Electronic Supplementary Material (ESI) for Dalton Transactions

Supporting Information for

Field-Induced Slow Relaxation of Magnetization in a Tetrahedral Co(II) Complex With Easy Plane Anisotropy

Wei Huang, Tao Liu, Dayu Wu, Jiajun Cheng, Z.W. Ouyang and Chunying Duan

Table S1. The parameters of χ_T, χ_S, τ_0, and α used in the analyses by Debye model for complex **dmphCoBr** under 1000 Oe applied dc field.

Temperature	χ_S(cm^3 mol^{-1})	χ_T(cm^3 mol^{-1})	τ_0 (s)	α
1.8 K	1.258	1.69246	0.00083	0.113
2.0 K	1.249	1.702	0.00065	0.097
2.2 K	1.244	1.708	0.00049	0.0857
2.4 K	1.245	1.710	0.00030	0.0838
2.6 K	1.240	1.715	0.00015	0.102
2.8 K	1.158	1.799	0.00005	0.17466

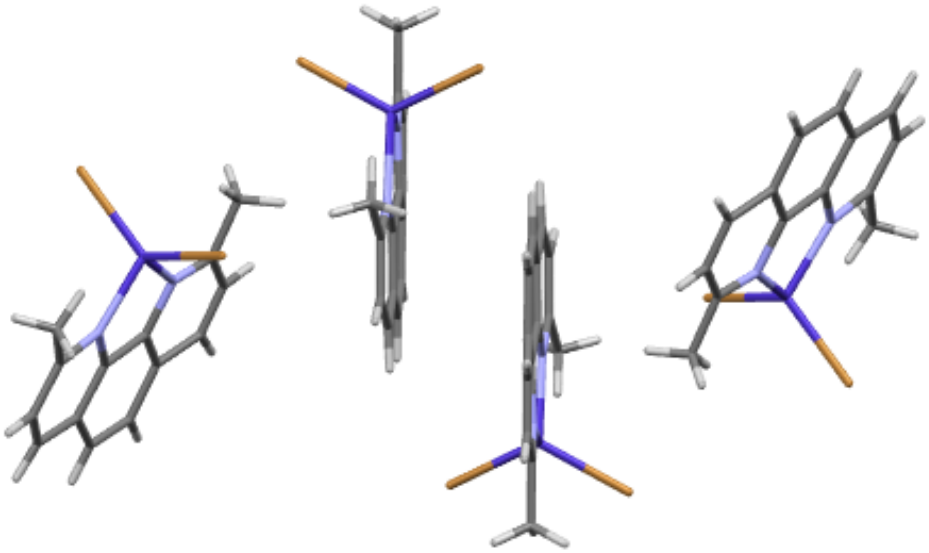

Figure S1. Crystal packing diagram of complex **dmphCoBr** emphasizing the π…π and C-H…π interactions.

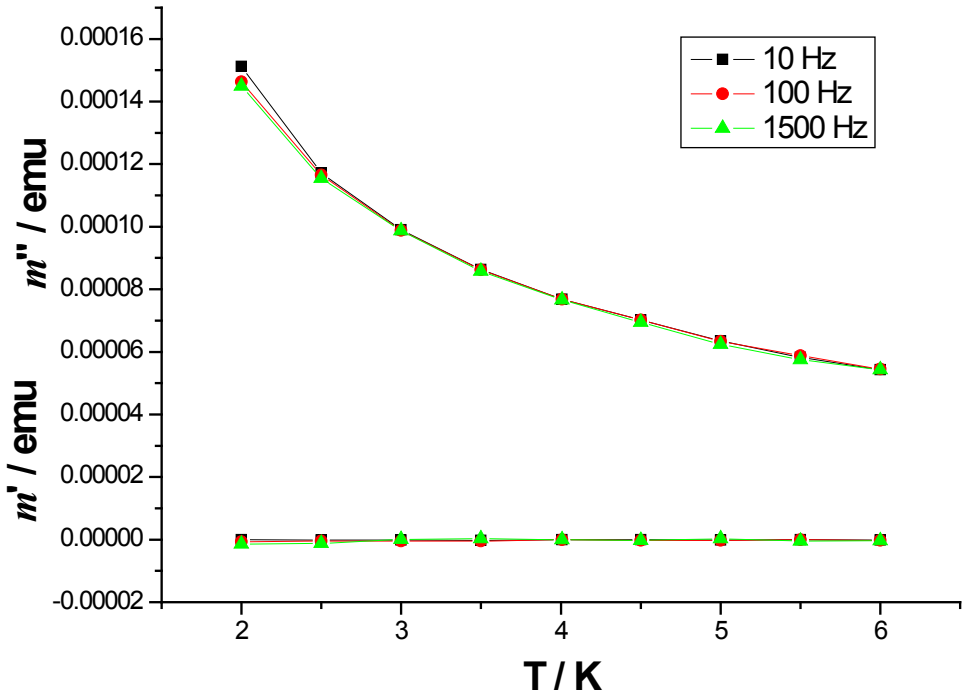

Figure S2. Temperature-dependent ac susceptibility data for complex **dmphCoBr** at three frequencies under 0 Oe dc field.

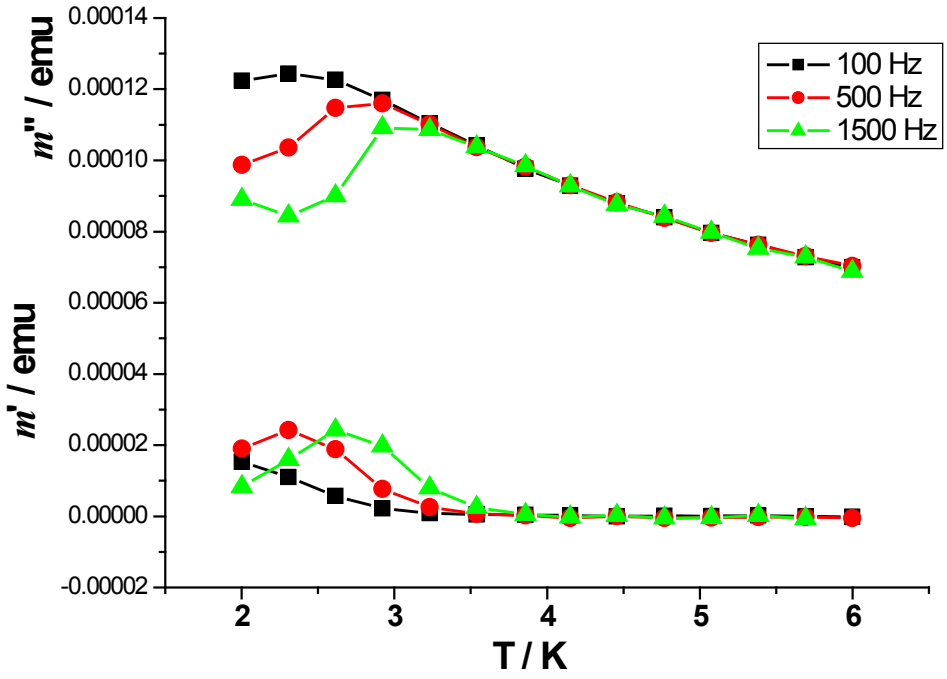

Figure S3. Temperature-dependent *ac* susceptibility data for complex **dmphCoBr** at three frequencies under 1000 Oe dc field.

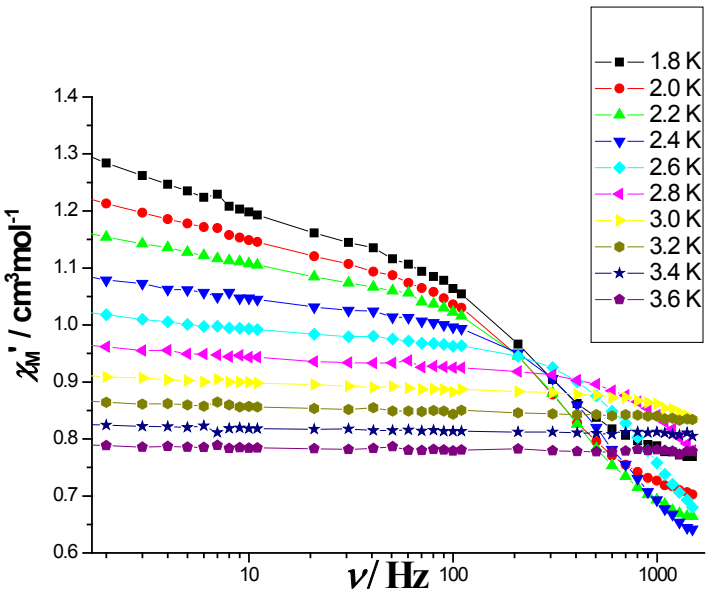

Figure S4. Frequency dependence of χ_M' under 1000 Oe applied dc field strengths for **dmphCoBr** at different temperature. Solid lines are guides for the eye.

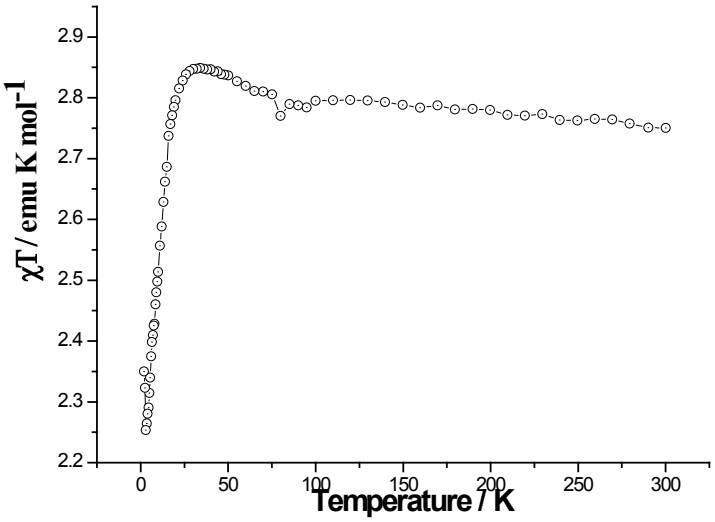

Figure S5. Temperature dependence of the $\chi_M T$ product at 2500 Oe for complex **dmphCo$_{0.2}$Zn$_{0.8}$Br** (with χ being the molar susceptibility per mononuclear complex defined as M/H).

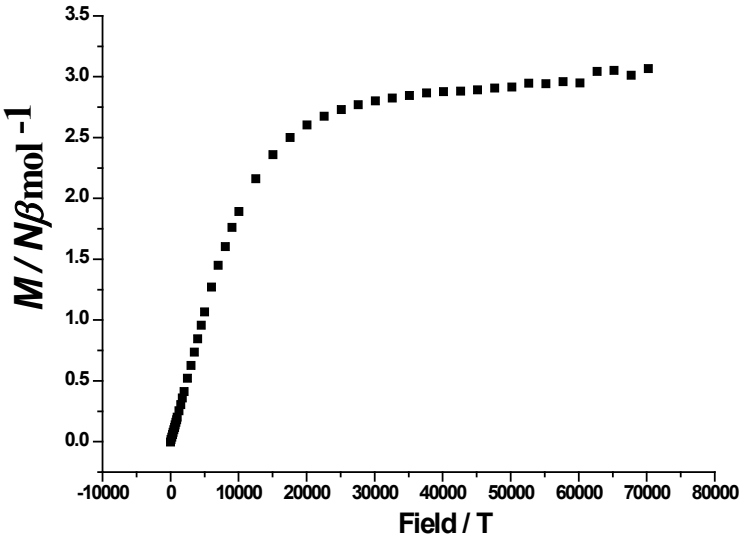

Figure S6. Magnetization versus magnetic field for **dmphCo$_{0.2}$Zn$_{0.8}$Br** at 2 K.

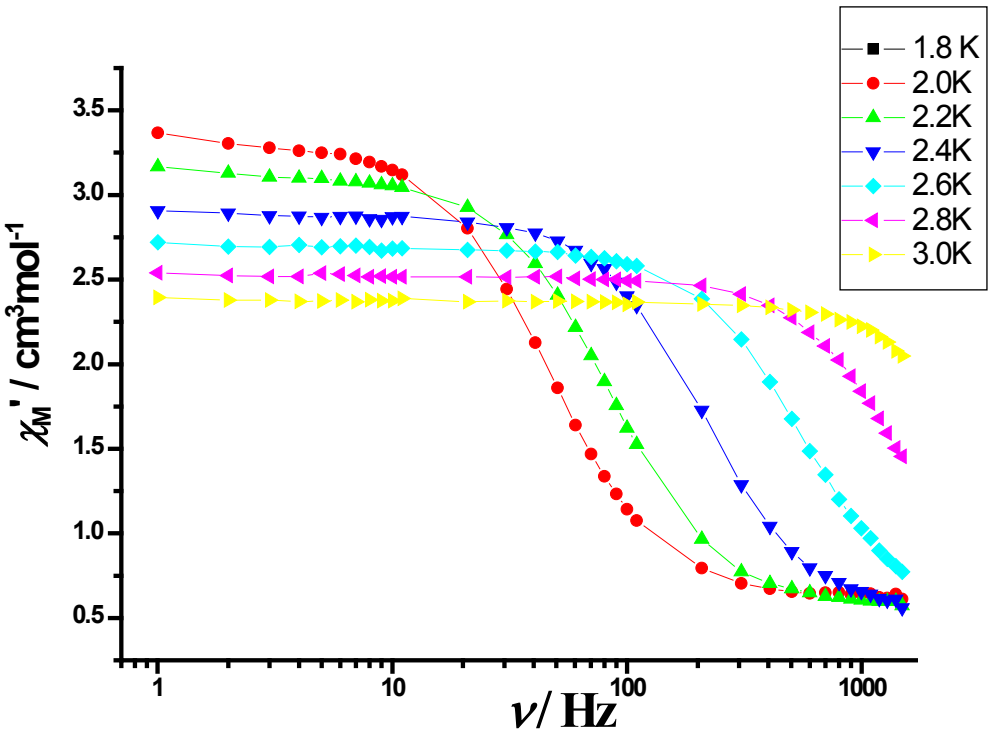

Figure S7. Variable-temperature frequency-dependent in-phase ac magnetic susceptibility data obtained for diluted **dmphCoBr** in a 1000 Oe dc field.