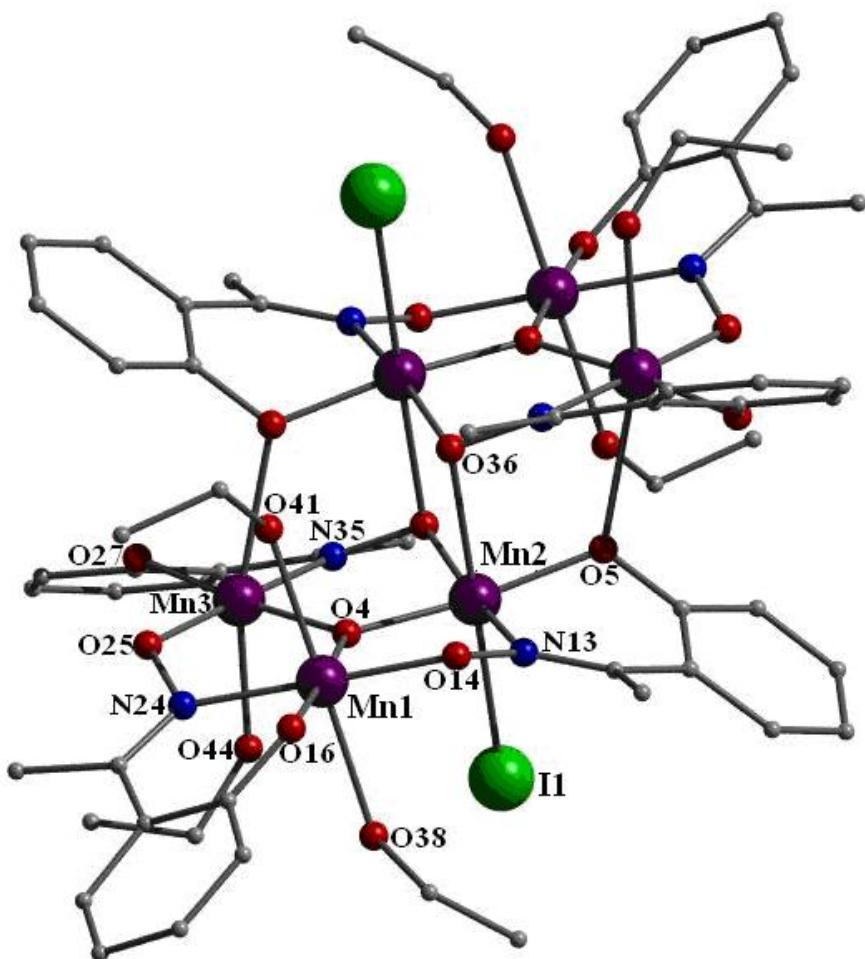


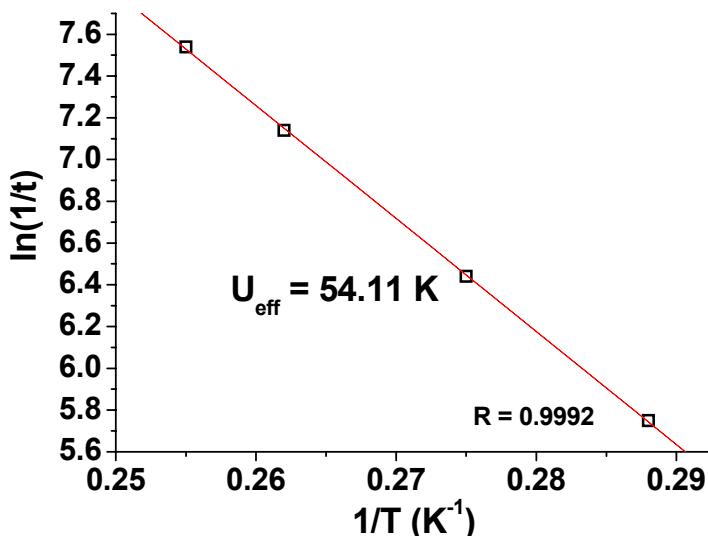
**Electronic Supplementary Information**

**New Structural Types and Different Oxidation Levels in the Family of Mn<sub>6</sub>-oxime Single-molecule Magnets**

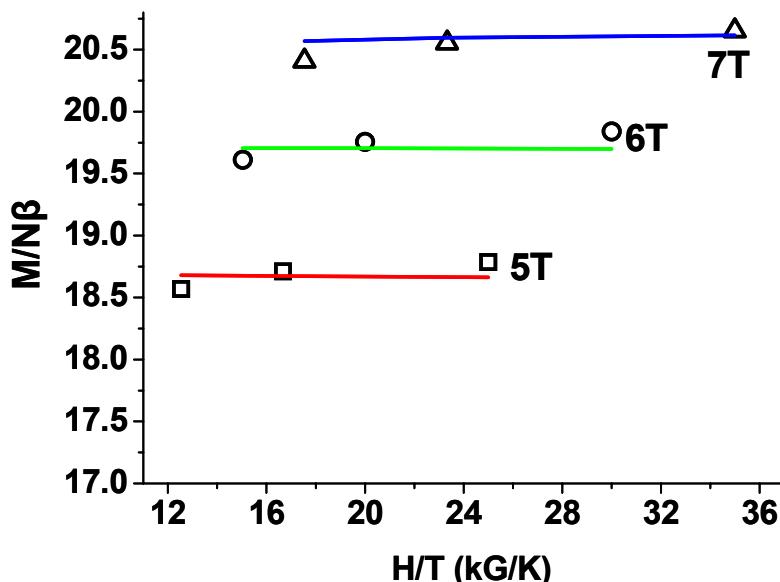
Leigh F. Jones,<sup>a</sup> Ross Inglis,<sup>a</sup> Kevin Mason,<sup>a</sup> Martyn E. Cochrane,<sup>a</sup> Anna Collins,<sup>a</sup> Simon Parsons,<sup>a</sup> Spyros P. Perlepes<sup>b</sup> and Euan K. Brechin\*<sup>a</sup>



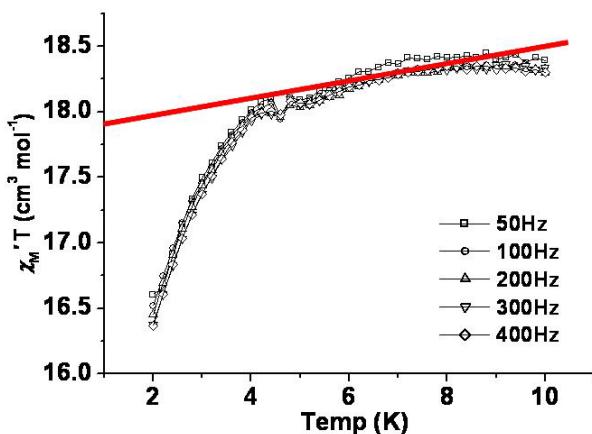
**Figure SI1** Crystal structure of **2**. Hydrogen atoms have been omitted for clarity. See table 2 for bond lengths and angles.



**Figure SI2** Arrhenius plot obtained from the out-of-phase data of **1**. The slope gradient gives the  $U_{\text{eff}}$  barrier = 54.11 K.  $\tau_0 = 5.45 \times 10^{-10} \text{ s}^{-1}$ .



**Figure SI3** Plot of reduced magnetization ( $M/N_\beta$ ) vs.  $H/T$  for **2** in fields 5, 6 and 7 T and temperatures 2 - 4 K to give the spin Hamiltonian parameters noted inset.



**Figure SI4** Plot of  $\chi_m' T$  vs. T obtained from **3** in an oscillating field of 3.5G and frequencies of 50, 100, 200, 300 and 400Hz.