Building scheme for RUT

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:

RUT can be built using units of 18 T atoms. The T18-units consist of 2-fold (1,4)-connected double 6-rings linked to a single 6-ring in such a way that 4-rings and 5-rings are formed. The one-dimensional Periodic Building Unit (PerBU) is the chain obtained when T18-units (one bold in Figure 1), related by pure translations along [101], are connected along [101] through 4-rings. Alternatively, the PerBU can be built from 4-2 and 5-1 units in a ratio 1:2, as can be seen from Figure 1.

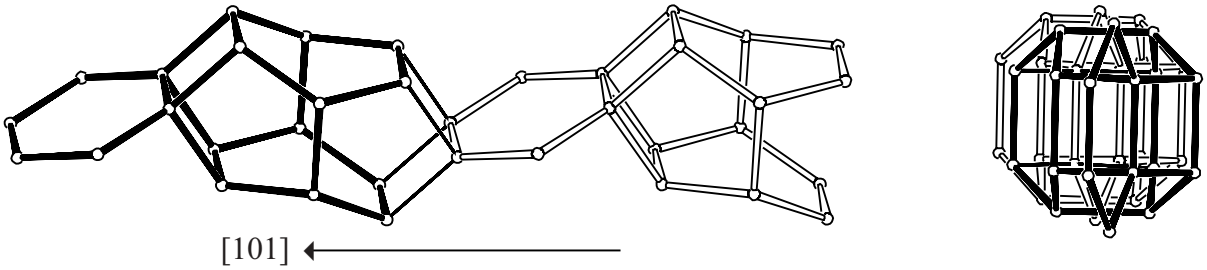

Figure 1. PerBU built from T18-units viewed along ***b*** (left) and down [101] (right).

2. Connection mode:

Neighboring PerBUs, related by shifts of ½(***a*** + ***b***), are connected through 4-, 5- and 6-rings into the three-dimensional framework of **RUT** as depicted in Figure 2.

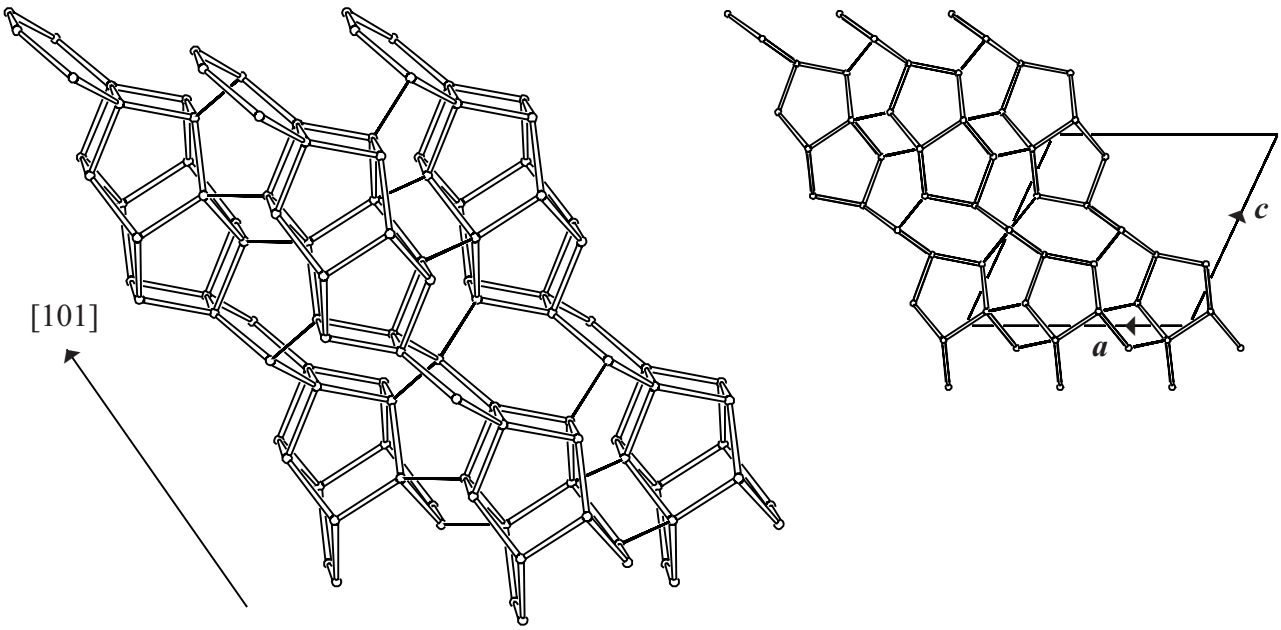

Figure 2. Connection mode of the PerBUs viewed along ***b*** (left), and unit cell content projected along ***b*** (right). In the perspective drawing only three PerBUs are drawn for clarity.

3. Projections of the unit cell content:

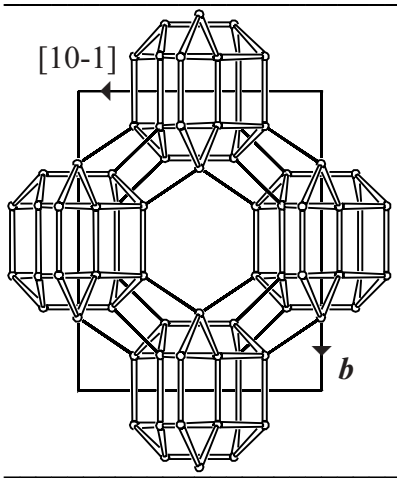

Figure 3. Unit cell content projected along [101]. The projection of the cell content along ***b*** is shown in Figure 2.

4. Channels and/or cages:

The cavity in **RUT** is shown in Figure 4. The **pore descriptor** is added. Apertures are formed by 6-rings only. The linkage of cavities in the ***ac*** plane (through the PerBU) is also illustrated in Figure 4.

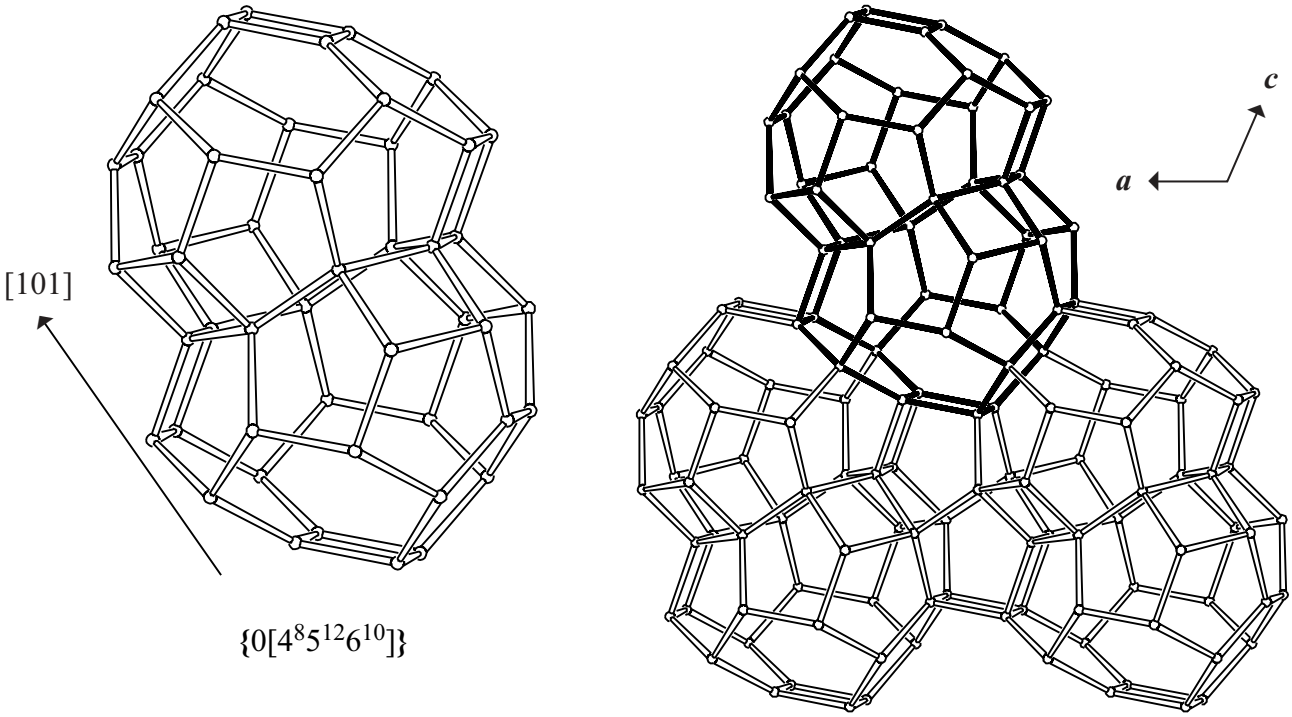

Figure 4. Cavity in **RTE** viewed along ***b*** (left) and linkage of cavities along ***a***, and ***c*** (through the PerBU) viewed along ***b*** (right). Only three cavities are drawn for clarity.

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).**