

Electronic supplementary information

A reversible SCSC transformation from a blue metamagnetic framework to a pink antiferromagnetic ordering layer exhibiting concomitant solvatochromic and solvatomagnetic effects

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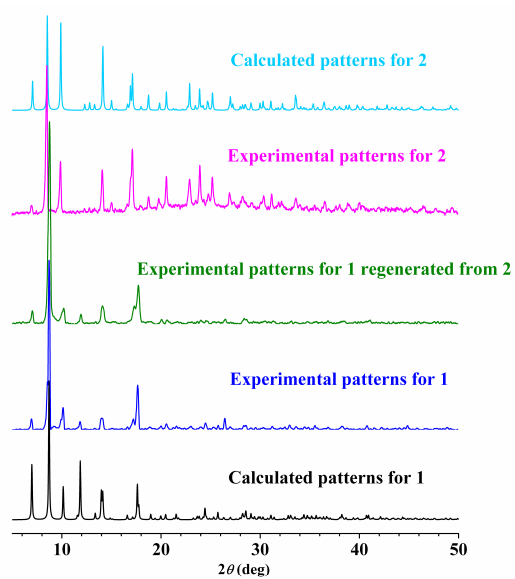


Fig. S1 PXR D patterns for the interconversion between 1 and 2.

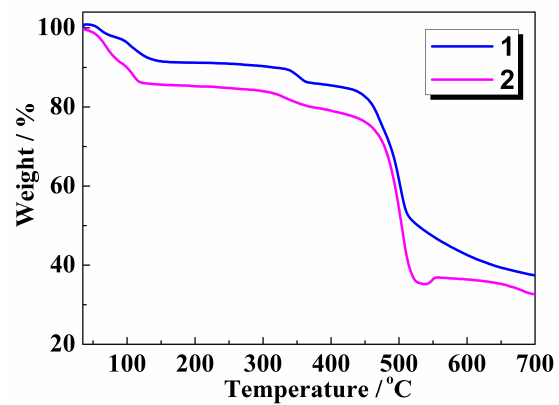


Fig. S2 TG curves for **1** and **2**.

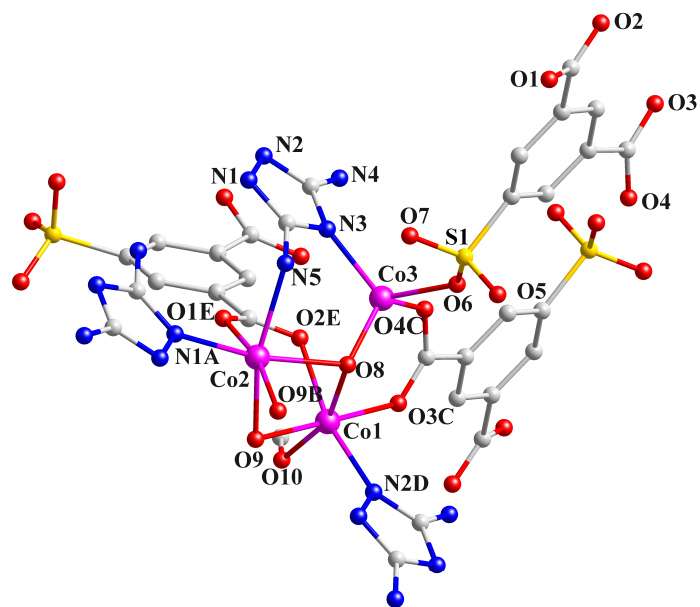


Fig. S3 Local coordination environments of Co^{II} ions in **1** (H atoms were omitted for clarity, symmetry codes:

A = $-x, 1-y, 2-z$; B = $-x, 2-y, 2-z$; C = $0.5-x, 1.5-y, 2-z$; D = $x, 1-y, 0.5+z$).

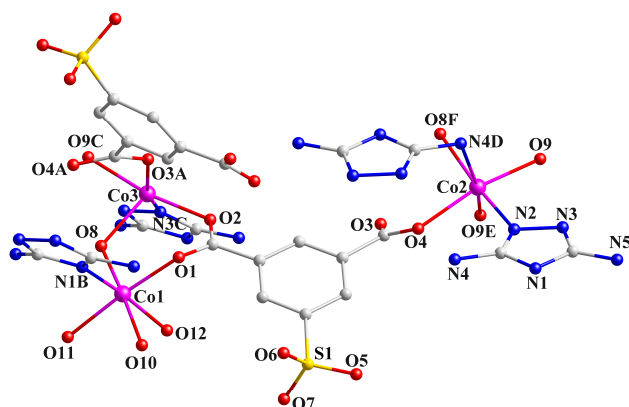


Fig. S4 Local coordination environments of Co^{II} ions in **2** (H atoms were omitted for clarity, symmetry codes: $A = 1 - x, y - 0.5, 1.5 - z$; $B = 1 + x, 1.5 - y, 0.5 + z$; $C = 1 + x, 2.5 - y, 0.5 + z$; $D = -x, 2 - y, 1 - z$; $E = -x, 3 - y, 1 - z$; $F = 1 - x, 0.5 + y, 1.5 - z$).

Table S1 Hydrogen-bonding Parameters for **2**.

D–H...A	<i>d</i> (D–H)	<i>d</i> (H...A)	<i>d</i> (D...A)	∠DHA
O10–H10B...O7 ^a	0.840	2.09	2.928(5)	171
O11–H11A...O6 ^a	0.840	1.96	2.753(4)	157

^a Symmetry transformations used to generate equivalent atoms: ^a 1 – *x*, 1 – *y*, 2 – *z*.

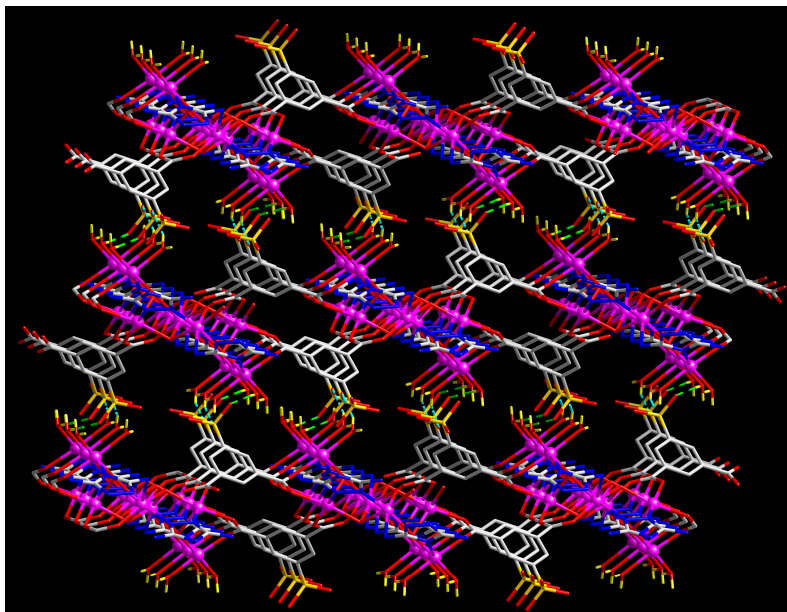


Fig. S5 3D supramolecular network of **2** formed by O–H...O hydrogen-bonding interactions.

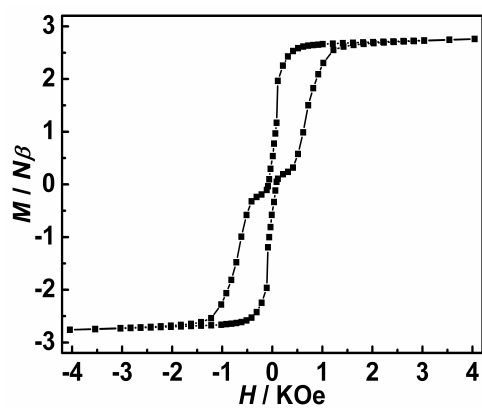


Fig. S6 Hysteresis loop for 1 at 2 K.

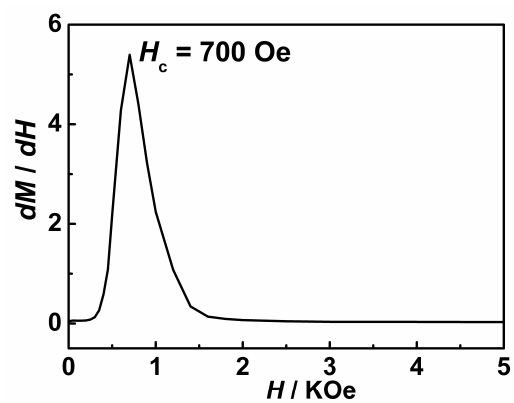


Fig. S7 The dM/dH derivative curve for **1** at 2 K.

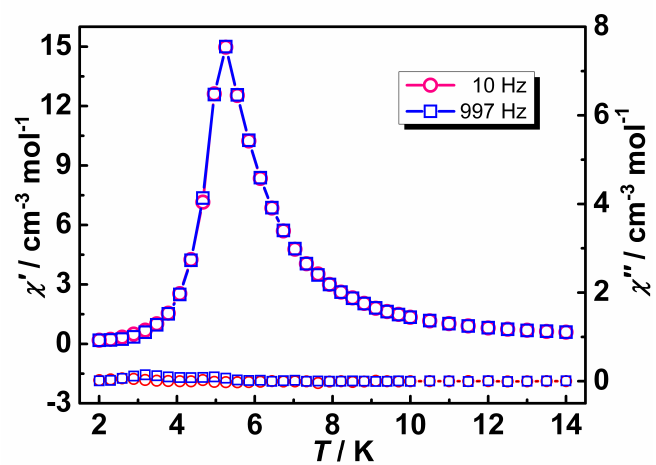


Fig. S8 Real (χ') and imaginary (χ'') ac magnetic susceptibility in zero applied dc field at 10 and 997 Hz for **2**.