Supporting information for article:

Structural disorder and transformation in crystal growth: direct observation of ring-opening isomerization in a metal–organic solid solution

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Supporting information

Table S1  Selected geometric parameters (Å, °)

| Form | Bond/Distance | Bond/Distance | Angle |
|------|---------------|---------------|-------|
| A    | Ag1—N4        | 2.053 (8)     | Ag2—N10 | 2.121 (9) |
|      | Ag1—N1        | 2.087 (10)    | Ag2—N7  | 2.124 (8) |
|      | Ag1—Ag1\(^i\) | 3.0776 (17)   | Ag1’—Ag1’\(^i\) | 3.031 (9) |
|      | N4—Ag1—N1     | 176.6 (4)     | N1—Ag1—Ag1\(^i\) | 92.6 (3) |
|      | N4—Ag1—Ag1\(^i\) | 90.7 (2) | N10—Ag2—N7 | 171.7 (3) |
| B    | Ag1—N11\(^ii\) | 2.134 (7)   | Ag2—N11\(^iii\) | 2.130 (7) |
|      | Ag1—Ag1\(^iii\) | 3.086 (3)   | Ag2—Ag2\(^ii\) | 3.645 (4) |
|      | N11—Ag1—N11\(^ii\) | 178.2 (4) | N11—Ag2—N11\(^iii\) | 167.8 (4) |

Symmetry code(s): (i) \(-y+1/2, -z\); (ii) \(-x+2, y, -z+1/2\); (iii) \(-x+2, -y+1, z\).
Figure S1 IR spectrum of complex 1.

Figure S2 TGA curve of complex 1 up to 700°C
**Figure S3** Excitation and emission spectra of the ligand $L$ and complex 1 in the solid state.

**Figure S4** Views of the twist double chain in 1 in the space-filling mode from two different directions.
**Figure S5** The unique packing arrangement of two types of structural motifs in 1: (a) parallel stacking of the ribbons of rings and the twist double chains in Form A, and 50-50% distribution in Form B, (b) tubular channels formed by the overlapping arrangement of two types of structural motifs in the a direction showing counter anions and solvent molecules in Form B, and (c) space-filling representations of the tubular framework without counter anions and solvent molecules in both Form A and B.