



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:

Finite building units of 12 T atoms are composed of two 5-1 units (bold in Figure 1(a)). The two-dimensional Periodic Building Unit (PerBU) is obtained when these T12-units, related by pure translations along c and by a 180° rotation about a accompanied by a shift of $\frac{1}{2}c$, are connected into a layer with a rectangular repeat unit (Figure 1(b)). Infinite saw chains along c (repeat distance: 7.5 Å) are formed. A strongly corrugated sheet of (fused) 6-ring boats with dimer “handles” is generated as is shown in Figure 1(c). [Compare this PerBU with the PerBUs in [DAC](#) and [EPI](#)]

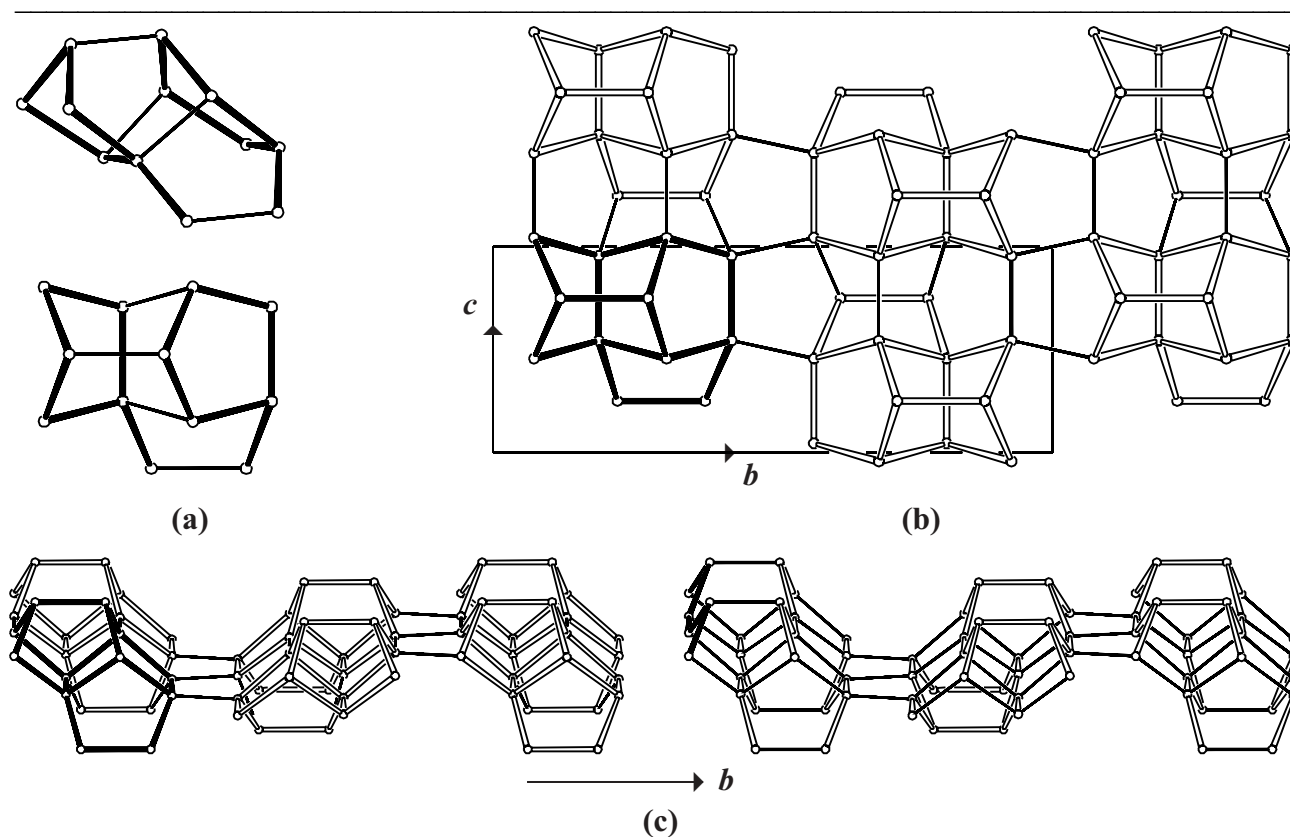


Figure 1. (a): T12-unit composed of two 5-1 units (see [Alternative description](#)) viewed along c (top), and along a (bottom); (b): PerBU projected along b (one T12-unit in bold); (c): PerBU (a 6-ring sheet with dimer “handles”) viewed along c . PerBU built from T12-units (left) or from saw chains (right; one saw chain in bold). [See [Supplementary information](#)]



2. Connection mode:

Neighboring PerBUs, related by a shift of $\frac{1}{2}(a + b)$ are connected along a as shown in Figure 2 on next page. Corrugated sheets of (fused) 6-ring boats are connected through 4-rings.

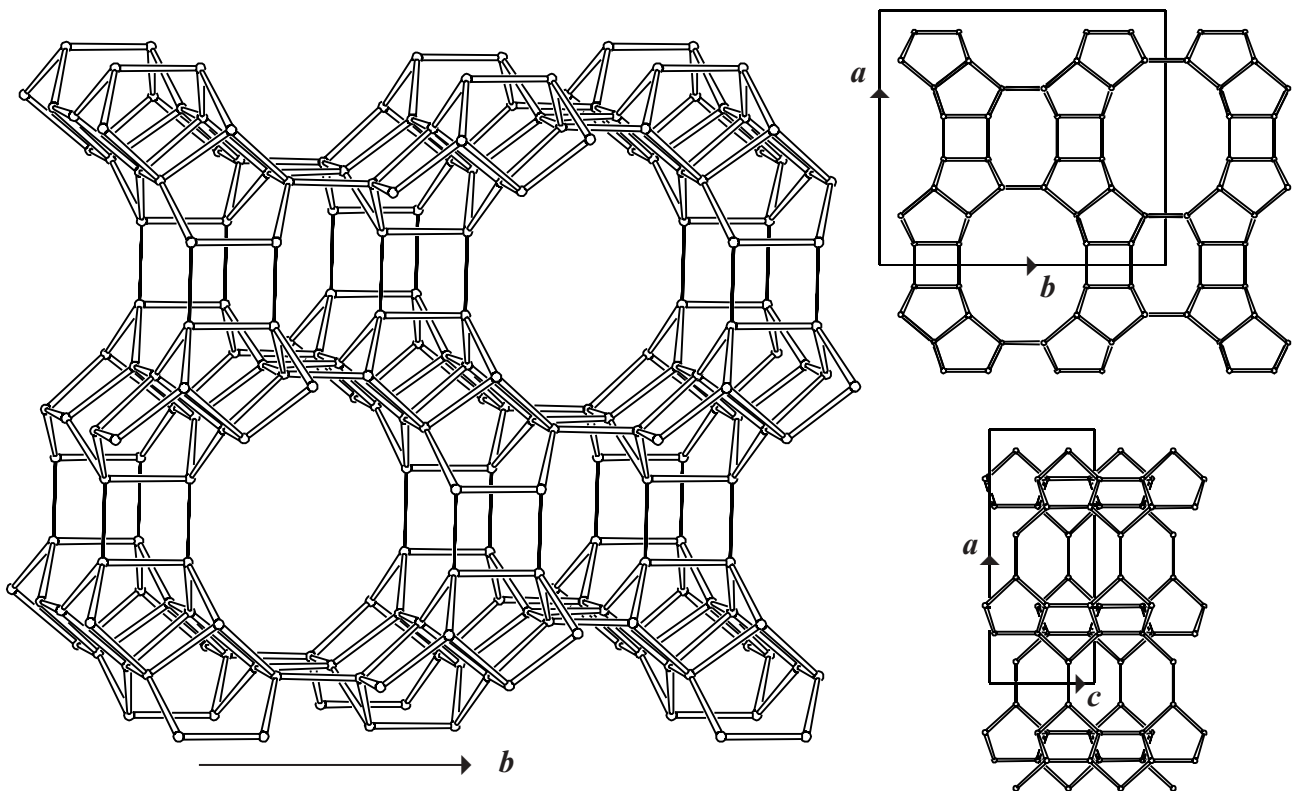


Figure 2. Connection mode viewed along *c* (left) and projection of the unit cell content along *c* (top right) and along *b* (bottom right). ▲

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

4. Channels and/or cages:

In **MOR** there are sinusoidal channels (with limiting 8-ring windows) parallel to *b* that intersect with one-dimensional 8- and 12-ring channels parallel to *c*. The 8- and 12-ring channels parallel to *c* and their interconnecting cavity are shown in Figure 3. The **pore descriptor** is added. The interconnection of the 8- and 12-ring channels is illustrated in Figure 4 together with the sinusoidal channel.

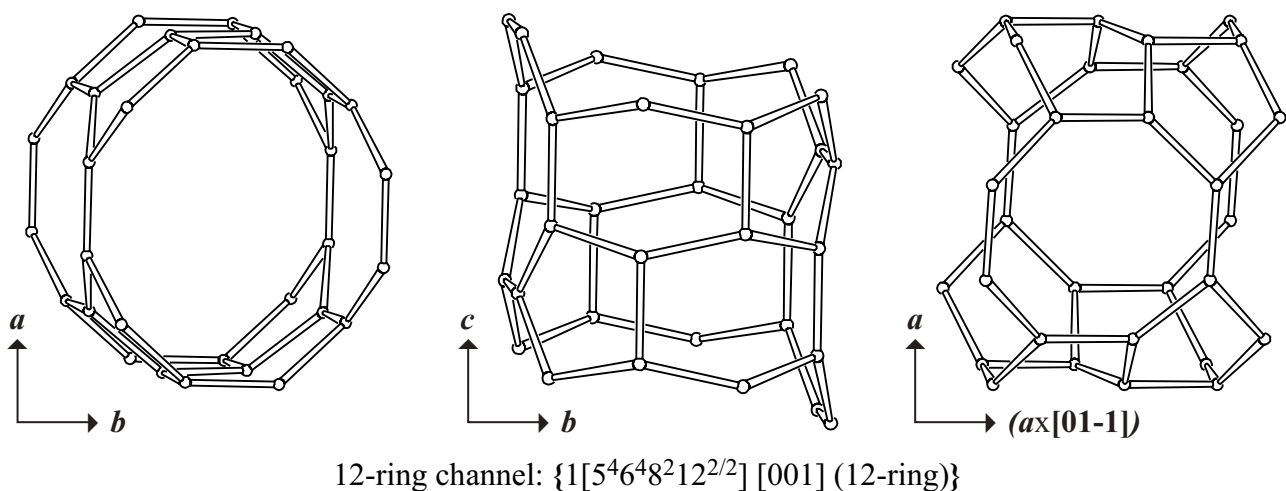
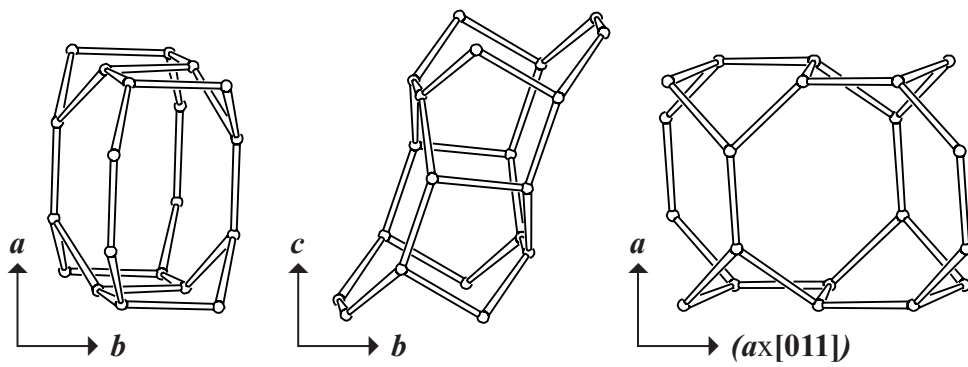
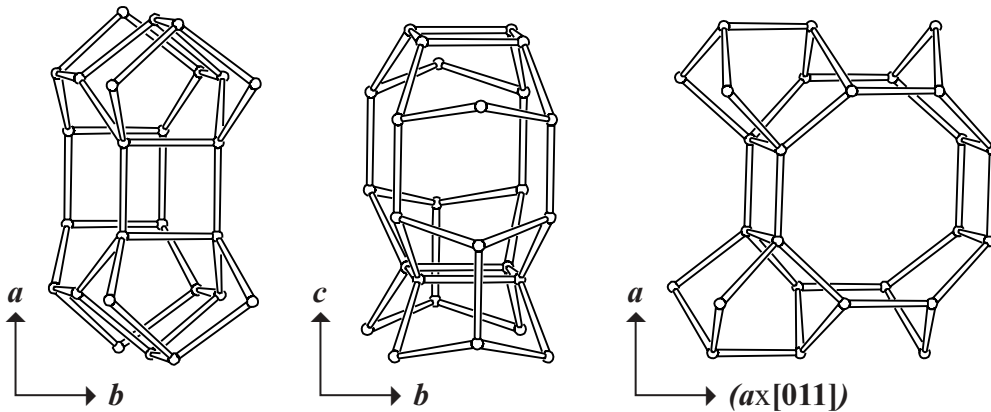


Figure 3. 12-Ring channel viewed along *c* (left), along *a* (middle), and along *[01-1]* (right). [Figure 3 is continued on next page]



8-ring channel: $\{1[5^4 8^2 8^{2/2}] [001] (8\text{-ring})\}$



interconnecting cavity: $\{1[4^2 5^8 6^2 8^2] [010] (8\text{-ring})\}$

Figure 3 [Cont'd].
8-Ring channel
(top) and inter-
connecting cavity
(bottom) viewed
along c (left),
along a (middle),
and along $[011]$
(right).

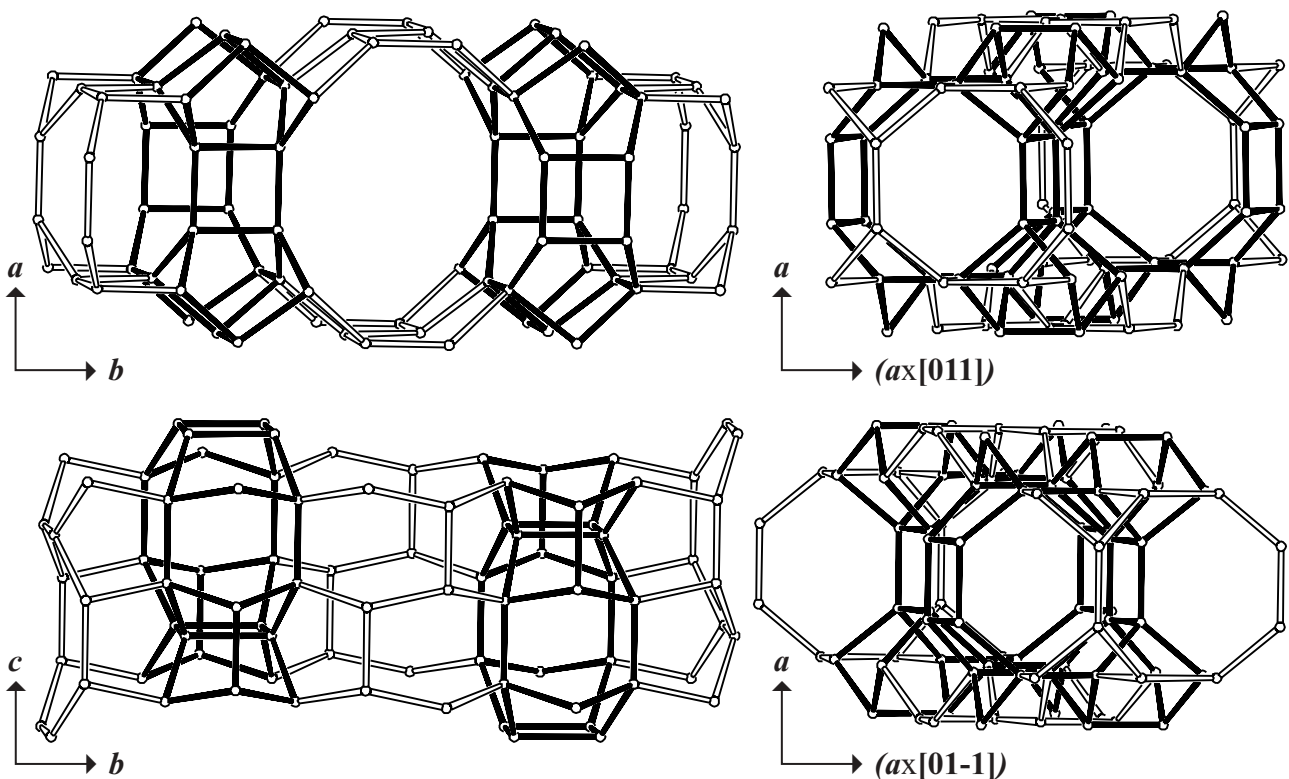


Figure 4. 8-Ring channels and 12-ring channels, linked along b through interconnecting cavities (in bold) that are part of the wall of the sinusoidal channel parallel to b , viewed along c (top left) and along a (bottom left). Sinusoidal channel viewed along $[011]$ (top right) and along $[01-1]$ (bottom right). The limiting window in the sinusoidal channel is an 8-ring window. [Compare this interconnection with the channel intersections in [DAC](#) and [EPI](#)]



5. Supplementary information:

Other framework types containing saw chains

In several framework types at least one of the unit cell dimensions is about $n \cdot 7.5 \text{ \AA}$ (where $n = 1, 2, 3 \dots$ etc.). In many cases this indicates the presence of saw chains.

In the [INTRO](#) pages links are given to descriptions of other framework types containing (twisted) saw chains (choose: **Saw chains**). There is also a link provided to a summary of the Periodic Building Units used in the building schemes of these framework types (choose: **Appendix; Figure 2**).

Alternative description using (modified) 5-rings

Several framework types, like **MOR**, can be constructed using (modified) 5-rings.

In the [INTRO](#) pages links are given to detailed descriptions of these framework types (choose: **5-Rings**). There is also a link provided to a summary of the Periodic Building Units used in the building schemes of these framework types (choose: **Appendix; Figure 6**).

