Supporting Information for

A Tetranuclear Cobalt(II) Chain with Slow Magnetization Relaxation

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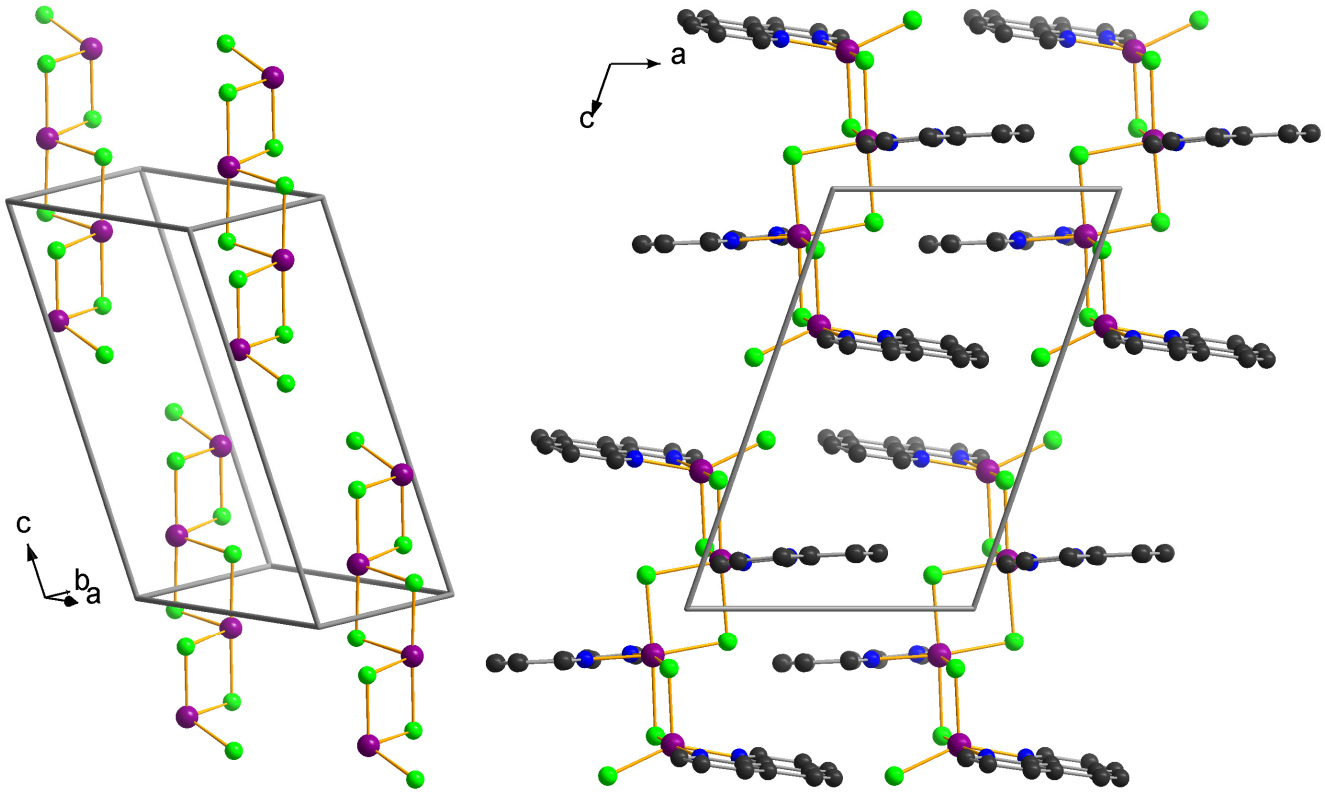

Figure S1. Left: Orientation of the $\{Co_4\}$ complexes in the crystal lattice of **1** (phen groups omitted for clarity). Right: A view of the unit cell along *b* shows the two relative orientation of phen groups (H omitted): one half co-planar to the the *ab* plane, the other half slightly tilted with respect to the *ab* plane (11.7°).

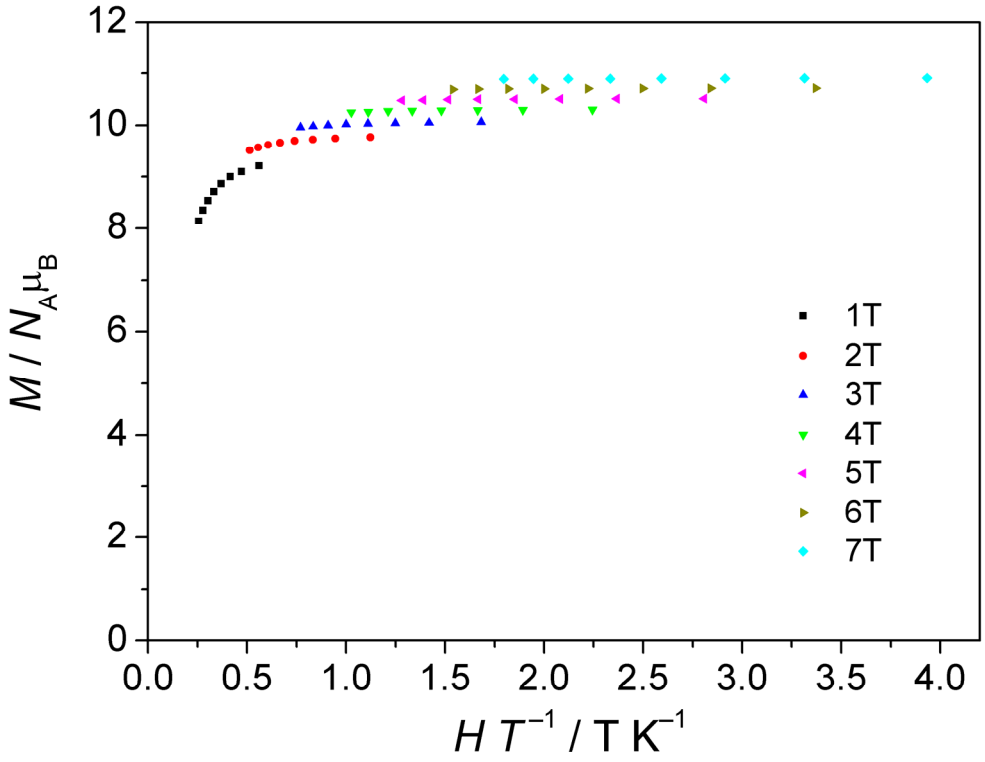

Figure S2. *M* vs. *H*/*T* data sets measured at indicated dc fields from 1.8-3.9 K. Note that the limitations of our model, in particular the approximation of the distorted five- and six-coordinate coordination environments by two tetragonally elongated ligand fields for the central and peripheral Co(II) centers, result in a significant deviation between calculated and experimental $M(H, T)$ data for low temperatures and high fields.

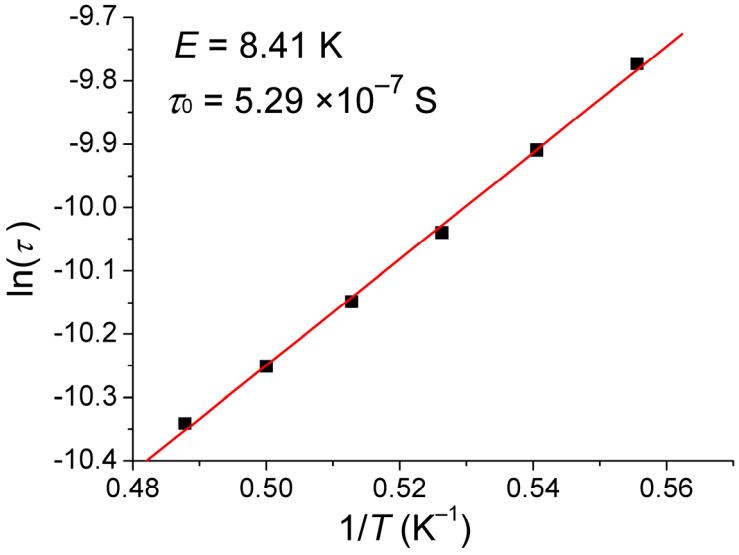

Figure S3. τ values derived from ac susceptibility in the absence of a static field (see Fig. 5) fitted to an Arrhenius law.

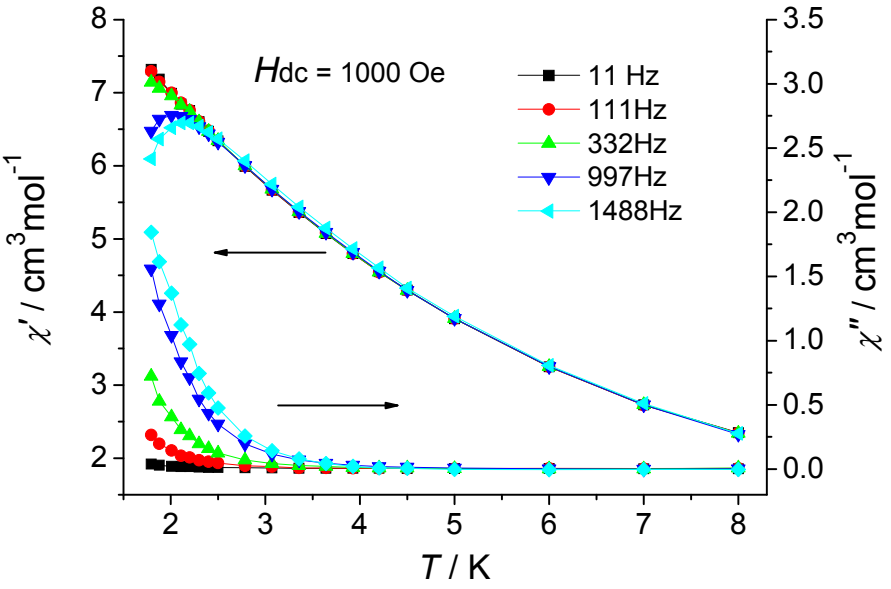

Figure S4. Temperature-dependent ac susceptibility data of **1** under a dc field 1000 Oe at the indicated frequencies.

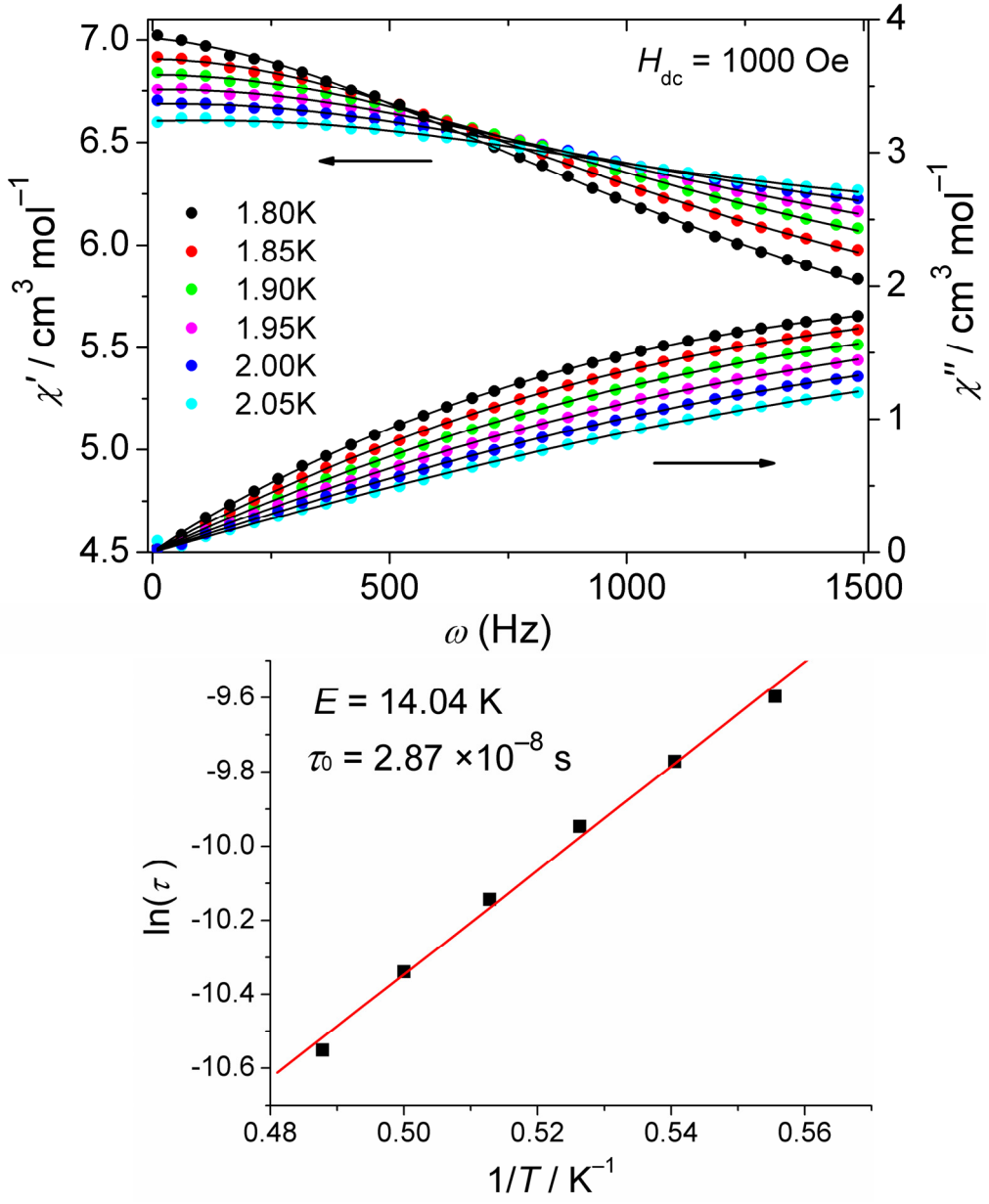

Figure S5. Top: Frequency-dependent ac susceptibility data under a static external field of 0.1 Tesla at T = 1.8–2.05 K (solid black lines: fit to a Debye model with χ_0 = 0, χ_s = 4.33–5.15 cm^3 mol^{-1}, α = 0.0769(4)). Bottom: τ values fitted to the Arrhenius law.

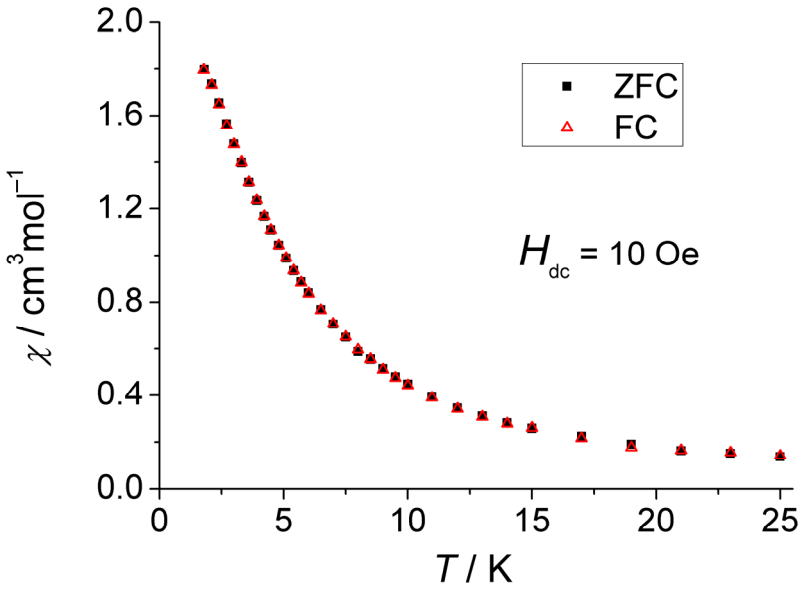

Figure S6. Zero-field cooled (ZFC) and field-cooled (FC) susceptibility of **1** measured under an external dc field of 10 Oe, indicating the absence of long-range ordering down to 1.8 K.