

Electronic supplementary information (ESI)

Anion- and auxiliary ligand-directed synthesis of cadmium(II) complexes with 3,5-di(1H-imidazol-1-yl)benzoate †‡

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Table S1. Hydrogen bonding distances/ Å and angle/ ° for complexes **1** and **5**.

D-H...A	d(D...A)	∠(D-H...A)
1		
O5-H2...O1#1	2.613(3)	164(5)
C19-H4...O4#2	3.437(4)	152
C2-H15...O5#3	3.204(4)	160
C11-H20...O4#4	3.336(4)	174
C12-H21...O7#5	3.106(4)	117
5		
O10-H111...O4#1	3.066(5)	131(7)
O10-H111...O6#1	2.916(5)	149(7)
O9-H113...O2#2	2.999(5)	152(6)
O9-H114...O4#3	2.807(4)	157(5)
C8-H8...O10	3.366(6)	148
C10-H10...O8#4	3.435(4)	165
C13-H13...O5#5	3.084(4)	121
C13-H13...O9#2	3.364(5)	147
C17-H17...O10#6	3.406(5)	149

Symmetry transformations used to generate equivalent atoms: For **1**: #1 -1+x, y, -1+z; #2 2-x, 3-y, 1-z; #3 1+x, y, 1+z; #4 2-x, 2-y, 1-z; #5 -1+x, -1+y, z. For **5**: #1 2-x, 1-y, -z; #2 1-x, 1-y, -z; #3 2-x, 2-y, -1-z; #4 1-x, 2-y, -z; #5 -1+x, -1+y, 1+z; #6 x, 1+y, z.

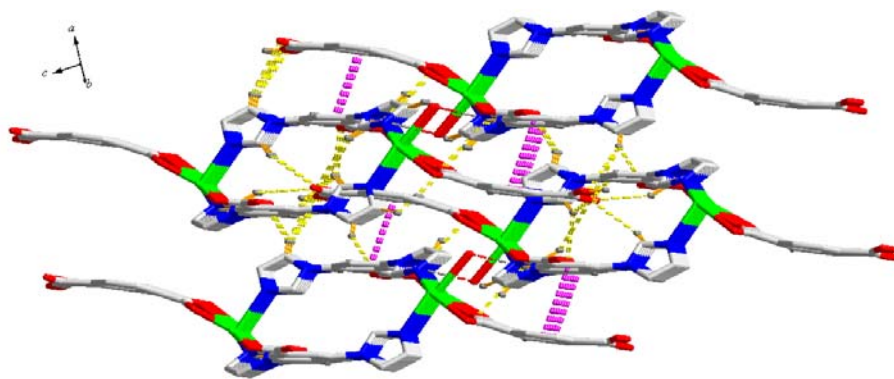


Figure S1. The 3D packing diagram of complex **1**, in which the pink dotted lines represent the π - π interactions and the yellow ones represent the hydrogen bonds.

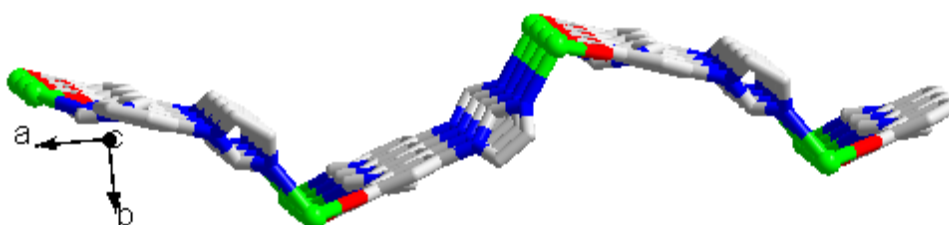


Figure S2. The wave-like 2D 6^3 -hcb layer in **2**.

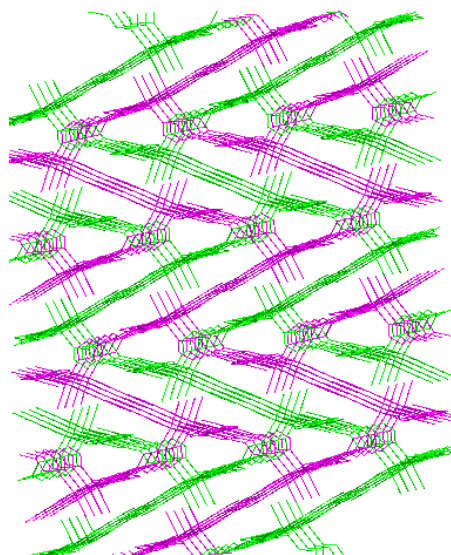


Figure S3. Representation of 2-fold interpenetration in complex **2**.

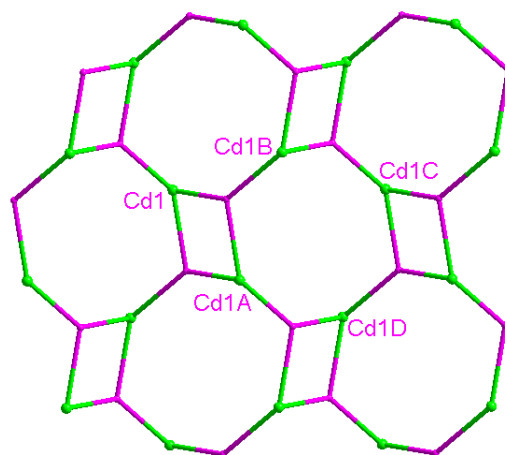


Figure S4. The Scheme representation of (4,8²) net in **3**.

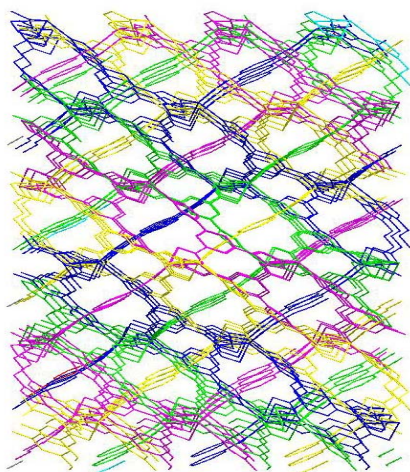


Figure S5. Representation of 4-fold interpenetration in complex **3**.

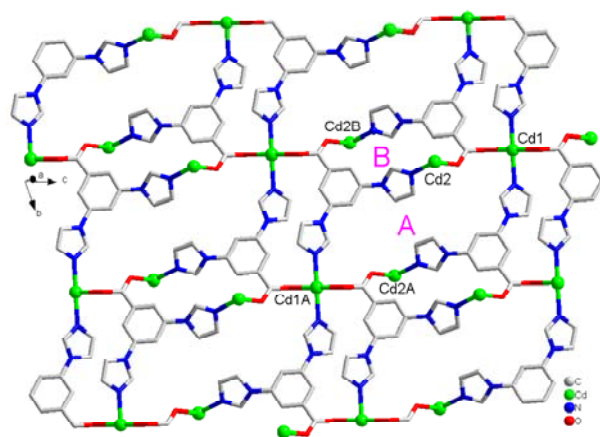


Figure S6. The L^- -Cd layer in **4**.

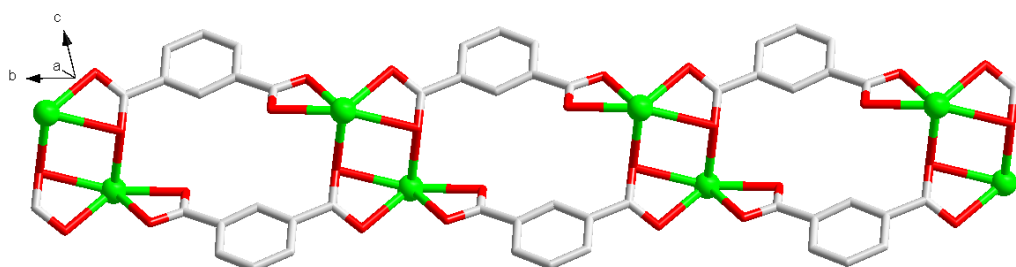


Figure S7. The $MBDA^{2-}$ -Cd chain in **4**.

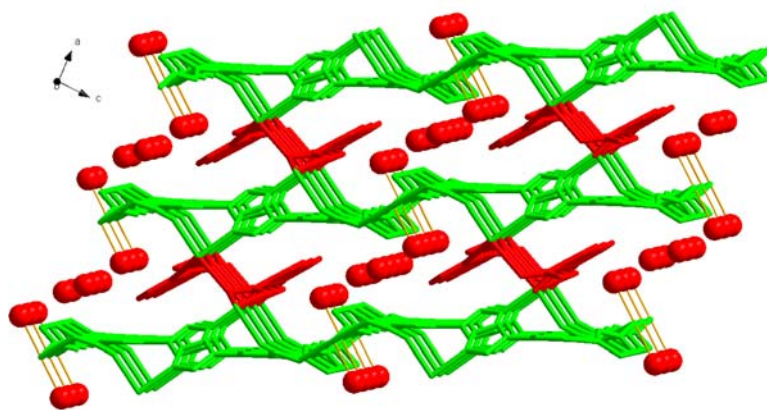


Figure S8. The coordinated and uncoordinated water molecules in **4** (Red: $MBDA^{2-}$ -Cd chains; Green: the L^- -Cd layers). The red balls represented the water molecules.

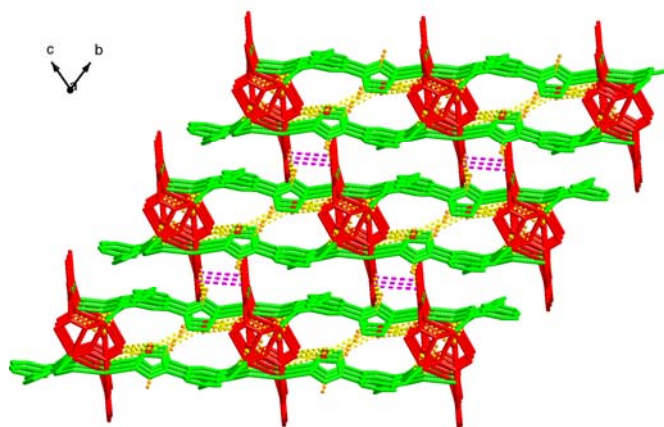


Figure S9. The 3D packing diagram of complex **5**, in which the pink dotted lines represented the $\pi \cdots \pi$ interaction and the yellow ones represented the hydrogen bonds.

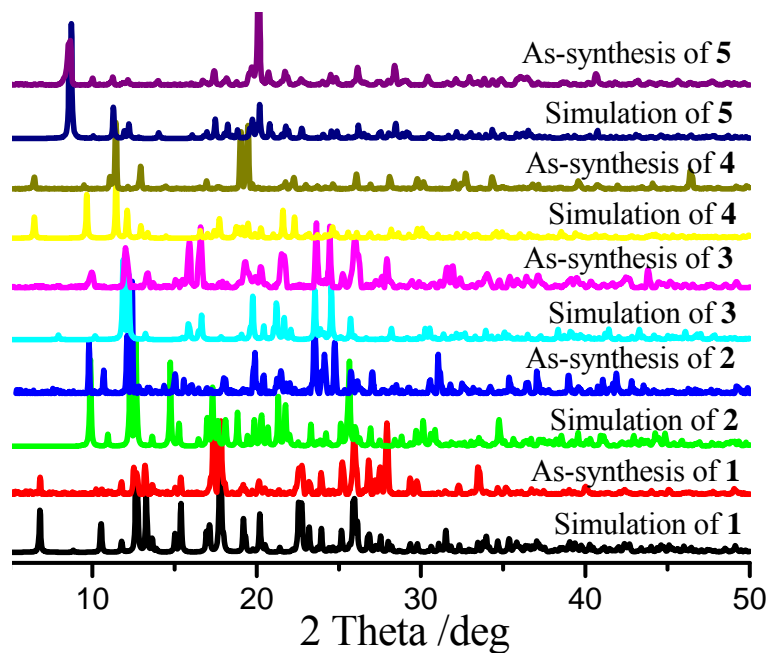


Figure S10. The simulated and as-synthesized PXRD of complexes **1-5**.

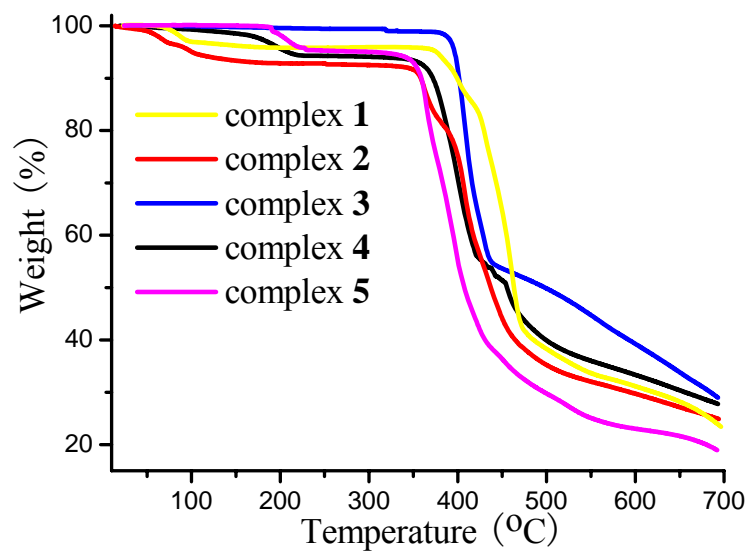


Figure S11. The TG curves of complexes 1-5.