Building scheme for OSO

1. Periodic Building Unit – 2. Connection mode – 3. Projections of the unit cell content
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1. Periodic Building Unit:

OSO can be built using units of 9 T atoms. The T9-unit consists of four fused 3-rings (or a 3-1 unit and a spiro-5 unit; bold in Figure 1). The Periodic Building Unit (PerBU) is obtained when T9-units, related by pure translations along ***a***, and ***b***, are connected into the ***ab*** layer depicted in Figure 1.

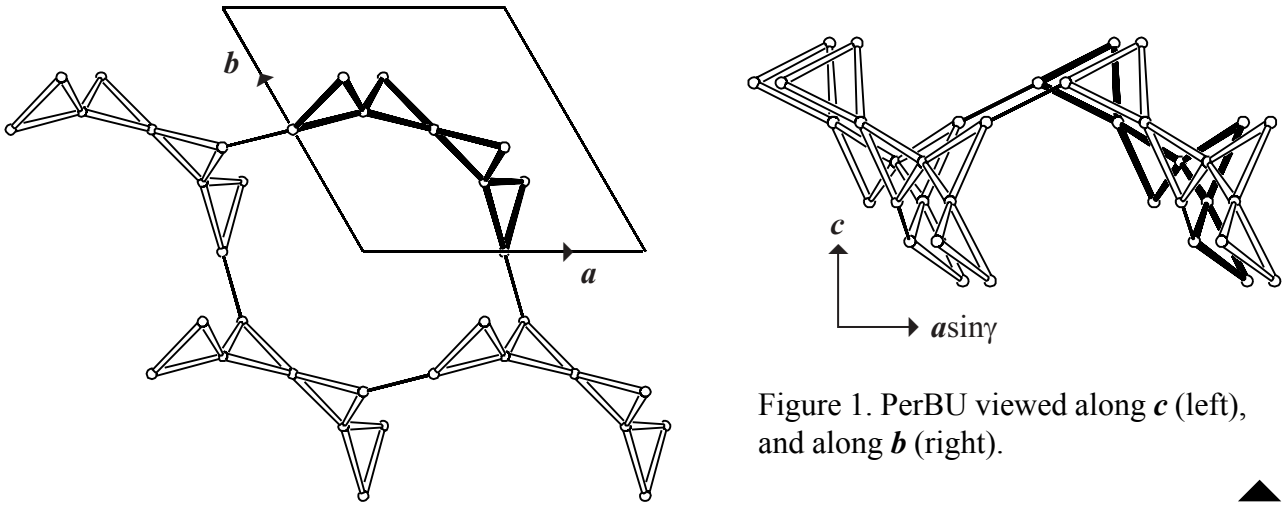

Figure 1. PerBU viewed along ***c*** (left), and along ***b*** (right).

2. Connection mode:

Neighboring PerBUs, related by a pure translation along ***c***, are connected along ***c*** through 3-rings as shown on Figure 2.

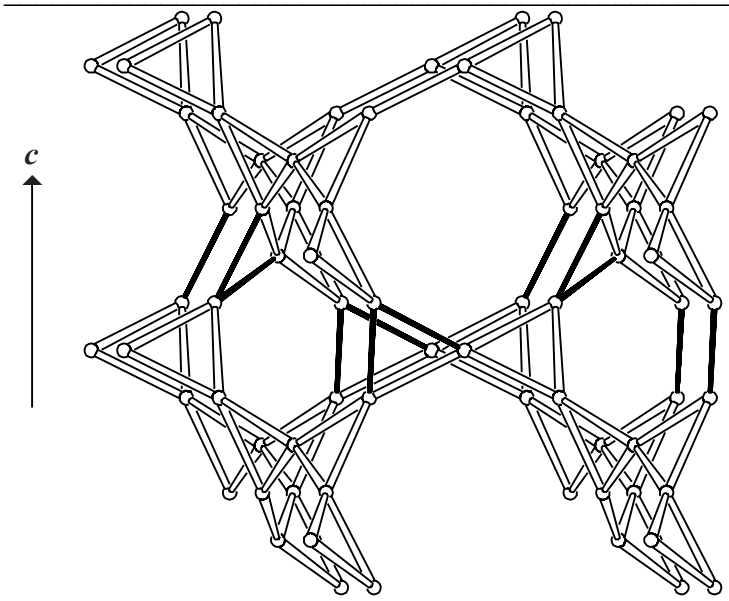

Figure 2. Connection mode viewed along ***b***.

3. Projections of the unit cell content: See Figure 3.

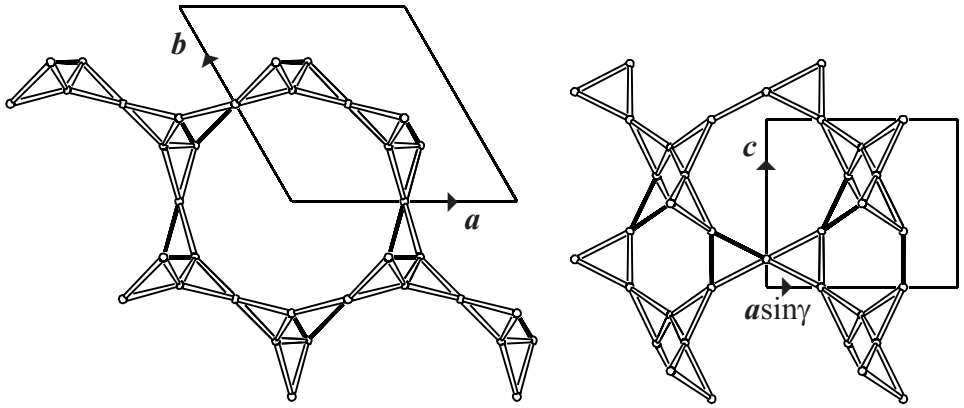

Figure 3. Unit cell content projected along ***c*** (left), and along ***b*** (right).

4. Channels and/or cages:

In hexagonal **OSO**, 14-ring channels parallel to [001] interconnect with 8-ring channels parallel to <100>. The channel intersection is shown in Figure 4. The **pore descriptor** is added. The fusion of intersections is illustrated in Figure 5.

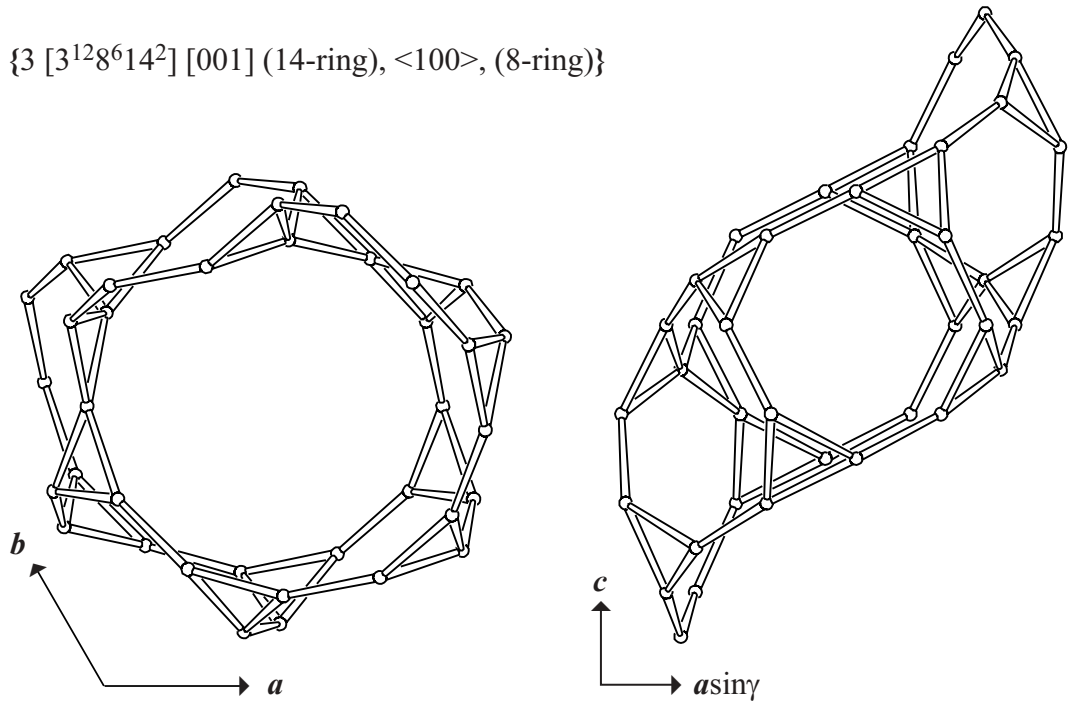

Figure 4. Channel intersection viewed along the 14-ring channel axis parallel to ***c*** (left), and along an 8-ring channel axis parallel to <010> (right).
Figure 5 is on next page.

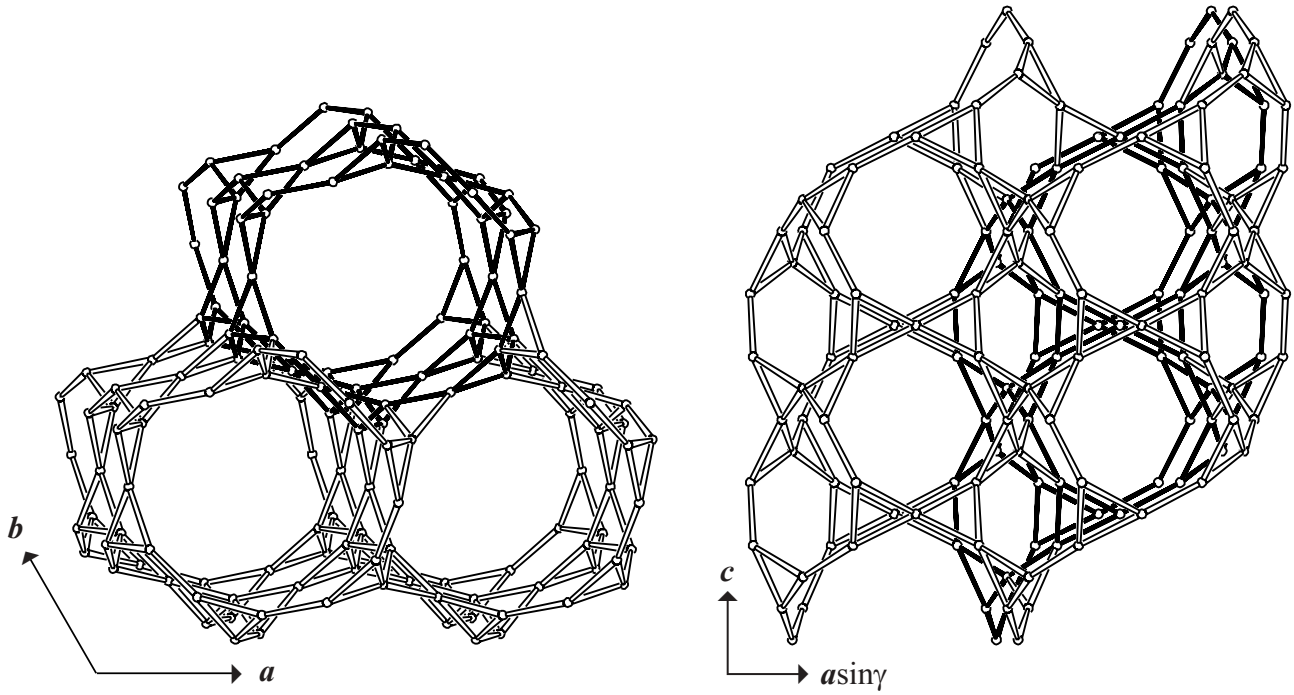

Figure 5. Fusion of channel intersections along ***a***, ***b*** and ***c*** viewed along the 14-ring channel axis parallel to ***c*** (left) and along the 8-ring channel axis parallel to <010> (right).

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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**).