Building scheme for -WEN

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:

The interrupted hexagonal **-WEN** framework can be built using the saw chain (bold in Fig.1) running parallel to ***c***. The repeat distance along the saw chain is about 7.5 Å. The repeat unit in the chain consists of 3 T atoms. Six saw chains are connected into an one-dimensional Periodic Building Unit (PerBU) consisting of a column of ***can*** cages (see **Alternative description**) that are connected through double 6-rings (Figure 1). Two additional T atoms, bearing the terminal oxygen atoms, are attached to each ***can*** cage. [Compare this PerBU with the PerBU in **LTL** and **OFF**]

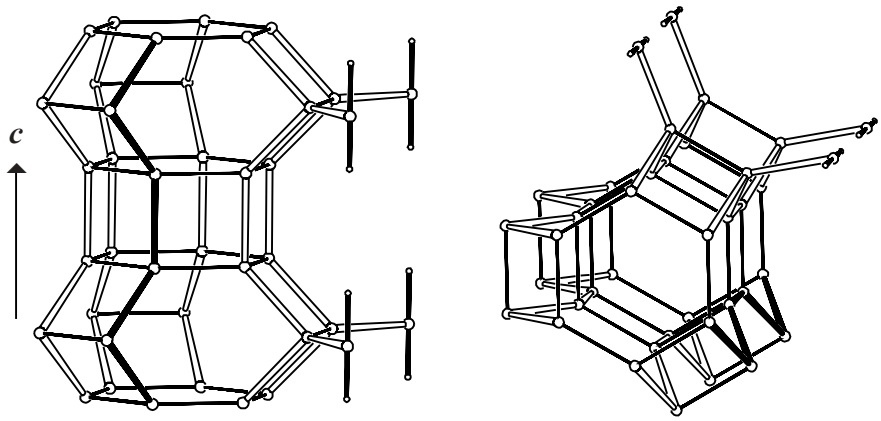

Figure 1. PerBU, composed of six saw chains that form a column of ***can*** cages and additional T atoms, viewed perpendicular to ***c*** (left), and along ***c*** (right). Two terminal oxygen atoms are randomly distributed on the four positions indicated by bold bonded small circles.

2. Connection mode:

Neighboring PerBUs, related by pure translations along ***a***, and ***b***, are connected in the ***ab*** plane through single T-T connections using the additional T atoms as is shown in the drawing in Figure 2.

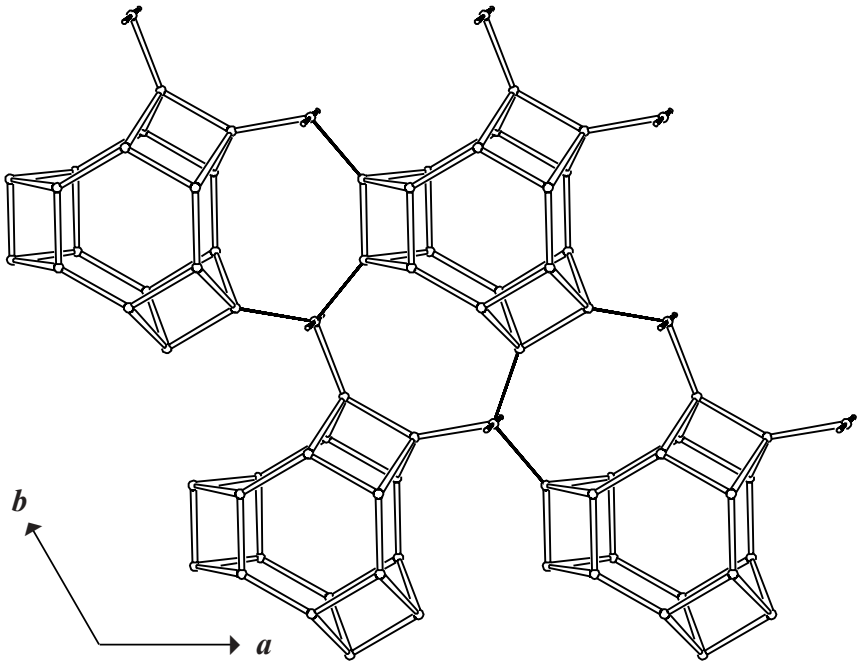

Figure 2. Connection mode in **-WEI** along ***a*** and ***b***. For clarity, only one ***can*** cage along ***c*** is drawn.

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

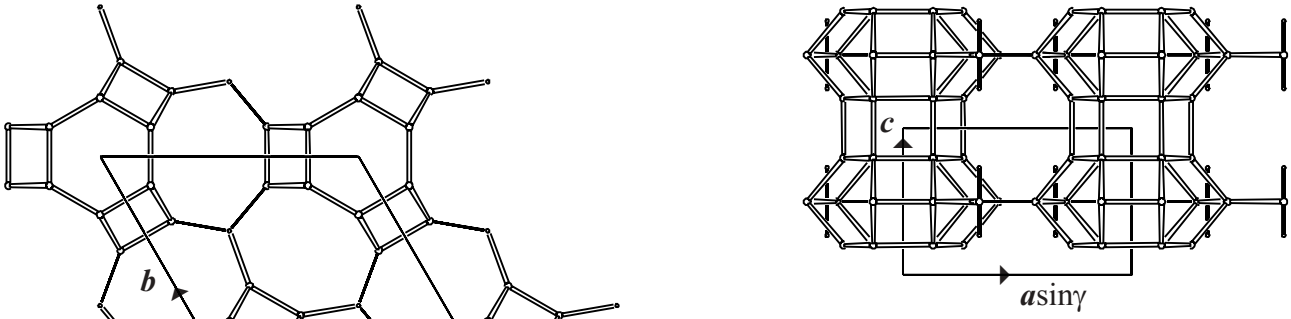

Figure 3. Parallel projection of the unit cell content along ***c*** (left), and along <100> (right).

4. Channels and/or cages:

Sinusoidal 10-ring channels, parallel to <100>, and straight 8-ring channels, parallel to ***c***, intersect. The channel intersection is depicted in Figure 4. The **pore descriptor** is added. The fusion of intersections is illustrated in Figure 5.

{2[$4^4 8^2 10^2$] [001] (8-ring), <120> (8-ring)}

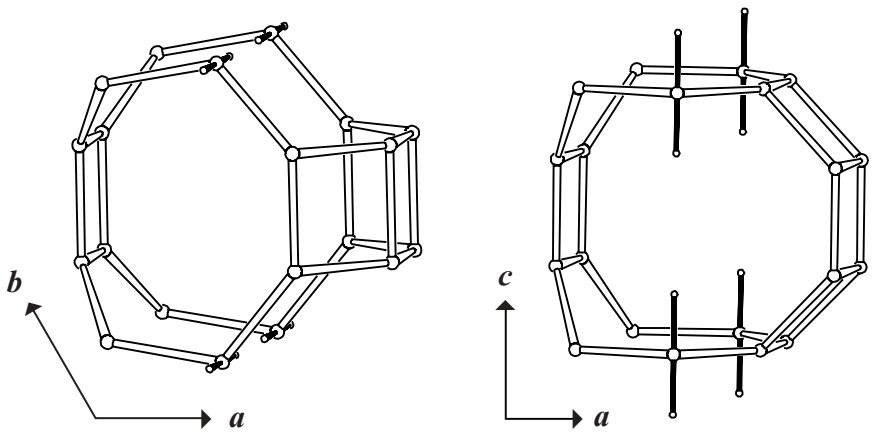

Figure 4. Channel intersection in **-WEN** viewed along ***c*** (left), and along <120> (right).

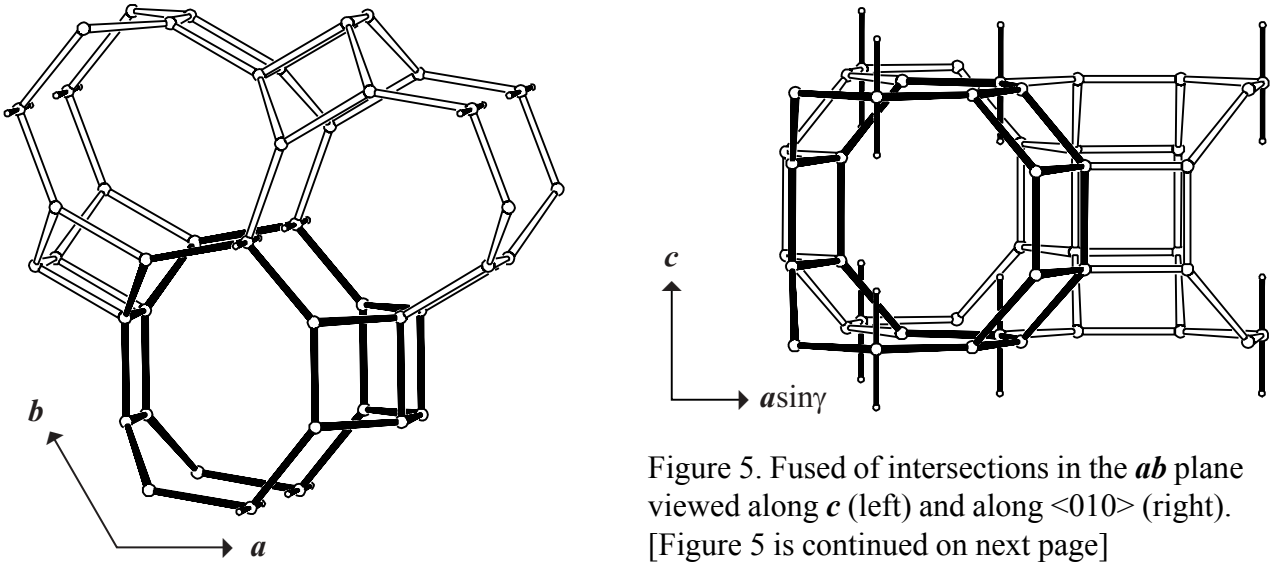

Figure 5. Fused of intersections in the ***ab*** plane viewed along ***c*** (left) and along <010> (right).
[Figure 5 is continued on next page]

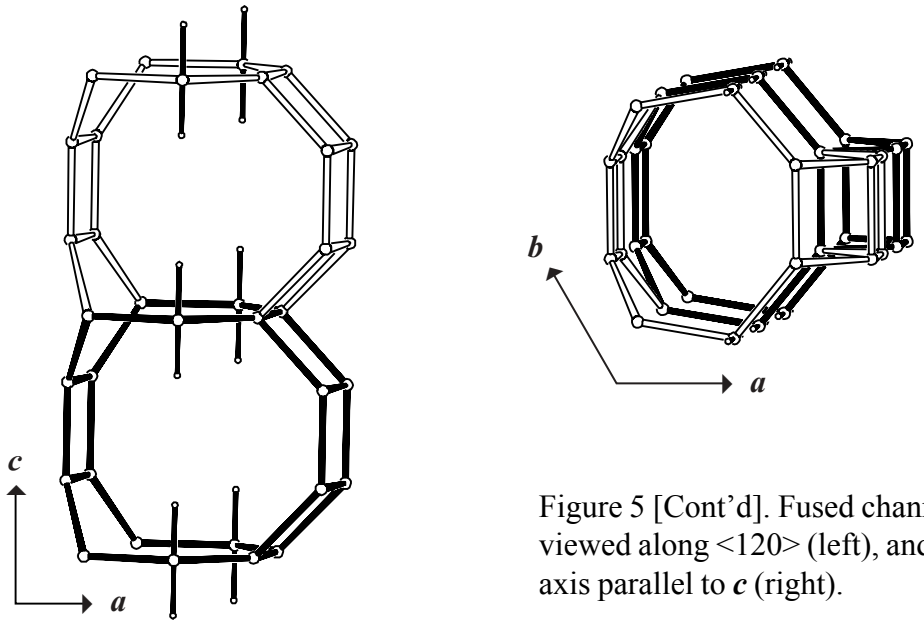

Figure 5 [Cont'd]. Fused channel intersections along ***c*** viewed along <120> (left), and along the 8-ring channel axis parallel to ***c*** (right).

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5. Supplementary information:

Other framework types containing saw chains
In several framework types at least one of the unit cell dimensions is about n*7.5 Å (where n = 1, 2, 3... 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 of* WEI *using (modified) cavities
Several framework types, like **-WEI**, can be built using (modified) cavities.
In the **INTRO**-pages links are given to a detailed description of a sub-set of framework types that contain (modified) cavities (choose: **Cages**). There is also a link provided to a summary of the PerBUs used in the building schemes of these framework types (choose: **Appendix**; **Figure 11**).