

ESI

Synthesis, Structure and Magnetic Properties of Two New Azido-Co^{II} Coordination Architectures: from Ferromagnetic Coupling to Single-Chain-Magnets

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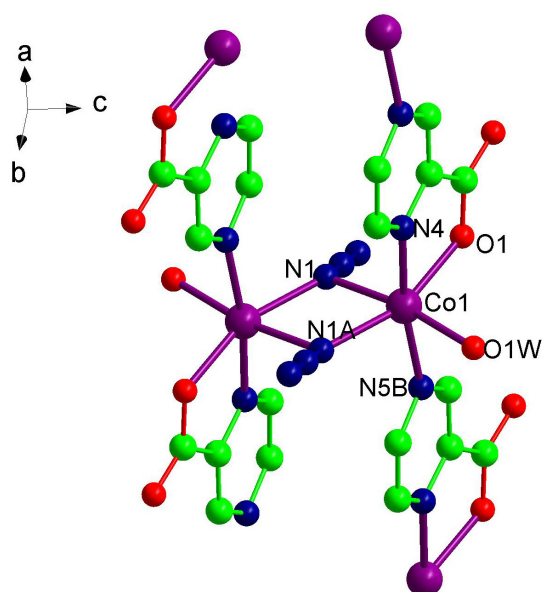


Fig. 1S The coordination environment of the Co^{II} center in **1** (symmetry code: A $-x+1, -y+1, -z+1$; B $x-1, y, z$).

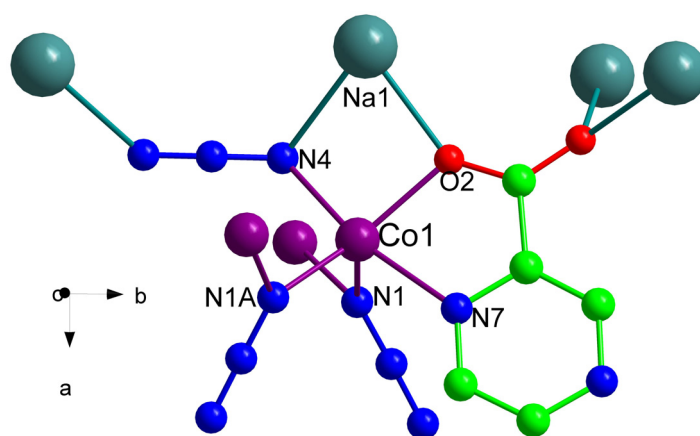
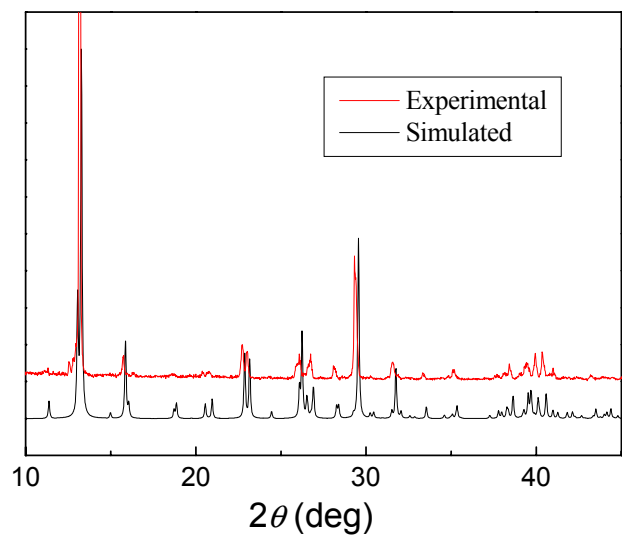
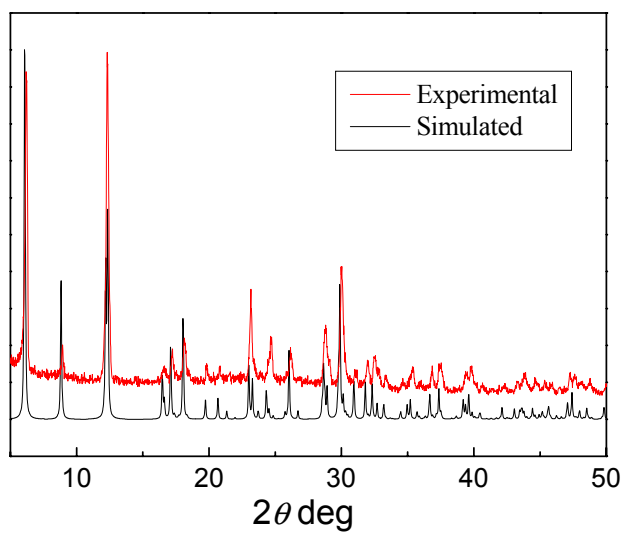


Fig. 2S The coordination environment of Co^{II} and Na⁺ centers in **2** (symmetry code: A $x, -y+1, z+1/2$).



(a)



(b)

Fig. 3S XRPD patterns for **1** (a) and **2** (b).

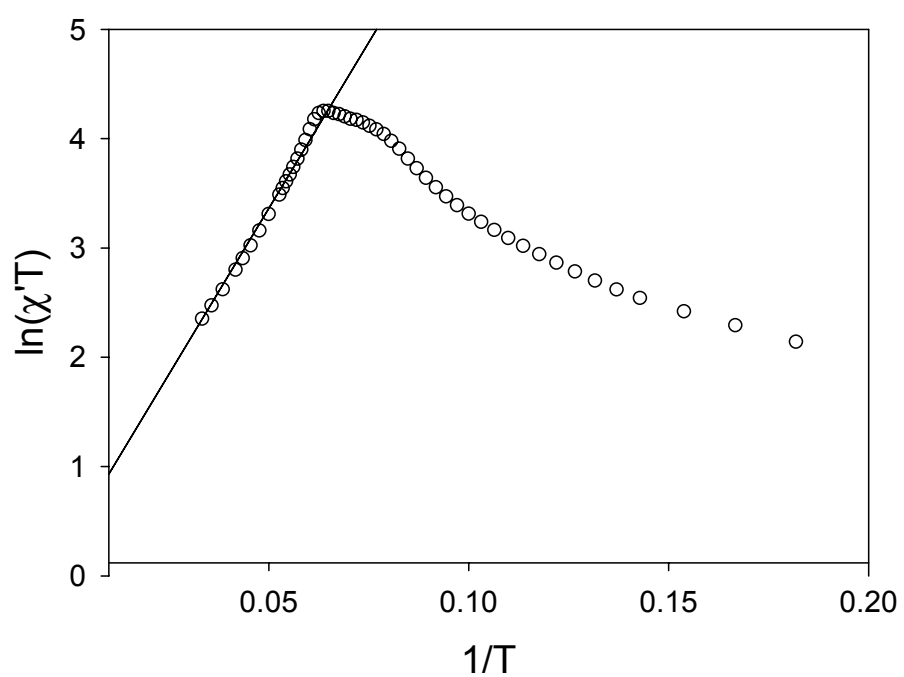


Fig. 4S Plot of $\ln(\chi'T)$ vs. $1/T$ for **2** (10 Hz oscillating frequency, 3 G ac field and zero dc field)

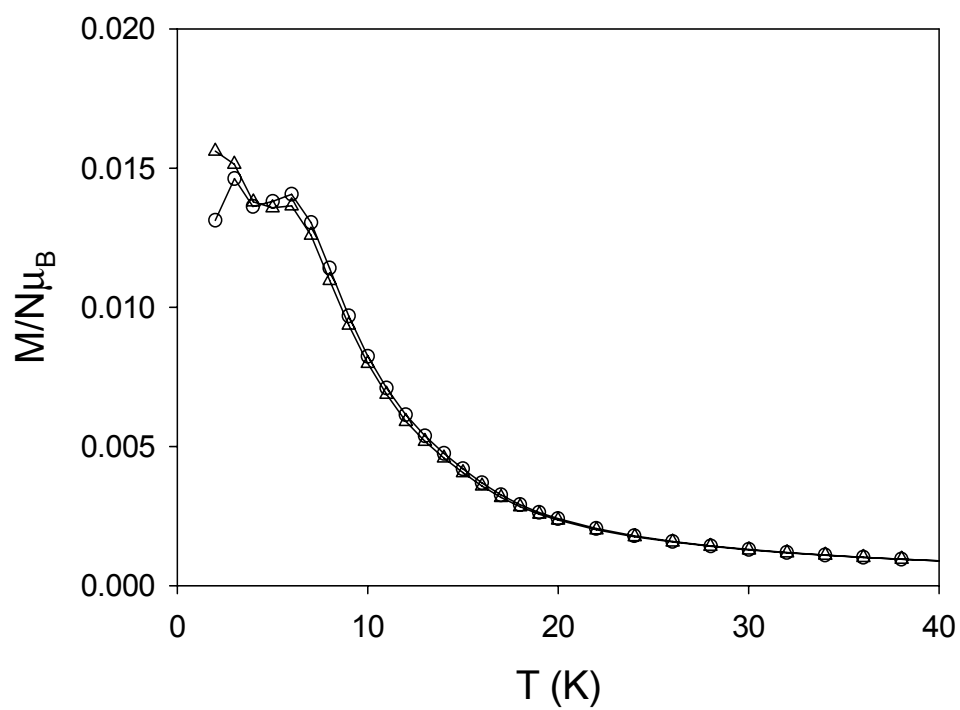


Fig. 5S ZFC/FC measurement for **2** at 50 G applied field.

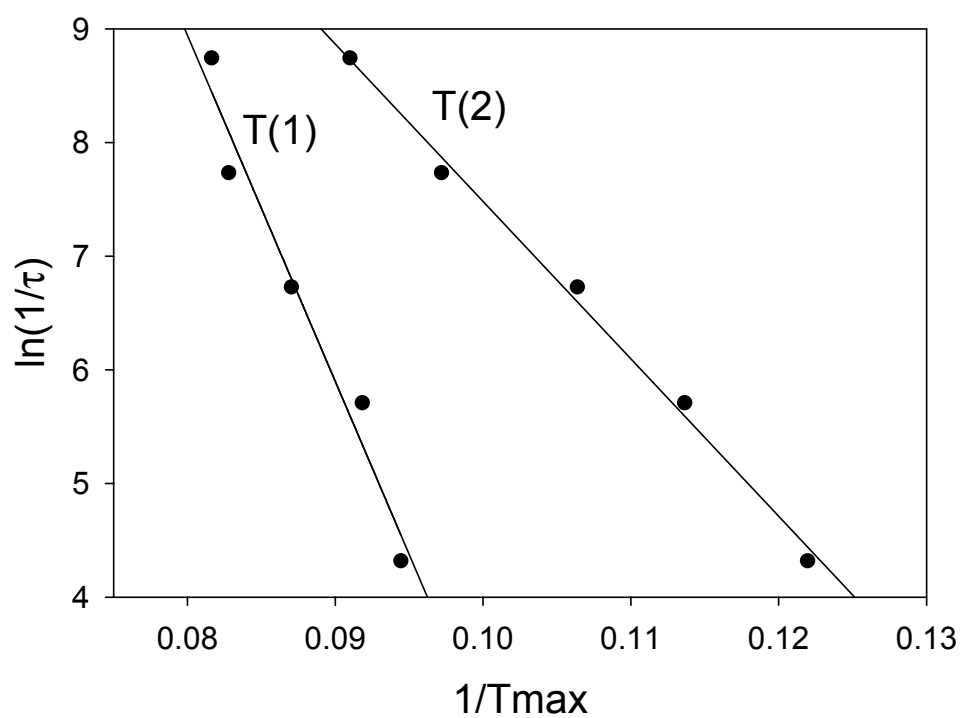


Fig. 6S Arrhenius plot for the two frequency dependent relaxation processes (T1 centred at 11.8 K and T2 centred at 9.5 K) observed for complex **2**. The solid lines are the best fit to the Arrhenius law. See text for fitting parameters.

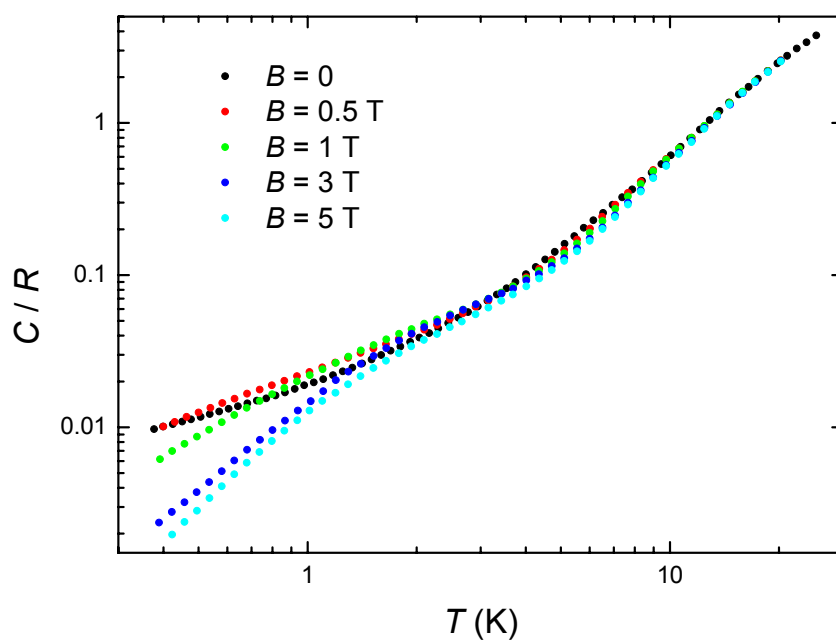


Fig. 7S Experimental heat capacity for complex 2 collected for several applied magnetic fields (B), as labelled.