

Electronic Supplementary Information

A new type of entangled motif: from 2D polyrotaxane layers to a 3D polythreaded framework

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Materials. All reagents and solvents for syntheses were purchased from commercial sources and used as received.

General Characterization and Physical Measurements. The powder X-ray diffraction (PXRD) data was collected on a Rigaku RINT2000 diffractometer at room temperature with Cu K α radiation in a flat plate geometry. The FT-IR spectra were recorded from KBr pellets in the range 4000–400 cm⁻¹ on a Mattson Alpha-Centauri spectrometer.

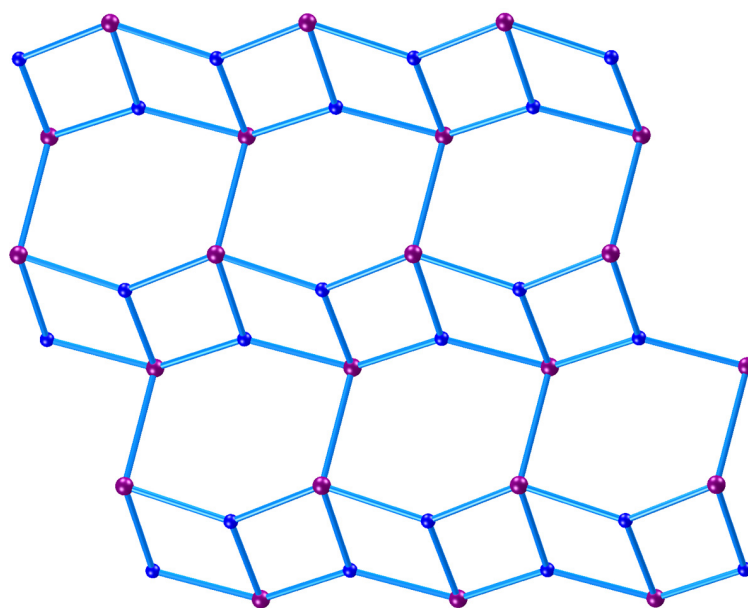


Fig. S1 Schematic representation of the (3,4)-connected network with a Schläfli symbol of $(4^2 \cdot 6)(4^2 \cdot 6^3 \cdot 8)$.

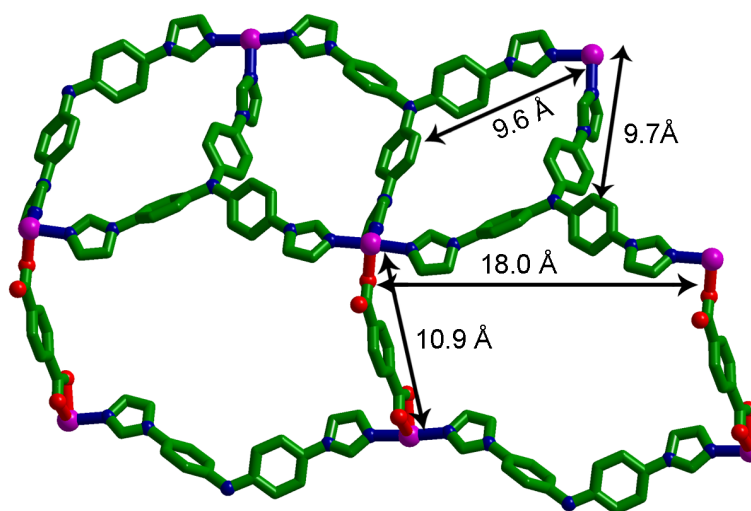


Fig. S2 A view of two kinds of windows.

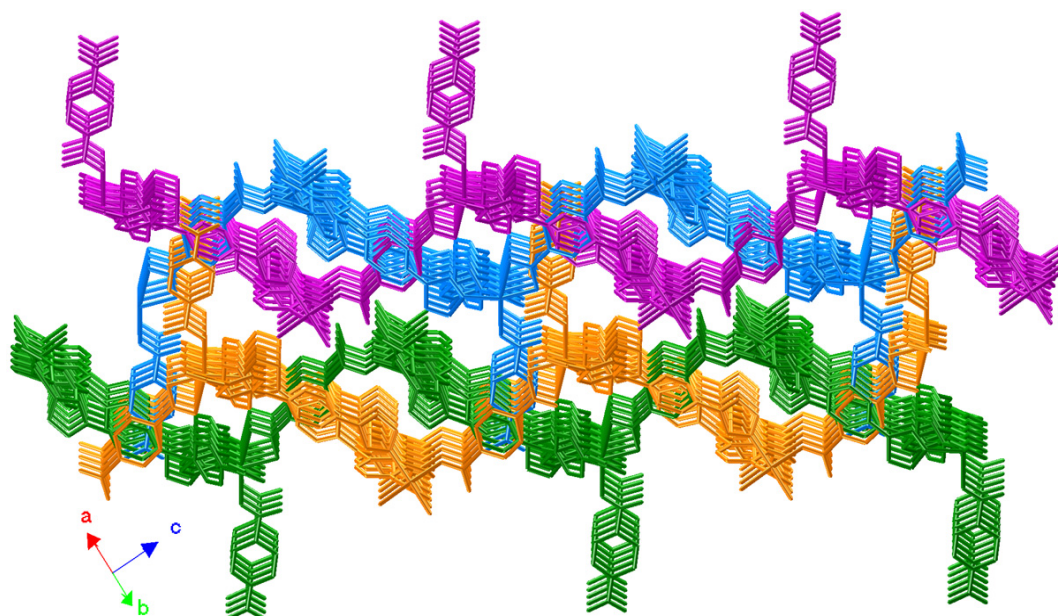


Fig. S3 View of the 2D \rightarrow 3D polythreaded framework originated from two polyrotaxane layers.

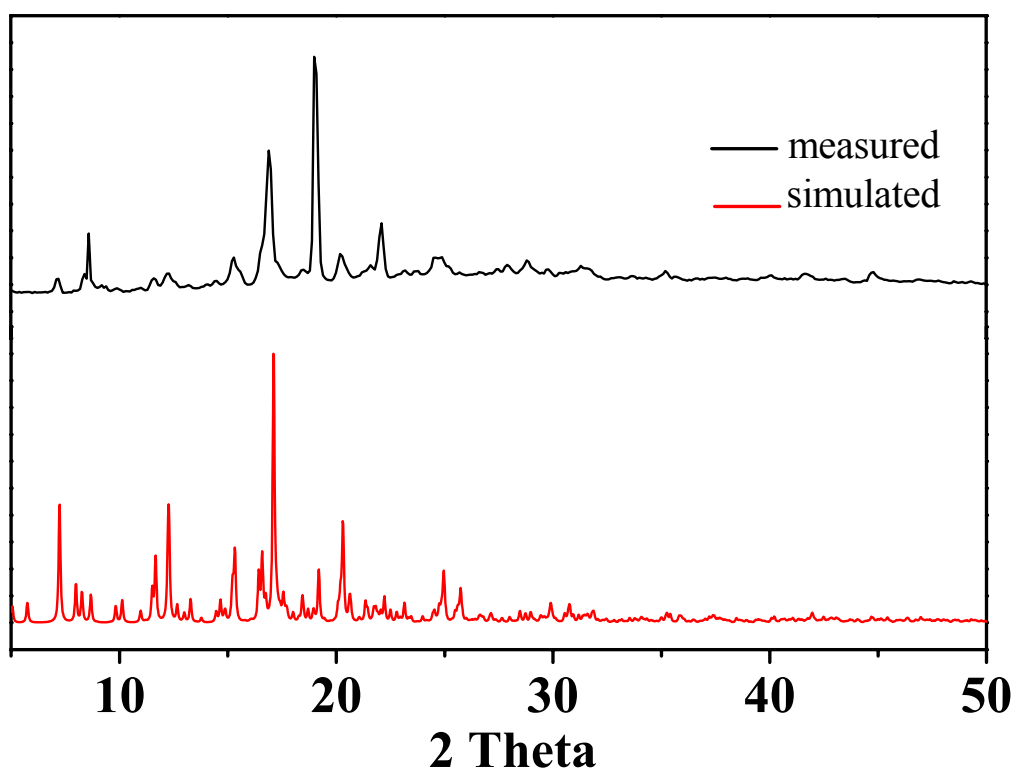


Fig. S4 Simulated (red) and measured (black) PXR D patterns of **1**.