

Building scheme for AWW



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

The one-dimensional PerBU in AWW is equal to a chain parallel to c and is depicted in Figure 1. The repeat unit of the PerBU consists of a 4-fold (1,2,3,4)-connected double 6-ring (D6R) and contains 12T atoms (bold in Fig. 1). The D6Rs in the chain are related by pure translations along c . [The connection in the D6R in AWW is different from the connection in the D6R in AFI, ATT, ATV, AWO and UEI]

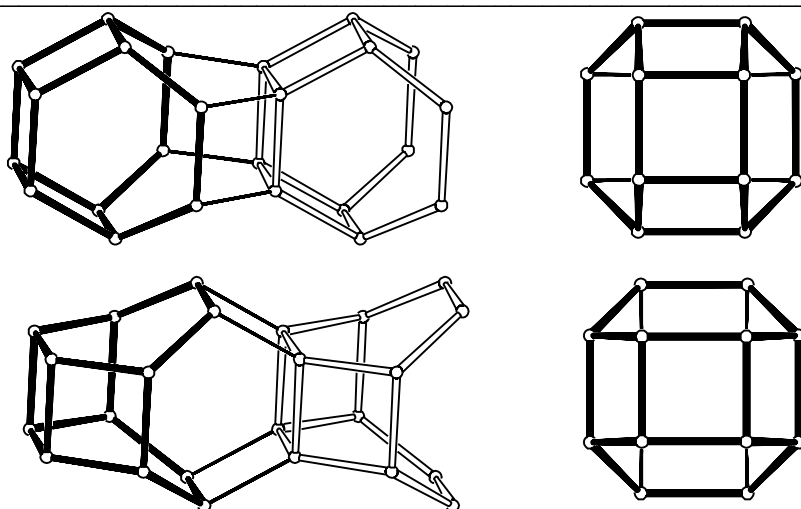


Figure 1. PerBU in AWW. Perspective drawings of the PerBU (left) and the corresponding down-chain projections (right). The perspective drawings of the PerBUs differ by a rotation of 90° about the chain axis.



2. Connection mode:

Neighboring PerBUs, related by a rotation of 90° about the chain axis c , are connected along $[110]$ through fused 4- and 6-rings as shown in Figure 2.

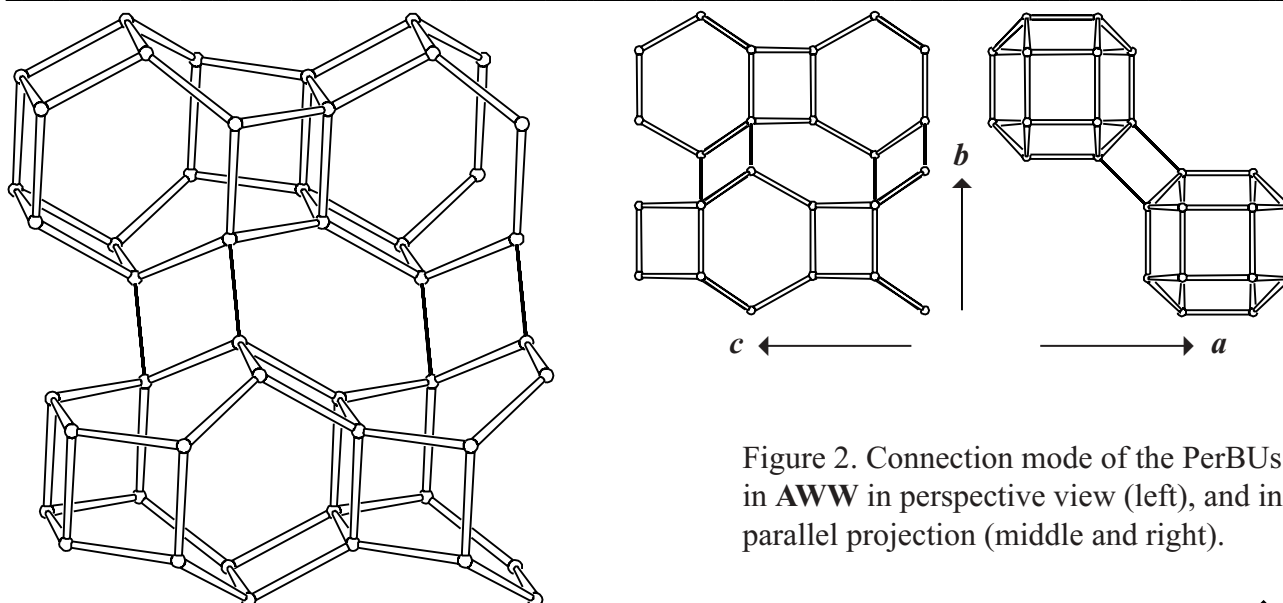


Figure 2. Connection mode of the PerBUs in AWW in perspective view (left), and in parallel projection (middle and right).



3. Projections of the unit cell content:

The unit cell is obtained by connecting four PerBUs around a 4-fold rotation axis parallel to c .

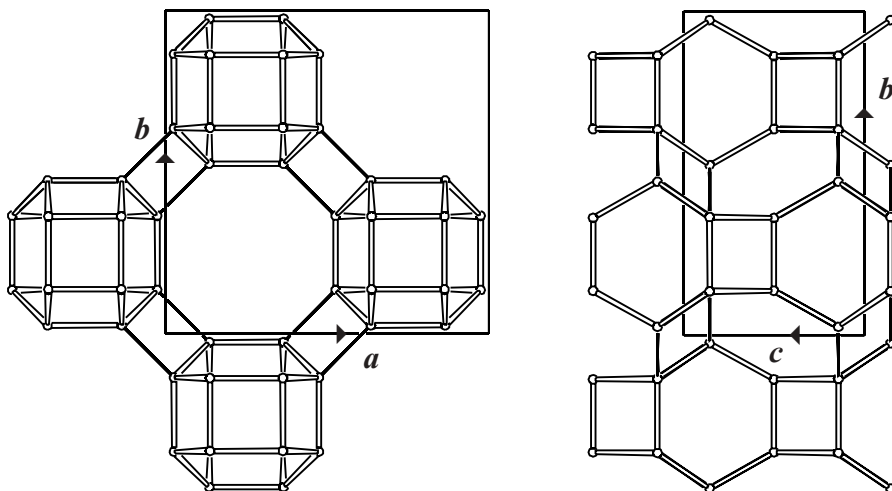


Figure 3. Parallel projection of the unit cell content along c (left), and along a (right).

4. Channels and/or cages:

The PerBUs form aww cavities shown in Figure 4 together with the **pore descriptor**. Cavities are linked through common 8-rings into columns that form (non-interconnected) channels parallel to c . The fusion of the columns through (common) 4- and 6-rings is illustrated in Figure 5.

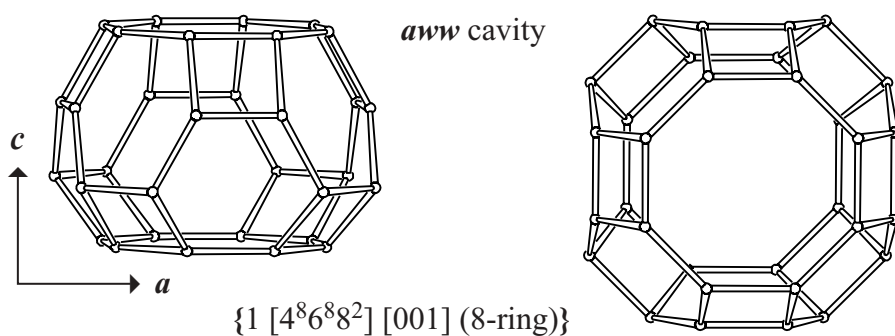


Figure 4. Cavity in AWW seen along b (left), and along c (right).

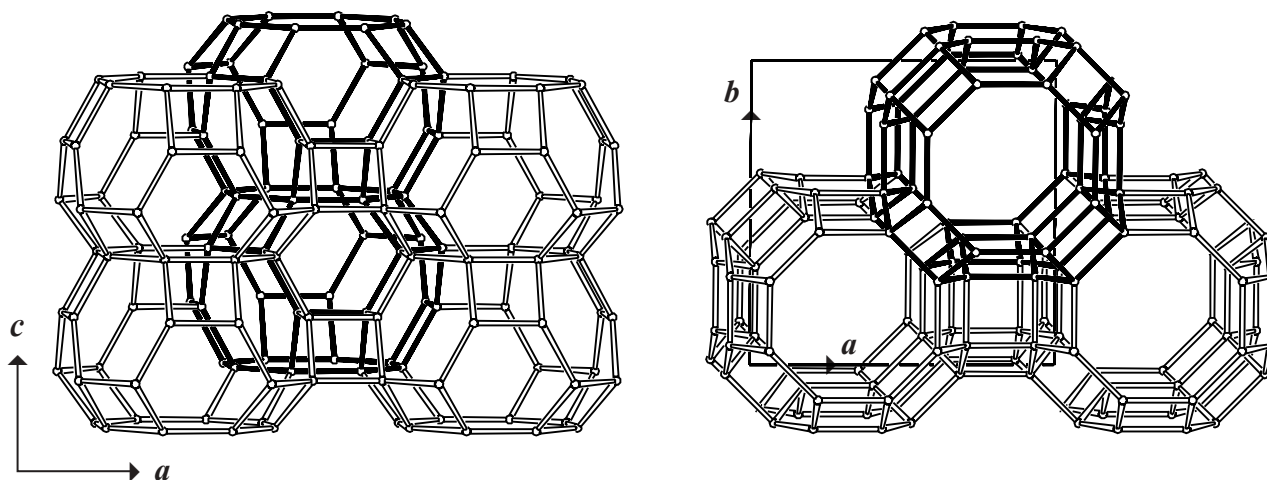


Figure 5. Fused columns of fused cavities viewed along b (left), and along c (right) illustrating the straight 8-ring channels formed along c . [The Figure also shows (not easily) that AWW can as well be built using (six) 4-rings]

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**).

