Electronic Supplementary Material (ESI) for Dalton Transactions.

Supporting Information

Synthesis and Characterization of a *trans*-1 Hexakis-fullerene Linker that Forms Crystalline Polymers with Silver Salts.

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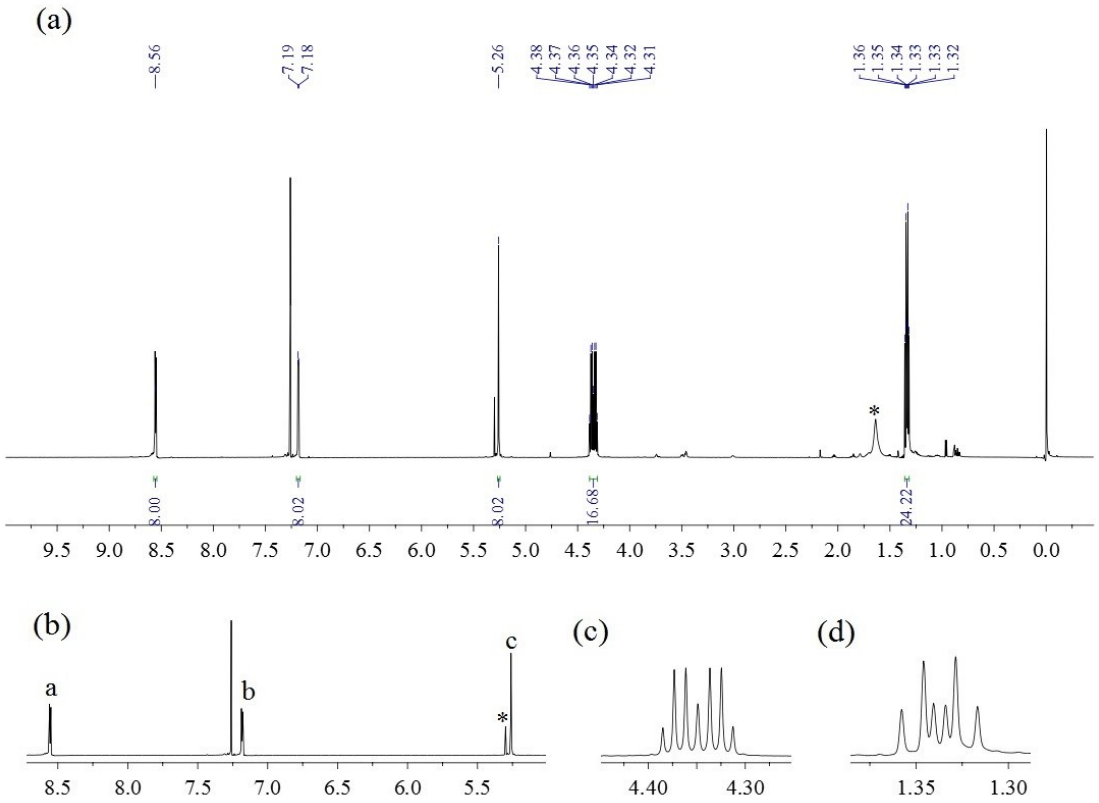

Figure S1. (a) ^{1}H NMR spectrum of compound **3** (600 MHz, $CDCl_3$) and expanded parts: (b) 8.55–5.00 ppm, (c) 4.45–4.25 ppm, (d) 1.40–1.20 ppm. * represent solvent peak.

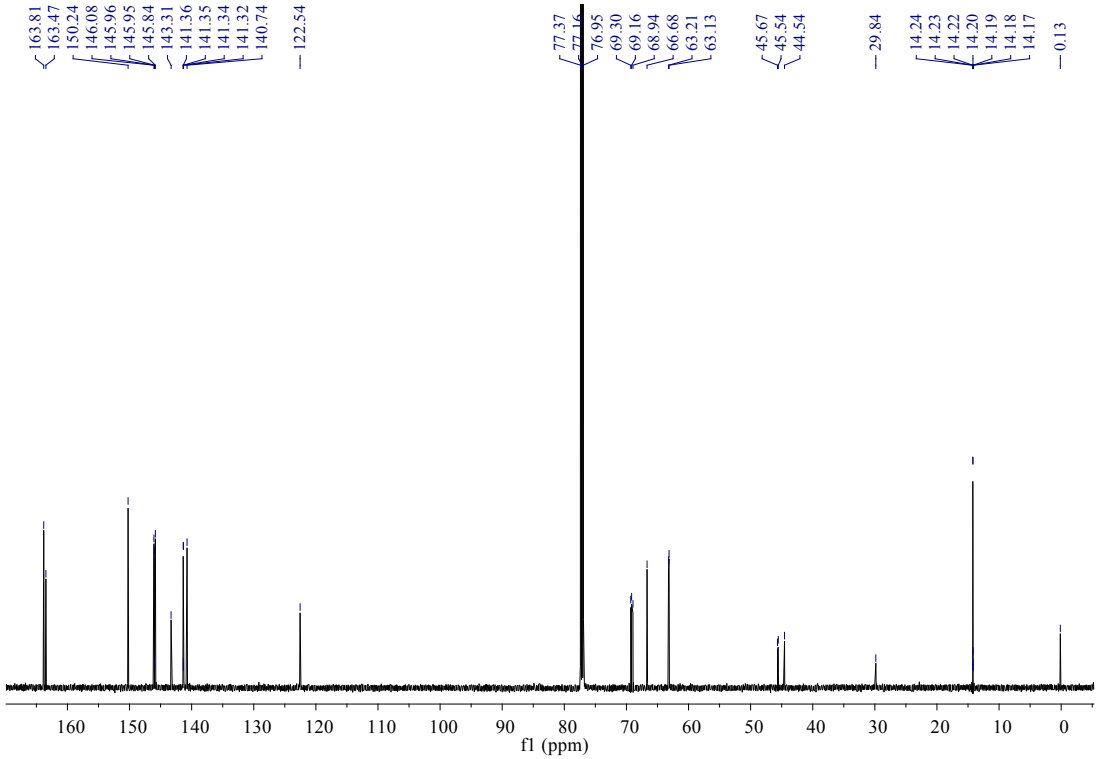

Figure. S2 ^{13}C NMR spectrum of compound **3** (150 MHz, $CDCl_3$)

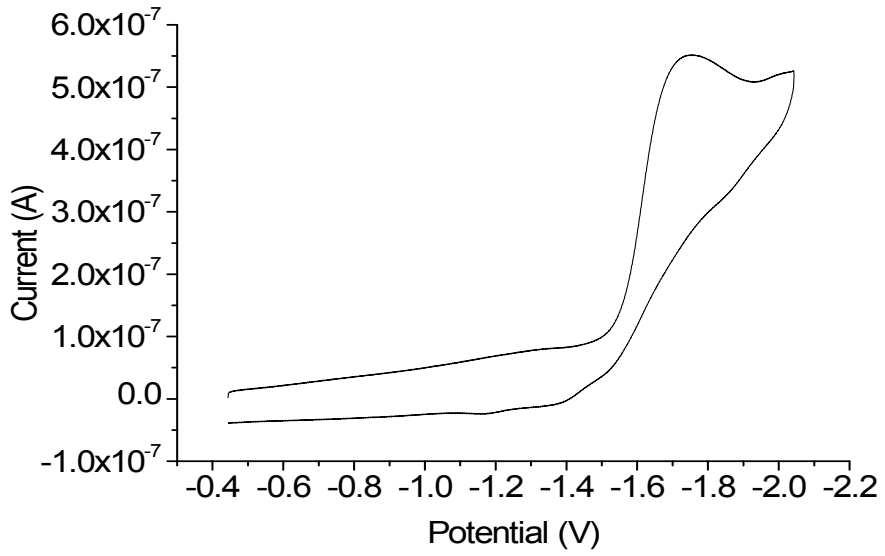

Figure S3. Cyclic voltammogram for **3** in dichloromethane. The potential was scanned at 100 mV s^{-1} at 25 °C. The potentials are vs. the Fc/Fc^+ couple.

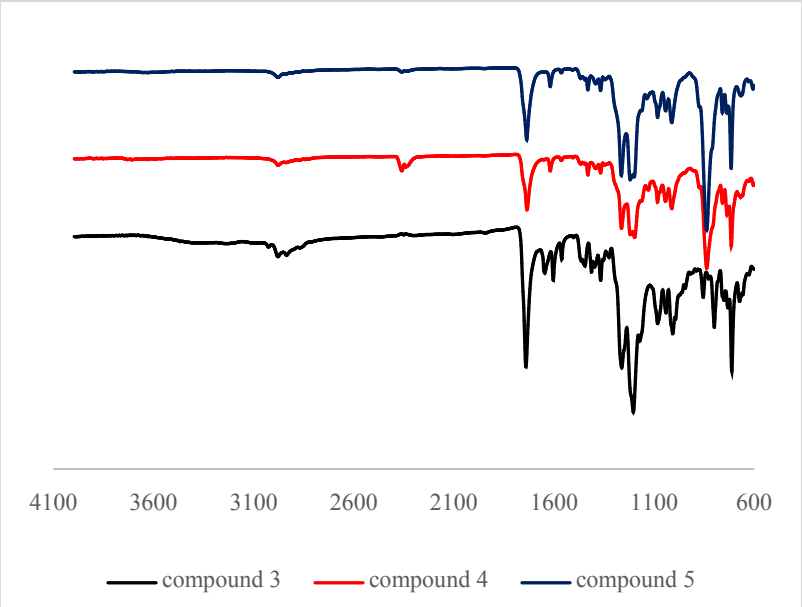

Figure S4. FT-IR (ATR) spectra of compound **3**, **4** and **5**

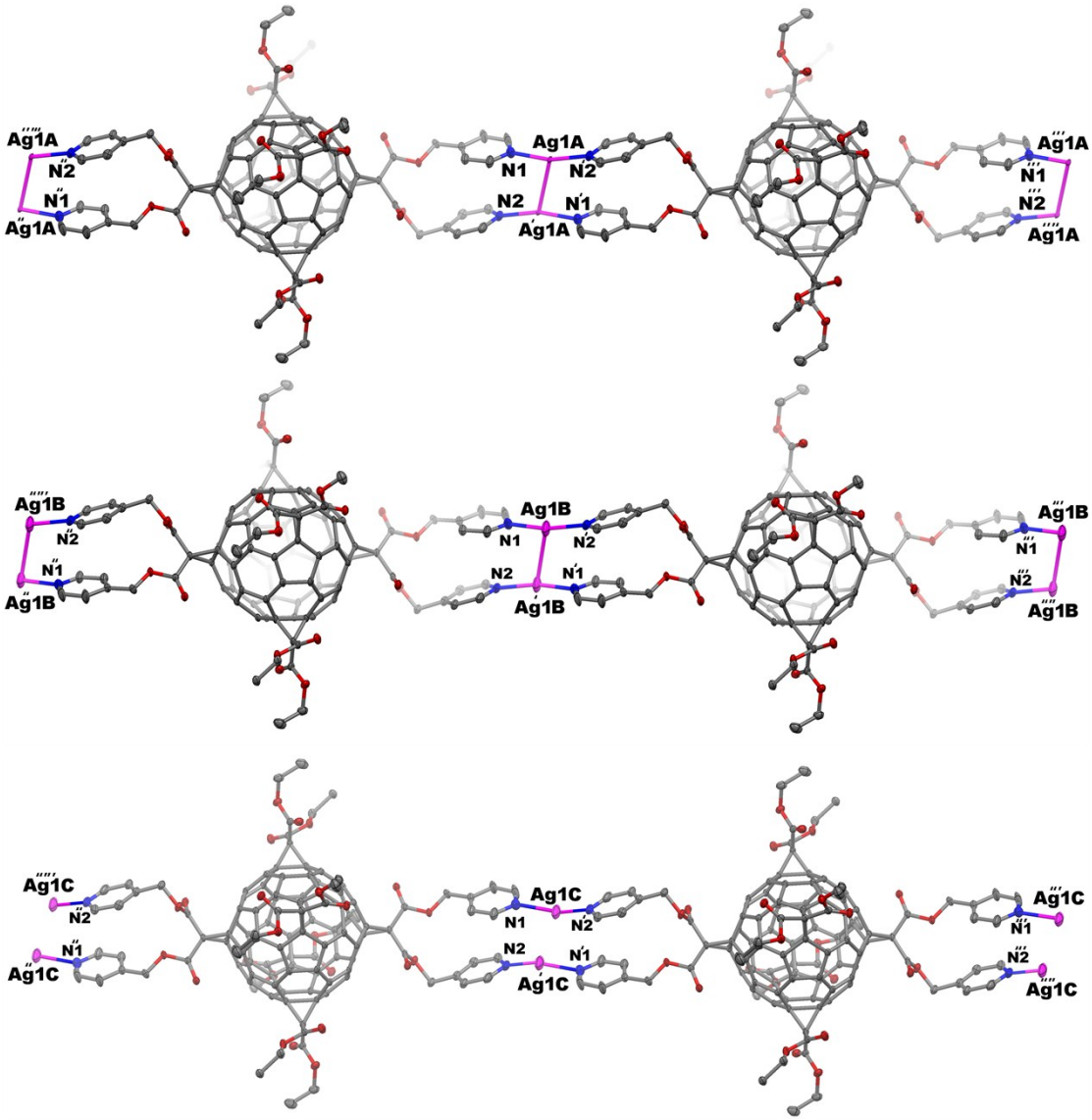

Figure S5. Drawings of **4** with 30% thermal ellipsoids. Bottom, with Ag1A with 0.40 partial occupancy; middle, with Ag1B with 0.40 partial occupancy; top, with Ag1C with 0.20 partial occupancy. Color code: carbon atoms, gray ellipsoids; oxygen atoms, red ellipsoids; nitrogen atoms, blue ellipsoids; silver ions, violet ellipsoids. For clarity, the anions and solvate molecules are not shown.

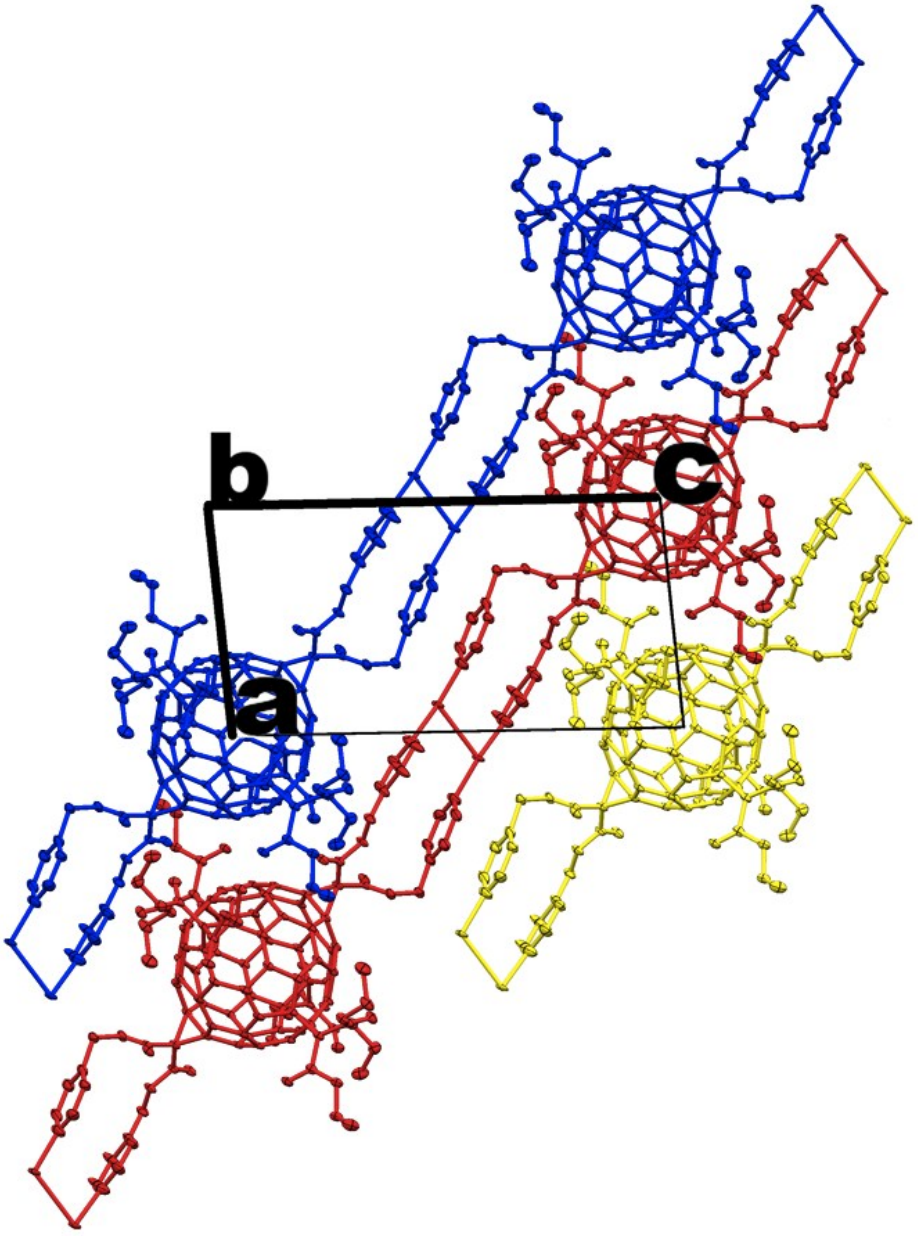

Figure S6. Molecular packing for **4.** Different polymeric strands are colored blue, red, yellow. For clarity, the anions and solvate molecules are not shown.

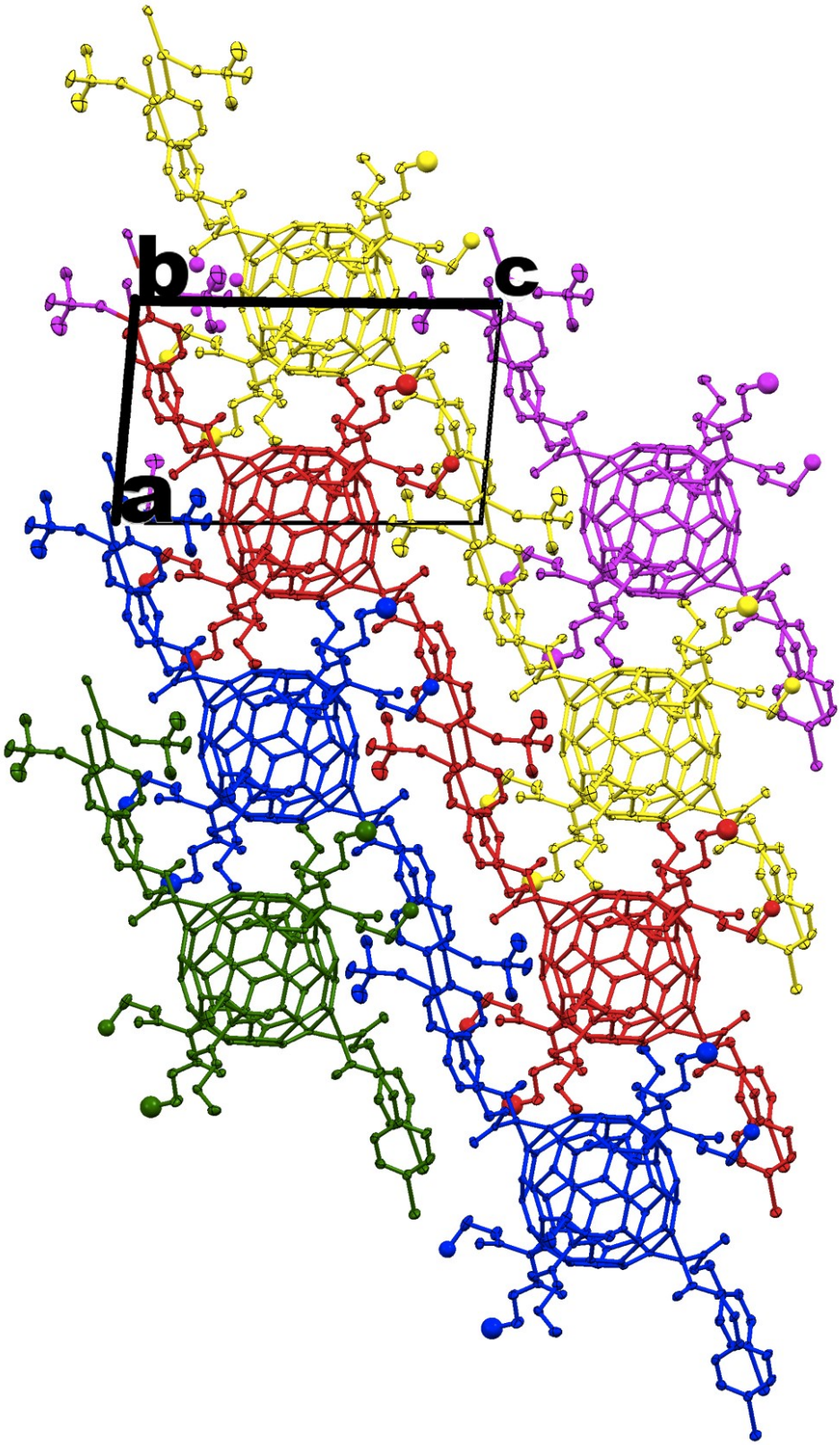

Figure S7. Molecular packing for **5.** Different polymeric strands are colored green, blue, red, yellow, violet. For clarity, the anions and solvate molecules are not shown.