**Supplementary Material**

Transition metal salts of quinoline: Synthesis, structure and magnetic behavior of (QuinH)2[MX4]·2H2O [Quin = quinoline; M = Mn, Co, Cu, Zn], (QuinH)2[MnBr2(H2O)2](Br)2 and (QuinH)[Cu(Quin)Br3]

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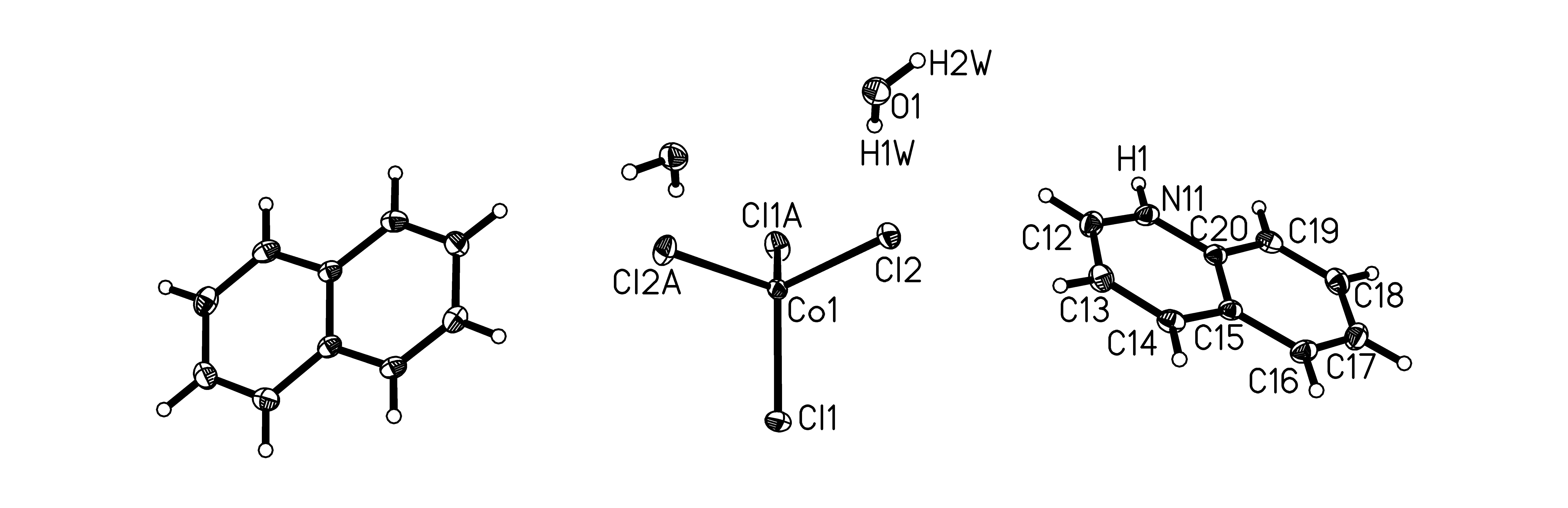


Figure S1. The molecular unit of **1** showing 50% probability thermal ellipsoids. Hydrogen atoms are shown as spheres of arbitrary size. Only the asymmetric unit, Cu-coordination sphere and those hydrogen atoms whose positions were refined are labelled.

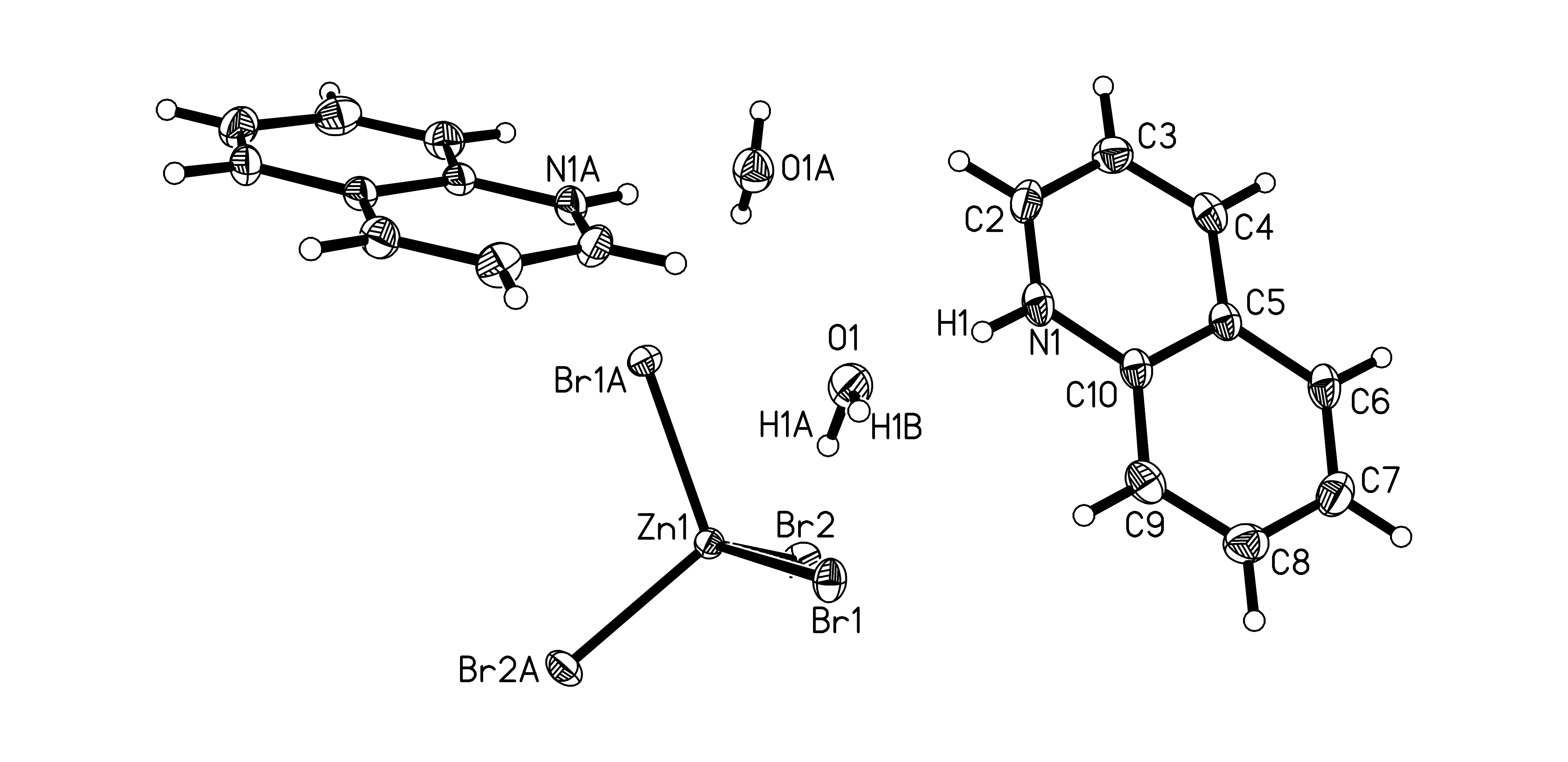


Figure S2. The molecular unit of **3** showing 50% probability thermal ellipsoids. Hydrogen atoms are shown as spheres of arbitrary size. Only the asymmetric unit, Cu-coordination sphere and those hydrogen atoms whose positions were refined are labelled.

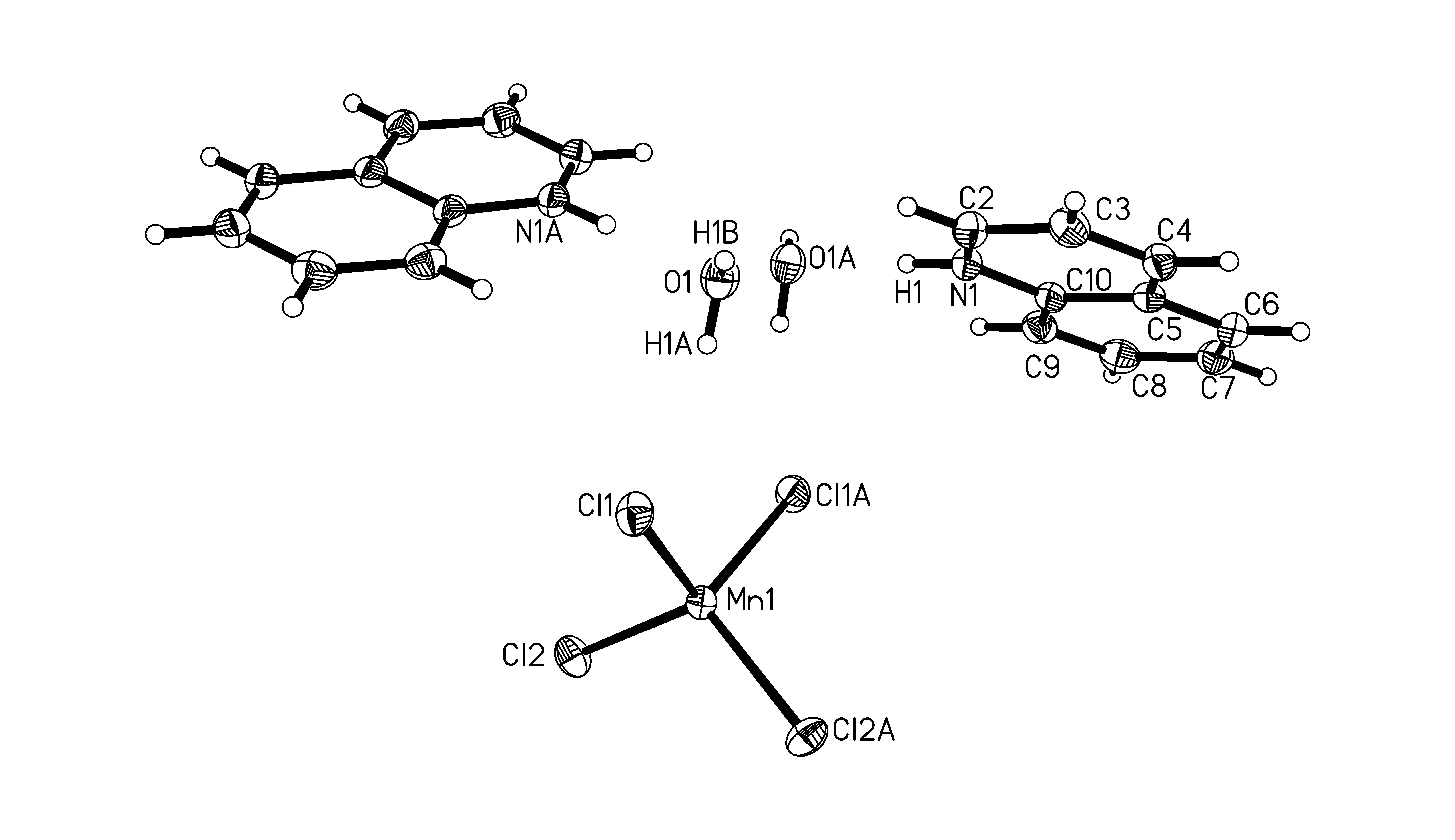


Figure S3. The molecular unit of **4** showing 50% probability thermal ellipsoids. Hydrogen atoms are shown as spheres of arbitrary size. Only the asymmetric unit, Cu-coordination sphere and those hydrogen atoms whose positions were refined are labelled.

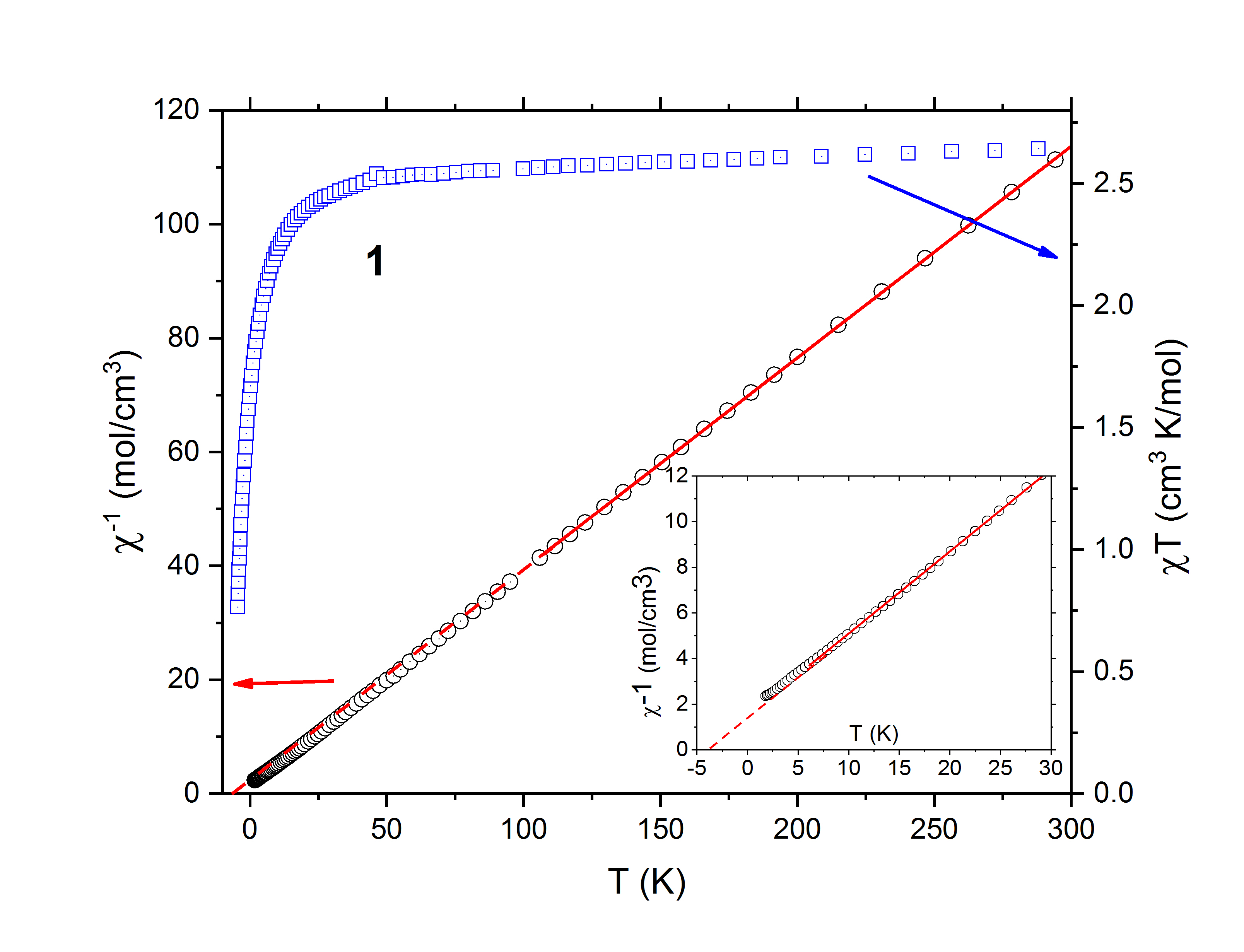


Figure S4. The inverse susceptibility (∇, left vertical axis) and χmT product (, right vertical axis) of **1** are plotted in figure S1. the solid red line through the susceptibility in the main panel corresponds to the results of a Curie-Weiss fit to the high-temperature data between 50 and 310 K, with parameters *C* = 2.78(2) cm3 K/mol and *θHT* = -4.2(2) K. The dashed red line represents the extension of the fitted line to the temperature axis. Insert: The inverse susceptibility data 5 and 25 K are C = 2.77 cm3 K mol-1 and *θLT* = -4.2(2) K (solid red line). The dashed red line represents the extension of the fitted line to the temperature axis.

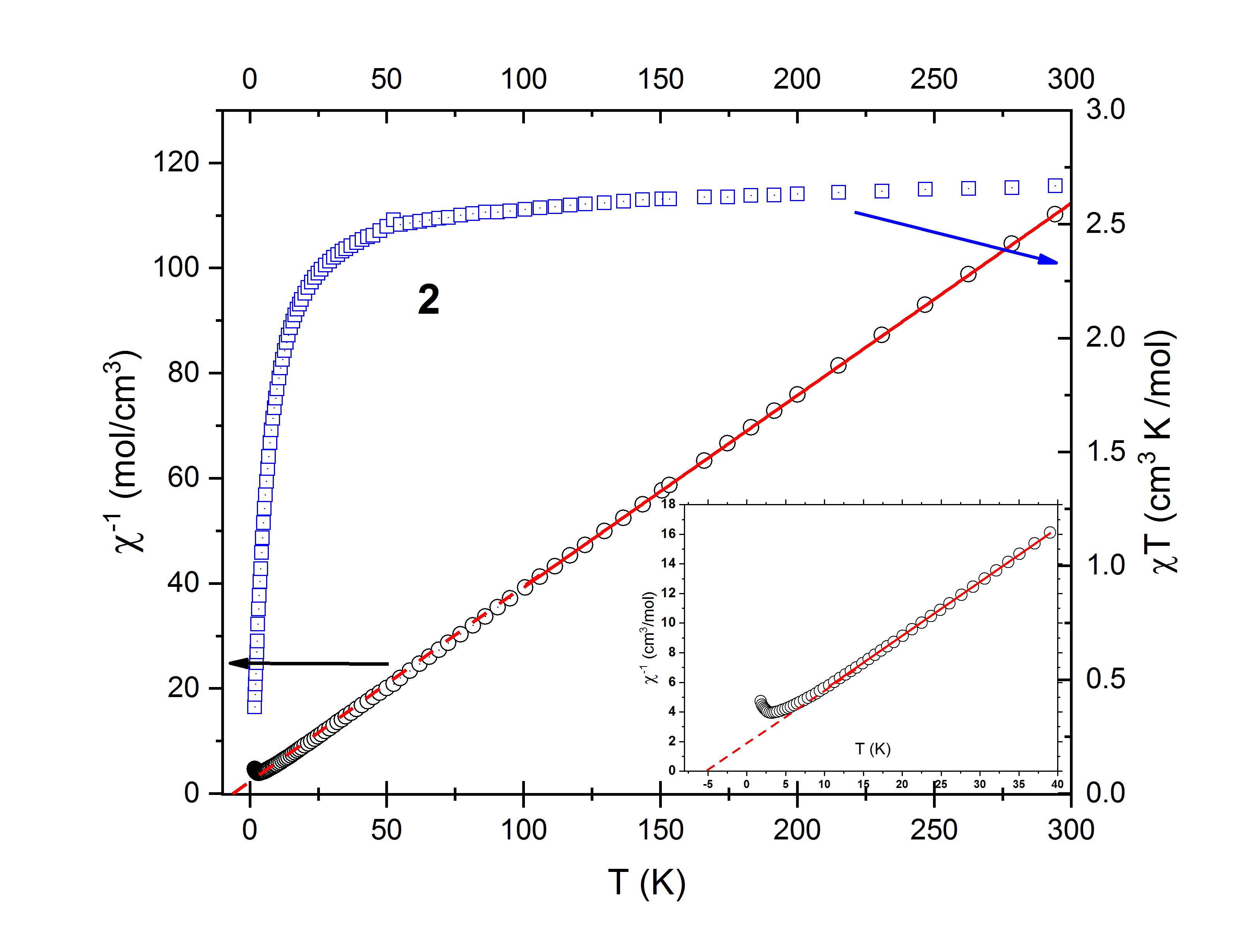


Figure S5. The inverse susceptibility (Ο, left vertical axis) and χmT product (, right vertical axis) of **2** are plotted in figure S2. The data between 100 and 310 K corresponds to parameters *C* = 2.75(2) cm3 K mol-1 and *θHT* = -7.2(5) K; when applied to the data between 10 and 40 K (insert), the parameters are *C* = 2.74(2) cm3 K mol-1 and *θLT* = ‑5.1(2) K. respectively. The dashed red line in the insert is the extrapolation of the fit to the temperature axis.

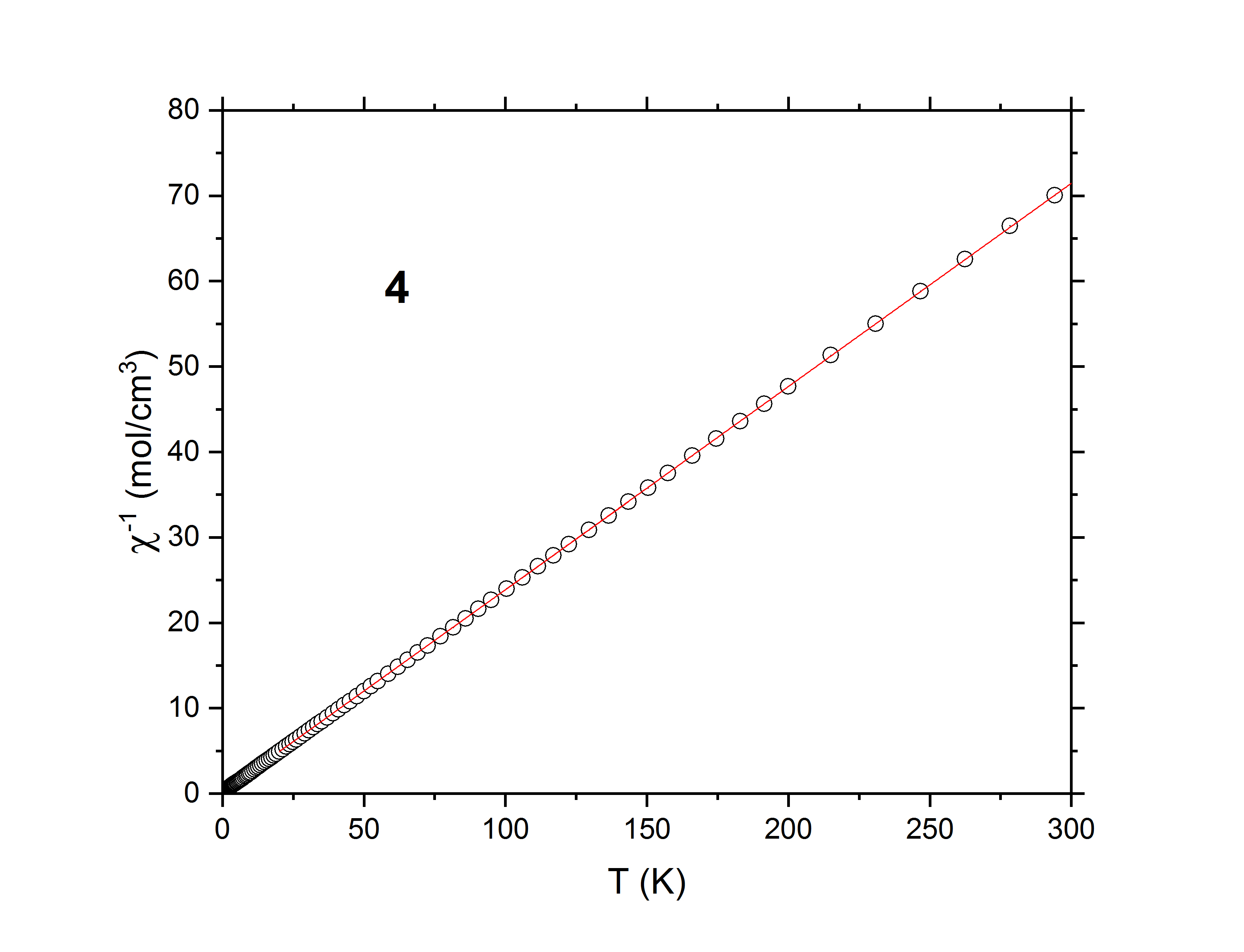


Figure S6. Inverse susceptibility as a function of temperature for **4**. The red line through the χ-1 data corresponds tothe Curie-Weiss fit with parameters *C* = 4.20(1) cm3 K/mol and *θ* = ‑0.45(6) K.

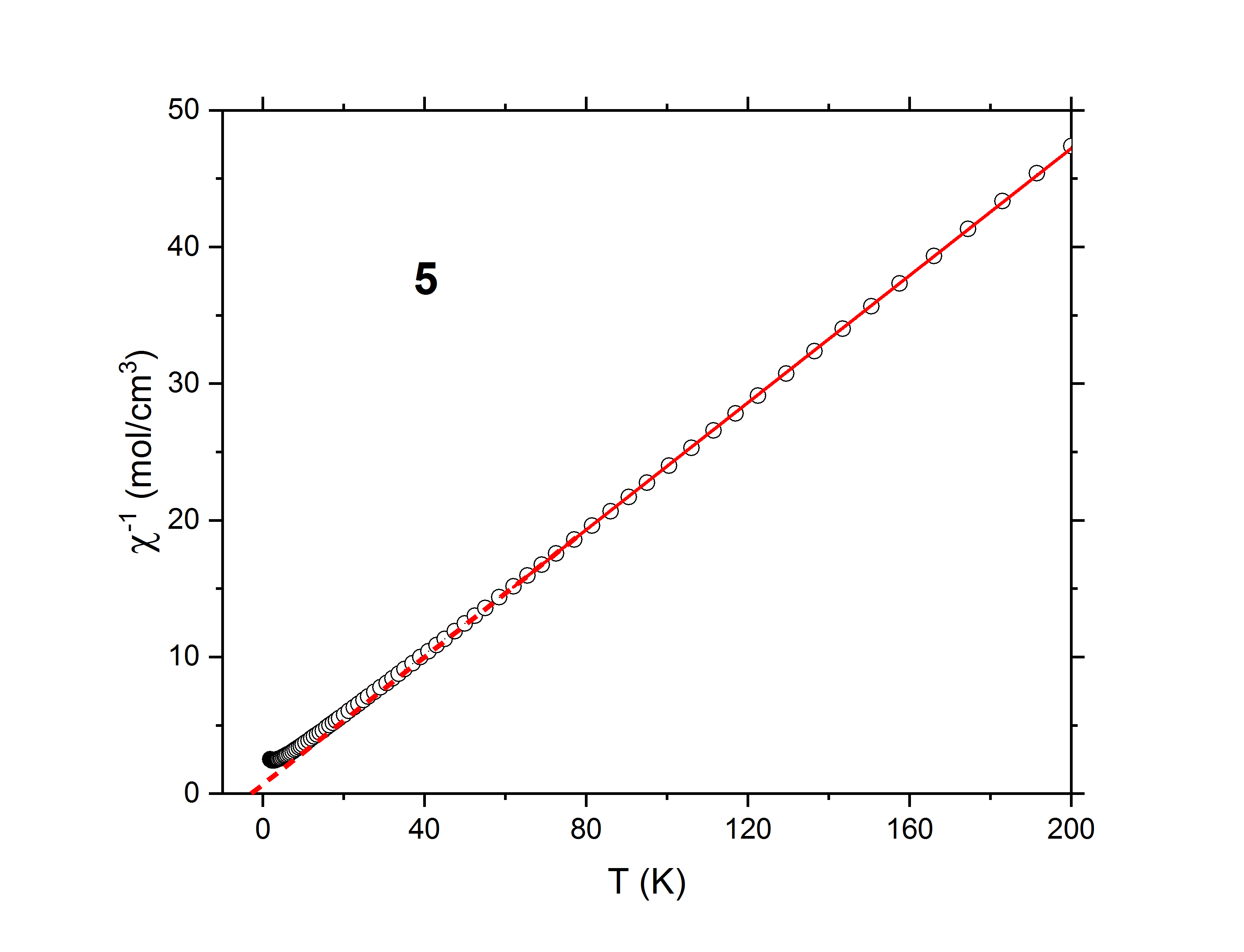


Figure S7. The inverse susceptibility of **5** are plotted in figure S2. The data between 100 and 310 K corresponds to parameters *C* = 4.30(2) cm3 K mol-1 and *θHT* = -3.0(2) K. The dashed red line in the insert is the extrapolation of the fit to the temperature axis.