

Supplementary Information

A 3D Porous Cobalt-Organic Framework Exhibiting Spin-Canted Antiferromagnetism and Field-Induced **Spin-Flop** Transition

You-Gui Huang^a, Da-Qiang Yuan^a, Long Pan^b, Fei-Long Jiang^a, Ming-Yan Wu^a,
Xu-Dong Zhang^a, Wei Wei^a, Qiang Gao^a, Jeong Yong Lee^b, Jing Li^{*b}, and
Mao-Chun Hong^{*a}

*a State Key Laboratory of Structural Chemistry, Fujian Institute of Research on
the Structure of Matter, Chinese Academy of Sciences, Graduate School of the
Chinese Academy of Sciences, Fujian, Fuzhou, 350002, China.*

*b Department of Chemistry and Chemical Biology, Rutgers University, 610 Taylor Road,
Piscataway, New Jersey 08854*

* Corresponding author. E-mail: hmc@fjirsm.ac.cn. Fax: Int. code +86 591 8371-4946.

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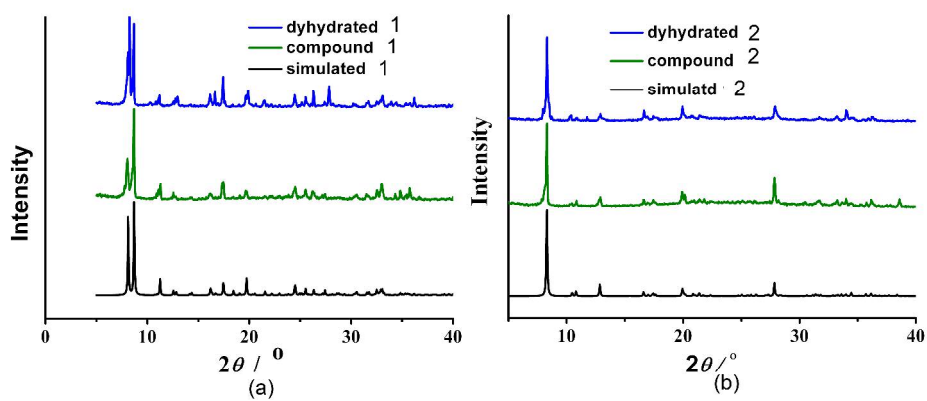


Figure S1. Powder XRD patterns of **1** (a) and **2** (b).

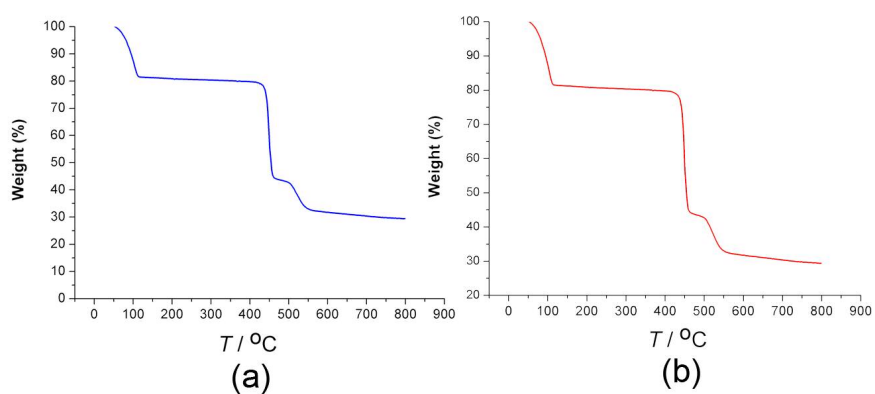


Figure S2. TGA curves of **1** (a) and **2** (b).

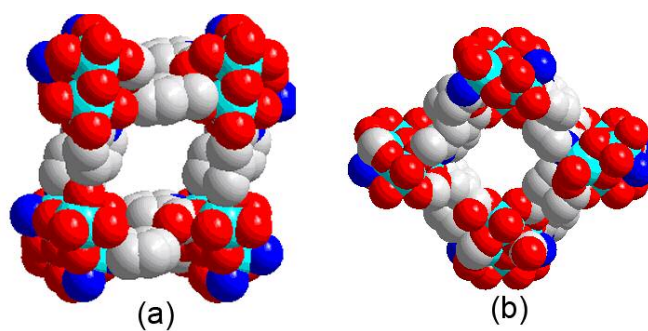


Figure S3. Space-filling model of cross section of the open channels in **1** (a) and **2** (b).

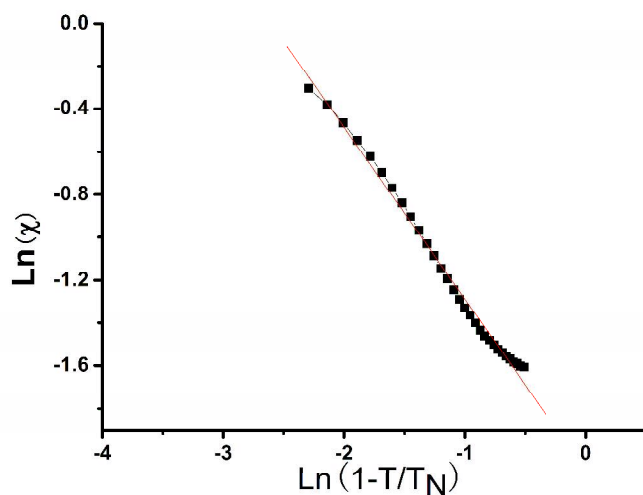


Figure S4. Double logarithmic plot of χ' as a function of the reduced temperature below T_N for **1**. Lines represent a fit to the power law.

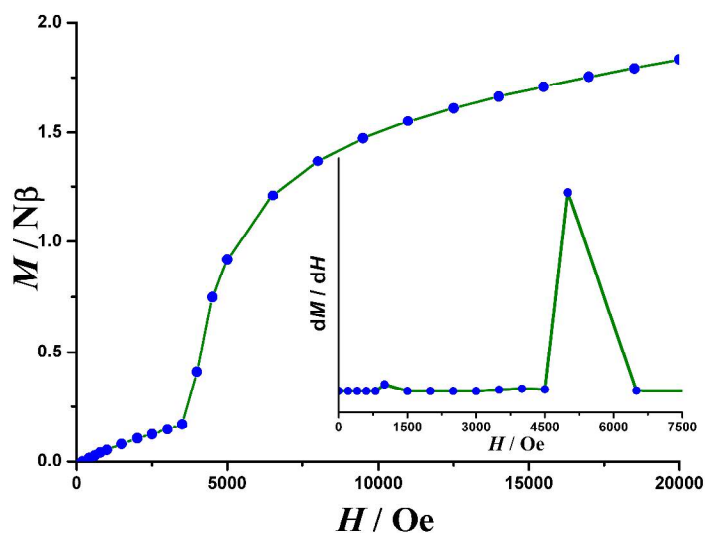


Figure S5. Plot of M vs H at 2 K for **1** at low field. dM/dH derivative curve inset.

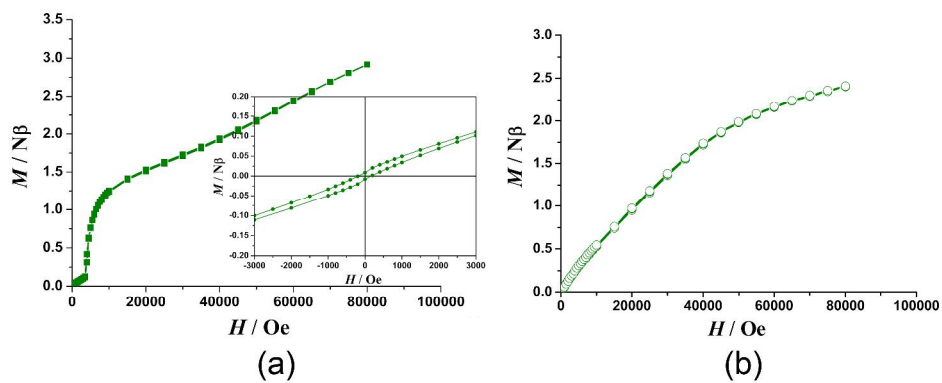


Figure S6. Plots of M vs H at 2 K for dyhydrated **1** (a) and **2** (b), hysteresis loop for dyhydrated **1** inset.

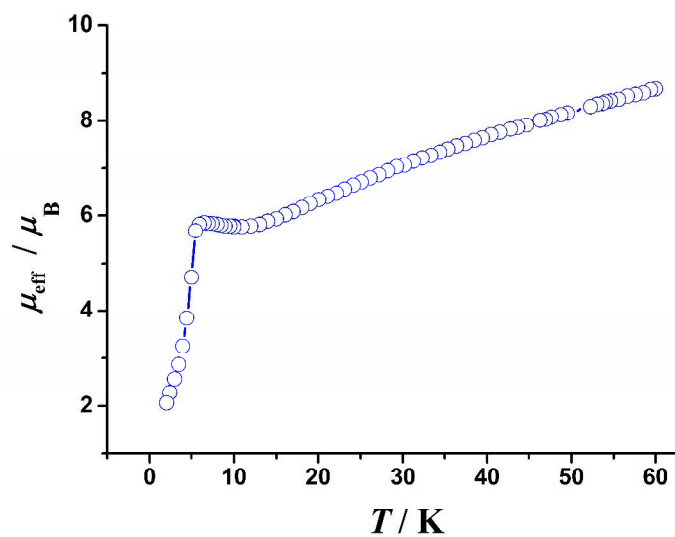


Figure S7. Temperature dependence of μ_{eff} for dyhydrated **1** at 500 Oe.

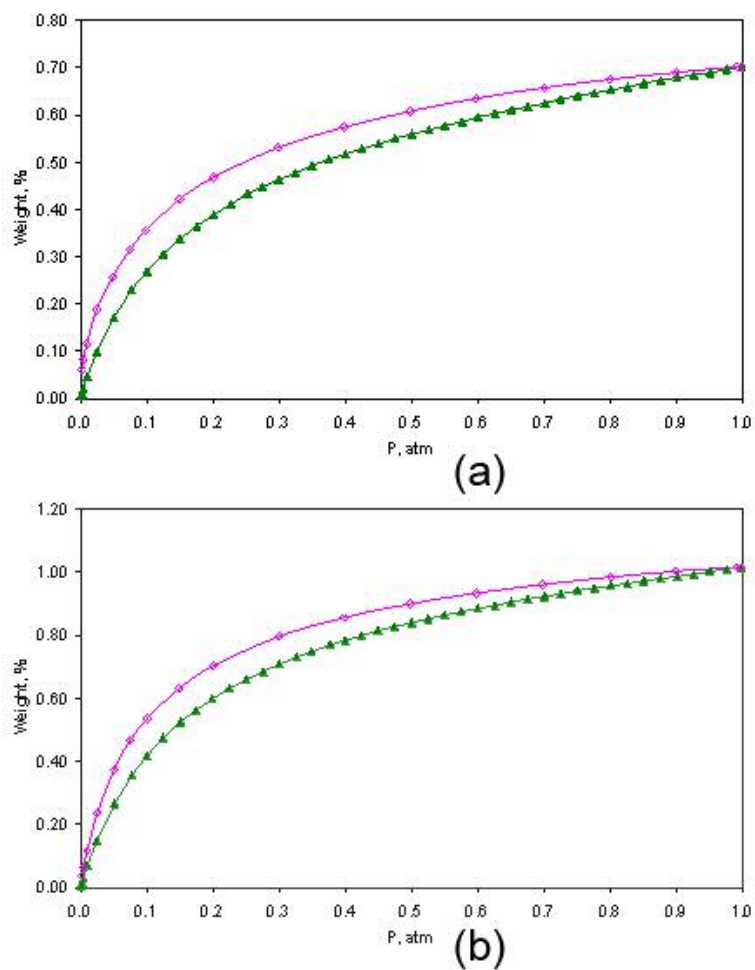


Figure S8. Hydrogen sorption isotherms of **1** (a) and **2** (b) at 77 K.