Supplementary Material (ESI) for New Journal of Chemistry

Supplementary Material

A Single Molecule Magnet (SMM) with a helicate structure

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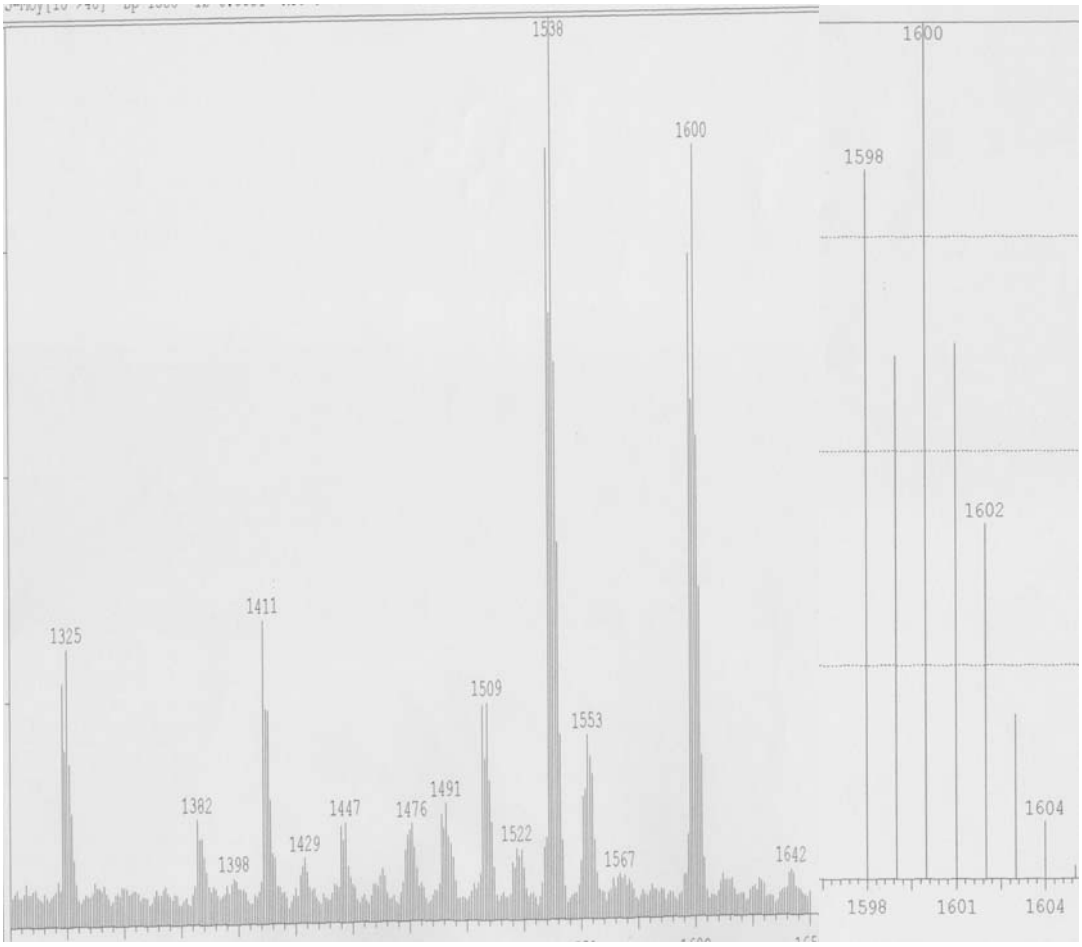
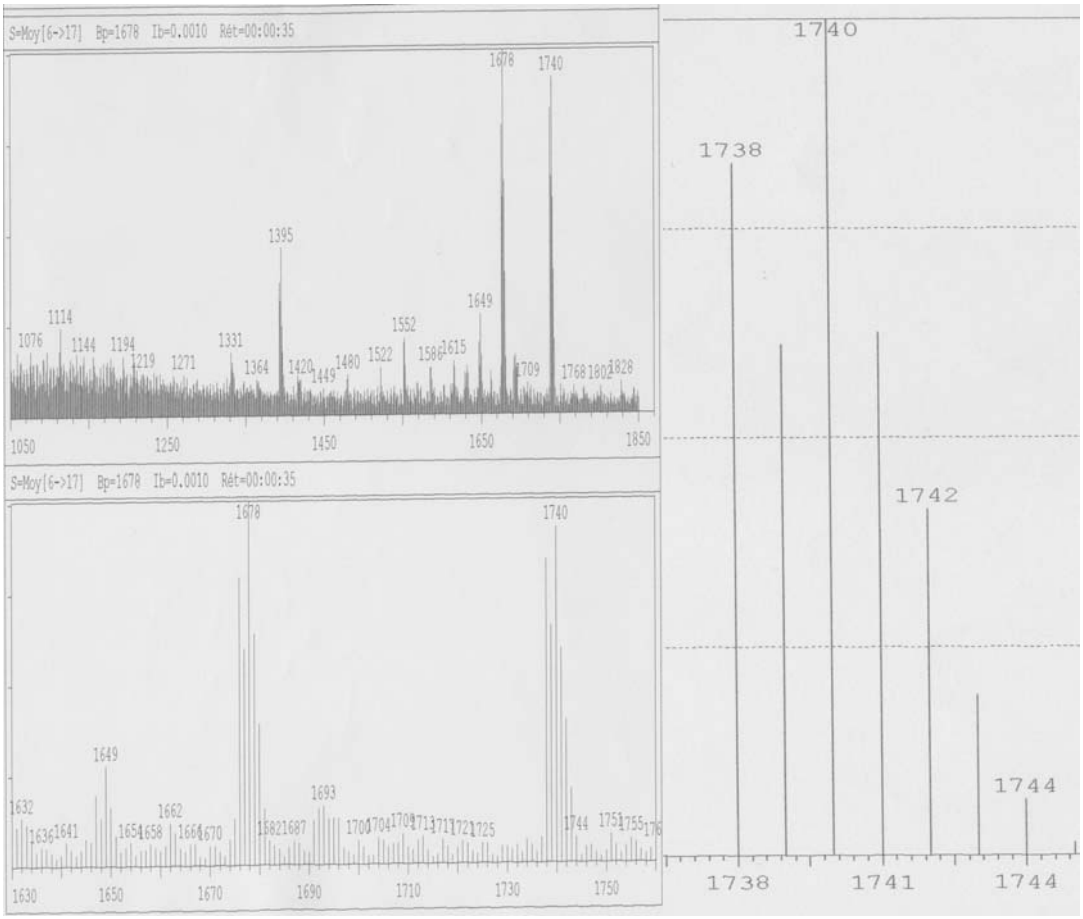


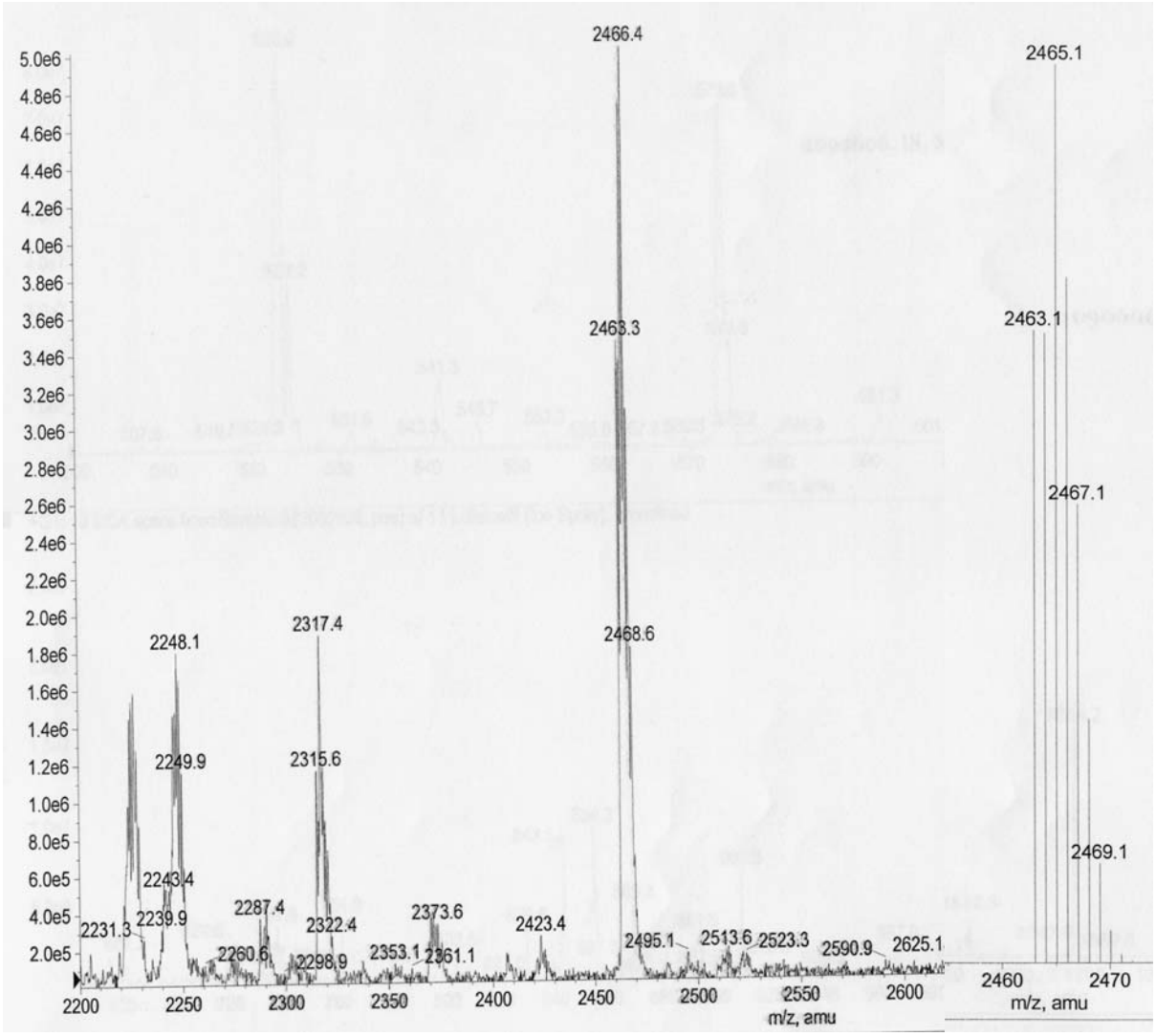
a) b)

Figure S1. MSFAB$^+$ for **2** : a) Experimental ; b) Calculated. MSFAB$^+$ for **1** appeared in reference 9.



a) b)

Figure S2. MSFAB$^+$ for **3** : a) Experimental ; b) Calculated.



a) b)

Figure S3. MSESI for 4. a) Experimental ; b) Calculated.

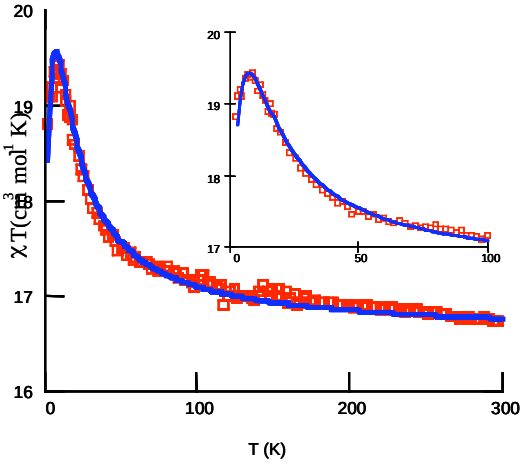


Figure S4. Thermal dependence of the $\chi_M T$ product for **1**.

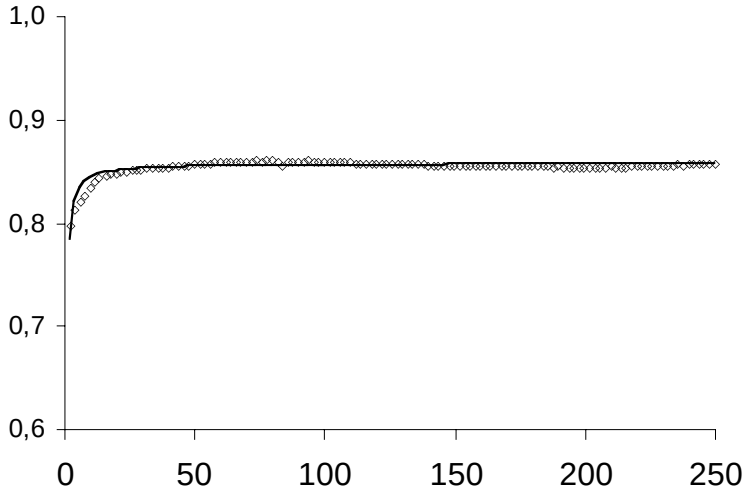


Figure S5. Thermal dependence of the $\chi_M T$ product for **2**.

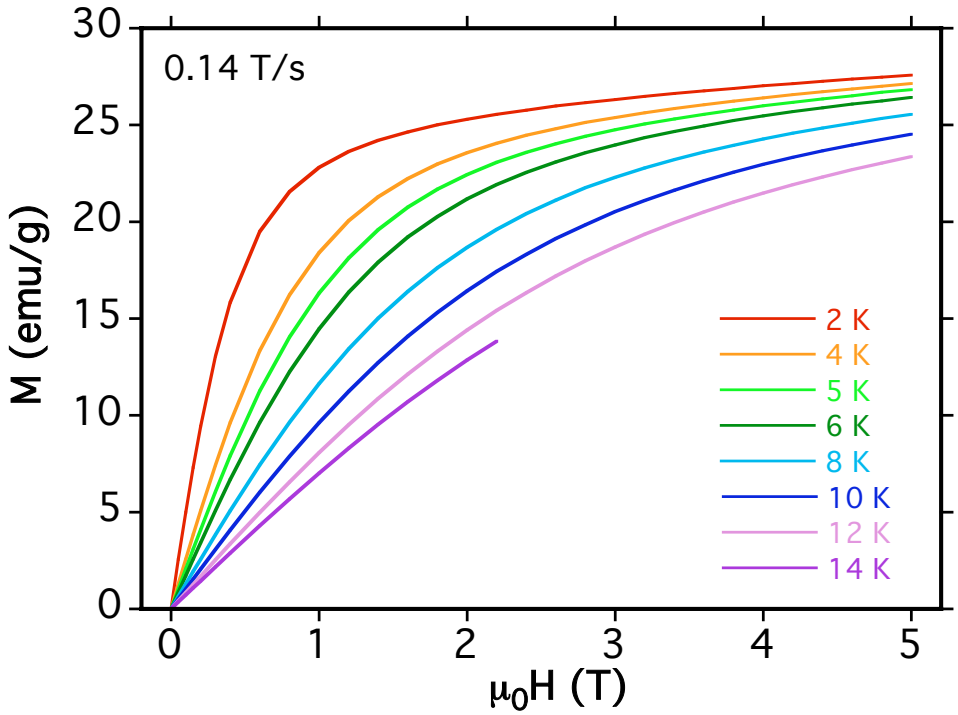
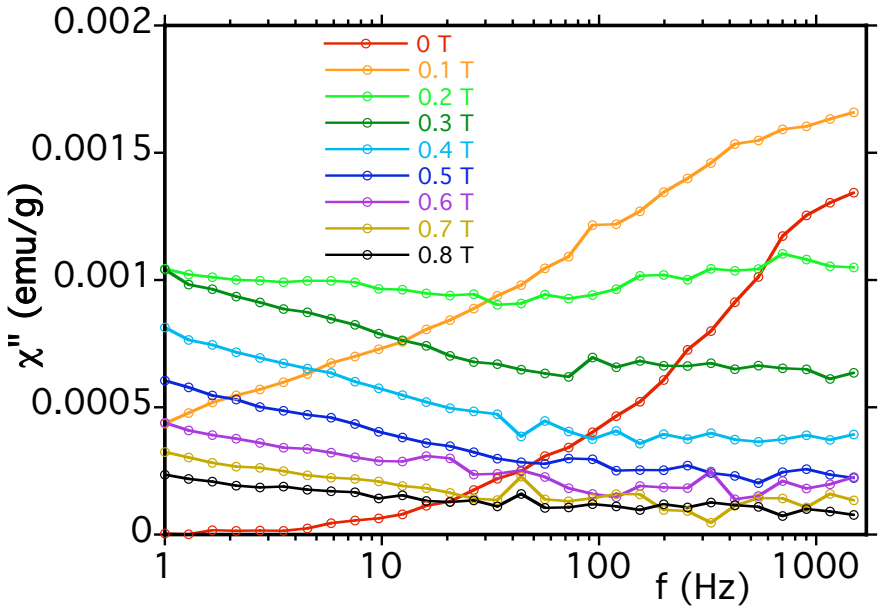
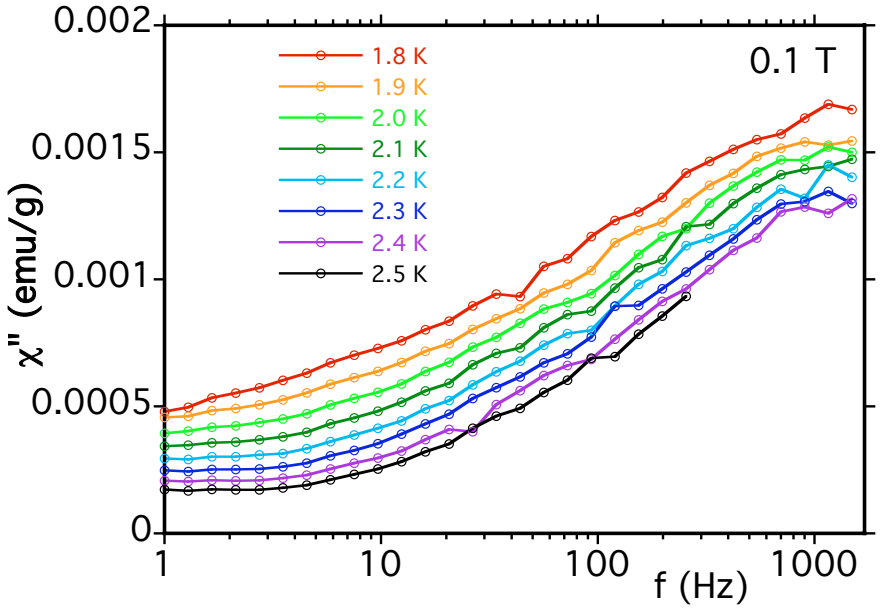


Figure S6. Field dependence of the magnetization for **4**.

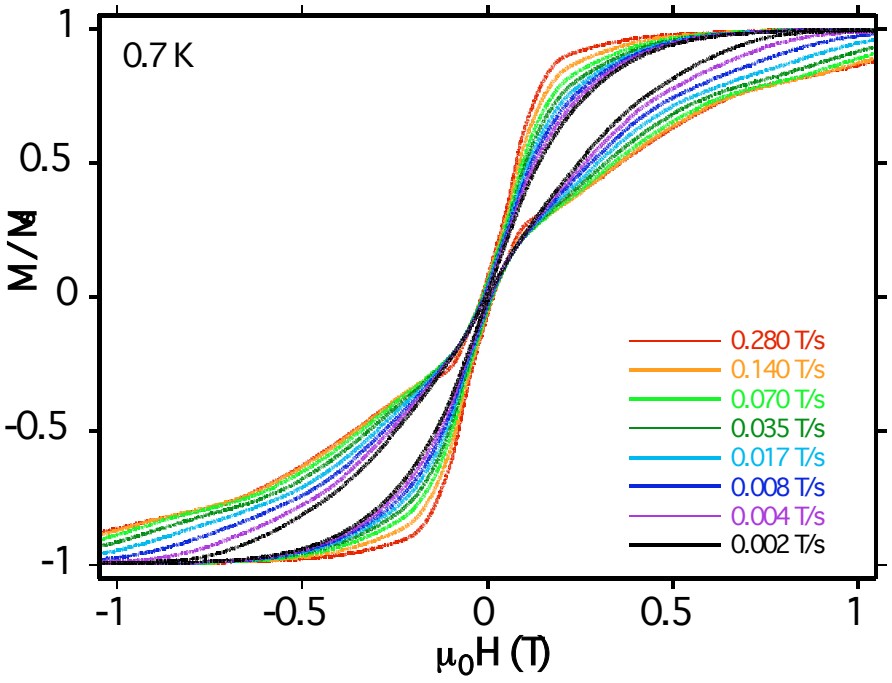


a)

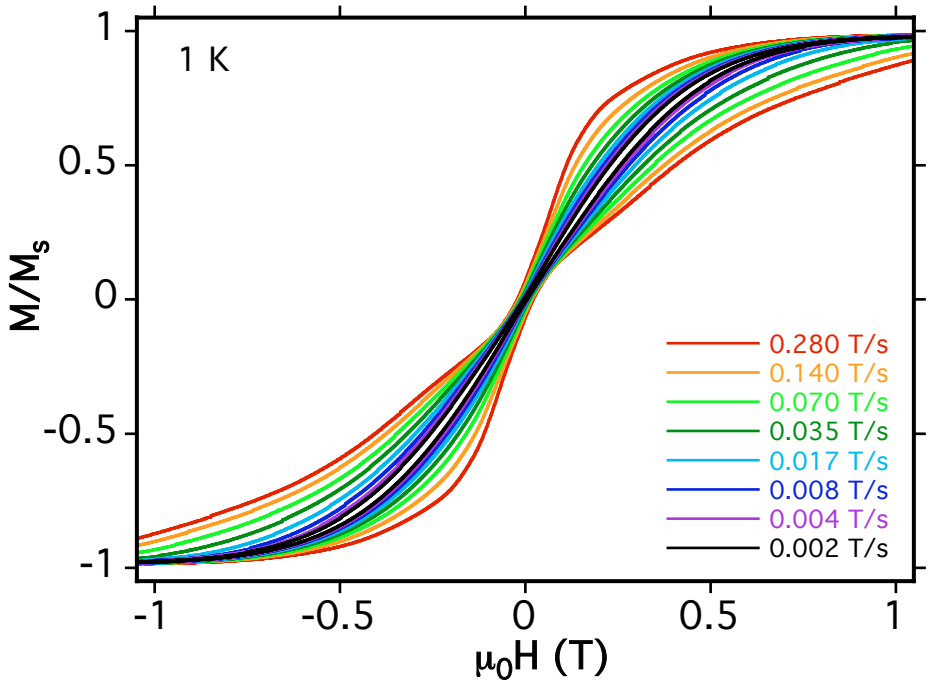


b)

Figure S7. Plots of the out-of-phase signals for complex **4** measured in a 3G oscillating ac field: a) as a function of frequency at several dc fields and 1.8 K; b) at H = 0.1 T and several temperatures. Although the out-of-phase signals are clearly frequency-dependent, no maxima were observed.



a)



b)

Figure S8. Single-crystal magnetization (M) vs. applied field measurements for complex **4** at T = 0.7 K in (a) and 1 K in (b) for several field sweep rates. M is normalised to its saturation value at 1.4 T. The strong sweep rate dependence is indicative for SMM behaviour.

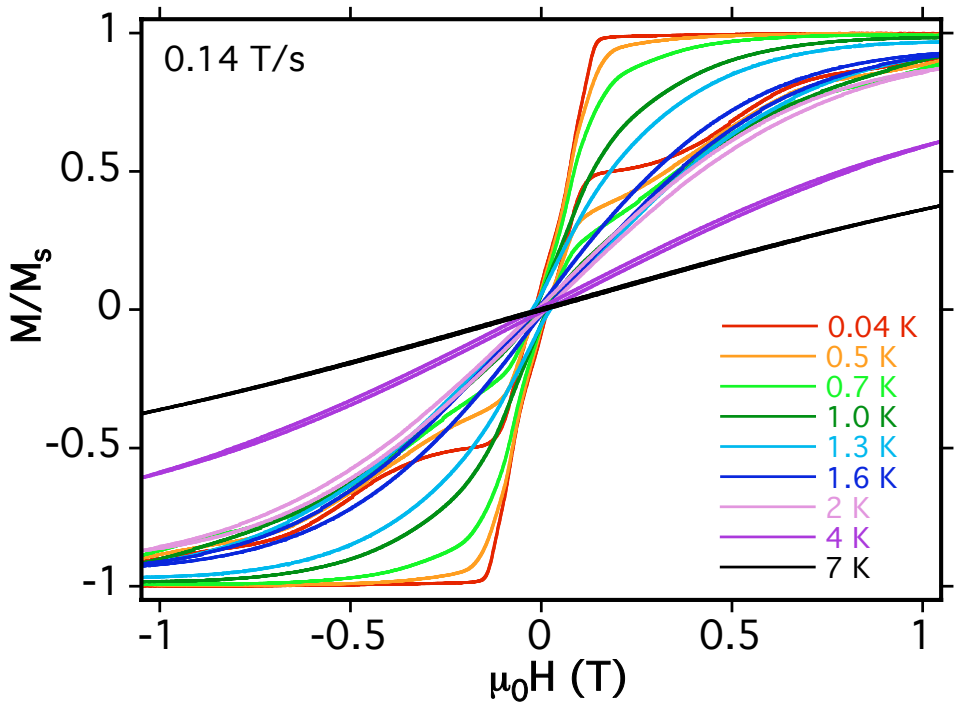


Figure S9. Single-crystal magnetization (M) vs. applied field measurements for complex **4** at several temperatures. M is normalised to its saturation value at 1.4 T. The hysteresis effects are observed below about 1.6 K.