

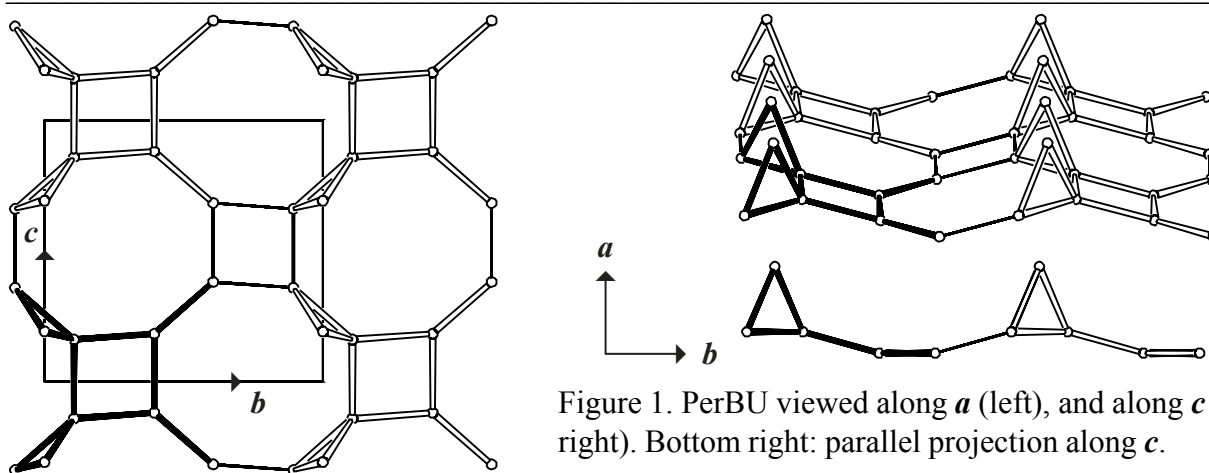
Building scheme for WEI



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:

Orthorhombic **WEI** can be built using units of 10 T atoms. The T10-unit consists of two 3-rings and a tetramer connected in such a way that a 4-ring is formed. The T10 units (one in bold), related by pure translations along b and c , are linked into the two-dimensional Periodic Building Unit (PerBU) depicted in Figure 1. 4-Rings and 8-rings are formed.



2. Connection mode:

Neighboring PerBUs, related by a shift of $\pm\frac{1}{2}b$, are connected along a through 3-rings forming spiro-5-rings as shown in Figure 2 (one spiro-5-ring is in bold). Figure 2 illustrates that **WEI** can as well be constructed using spiro-5-rings.

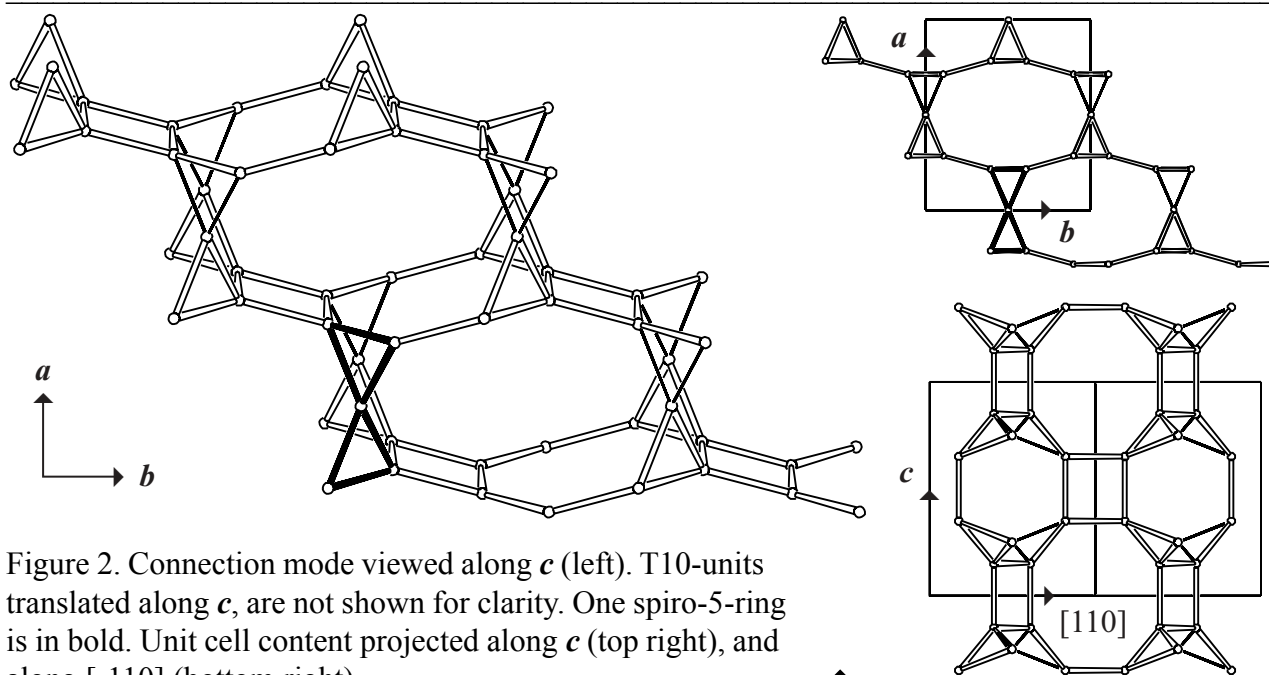


Figure 2. Connection mode viewed along c (left). T10-units translated along c , are not shown for clarity. One spiro-5-ring is in bold. Unit cell content projected along c (top right), and along $[-110]$ (bottom right).



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



4. Channels and/or cages:

Interconnected 8-ring channels parallel to $[-110]$ and $[110]$ intersect with 10-ring channels parallel to $[001]$. The channel intersection is shown in Figure 3. The **pore descriptors** are added. The fusion of cavities is illustrated in Figure 4.

$\{3[3^8 4^4 6^4 8^4 10^2] [001] (10\text{-ring}), [110] (8\text{-ring}), [-110] (8\text{-ring})\}$

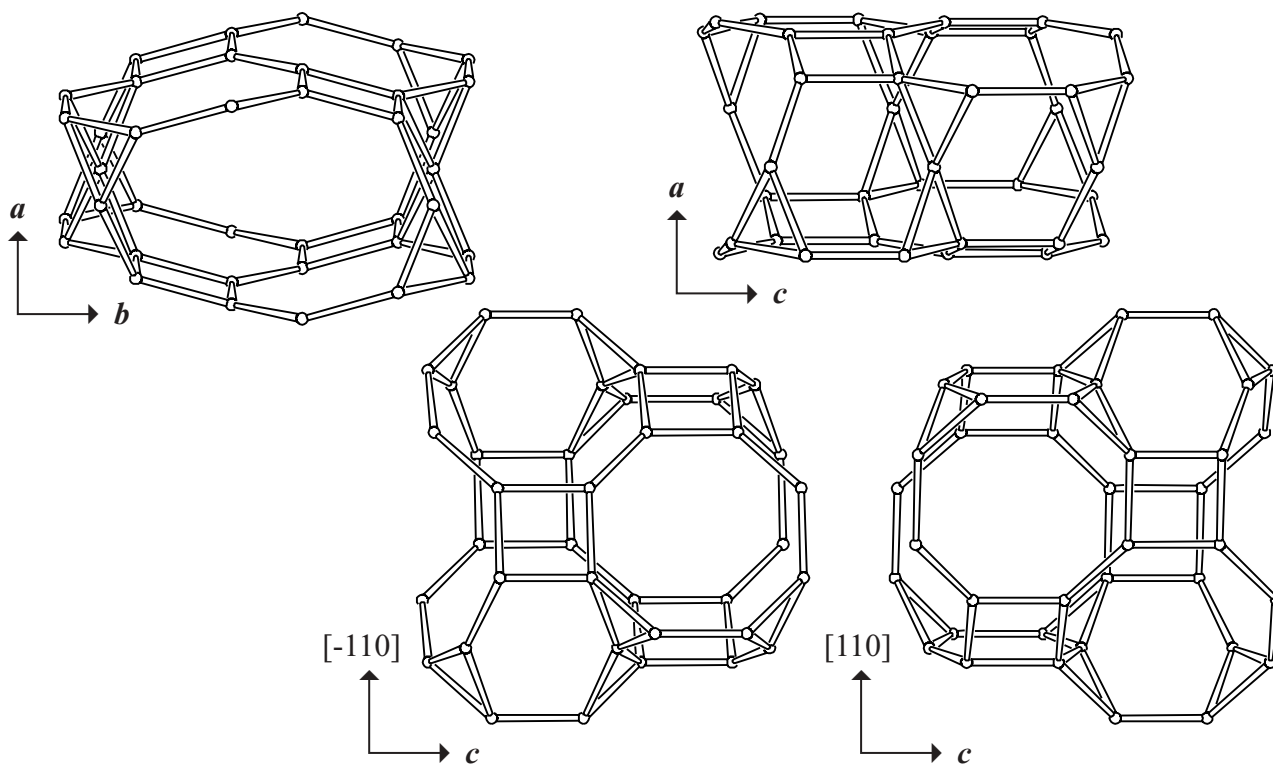


Figure 3. Intersecting cavity viewed along c (top left), along b (top right), along $[110]$ (bottom left), and along $[-110]$ (bottom right).

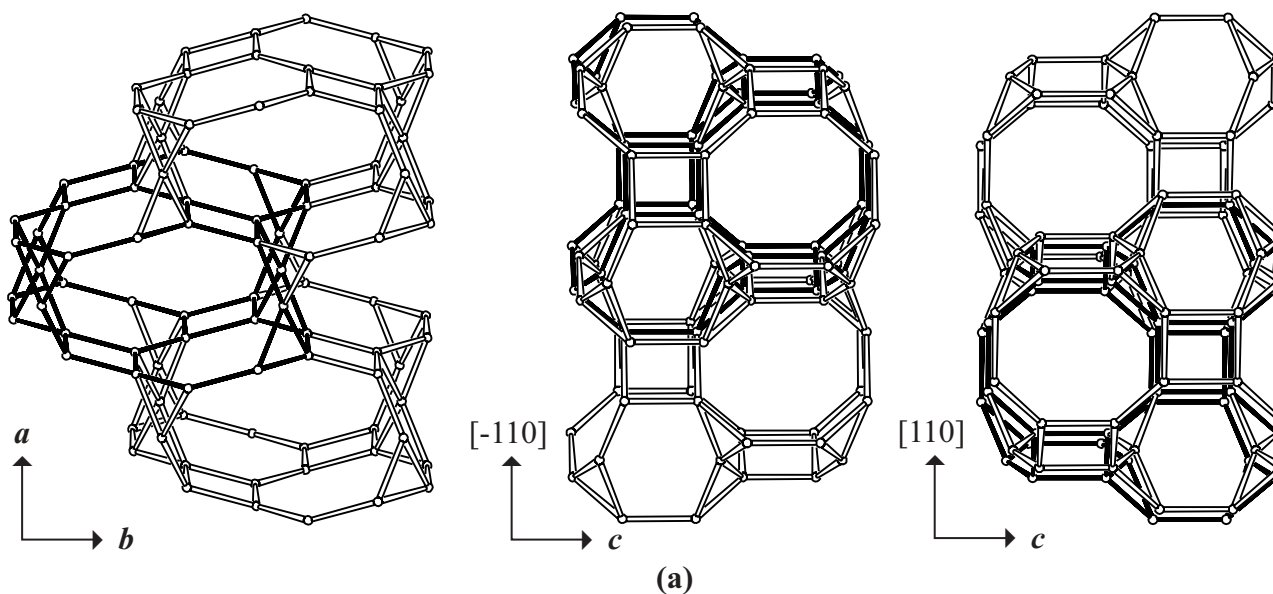


Figure 4. (a): Fusion of intersections along a viewed along c (left), and along the 8-ring channel axes parallel to $[110]$ (middle), and parallel to $[-110]$ (right). [Figure 4 is continued on next page]

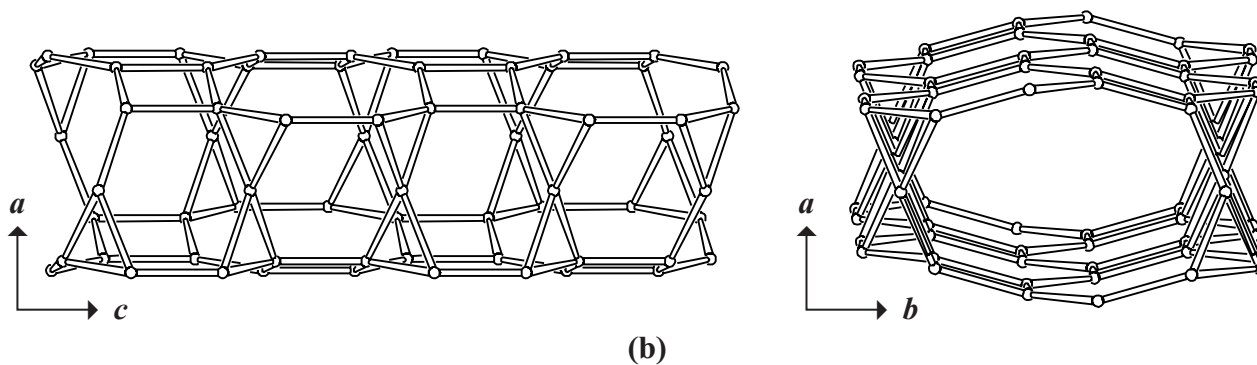


Figure 4. [Cont'd]. (b): Fusion of intersections along c viewed along b (left), and along the 10-ring channel axis parallel to c (right). ▲

5. Supplementary information:

Other framework types containing (modified) single 3- and/or 4-rings

Single 3- and/or 4-rings can be connected in several other ways. In several cases additional T atoms are needed to build the framework.

In the [INTRO](#)-pages links are given to a detailed description of a sub-set of framework types that contain (modified) single 3- and/or 4-rings (choose: **Single 3- and/or 4-rings**). There is also a link to a summary of the Periodic Building Units used in the building schemes of these framework types (choose: **Appendix**; **Figure 4**).

Alternative description of WEI using spiro-5-rings

WEI can as well be constructed using spiro-5-rings (see Figure 2). ▲