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

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![View of the 2D structure of 1.](image1)

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

![2D sheet unit in 1 showing the hexagonal Co-azide-hydrazine rings.](image2)

**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.