Supporting Information File

A 2D coordination polymer based on Co_3 SBU showing spin-canting ferromagnetic behaviour

Sajal Khatua, Soumyabrata Goswami, Srinivasulu Parshamoni, Himanshu Sekhar Jena and Sanjit Konar*

Department of Chemistry, IISER Bhopal, ITI Gas Rahat Building, Govindpura

Bhopal 462023, M.P. INDIA.**Fax:** +91-755-4092392; Tel: +91-755-4092336

E-mail: skonar@iiserb.ac.in

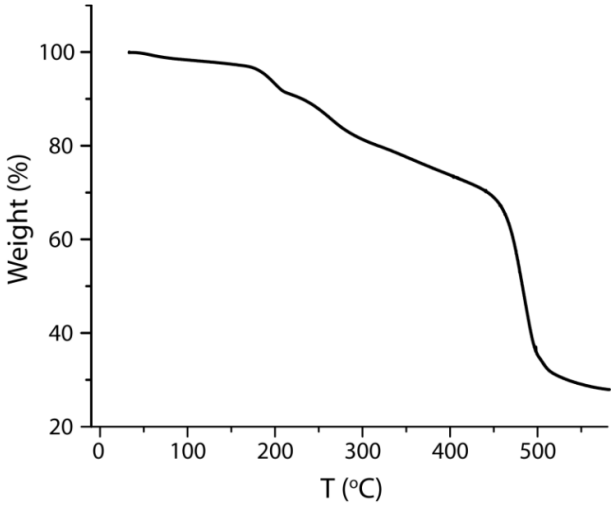

Fig. S1 TGA plot of complex **1.**

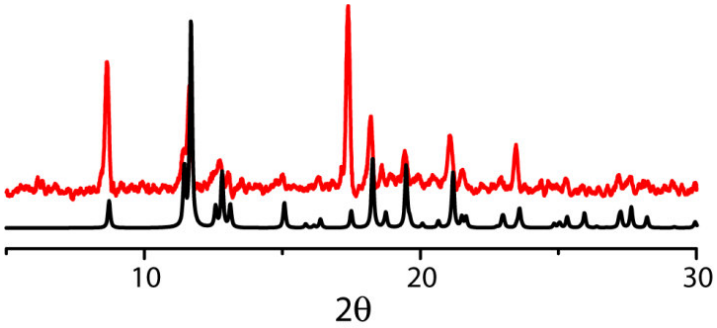

Fig. S2 PXRD pattern of complex **1** (red (experimental) and black (simulated)).

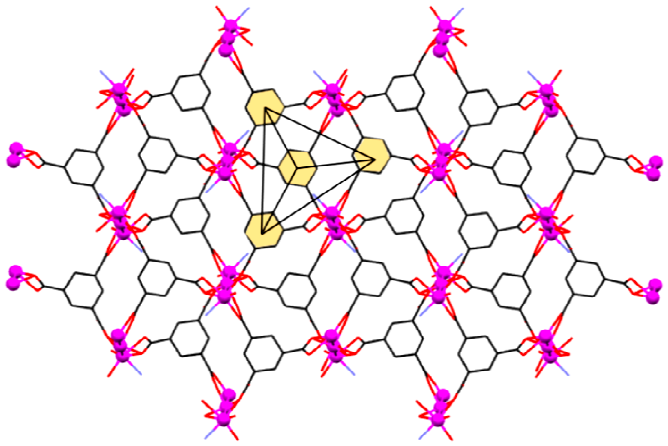

Fig. S3 Illustration of tetrahedral arrangements of the cyclohexane rings of CTC ligands in the 2D framework.

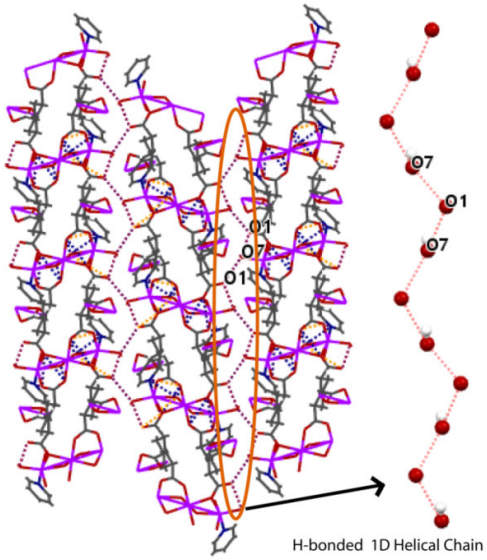

Fig. S4 Illustration of 1D helical chain originating from the H-bonded interaction between free oxygen atom (O1) of CTC ligand and coordinated hydroxyl group.

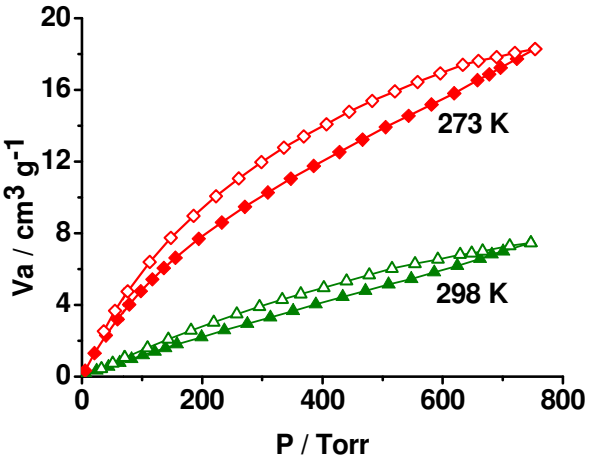

Fig. S5 CO_2 adsorption-desorption isotherms at 273 K and 298 K for **1.**

Table S1. The relevant bond distances (Å) and bond angles (°) around metal centres found in **1**.

Bond lengths (Å)			
Co1-N1	2.126(2)	Co1-O7	2.041(2)
Co1-O2	2.121(1)	Co2-O2	2.177(2)
Co1-O3	2.134(1)	Co2-O4	2.109(1)
Co1-O4	2.272(2)	Co2-O6	2.043(1)
Co1-O5	2.003(1)	Co1-O2	3.109(3)
Bond angles (°)			
N1-Co1-O2	168.0(7)	O4-Co1-O7	160.08(6)
N1-Co1-O3	85.82(7)	O5-Co1-O7	103.16(7)
N1-Co1-O4	87.11(6)	O2-Co2-O4	95.68(5)
N1-Co1-O5	89.67(7)	O2-Co2-O4A	84.32(5)
N1-Co1-O7	92.97(7)	O2-Co2-O6	87.92(5)
O2-Co1-O3	88.71(6)	O2-Co2-O6A	92.08(5)
O2-Co1-O4	81.77(5)	O4-Co2-O6	92.64(6)
O2-Co1-O5	91.44(6)	O4-Co2-O6A	87.36(6)
O2-Co1-O7	97.54(6)	O2-Co2-O2A	180.00(5)
O3-Co1-O4	59.63(6)	O4-Co2-O4A	180.00(6)
O3-Co1-O5	156.11(6)	O6-Co2-O6A	180.00(6)
O3-Co1-O7	100.49(6)	Co1-O2-Co2	92.67(5)
O4-Co1-O5	96.76(6)	Co1-O4-Co2	90.33(5)