

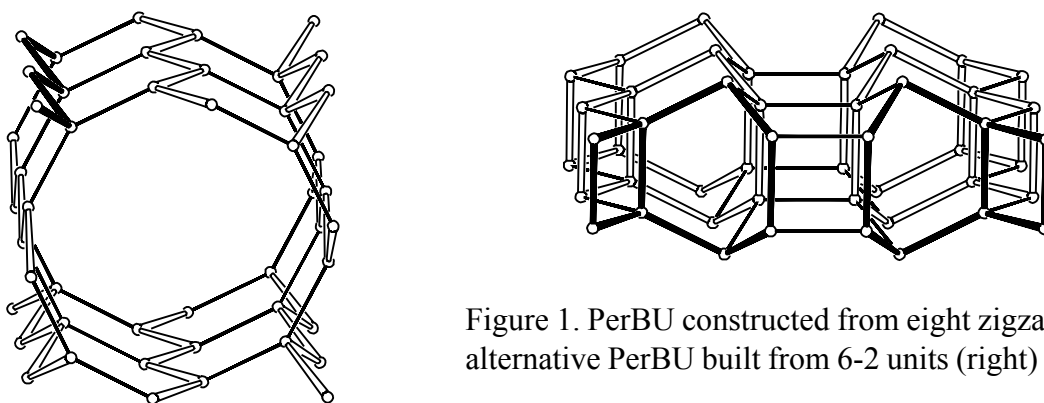
Building scheme for OSI



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

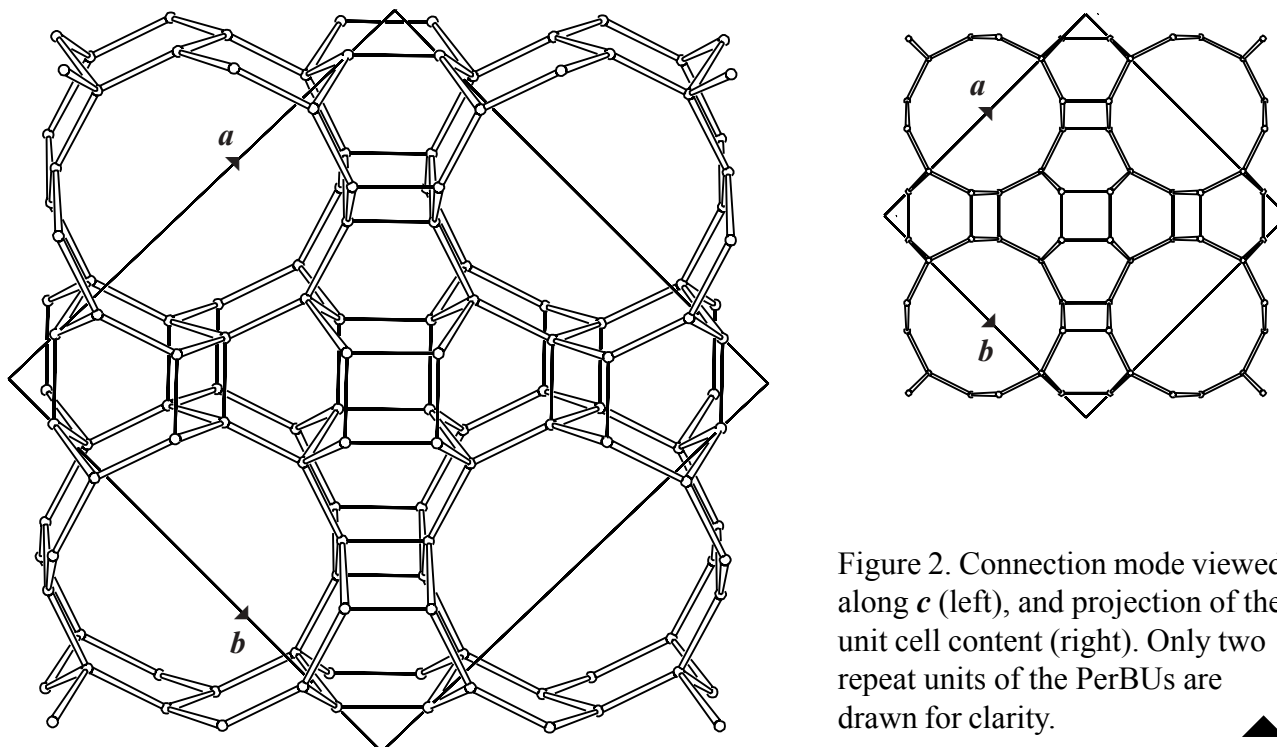
1. Periodic Building Unit:

OSI can be built using the zigzag chain (bold in Fig. 1 (left)) parallel to c . The repeat distance along the zigzag chain is about 5.2 Å. The repeat unit consists of 2 T atoms. The one-dimensional Periodic Building Unit (PerBU) is obtained when eight zigzag chains are connected into a cylindrical pore with a 12-ring window. The cylinder wall consists of fused 6-rings. [Compare this PerBUs with the PerBUs in **CFI**, **GON** and **VET**]. An alternative PerBU consists of 6-2 units (bold in Fig.1 (right)).



2. Connection mode:

Neighboring PerBUs, related along a , and b by a shift of $\frac{1}{2}(a + b + c)$, are connected through 4- and 6-rings as illustrated in Figure 2. The connection mode between four direct neighboring PerBUs shows a 4-fold rotation axis through the central 4-ring.



3. Projections of the unit cell content: See Figure 2. ▲

4. Channels and/or cages:

The 12-ring channel in **OSI**, parallel to c , is equal to the PerBU. The channel wall consists of fused 6-rings as shown in Figure 3. The **pore descriptor** is added. The channel is topologically equivalent to the 12-ring channel in **VET**.

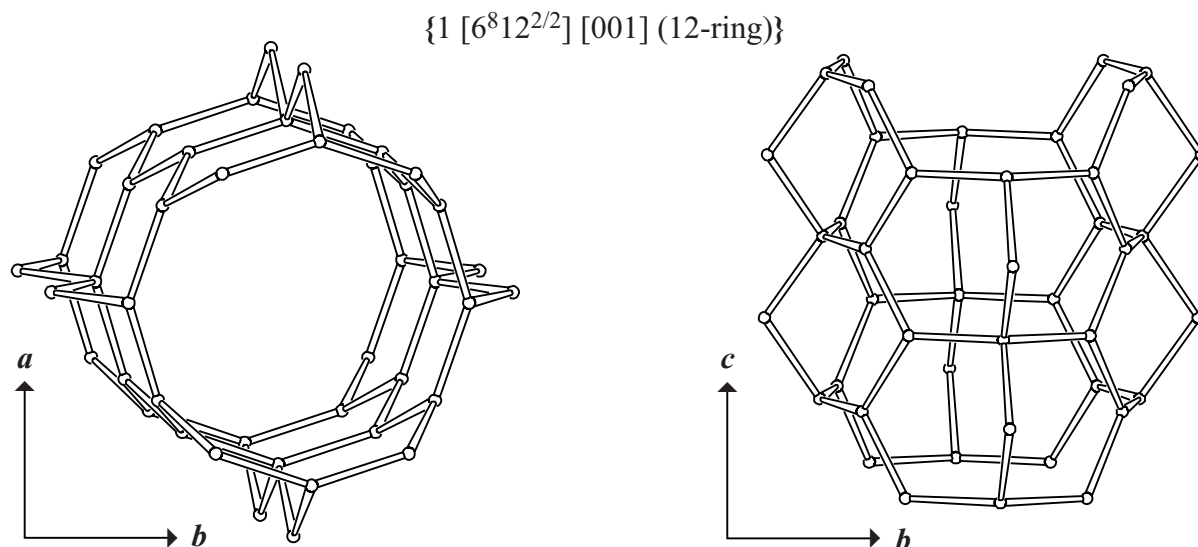


Figure 3. 12-Ring channel viewed along the channel axis parallel to c (left), and along a (right). ▲

5. Supplementary information:

Other framework types containing zigzag chains

In several framework types at least one of the unit cell dimensions is about $n \cdot 5.2 \text{ \AA}$ (where $n = 1, 2, 3, \text{ etc.}$). In many cases this indicates the presence of zigzag chains.

In the **INTRO** pages links are given to detailed descriptions of these framework types (choose: **Zigzag chains**). 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 1**). ▲