

**Framework variations in Mn(II)-organic coordination polymers:
solvent templated formation and characterisation of 1D zigzag and
straight chain network isomers**

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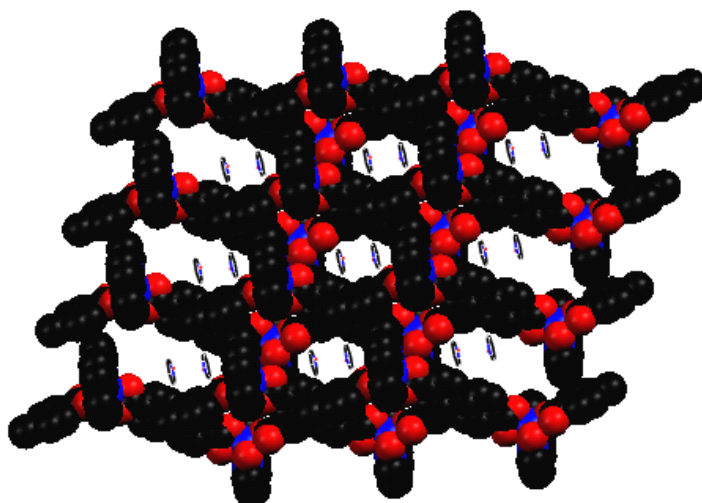


Figure S1 The packing of the H-bonded grids in **1a**, showing the formation of hexagonal channels occupied by solvate pyridine and water molecules, and with the Mn-bda-phen framework shown in space-filling and the crystallisation guests as capped sticks.

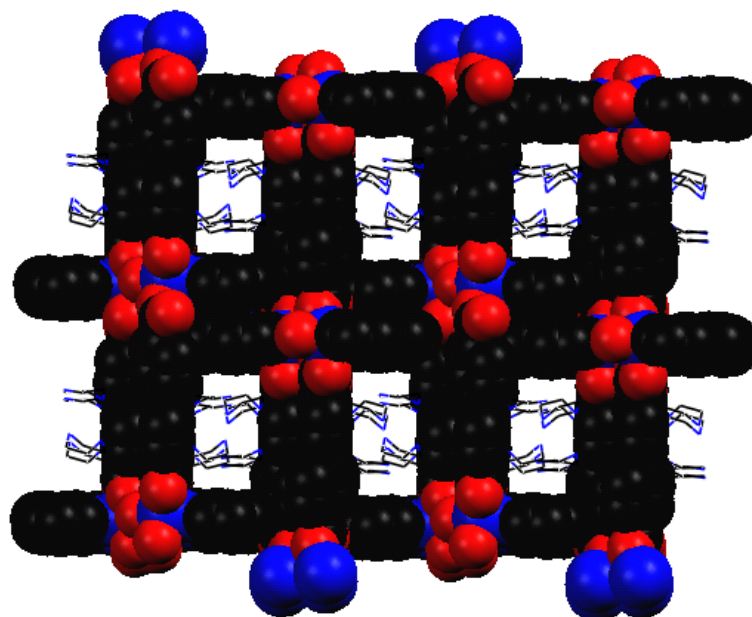


Figure S2 The packing of the H-bonded layers in **1b**, showing the formation of rectangular channels filled with free piperazine molecules, and with the Mn-bda-phen framework shown in space-filling and the crystallisation guests as capped sticks.

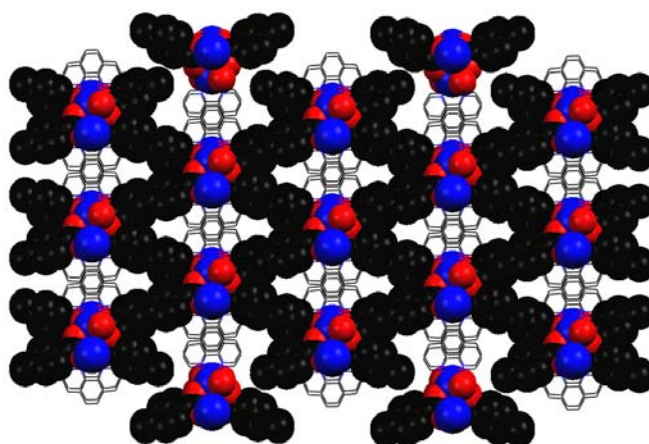


Figure S3 The packing diagram of complex **2**, showing the formation of rhombus channels filled with phen ligands, and with the Mn-bda framework shown in space-filling and the phen ligands as capped sticks.

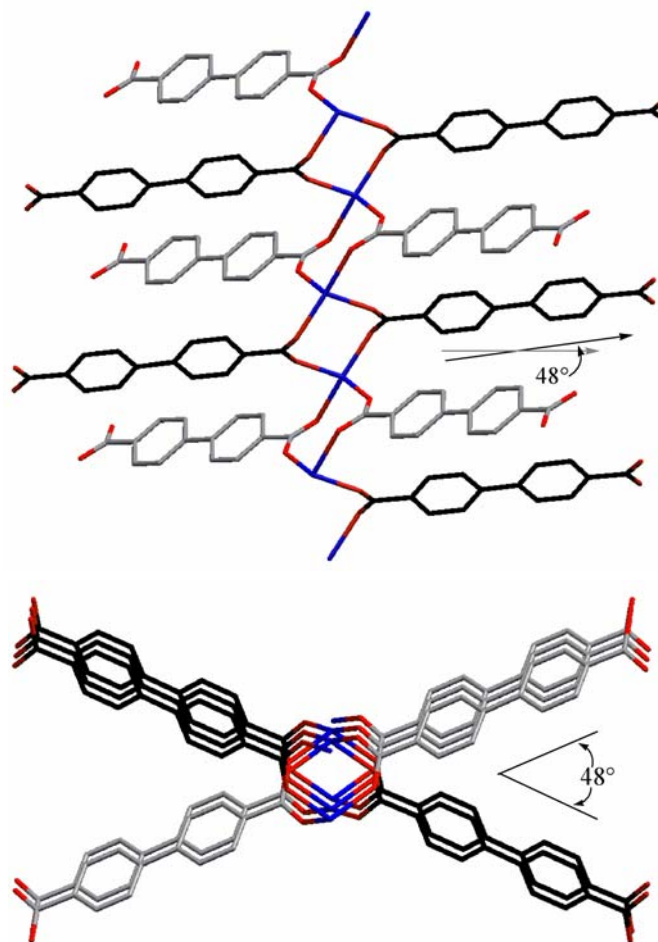


Figure S4 $[\text{Mn}(\mu_{1,3}\text{-OCO})_2]_n$ chain in **2** shown perpendicular to (top) and along (bottom) the c axis.

Equation S1:

The equation used for fitting the magnetic susceptibility data of complexes **1a**, **1b** and **2**:

$$\chi_{chain} = \left(\frac{Ng^2 \mu_B^2}{kT}\right) [A + Bx^2] [1 + Cx + Dx^3]^{-1}$$

where $A = 2.9167$, $B = 208.04$, $C = 15.543$, $D = 2707.2$, and $x = |J|/kT$.

$$\chi_M = \chi_{chain} / (1 - zJ' \chi_{chain} / Ng^2 \beta^2)$$