc field. Left: χ_M'' vs T , and right: χ_M' vs T in the temperature range 2-16 K.

S4. Ac data for 3 under a 2500 Oe dc field.

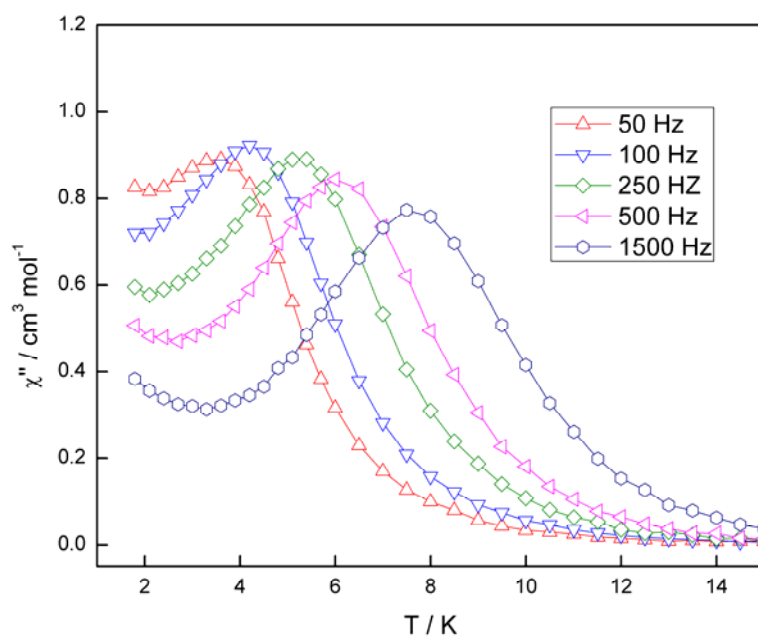


Fig. S6: Plot of χ_M'' vs T for **3** under a 2500 Oe applied dc field.

S5. Relaxation distribution and times fitted from Cole-Cole data.

T (K)	α	τ (s)
2	0.201	4.01E-02
2.2	0.199	3.83E-02
2.5	0.196	3.49E-02
3	0.187	2.78E-02
3.5	0.180	2.05E-02
4	0.170	1.42E-02
4.5	0.164	9.66E-03
5	0.156	6.53E-03
5.5	0.155	4.48E-03
6	0.153	3.10E-03
6.5	0.152	2.17E-03
7	0.151	1.54E-03
7.5	0.152	1.11E-03

Table S1. Relaxation distribution and times fitted from Cole-Cole data for **3**.