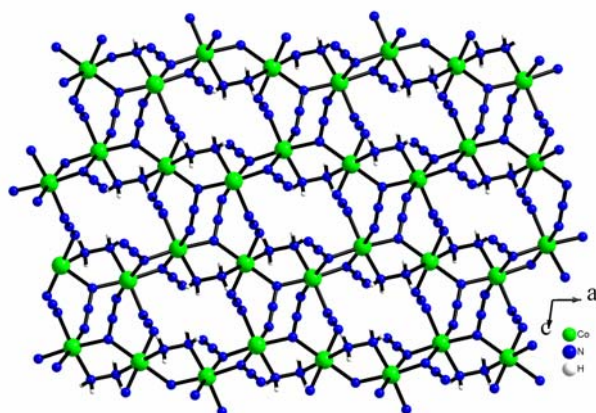


## Three-component assembly of a metal-inorganic 3D Co(II) polymer containing bridging hydrazine

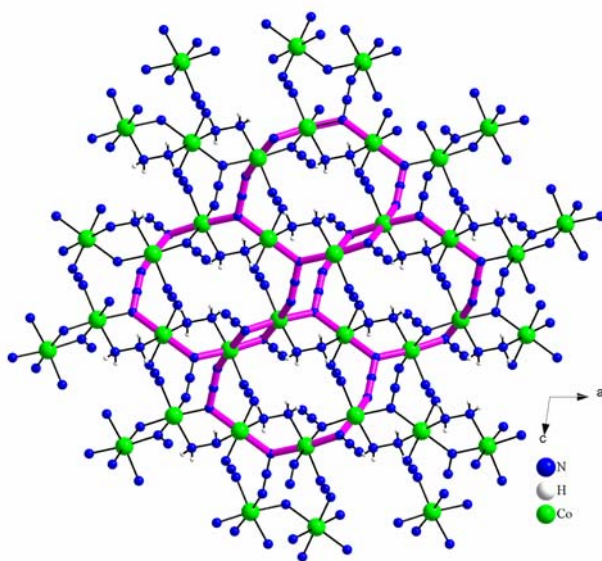
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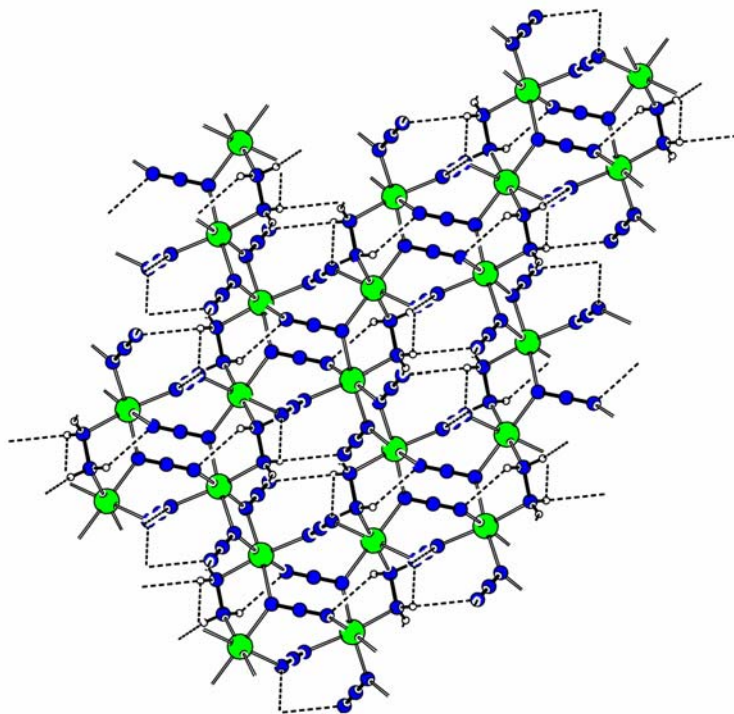
E-mail: [psm@ipc.iisc.ernet.in](mailto:psm@ipc.iisc.ernet.in)



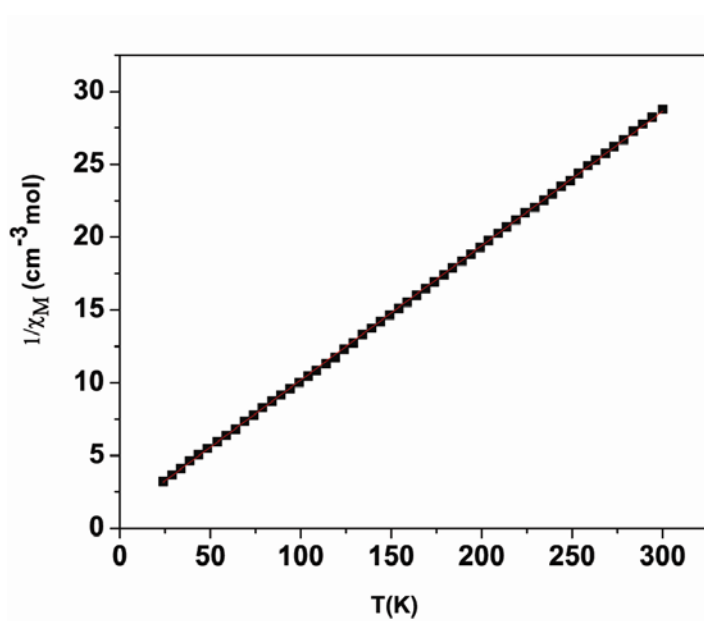
**Fig. S1:** View of the 2D structure of **1**.



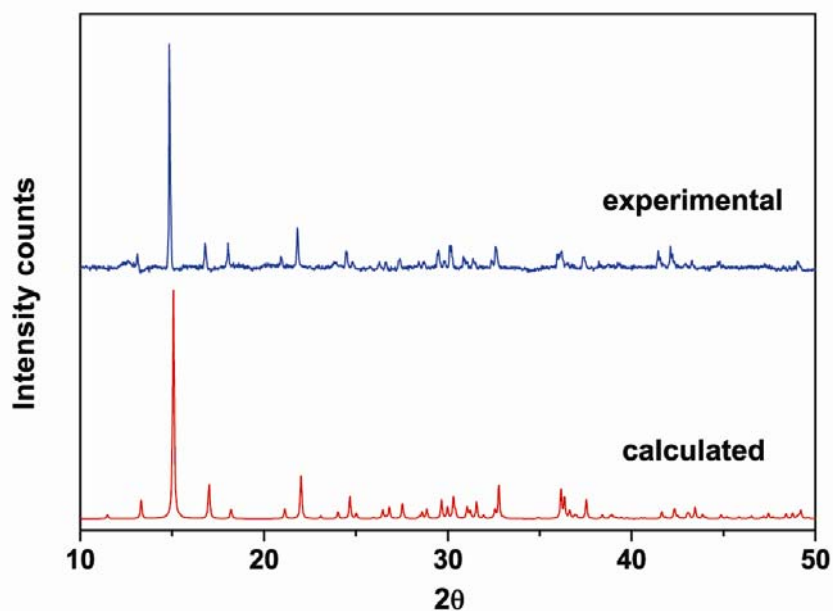
**Fig. S2:** 2D sheet unit in **1** showing the hexagonal Co-azide-hydrazine rings.



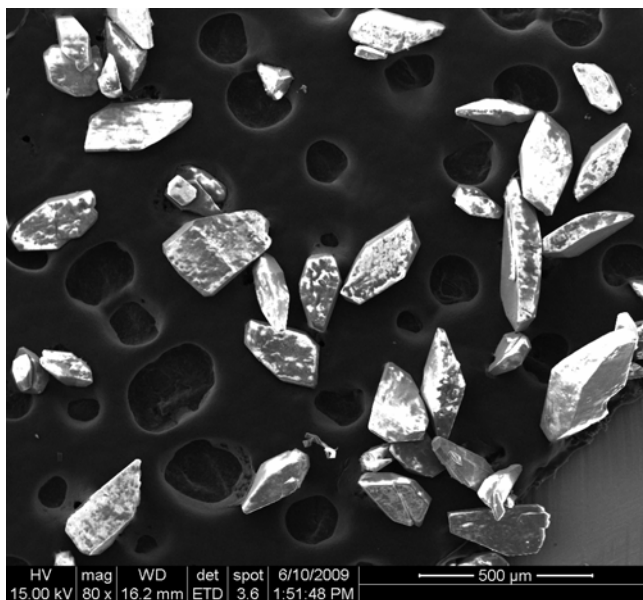
**Fig. S3:** View of the 3D structure showing H-bonding (shown by dotted line).



**Fig. S4:** Fitting of the  $1/\chi_M$  vs  $T$  data in the temperature range of 60 – 300 K using Curie-Weiss equation.



**Fig. S5:** Powder XRD of the complex **1** was carried out in D8 Advance X-ray diffractometer. The experimental pattern match very well with the simulated one obtained from X-ray single crystal structure.



**Fig. S6:** A SEM photograph of the complex **1** is given which revealed the nature of the particle size.