Electronic Supplementary Information for Dalton Transactions

Supporting Information

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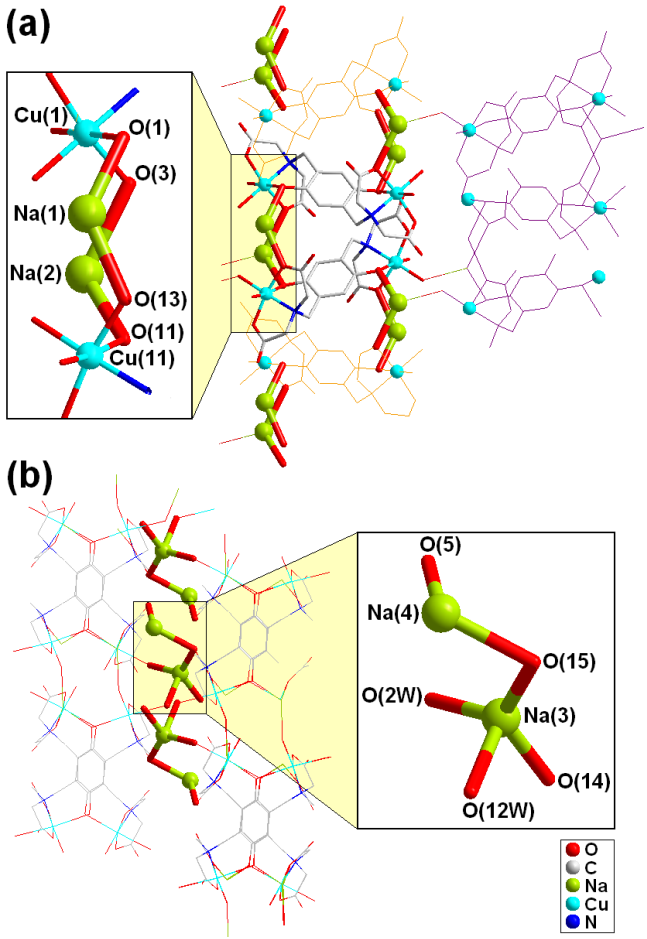

Figure S1. Representative structural drawings of **6** showing the formation of the 3D self-assembly polymeric structure via the interactions of Na^+ with the oxygen atoms of the ligand. (a) The Na(1) and Na(2) atoms form bridges [O(11)-Na(2)-O(3) and O(1)-Na(1)-O(13)] that connect two complexes in a zig-zag 1D polymer. In addition, Na(2) forms bonds with the O(11) of the neighbouring 1D polymers creating 2D sheets. (b) The Na(3) and Na(4) atoms operate as bringing atoms [O(15)-Na(3)-O(2w)O(12w)O(14), O(15)-Na(4)-O(3)] between the 2D polymers resulting in the 3D polymer.

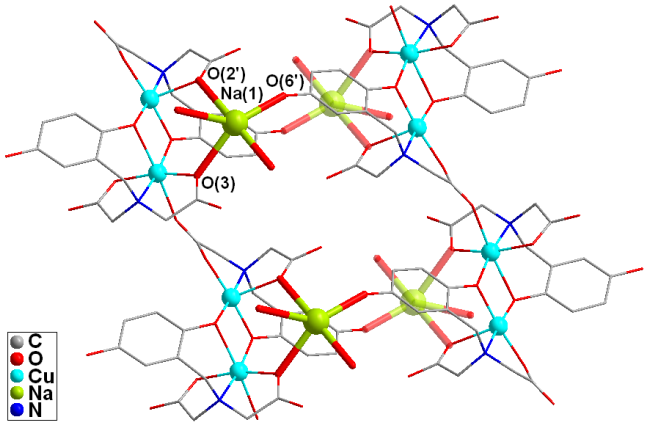

Figure S2. A representative structural drawing of **9** where the 1D polymers are coupled to each other through interaction of the sodium counter ions with the second free phenolic oxygen [O(6')], and the carboxylate oxygen atoms [O(2')] and [O(3)].

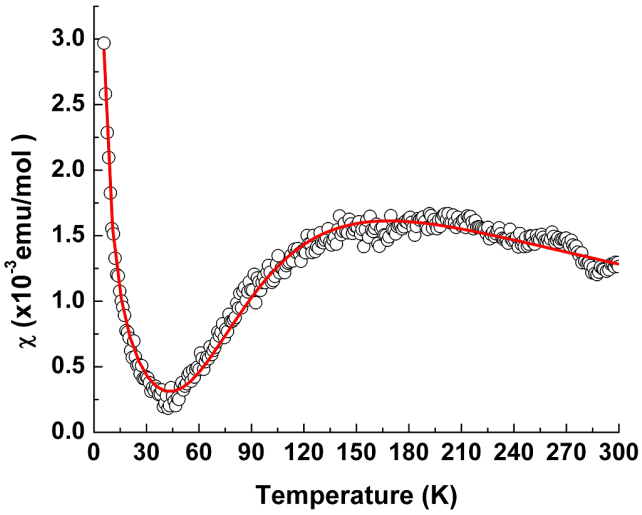

Figure S3. Molar magnetic susceptibility of **7** as a function of temperature. The red line is a fit according to the modified Bleany–Bowers equation (equation 1).

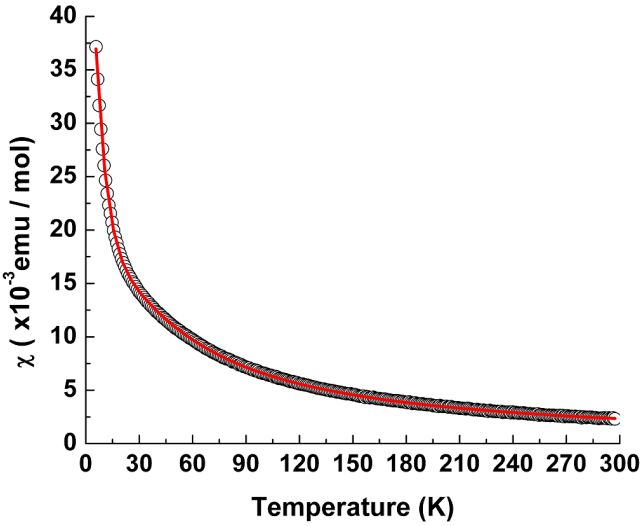

Figure S4. Molar magnetic susceptibility of **9** as a function of temperature. The red line is a fit according to the modified Bleany–Bowers equation (equation 1).

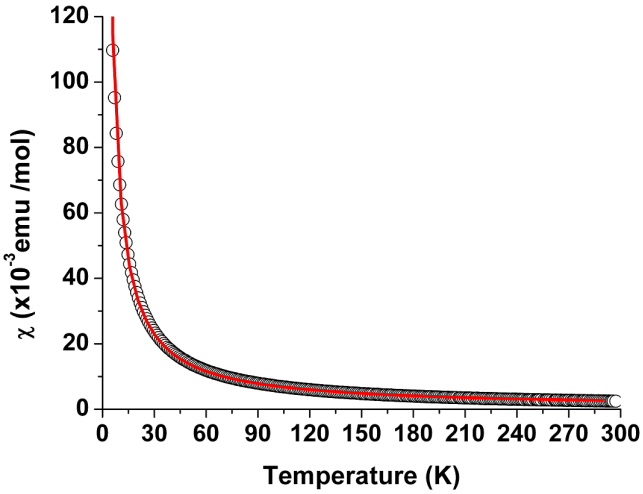

Figure S5. Molar magnetic susceptibility of **3** as a function of temperature. The red line is a fit according to the Curie–Weiss model.

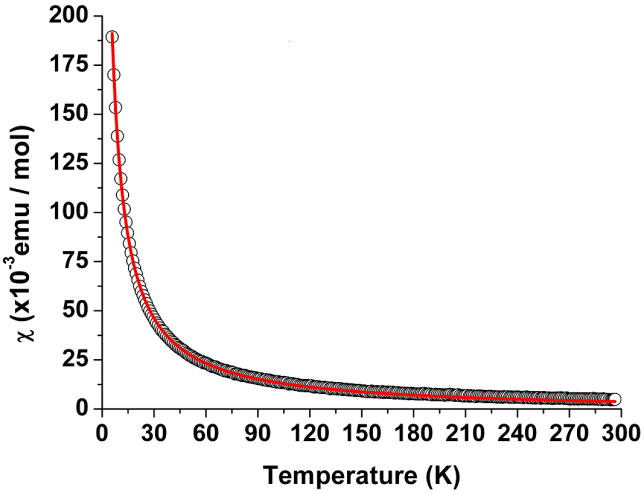

Figure S6. Molar magnetic susceptibility of **6** as a function of temperature. The red line is a fit according to the Curie–Weiss model.

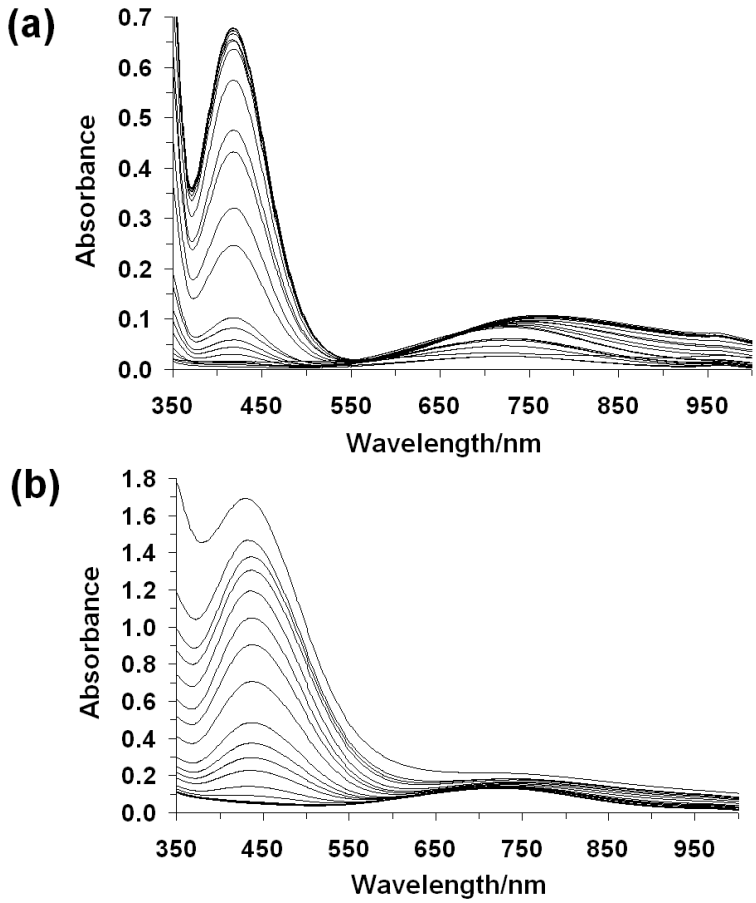

Figure S7. UV-vis absorption spectra of **1** (1.7 mM, a) and **2** (2.5 mM, b) observed over the pH range 2.0 – 10.0 in 0.1M KCl at 25 °C.

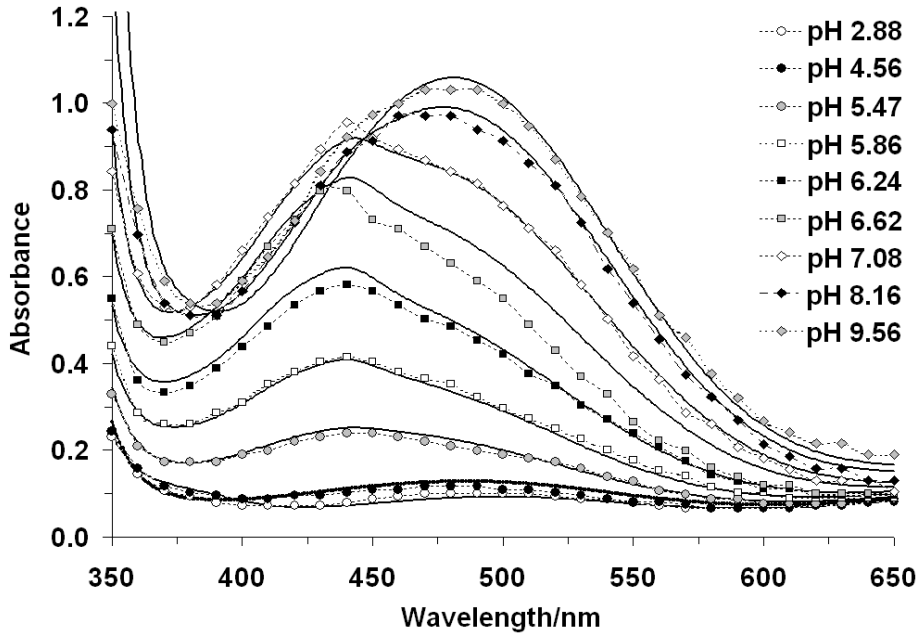

Figure S8. Absorbance spectra of **3** (1.0 mM) over the pH range 3.0 – 10.0. Straight lines refer to the experimental data obtained while points denoted represent the simulated spectra produced from program SQUAD at each pH value studied.

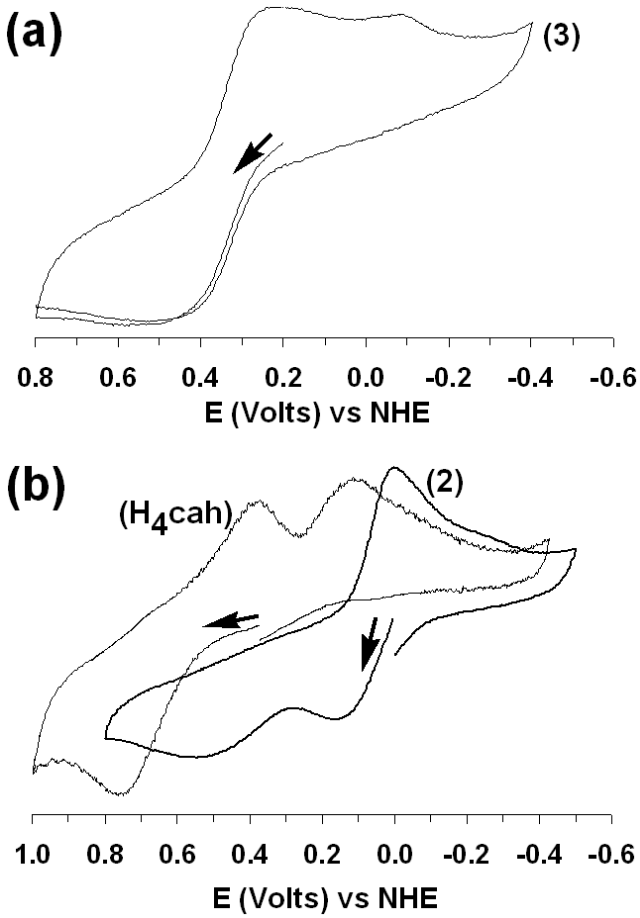

Figure S9. Cyclic voltamograms of (a) **3** and (b) **2** with H_4cah at pH 8.0 (0.1M KNO_3 was used as supporting electrolyte, N_2, 25 °C). The scan rate was 100 mV s^{-1}. A platinum disk electrode was used as the working electrode, a platinum wire as the auxiliary electrode, and an $Hg/HgSO_4$ electrode as reference. Arrows indicate the direction of initial potential. The scale of the potential axis has been shifted to match the NHE reference.