S1. The V-shaped (H₂O)₃ clusters inserted in complex 2
S2. The acyclic (H₂O)₄ cluster in 4
S3. The 2D structures in ab plane (a, b) when K ions are shown or not
S4. The network diagram of water tapes with the Sm complex acting as connector in 6, the pdtc⁺ ligands are simplified for clarity
S5. TGA curves for 2, 4 and 6

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**S1.** The V-shaped \((\text{H}_2\text{O})_3\) clusters inserted in complex 2. The symmetry code: \(1-x, 1-y, -z\).

**S2.** The acyclic \((\text{H}_2\text{O})_4\) cluster in 4. The symmetry code: \(1-x, 1-y, 1-z; x, -1+y, 1+z\).

**S3.** The 2D structures in \(ab\) plane (a, b) when K ions are shown or not.

**S4.** The network diagram of water tapes with the Sm complex acting as connector in 6, the \(\text{pdte}^4\).
ligands are simplified for clarity

S5. TGA curves for 2, 4 and 6