Supporting Information for

Two New Polar Coordination Polymers with Diamond Networks: Interpenetration and Thermal Phase Transition

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Supplementary Index

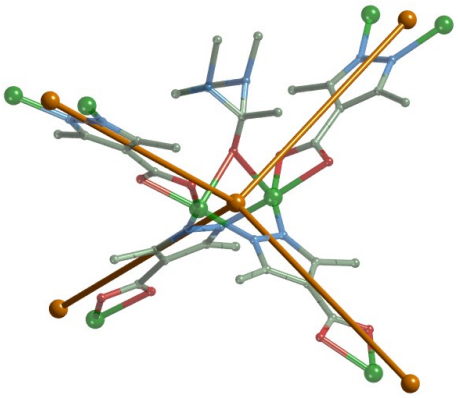

Fig. S1. Simplifying illustration of the 4-connected node for **2**.

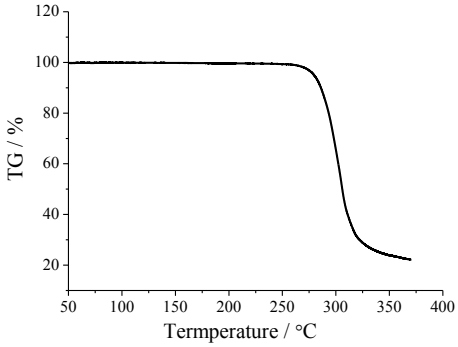

Fig. S2. TG curve of the as-synthesized **1** under N_2 atmosphere

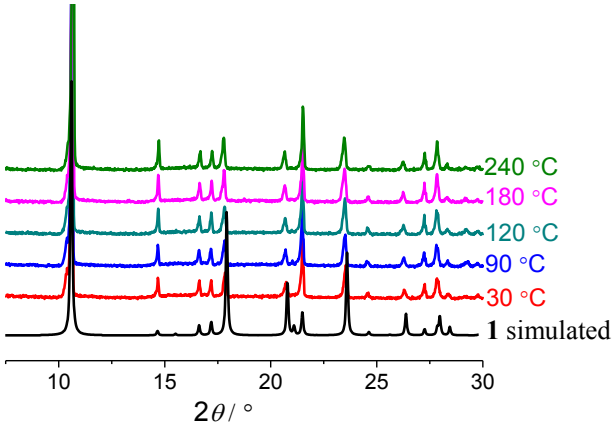

Fig. S3 VTPXRD patterns of **1**

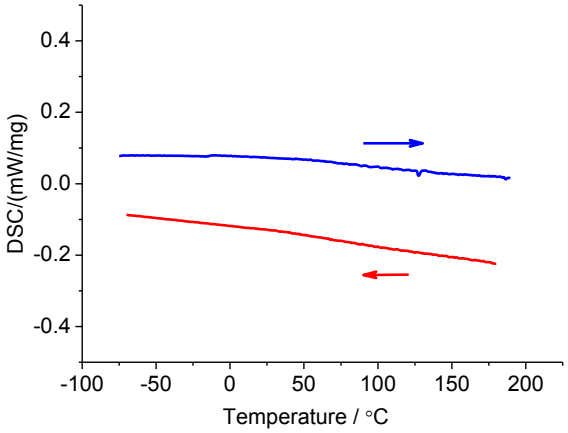

Fig. S4 DSC curves of the as-synthesized **1**

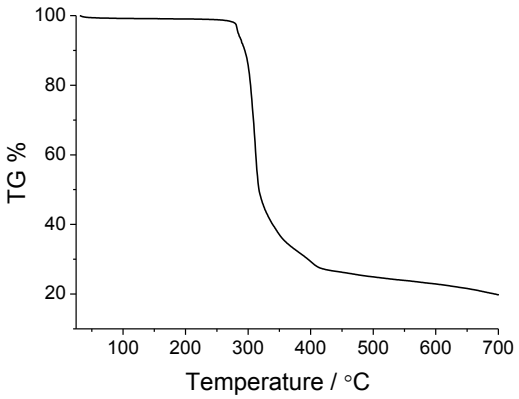

Fig. S5. TG curve of the as-synthesized **2** under N_2 atmosphere

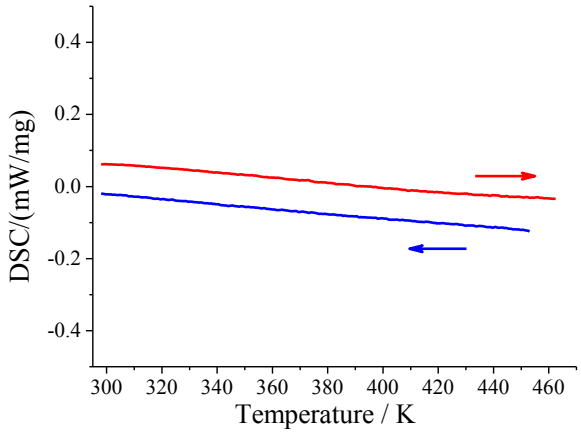

Fig. S6 DSC curves of the as-synthesized **2**

Table S1. Summary of the Crystal Data and Structure Refinements for a crystal of **2** measured at different temperatures

	300 K	440 K	300 K	440 K
phase	**2α**	**2β**	**2α**	**2β**
Formula	$C_{16}H_{21}Cu_2N_5O_5$	$C_{16}H_{21}Cu_2N_5O_5$	$C_{16}H_{21}Cu_2N_5O_5$	$C_{16}H_{21}Cu_2N_5O_5$
Formula weight	490.46	490.46	490.46	490.46
Crystal system	Tetragonal	Tetragonal	Tetragonal	Tetragonal
Space Group	$P4_3$	$P4_2nm$	$P4_1$	$P4_2nm$
a/Å	10.9932(1)	10.9780(3)	10.9902(1)	10.9855(3)
b/Å	10.9932(1)	10.9780(3)	10.9902(1)	10.9855(3)
c/Å	18.0928(3)	9.1059(4)	18.094 (3)	9.1106(4)
V/Å^3	2186.52(5)	1097.41(6)	2185.5(4)	1099.48(6)
Z	4	2	4	2
D_c (g·cm^{-3})	1.490	1.484	1.491	1.481
μ (mm^{-1})	2.703	2.693	2.705	2.688
R_1	0.0421/0.0423	0.0229/0.0231	0.0292/0.0294	0.0214/0.0216
wR_2	0.1028/0.1031	0.0615/0.0617	0.0807/0.0807	0.0601/0.0602
GOF	1.054/1.069	1.018/1.065	1.023/1.052	1.020/1.059
$\Delta\rho$/e·Å^3	0.503/-0.506	0.153/-0.231	0.259/-0.432	0.149/-0.190
BASF	0.498	—	0.504	—
Flack	—	0.09(6)	—	0.04(5)