Supporting Information

Influence of central metal ion in controlling the self-assembly and magnetic properties of 2D coordination polymers derived from [(NiL)_2M]^{2+} nodes (M = Ni, Zn and Cd) (H_2L = salen type di-Schiff base) and dicyanamide spacers

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Fig. S1. Plots of the simulated and experimental powder XRD patterns for the three compounds 1-3.
Fig. S2. IR spectrum of compound 1.

Fig. S3. IR spectrum of compound 2.
**Fig. S4.** IR spectrum of compound 3.

**Fig. S5.** (a) The 2D coordination network in 2 constructed by assembling in the trinuclear $[(\text{NiL})_2\text{Cd}]^{2+}$ units through the central Cd and terminal Ni centres with the dca$^-$ bridges. All H atoms are omitted for clarity, Ni = green, Cd = violet, N = blue, O = red, C = brown. (b) Simplified uninodal 4-connected net with the sq1 topology and the point symbol of $(4^4.6^2)$. Centroids of the 4-connected trinuclear units are shown as green balls.
Fig. S6. Isothermal magnetization of compound 1 at 2 K.

Fig. S7. Isothermal magnetization of compound 2 at 2 K.

Fig. S8. Isothermal magnetization of compound 3 at 2 K.