

Electronic Supplementary Information (ESI) for

**Diverse coordination polymers from a new bent
dipyridyl type ligand
3,6-di(pyridin-4-yl)-9*H*-carbazole**

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Table S1. Crystal data and structure refinements results.

Compound	1	2	3	4
Formula	ZnC ₂₂ H ₁₅ N ₃ Cl ₂	ZnC ₂₂ H ₁₅ N ₃ Cl ₂ O _{0.36}	ZnC ₅₀ H ₅₀ O ₅ N ₈ PF ₇	ZnC ₄₄ H ₃₀ N ₆ SiF ₆
Formula weight	457.64	463.40	1072.32	850.20
Temperature (K)	173(2)	123(2)	156(2)	150(2)
Crystal system	Monoclinic	Orthorhombic	Monoclinic	Monoclinic
Space group	<i>P2₁/c</i>	<i>Ccce</i>	<i>C2</i>	<i>C2/c</i>
<i>a</i> (Å)	9.0686(1)	18.5190(3)	23.5121(8)	26.5001(6)
<i>b</i> (Å)	15.7253(2)	25.5918(5)	7.7408(3)	7.7383(1)
<i>c</i> (Å)	13.5258(2)	17.2622(3)	15.3224(5)	27.4332(7)
β (°)	101.215(1)	/	118.548(3)	112.066(3)
<i>V</i> (Å ³)	1892.04(4)	8181.1(3)	2449.6(2)	5213.5(2)
<i>Z</i>	4	4	2	4
<i>D_c</i> (g cm ⁻³)	1.607	1.505	1.454	1.083
reflns coll.	3914	4320	2605	4424
unique reflns	3801	4121	2597	3944
<i>R</i> _{int}	0.0464	0.0258	0.0147	0.0453
<i>R</i> ₁ [<i>I</i> > 2σ(<i>I</i>)] ^[a]	0.0380	0.0332	0.0290	0.0530
<i>wR</i> ₂ [<i>I</i> > 2σ(<i>I</i>)] ^[b]	0.1025	0.0928	0.0796	0.1627
<i>R</i> ₁ (all data)	0.0394	0.0342	0.0291	0.0571
<i>wR</i> ₂ (all data)	0.1069	0.0941	0.0797	0.1650
GOF	1.065	1.047	1.061	1.088
Flack	/	/	0.48(3)	/

^a $R_1 = \sum ||F_o| - |F_c|| / \sum |F_o|$.

^b $wR_2 = \{ \sum w[(F_o)^2 - (F_c)^2]^2 / \sum w[(F_o)^2]^2 \}^{1/2}$

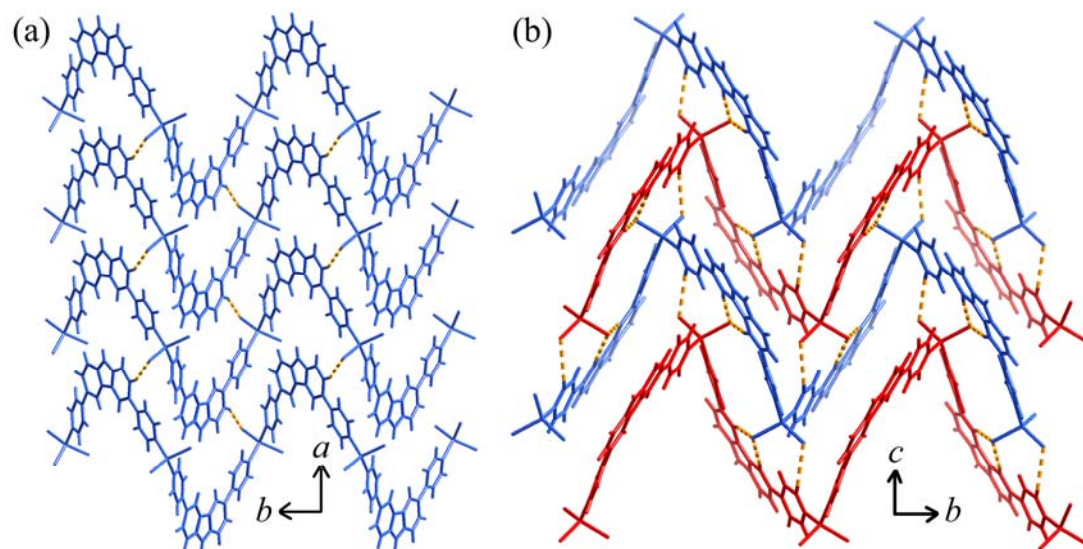


Fig. S1 Side views of the chain packing along (a) the a -axis and (b) the c -axis in **1**. Left-handed and right-handed helical chains in the packing structures are drawn in blue and red, respectively.

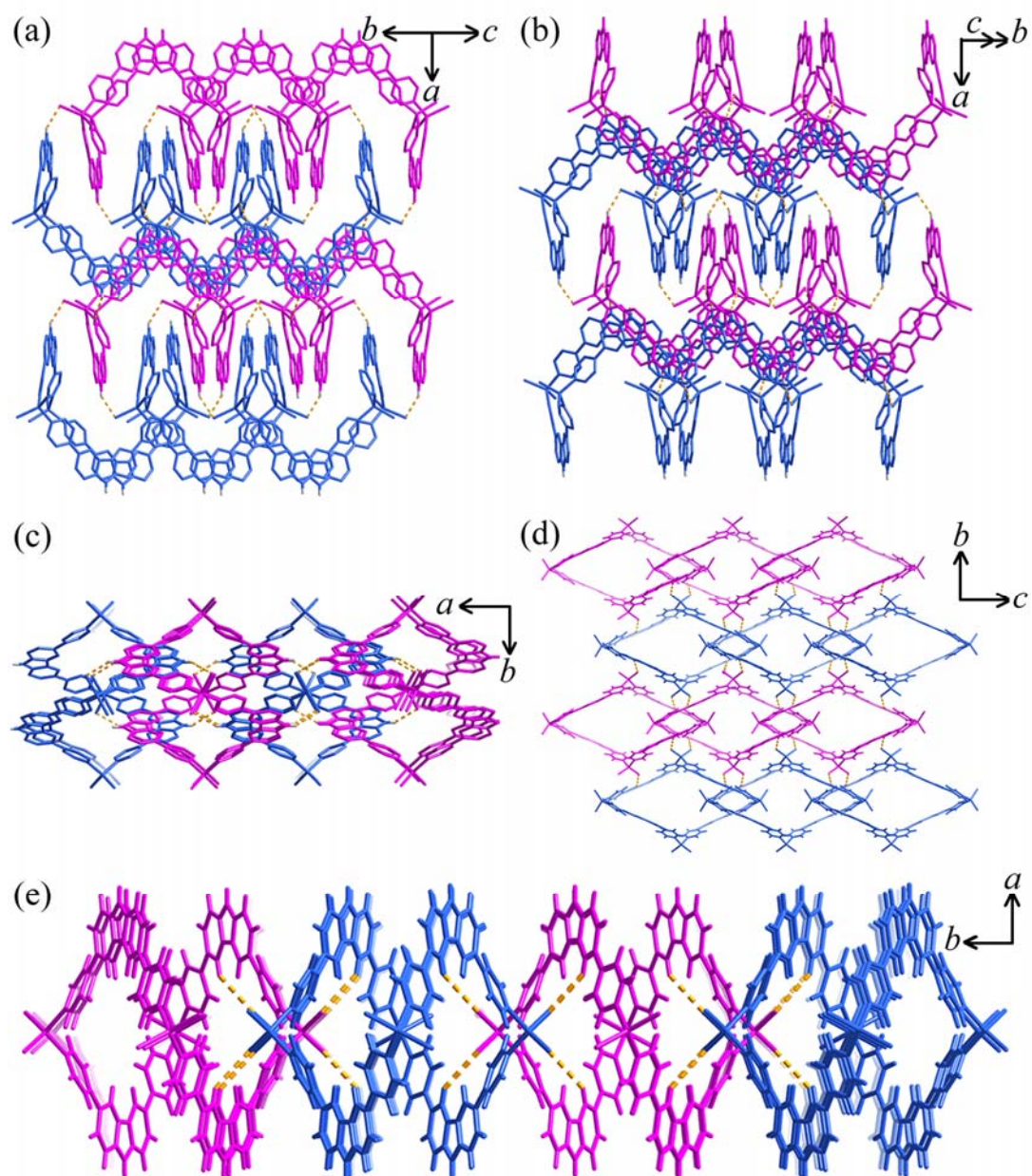


Fig. S2 Perspective views of the interdigitated packing of curc chains in **2** along different directions. For clarity, adjacent curc chains are highlighted in different colours.

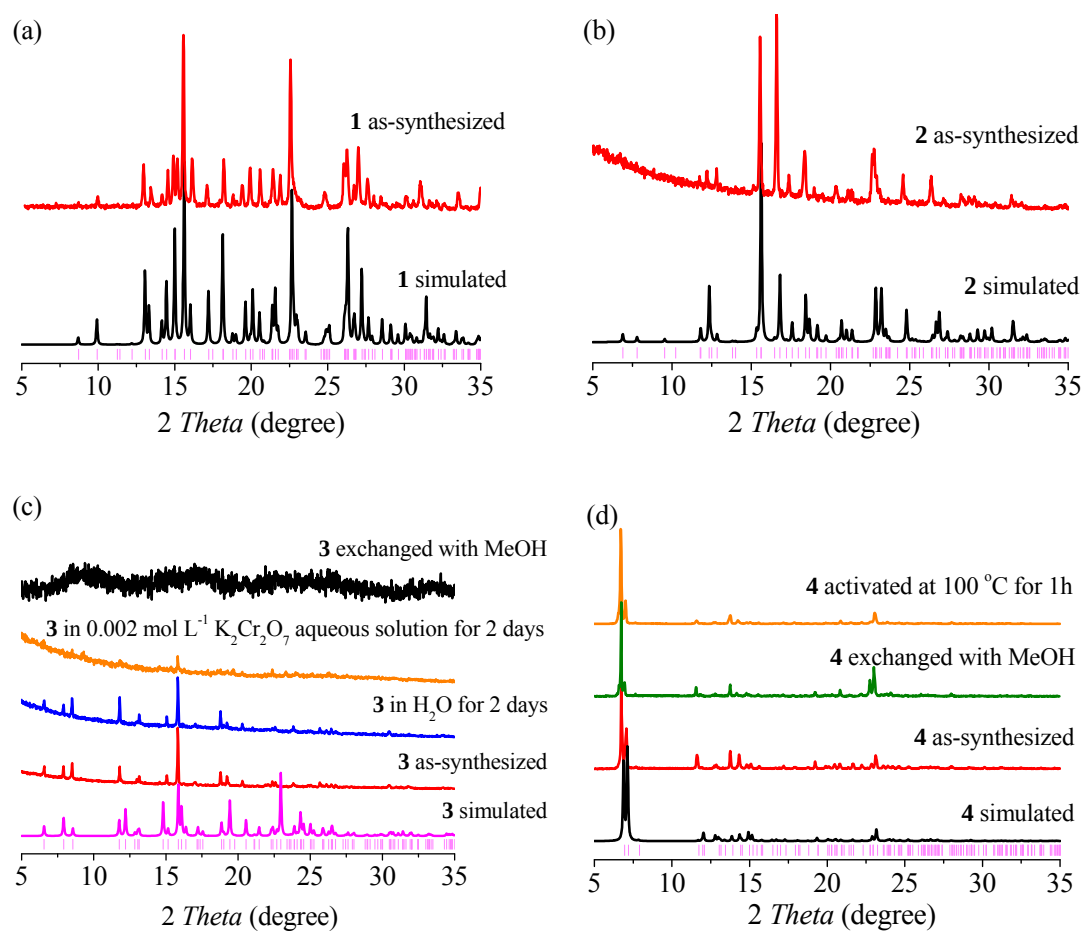


Fig. S3 Powder X-ray diffraction patterns.

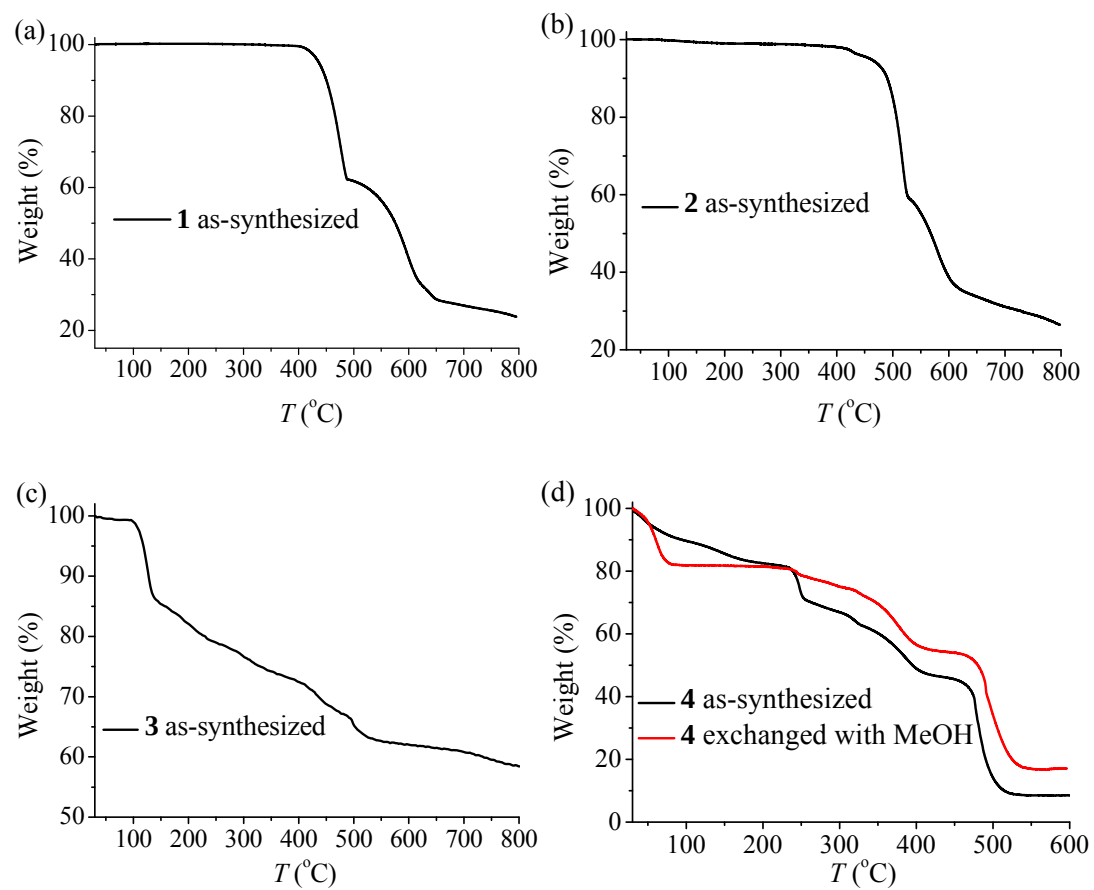


Fig. S4 TG curves.

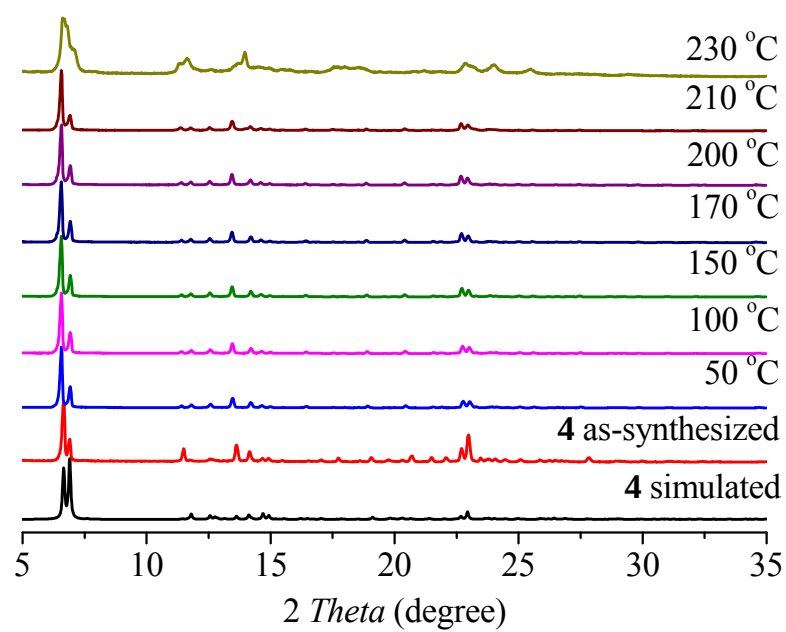


Fig. S5 Variable-temperature PXRD patterns of **4**.