

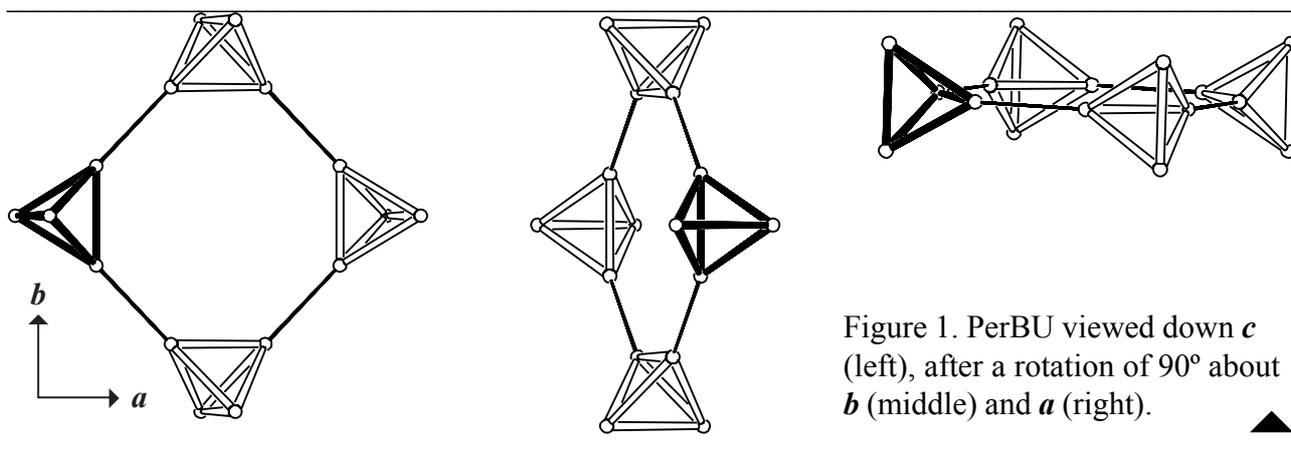
# Building scheme for RWY



1. Periodic Building Unit – 2. Connection mode – 3. Projections of the unit cell content
4. Channels and/or cages – 5. Supplementary information

## 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  $90^\circ$  about  $a$ , and  $b$  (or by the cubic 3-fold axis) are connected along through single T-T connections as illustrated in Figure 2.

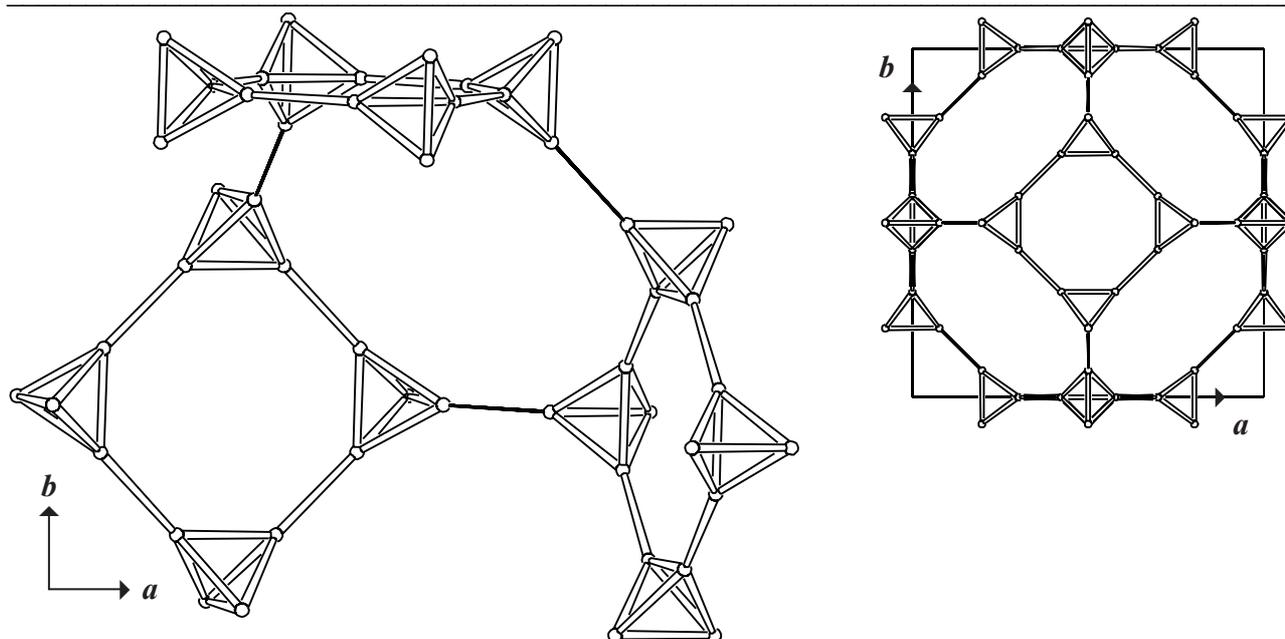


Figure 2. Connection mode viewed along  $c$  (left) and unit cell content viewed along  $c$  (right). In the perspective drawing only one set of 3-fold related PerBUs is shown for clarity.

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.

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$\{3[3^{24}8^6 12^8] \langle 100 \rangle (8\text{-ring}), \langle 111 \rangle (12\text{-ring})\}$

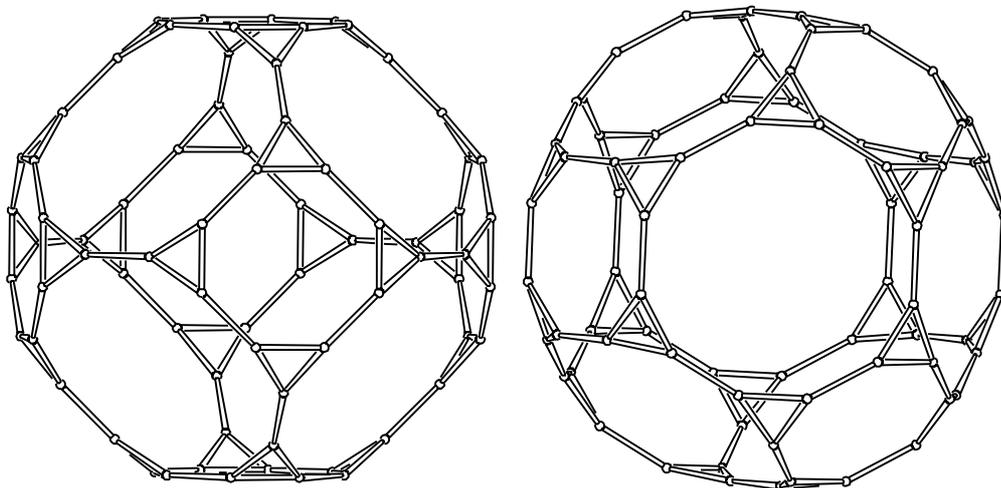


Figure 3. Cavity viewed along  $\langle 001 \rangle$  (left) and along  $\langle 111 \rangle$  (right).

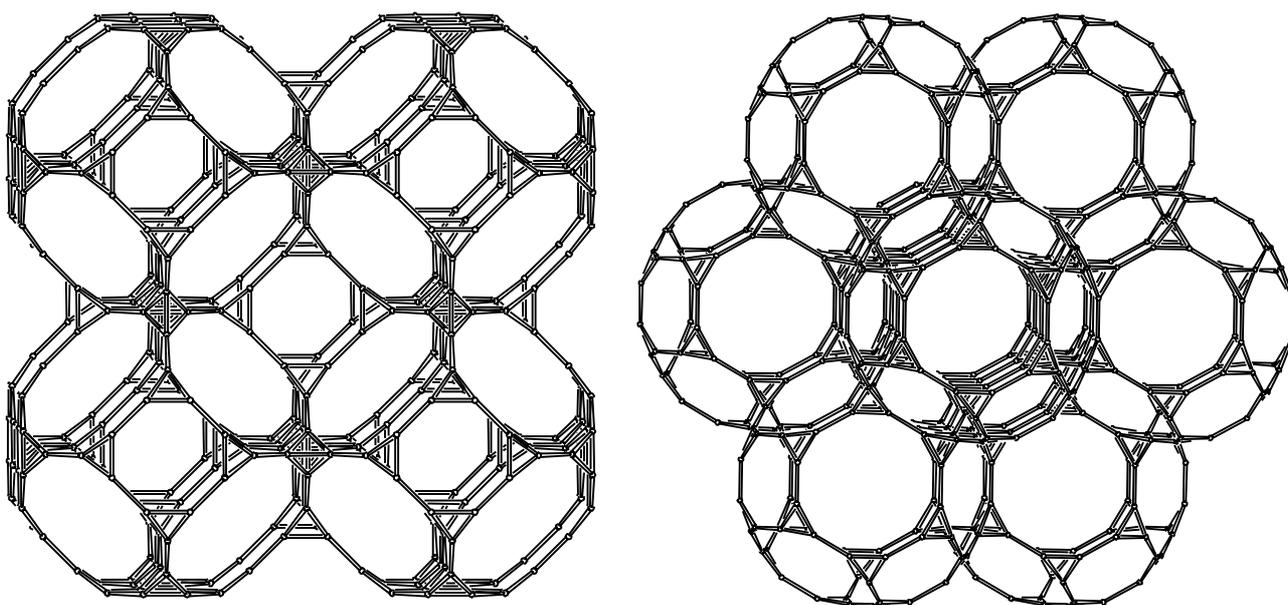


Figure 4. Fused cavities viewed along  $\langle 001 \rangle$  (left) and along  $\langle 111 \rangle$  (right). ▲

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#### 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**). ▲