Supporting Information

Reversible crystal-to-amorphous structural transformations and magnetic variations in single end-on azide-bridged M^{II} (M = Mn, Ni) coordination polymers

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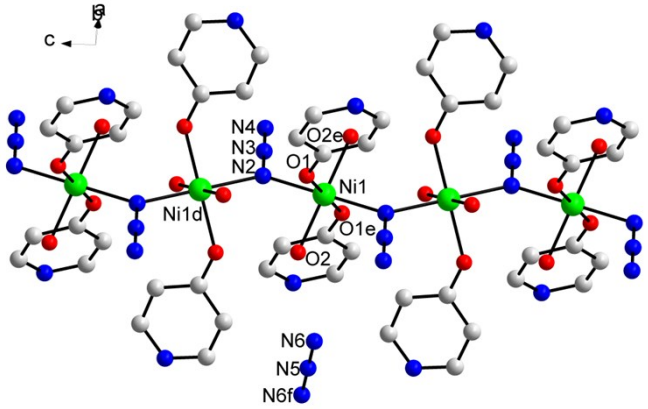
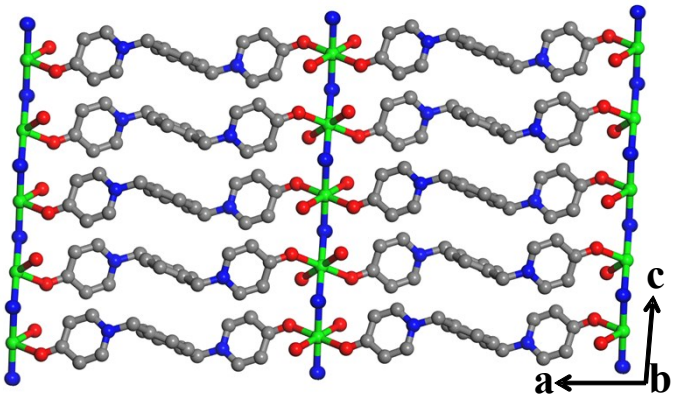
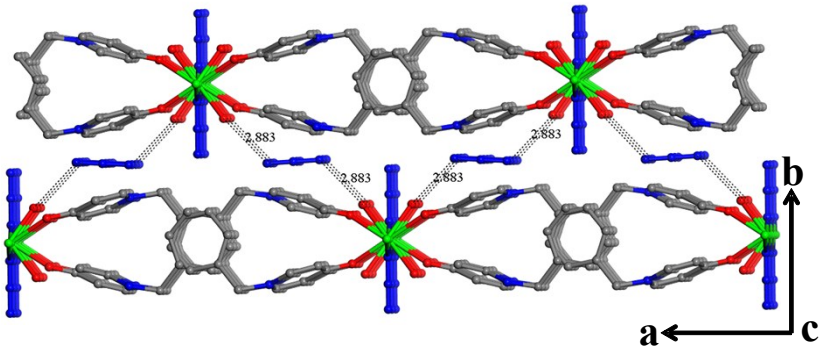


(a)



(b)



(c)

Fig. S1 (a) Molecular view of **2**. Symmetry transformation used to generate equivalent atoms: d = 1-x, y, 0.5-z; e = 1-x, 2-y, -z; f = 0.5-x, 1.5-y, -z. (b) Extended 2D structure in the *ac* plane. (c) Extended 3D view of **2** in the *ab* plane. The free azide ligands participate in hydrogen bonding with coordinated water molecules.

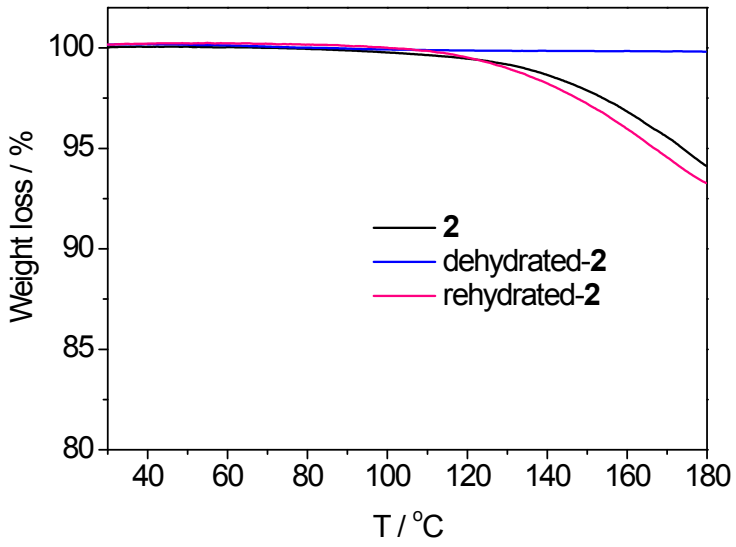


Fig. S2 TGA diagrams of **2**, dehydrated-**2**, and rehydrated-**2**.

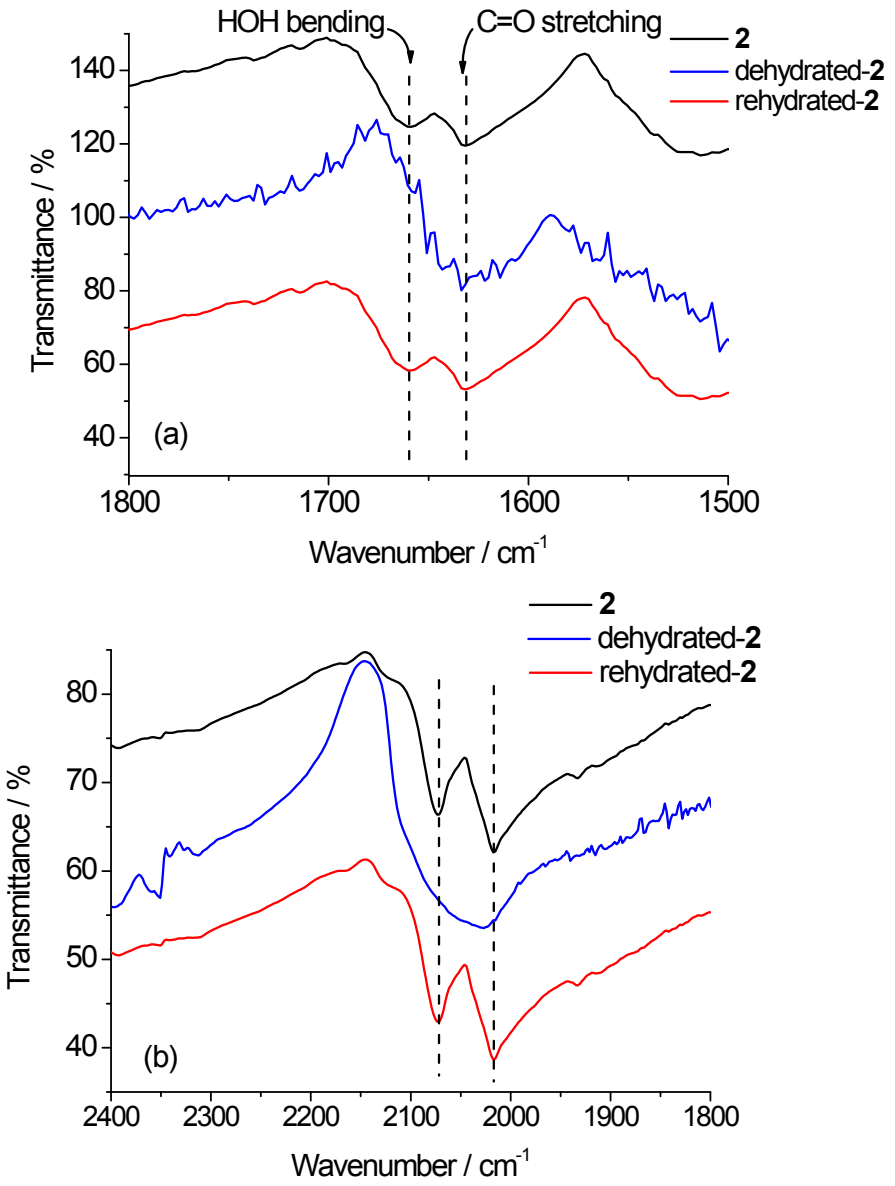


Fig. S3 Nujol IR spectra of **2**, dehydrated-**2**, and rehydrated-**2** in (a) the regions of H_2O bending and CO stretching modes and (b) asymmetric N_3^- stretching modes.

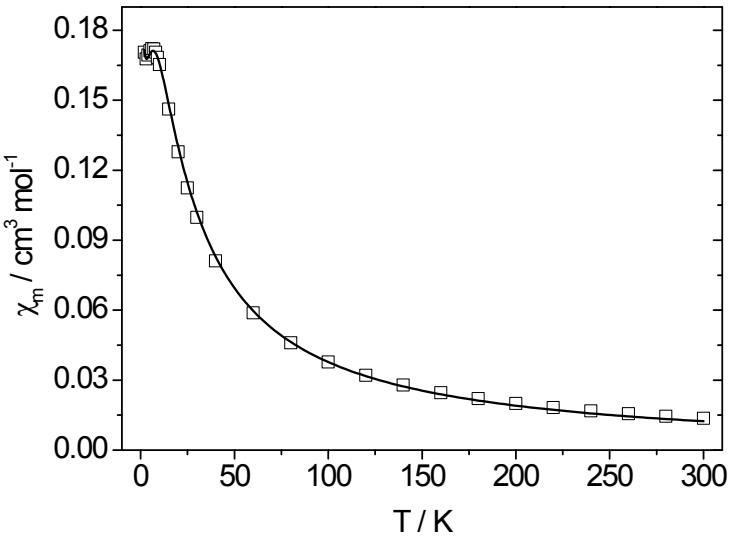


Fig. S4 Plot of χ_m versus T for **1** at H_{dc} = 1000 Oe. The solid line stands for the best fit with the Fisher equation.

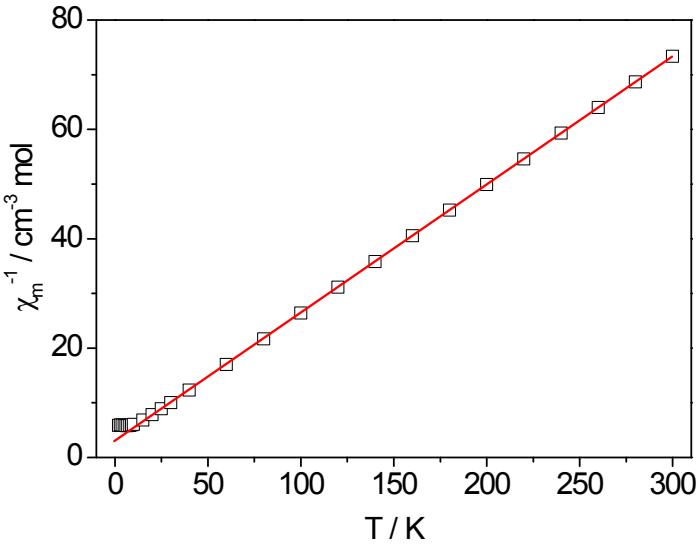


Fig. S5 Plot of χ_m^{-1} versus T for **1** at H_{dc} = 1000 Oe. The solid line stands for the best fit with the Curie-Weiss law, $\chi_m = C/(T-\theta)$.

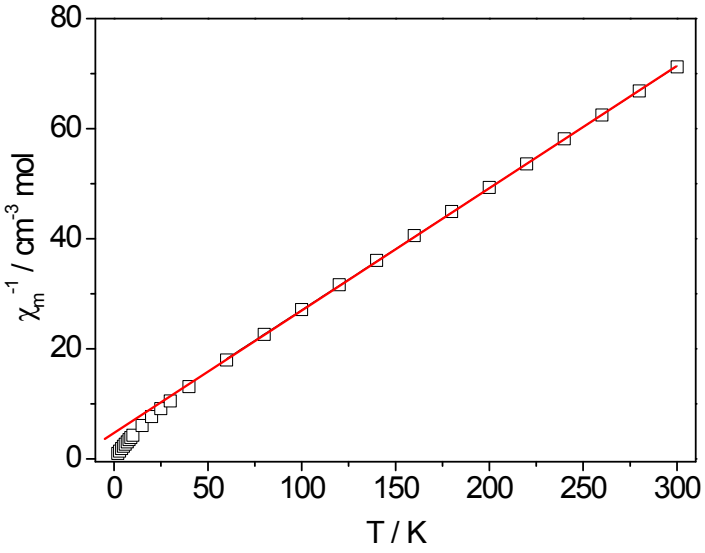


Fig. S6 Plot of χ_m^{-1} versus T for dehydratd-**1** at H_{dc} = 1000 Oe. The solid line stands for the best fit with the Curie-Weiss law, $\chi_m = C/(T-\theta)$.

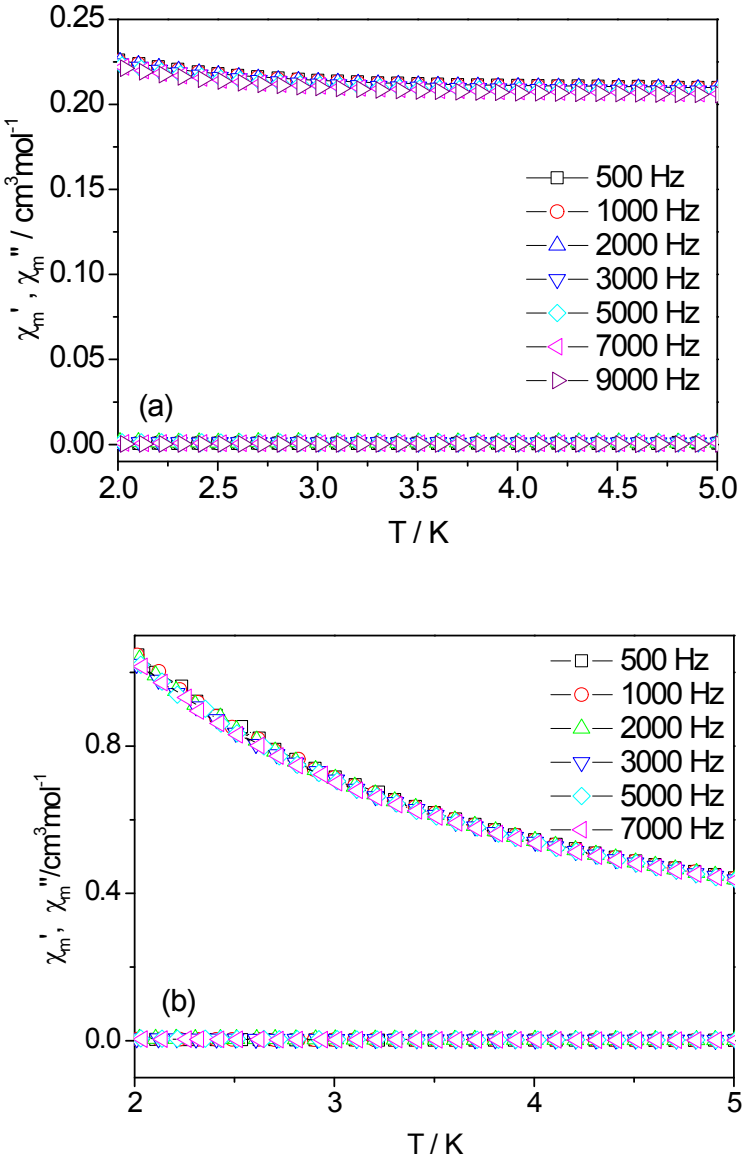


Fig. S7 Plot of χ_m' and χ_m" versus T for (a) **1** and (b) dehydratd-**1** at H_{ac} = 5 Oe and H_{dc} = 0 Oe.

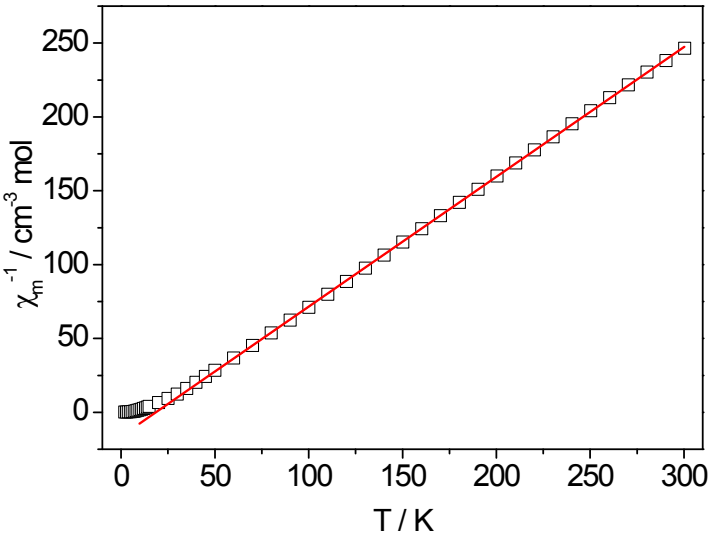


Fig. S8 Plot of χ_m^{-1} versus T for **2** at H_{dc} = 1000 Oe. The solid line stands for the best fit with the Curie-Weiss law, $\chi_m = C/(T-\theta)$.

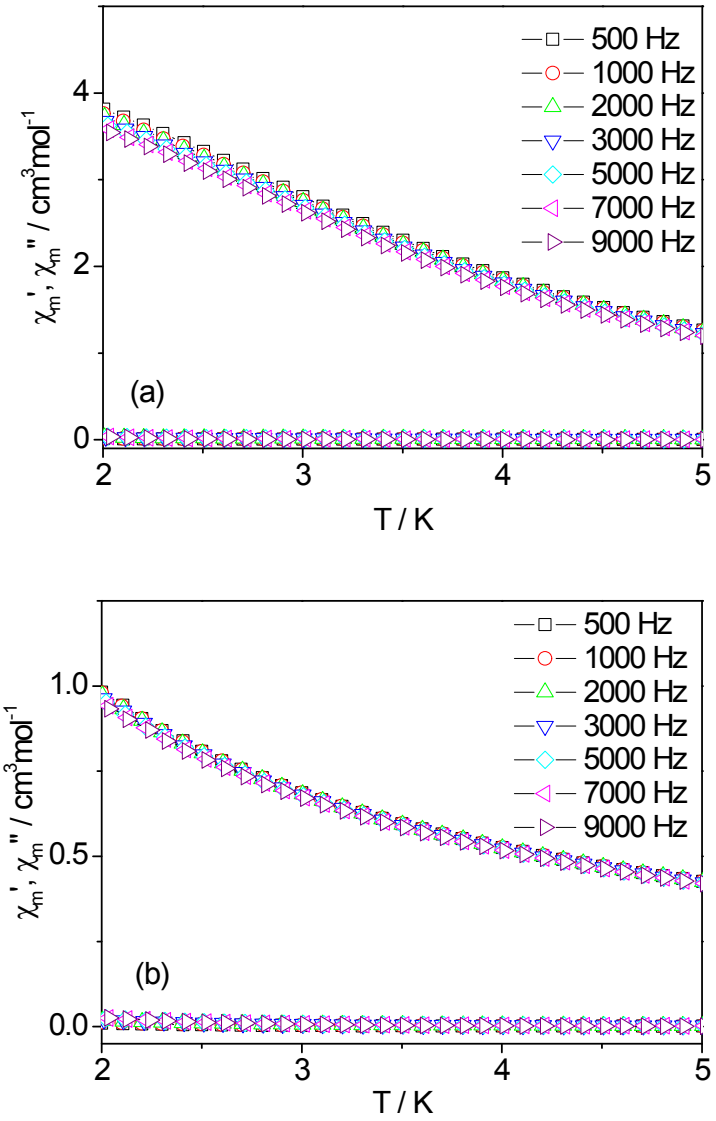


Fig. S9 Plot of χ_m' and χ_m" versus *T* for (a) **2** and (b) dehydratd-**2** at H_{ac} = 5 Oe and H_{dc} = 0 Oe.