1. Periodic Building Unit:

Cubic RWY can be built using units of 4 T atoms: four fused 3-rings connected to a tetrahedron of T atoms (a 3*1 unit). The Periodic Building Unit (PerBU), periodic in zero dimensions, is obtained when T4-units (one bold in Figure 1) are linked about a 4-fold axis as shown in Figure 1.

2. Connection mode:

Neighboring PerBUs, related by a rotation of 90° about \( a \), and \( b \) (or by the cubic 3-fold axis) are connected along through single T-T connections as illustrated in Figure 2.
3. Projections of the unit cell content: See Figure 2.

4. Channels and/or cages:

The cavity in RWY is depicted in Figure 3. The pore descriptor is added. Fused cavities are shown in figure 4. 8-Ring and 12-ring channels are formed.

\[ \{3[3^{24}8^{6}]12^{8}\} <100> \text{ (8-ring), } <111> \text{ (12-ring)} \]

Figure 3. Cavity viewed along <001> (left) and along <111> (right).

Figure 4. Fused cavities viewed along <001> (left) and along <111> (right).

5. Supplementary information:

Other framework types containing (modified) single 3- and/or 4-rings

Single 3- and/or 4-rings can be connected in several other ways. In several cases additional T atoms are needed to build the framework.

In the INTRO-pages links are given to a detailed description of a sub-set of framework types that contain (modified) single 3- and/or 4-rings (choose: Single 3- and/or 4-rings). There is also a link to a summary of the Periodic Building Units used in the building schemes of these framework types (choose: Appendix; Figure 4).