

## Electronic Supplementary Information

### **Assembly of 1D, 2D and 3D lanthanum(III) coordination polymers with perchlorinated benzenedicarboxylates: positional isomeric effect, structural transformation and ring-opening polymerisation of glycolide**

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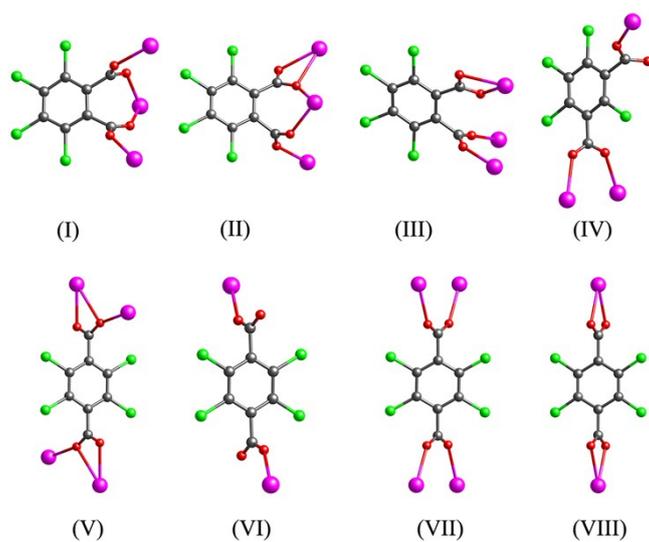
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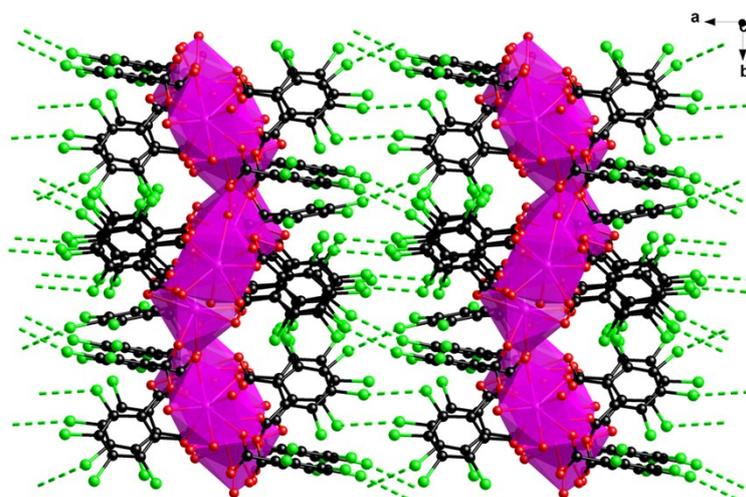
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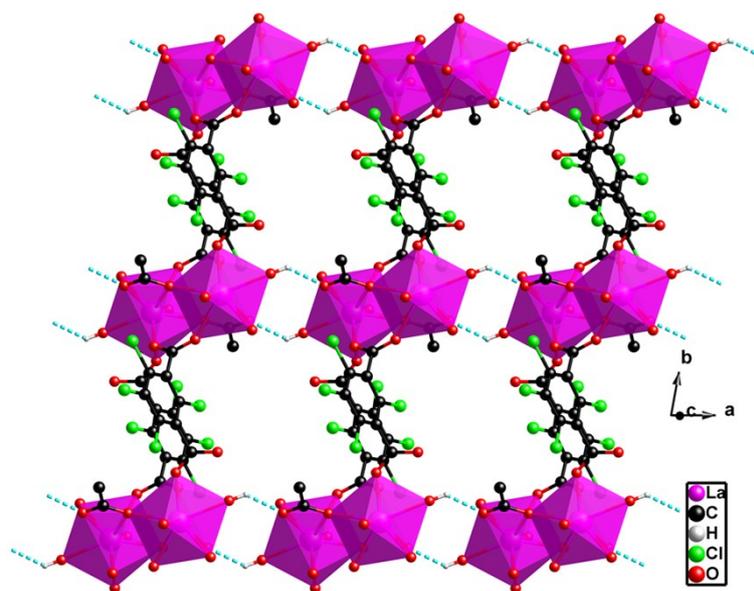
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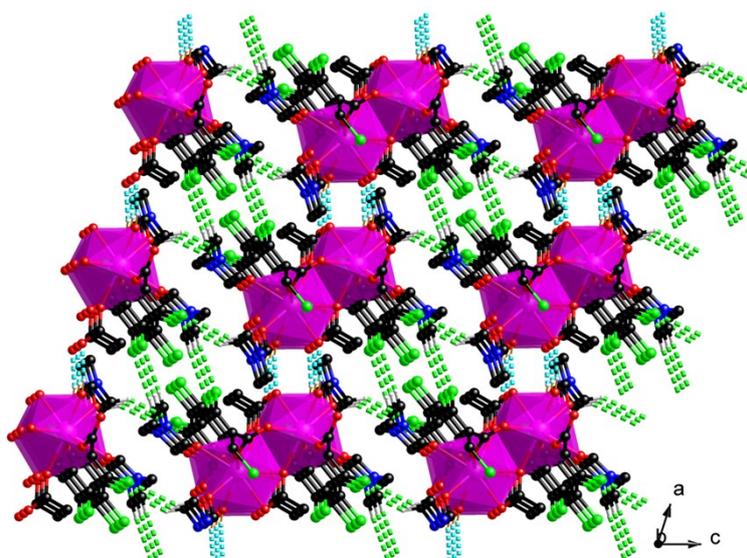
**Scheme S1** Various coordination modes for isomeric tcbdc ligands in **1–8**.



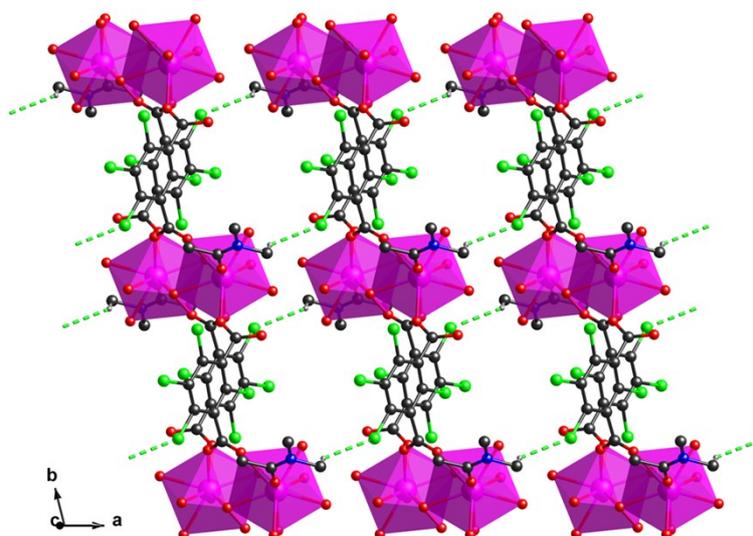
**Fig. S1** The 3D supramolecular architecture of **1** (Cl...Cl interactions are shown as bright green dashed lines; irrelevant hydrogen atoms are omitted for clarity).



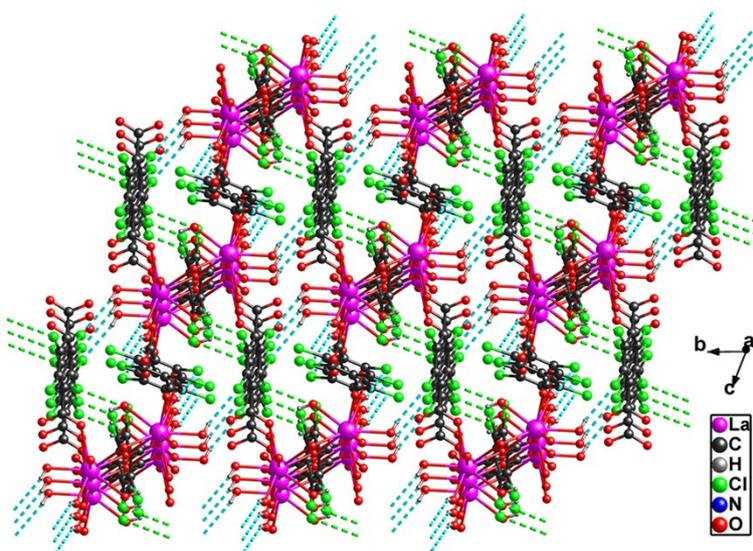
**Fig. S2** The 2D supramolecular network of **2** with hydrogen-bonding interactions highlighted in the bright turquoise dashed lines (irrelevant hydrogen atoms are omitted for clarity).



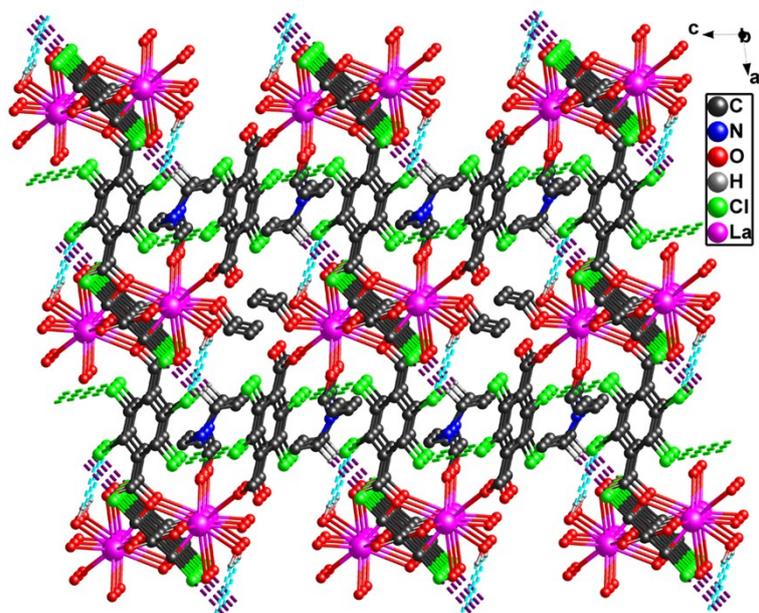
**Fig. S3** The 3D supramolecular network of **2** with hydrogen-bonding interactions highlighted in dashed lines (irrelevant hydrogen atoms are omitted for clarity).



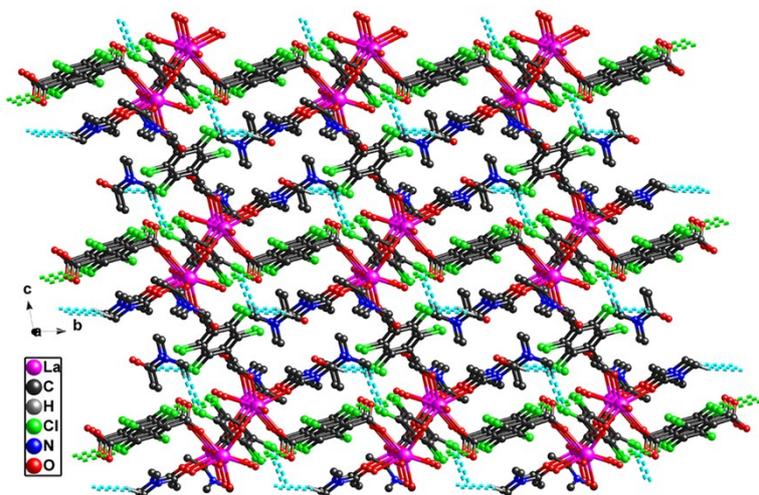
**Fig. S4** The 2D supramolecular network of **3** with C–H···Cl hydrogen-bonding interactions highlighted in green dashed lines (irrelevant hydrogen atoms are omitted for clarity)



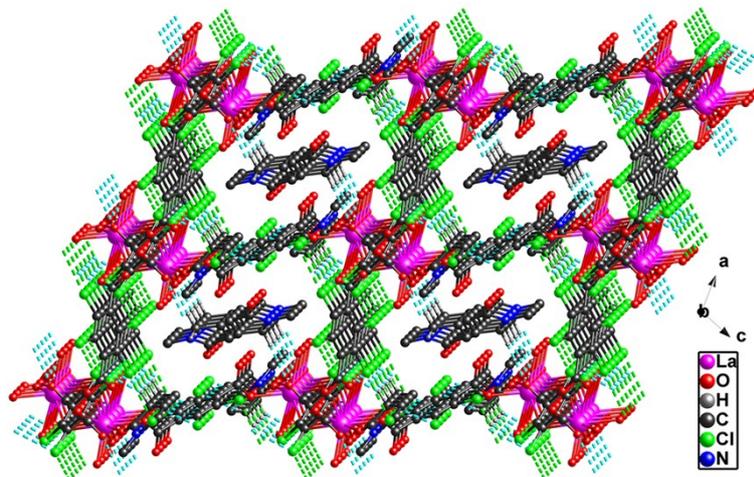
**Fig. S5** The intermolecular weak O–H···Cl (turquoise dashed lines) and Cl···Cl (green dashed lines) interactions in **4** (irrelevant hydrogen atoms are omitted for clarity).



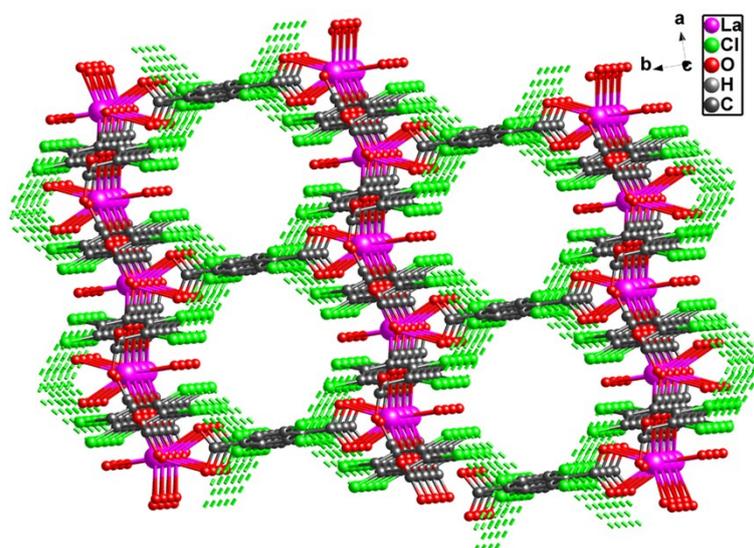
**Fig. S6** The intermolecular weak O–H···Cl (turquoise dashed lines), C–H···Cl (violet dashed lines) and Cl···Cl (green dashed lines) interactions in **5** (irrelevant hydrogen atoms are omitted for clarity).



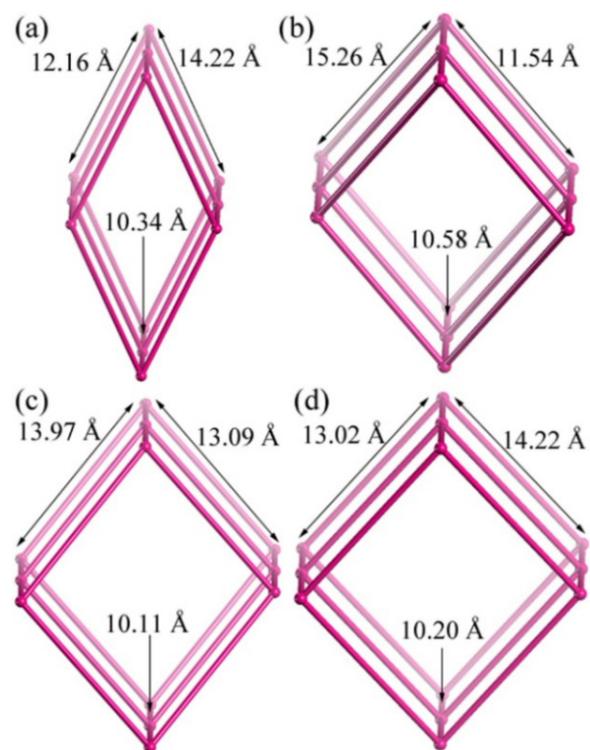
**Fig. S7** The intermolecular weak C–H···Cl (turquoise dashed lines) and Cl···Cl (green dashed lines) interactions in **6** (irrelevant hydrogen atoms are omitted for clarity).



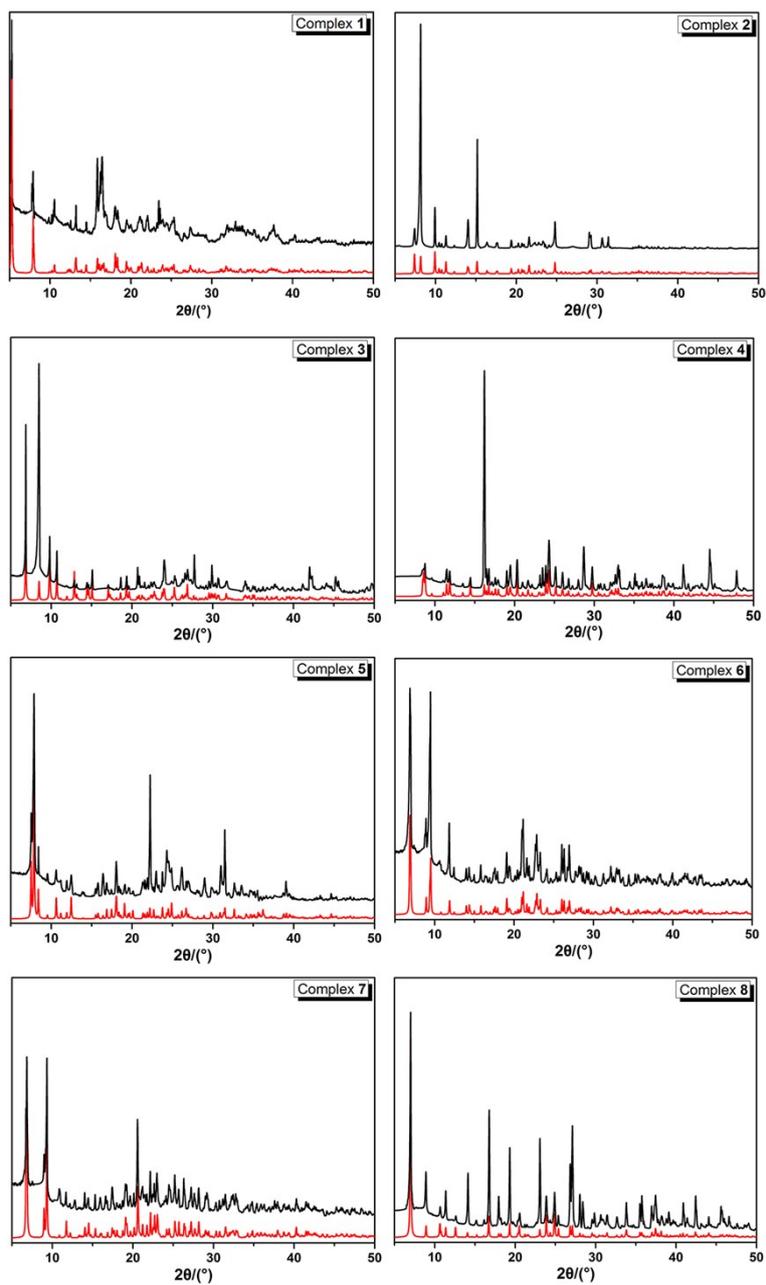
**Fig. S8** The intermolecular weak C–H···O (turquoise dashed lines) and Cl···Cl (green dashed lines) interactions in **7** (irrelevant hydrogen atoms are omitted for clarity).



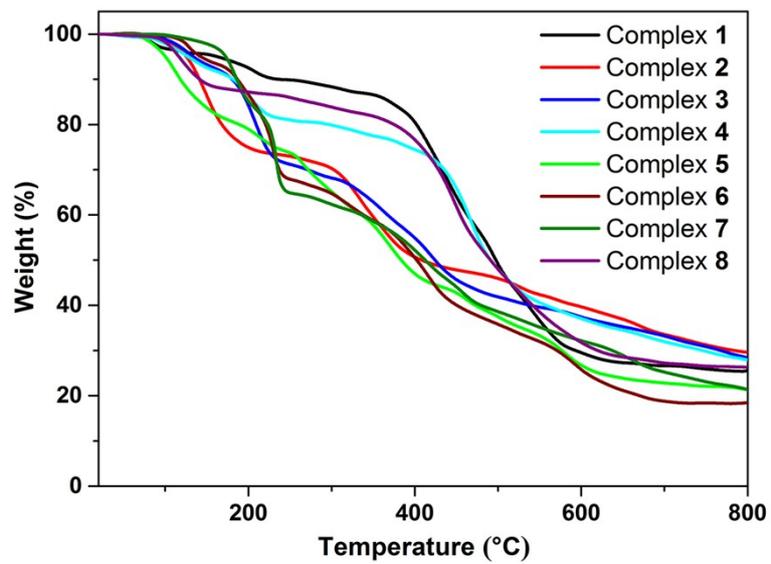
**Fig. S9** The intermolecular weak Cl···Cl interactions (green dashed lines) in **8** (irrelevant hydrogen atoms are omitted for clarity).



**Fig. S10** A schematic representation of 1D shape of channel for **4** (a), **5** (b), **6** (c) and **7** (d).



**Fig. S 11** Experimental (black) and simulated (red) PXRD patterns of 1–8.



**Fig. S12** TGA curves of 1–8.