



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

MON can be built using 4-rings. The Periodic Building Unit (PerBU) equals the 4-ring layer depicted in Figure 1. The 4 rings (one in bold) are related by pure translations along a , and b .

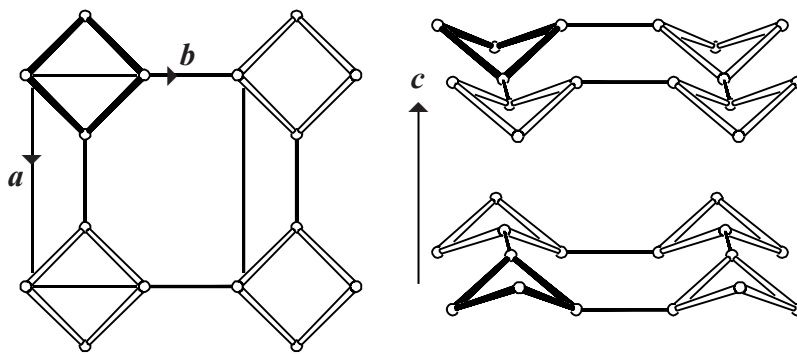


Figure 1. PerBU viewed down c (left), down a (top right), and along b (bottom right). The PerBUs, depicted at the right, are identical and related by a rotation of 90° about c or by a mirror operation perpendicular to c .

2. Connection mode:

Neighboring PerBUs, related by a rotation of 90° about c , accompanied by a lateral shift of $\frac{1}{2}a$ or $\frac{1}{2}b$, are connected along c through 5-rings as shown in Figure 2. The connectivity codes are denoted as $(\frac{1}{2}, 0)$ or $(0, \frac{1}{2})$ depending on whether the lateral shift is along a or b . [Compare this connection mode with those in LOV, VSV and RSN].

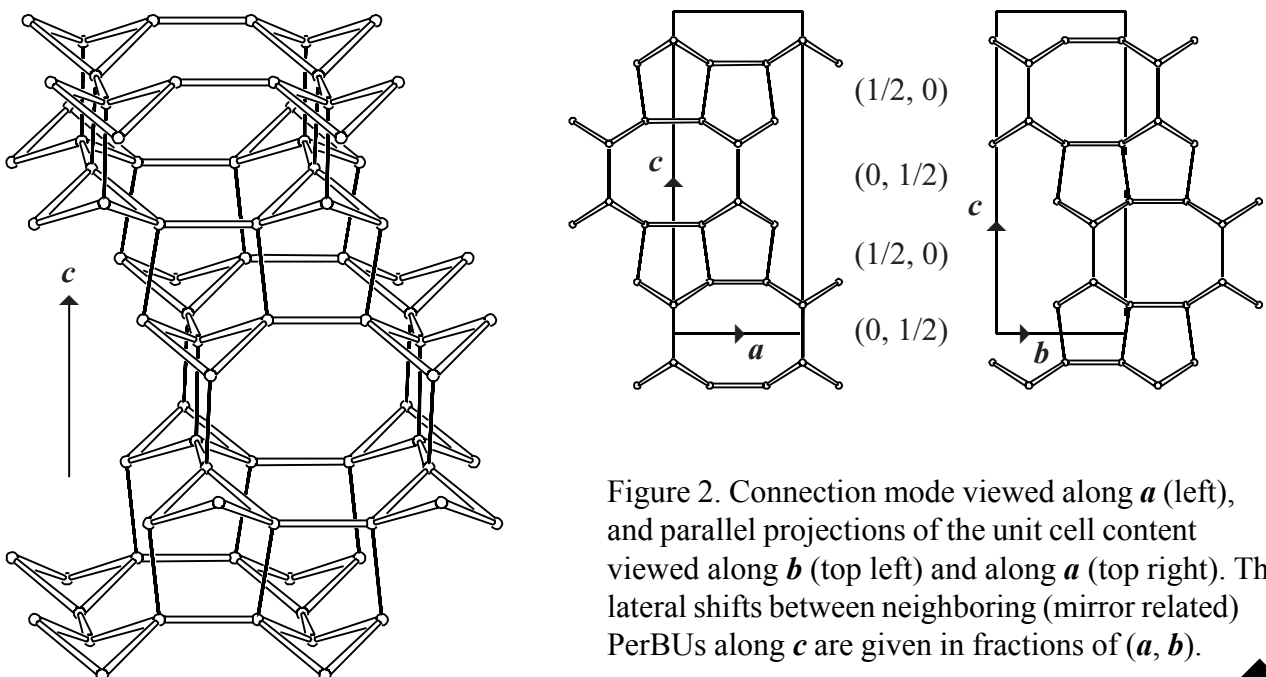


Figure 2. Connection mode viewed along a (left), and parallel projections of the unit cell content viewed along b (top left) and along a (top right). The lateral shifts between neighboring (mirror related) PerBUs along c are given in fractions of (a, b) .

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

4. Channels and/or cages:

In tetragonal **MON**, (equal) interconnected 8-ring channels are parallel to $\langle 100 \rangle$. One channel is depicted in Figure 3. The **pore descriptor** is added. The channel is topologically equivalent to the connecting cavity 2 in **LOV**. The fusion of channels is illustrated in Figure 4.

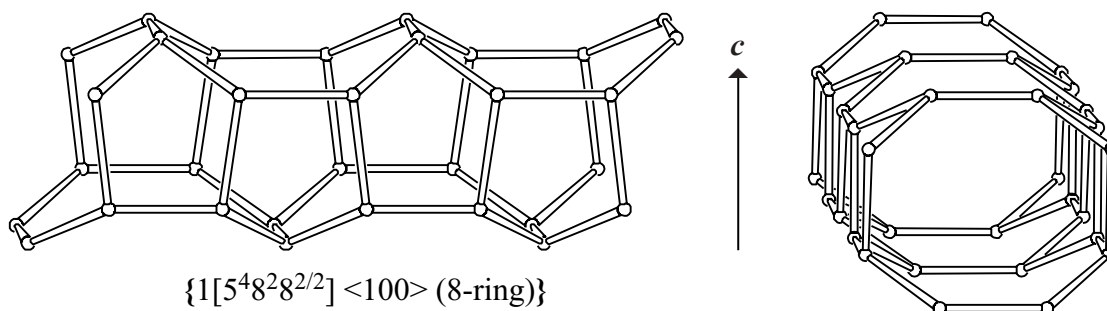


Figure 3. 8-Ring channel in **MON** viewed perpendicular to the channel axis (left) and along the channel axis (right).

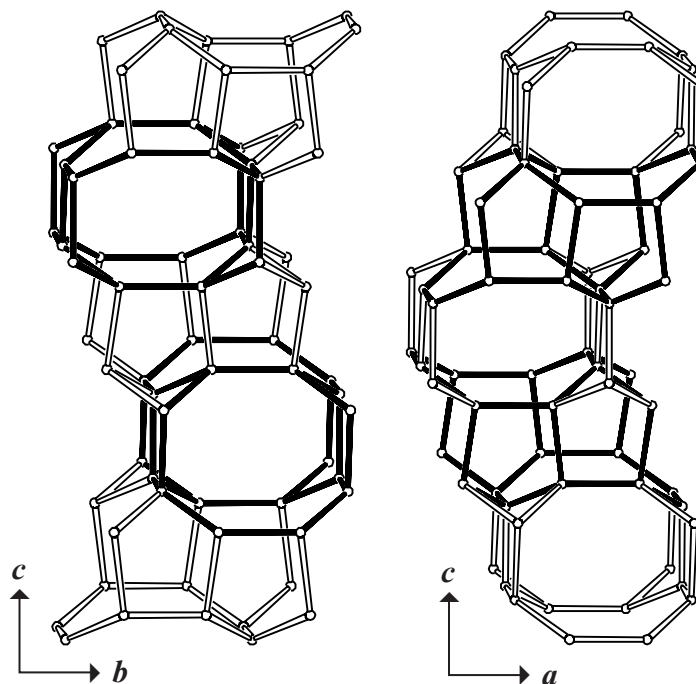


Figure 4. Connection of channels along c viewed along a (left) and along b (right). [Only one repeat unit along the channels are drawn] ▲

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**). ▲