

Building scheme for LAU



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

LAU can be built using the 4-fold (1,2,4,5)-connected double 6-rings (D6Rs; bold in Figure 1). The one-dimensional Periodic Building Unit (PerBU) is obtained when D6Rs, related along c by pure translations, are connected through 4-rings into a chain along c as shown in Figure 1. Alternatively, the PerBU can be obtained by connecting 2-fold (1,3)-connected double 4-rings with dimer "handles" (or two 1-4-1 units; see [Alternative description](#)).

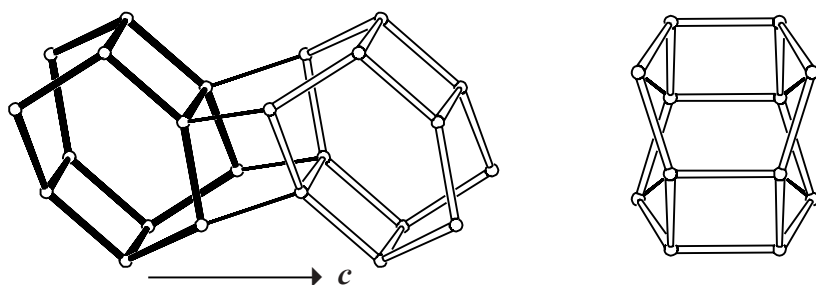


Figure 1. PerBU in LAU constructed from D6Rs viewed normal to the chain axis c (left) and in parallel projection along the chain axis (right).



2. Connection mode:

Neighboring PerBUs, related by a translation of $\frac{1}{2}(a \pm b)$, are connected along $\{110\}$ by 4-rings.

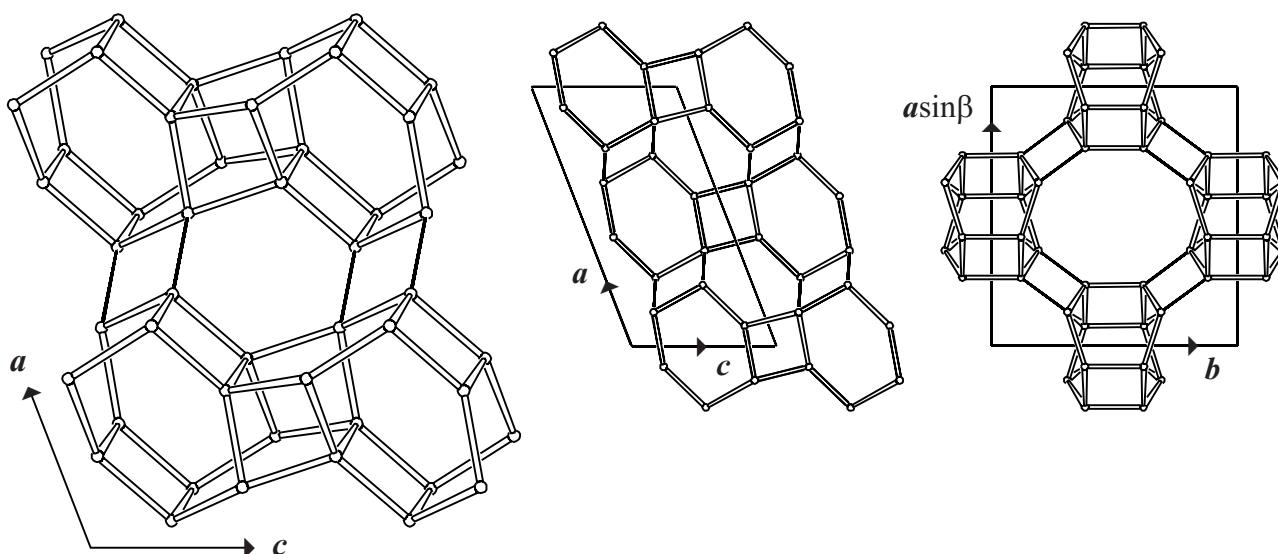


Figure 2. Connection mode in LAU viewed along b (left) and parallel projection of the unit cell content along b (middle) and along c (right).

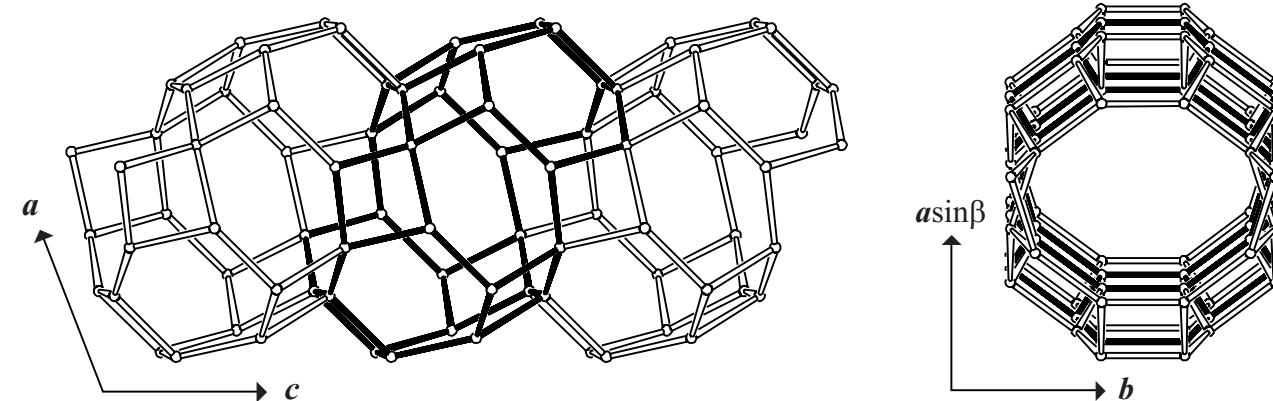
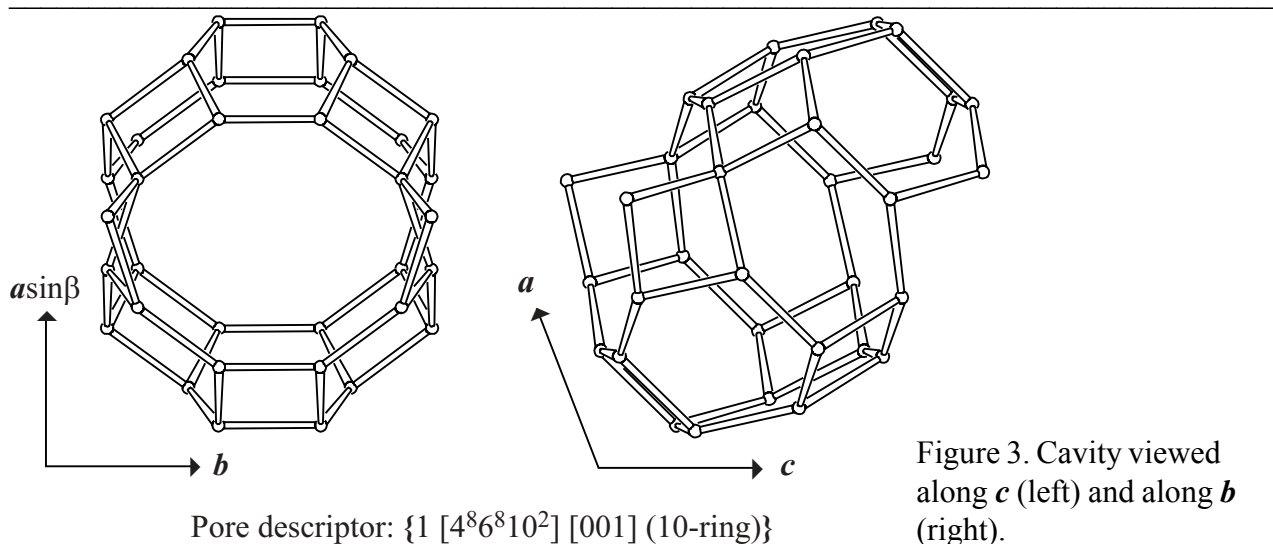


3. Projections of the unit cell content: See Figure 2.



4. Channels and/or cages:

10-Ring channels are parallel to c and can be obtained by connecting cavities, depicted in Figure 3, through common 10-rings. The **pore descriptor** is added in Figure 3. The fusion of cavities is illustrated in Figure 4.



5. Supplementary information:

Other framework types containing (modified) double 6-rings (D6Rs)

Several other framework types can be built using (modified) D6Rs.

In the **INTRO**-pages links are given to descriptions of other framework types containing (modified) D6Rs (choose: **Double 6-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 7**).

Alternative description of LAU using (modified) double 4-rings (D4Rs)

Several framework types, like LAU, can be built using (modified) D4Rs. In the **INTRO**-pages links are given to a detailed description of a sub-set of framework types that contain (modified) D4Rs (choose: **Double 4-rings**). There is also a link provided to a summary of the PerBUs used in the building schemes of these framework types (choose: **Appendix; Figure 5**).

