

**Uranyl ion complexes of polycarboxylates - steps towards isolated
photoactive cavities**

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SUPPLEMENTARY MATERIAL

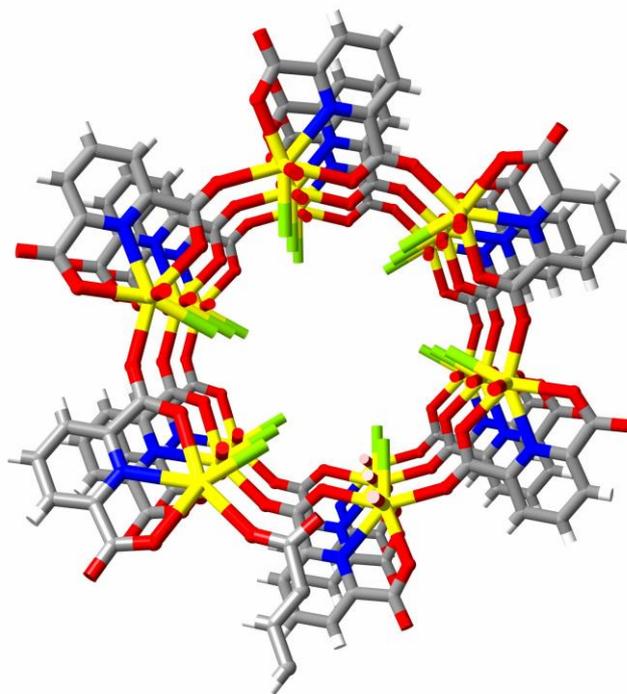


Figure S1 Perspective view of one helical tube within the crystal of $[UO_2(dipic)(OH_2)]$. The water molecules (oxygen coloured green) appear to be involved in H-bonding to carboxylate-O atoms and not to any species which could possibly be held within the tube.

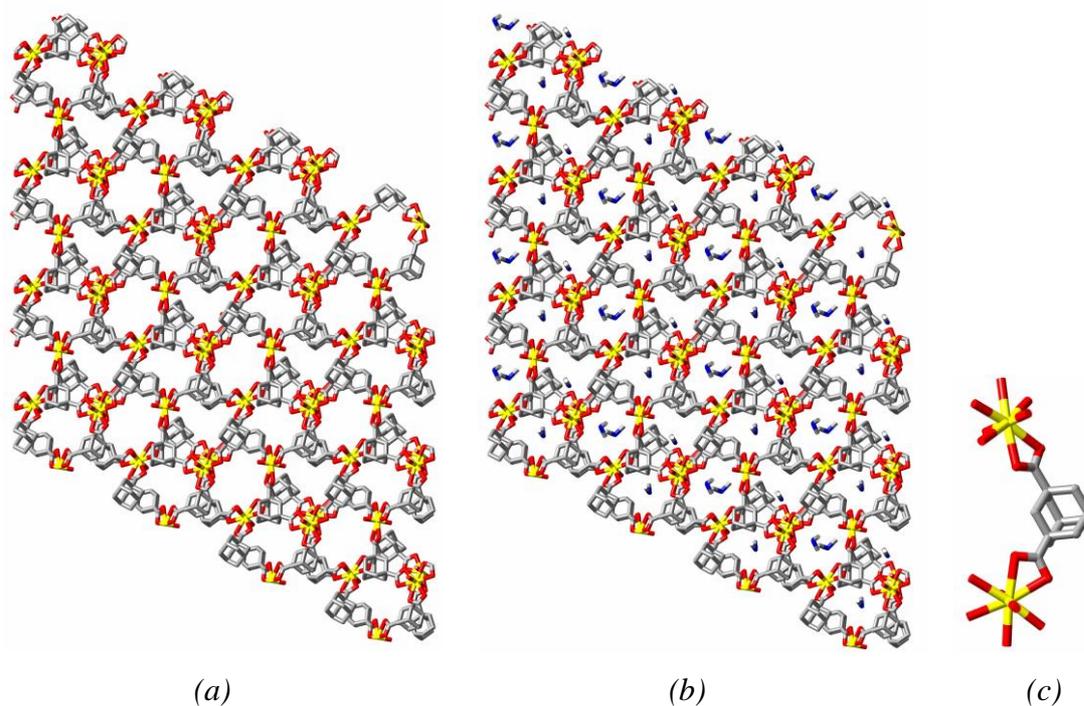


Figure S2 Views, down a , of the triperiodic structure of $[H_2NMe_2]_2[(UO_2)_2(adc)_3] \cdot 1.5H_2O$, complex **H**, showing the various channels (a) without and (b) with dimethylammonium counter cations shown. The ligand binding mode is shown in (c).

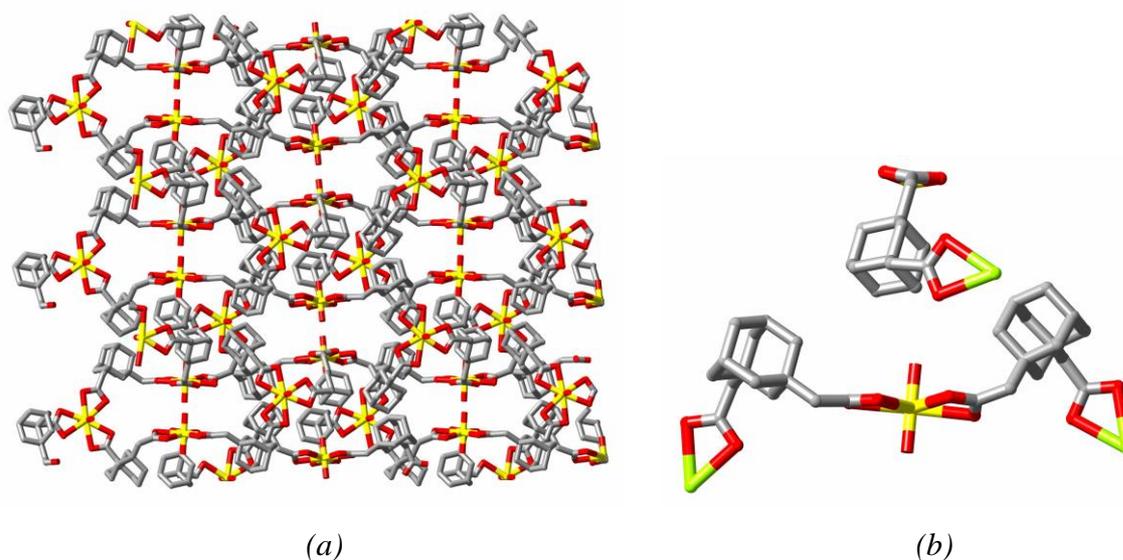


Figure S3 (a) A partial view, along *a*, of one of the diperiodic sheets found in the crystal of $[\text{H}_2\text{NMe}_2]_2[(\text{UO}_2)_2(\text{ada})_3] \cdot 1.5\text{H}_2\text{O}$, complex **I** (cations and H-atoms not shown); (b) The three inequivalent ligand units within the structure, showing the somewhat divergent orientations of the carboxylate groups on each. (The inequivalent uranium atoms are shown in yellow and green.)

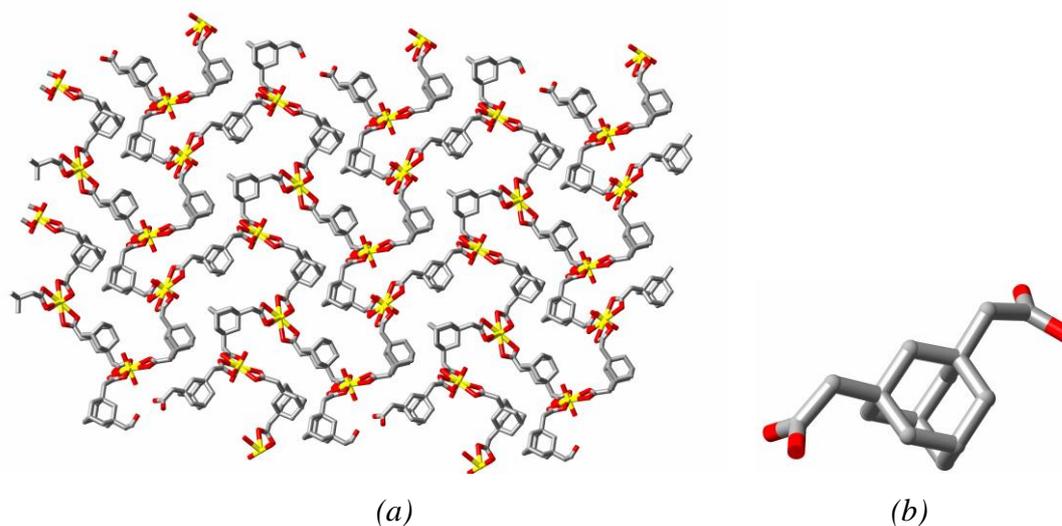


Figure S4 (a) A partial view of one of the diperiodic anionic polymer sheets (counter cations not shown) in the crystal of $[\text{H}_2\text{NMe}_2][\text{PPh}_3\text{Me}][(\text{UO}_2)_2(\text{ada})_3] \cdot \text{H}_2\text{O}$, complex **J**; (b) the ligand unit in this sheet showing complete divergency of the carboxylate groups.

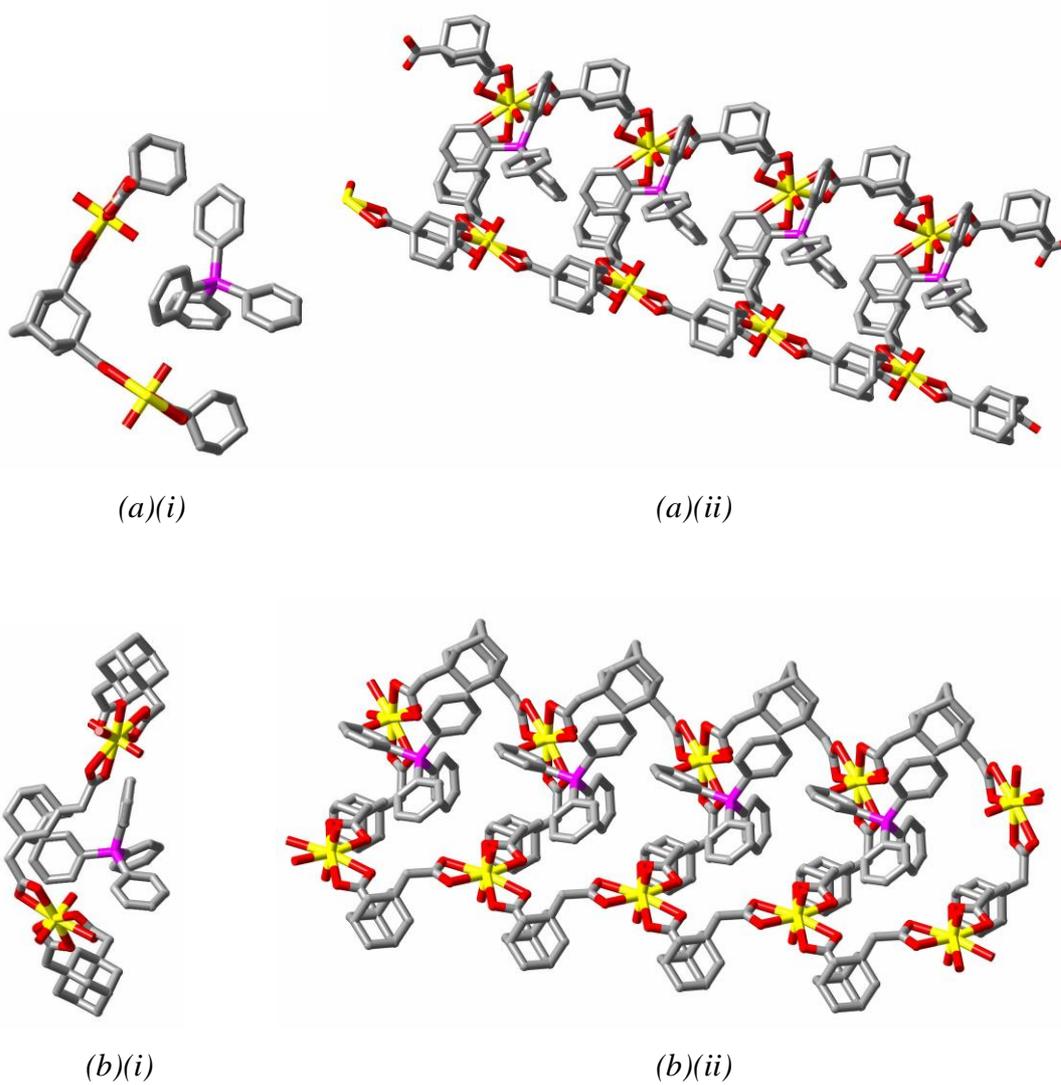


Figure S5 Views, (i) down *a* and (ii) in perspective, of the trough-like anionic monoperiodic polymers and their closest cations found in the crystals of (a) $[PPh_4]_2[(UO_2)_2(adc)_3] \cdot 2H_2O$, complex **M**, and (b) $[PPh_4]_2[(UO_2)_2(ada)_3]$, complex **N**.