

# Building scheme for EZT



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

EZT can be built using units of 24 T atoms (Figure 1(a)). The T24-unit consists of two different fused T14-units. The first T14-unit (in bold) consists of a 3-fold (1,3,5)-connected double 6-ring "capped" on each side by a single T atom (see also **AFS** and **BPH**). The second T14-unit is composed of a 4-fold (1,2,4,5)-connected double 6-ring with a "handle" (see also **IFR**). The two-dimensional Periodic Building Unit (PerBU) is obtained by connecting T24-units, related by  $\frac{1}{2}(a + b + c)$ , through 4-rings. The PerBU is shown in Figure 1(b).

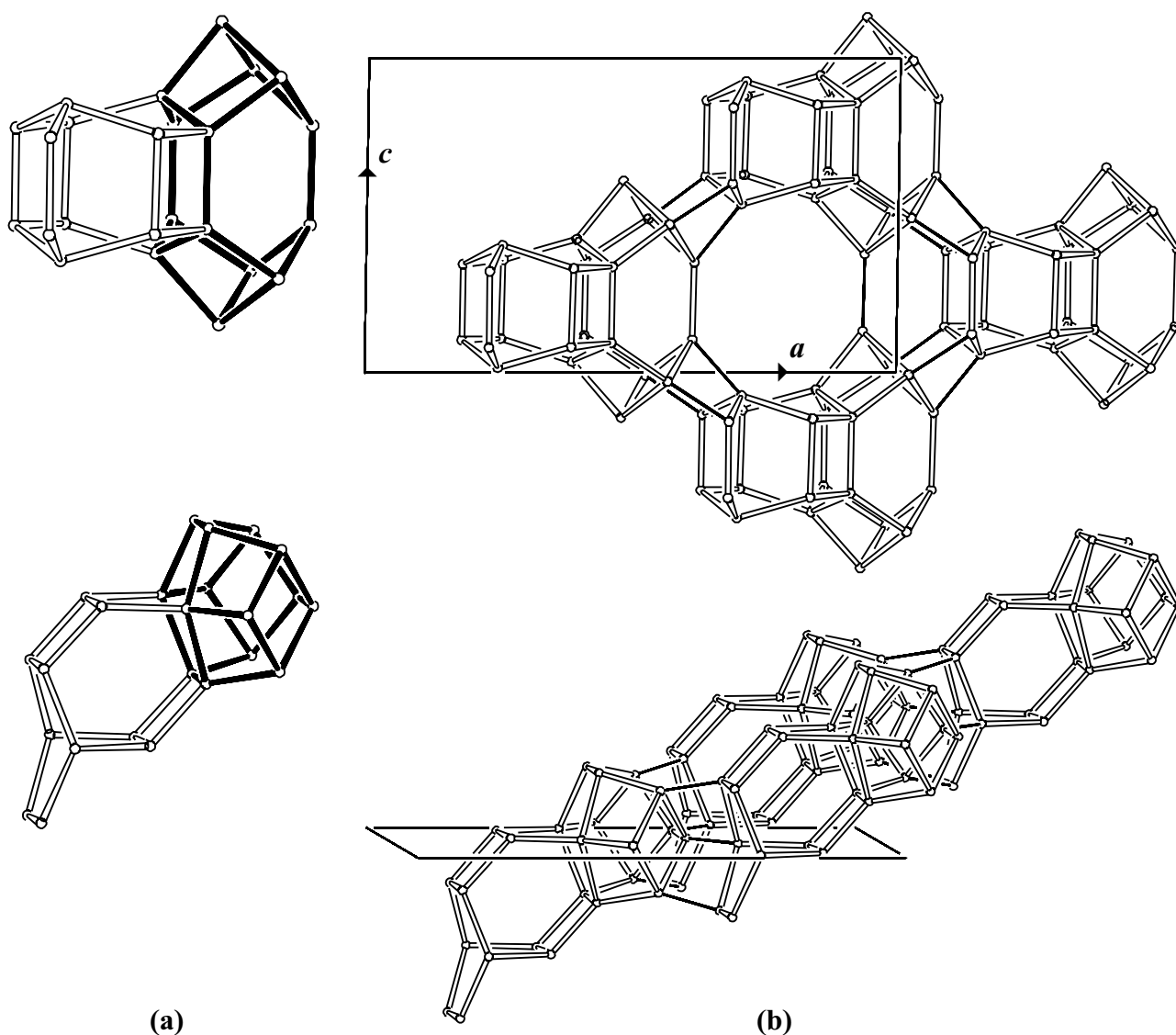


Figure 1. (a): Fusion of T14-units into the T24 building unit viewed along **b** (top) and along **c** (bottom); (b): PerBU viewed along **c** (top) and along **b** (bottom).



## 2. Connection mode:

Neighboring layers, related by pure translation along  $b$ , are connected along  $b$  through 4-rings as shown in Figure 2.

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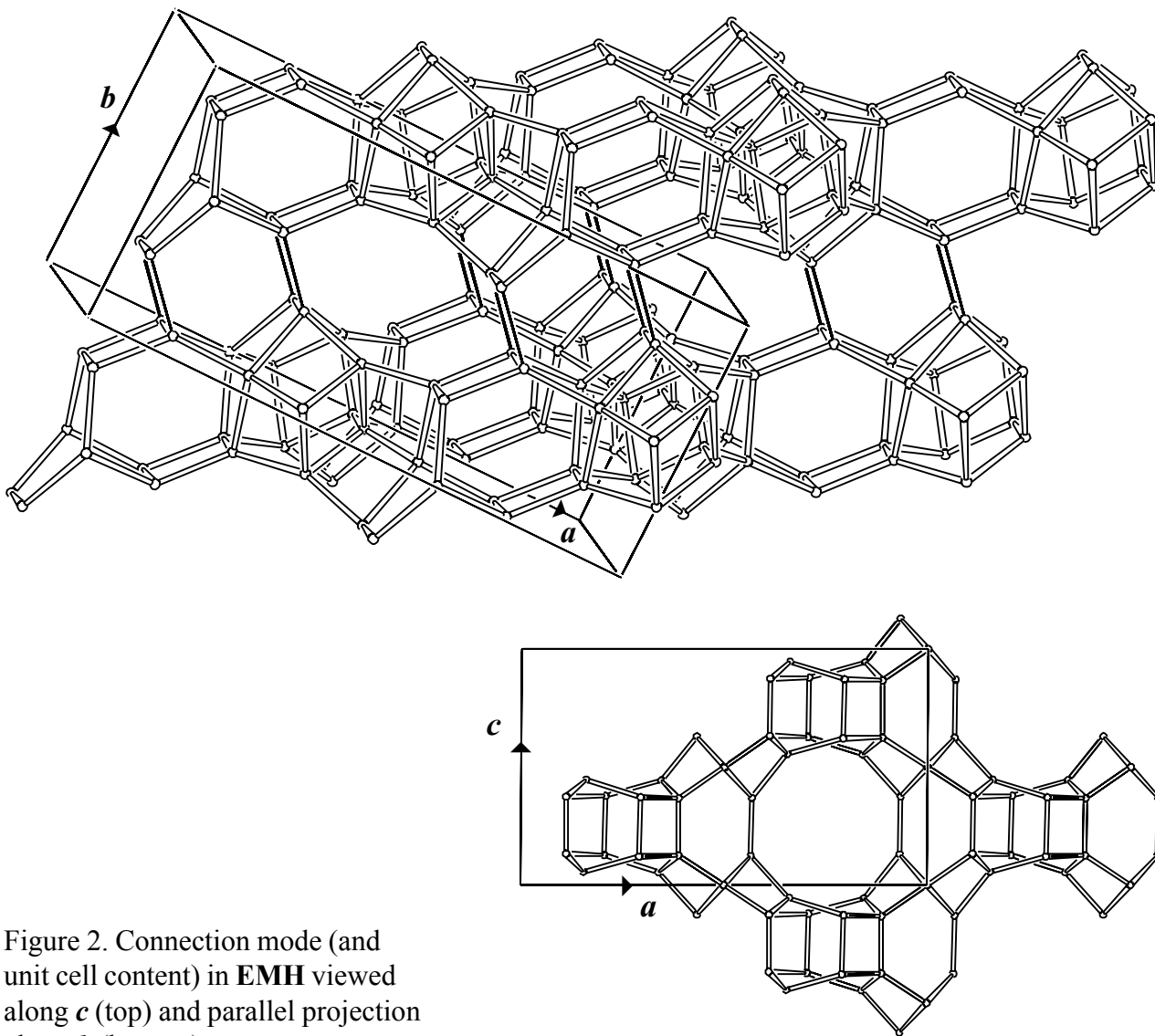


Figure 2. Connection mode (and unit cell content) in EMH viewed along  $c$  (top) and parallel projection along  $b$  (bottom).

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

## 4. Channels and/or cages:

Sinusoidal 12-ring channels are parallel to  $[010]$  and highly elliptical 8-ring channels are parallel to  $[001]$ . Pairs of 8-ring channels are connected along  $[100]$  through 12-ring channels. The interconnection of channels is depicted in Figure 3 on next page. The **pore descriptor** is added.

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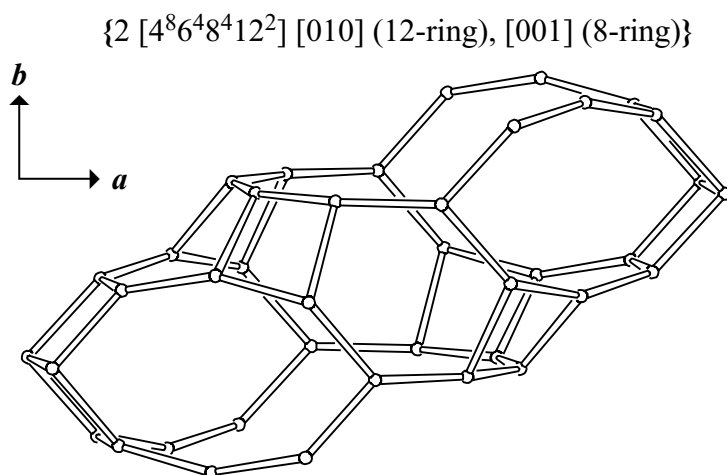


Figure 3. Interconnection of 8- and 12-ring channels viewed along [001].



## 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**).

