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1. Periodic Building Unit:

EON can be built using the saw chain (bold in Figure 1) running parallel to a . 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 infinite building unit1 consisting of a column of *gme* cavities connected through common 6-rings (Figure 1(a)). Four additional saw chains are connected into infinite building unit2 shown in Figure 1(b). Building units1, related by a rotation of 60° about a and a shift of $\frac{1}{2}b$, are connected into the Periodic Building Unit1 (PerBU1) through 5- and 8-rings (Fig. 1(a)). PerBU1 can also be built using 5-1 units and equals the layers perpendicular to $\langle 120 \rangle$ in **MAZ**. Building units2, related by a rotation of 180° about c (or by a mirror plane perpendicular to b), are connected into PerBU2 along b through 4-rings and 8-rings (Fig.1 (b)). PerBU2 can as well be built using 5-1 units and equals the (010) layer in **MOR**. [See also: [Alternative description](#)].

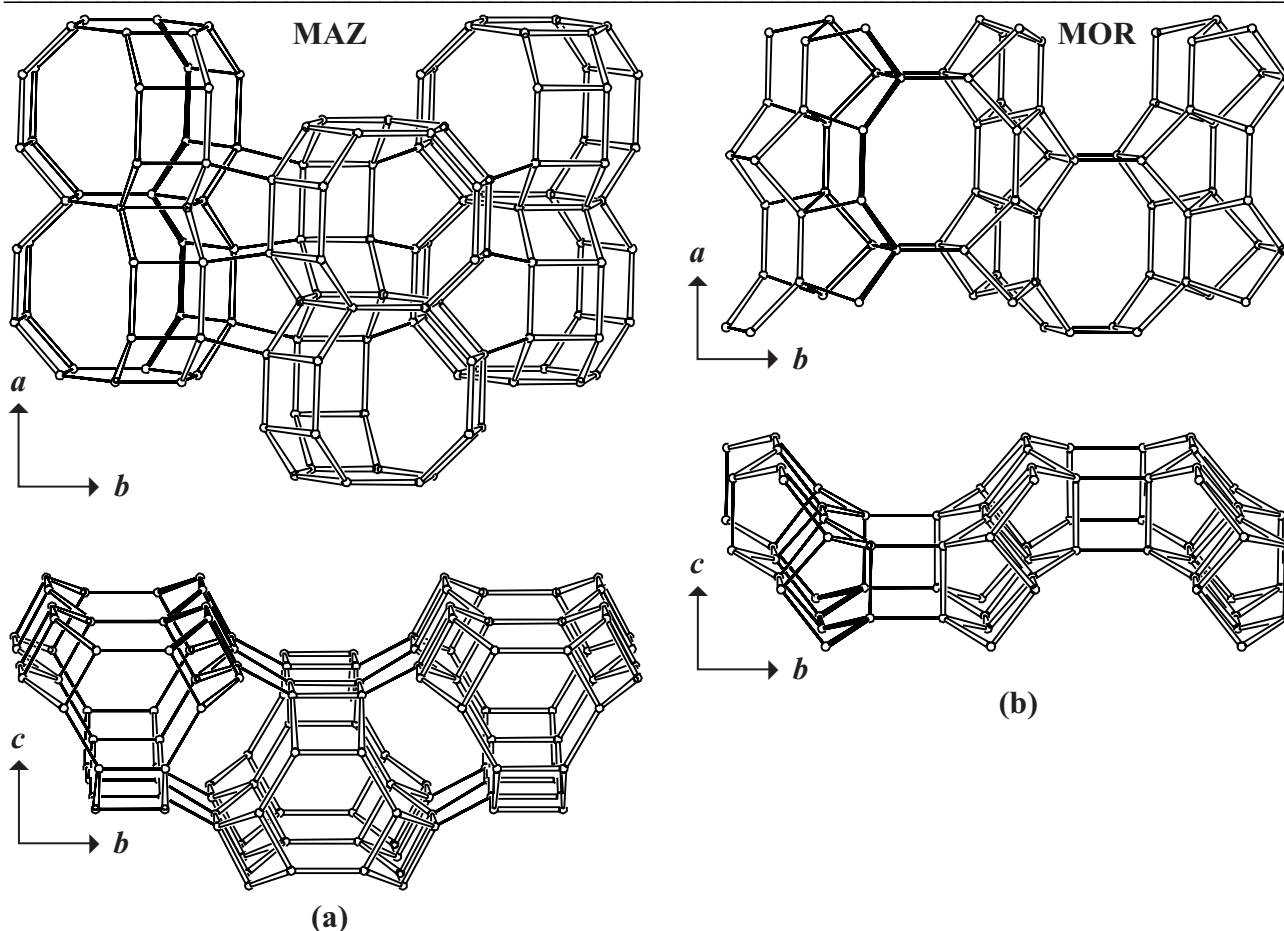


Figure 1. (a): PerBU1 (**MAZ** layer), composed of columns of (fused) *gme* cavities, viewed along c (top), and along the saw chain direction parallel to a (bottom); (b): PerBU2 (**MOR** layer) viewed along c (top), and along the saw chain direction parallel to a (bottom).

2. Connection mode:

PerBU1s and PerBU2s alternate along c and are connected through crankshaft chains into the 3-dimensional framework of **EON**. 12-Ring channels and a second type of 8-ring channels parallel to a are formed. The 8-ring channel interconnects along c the 12-ring channel and the *gme* columns as shown in Figure 2.

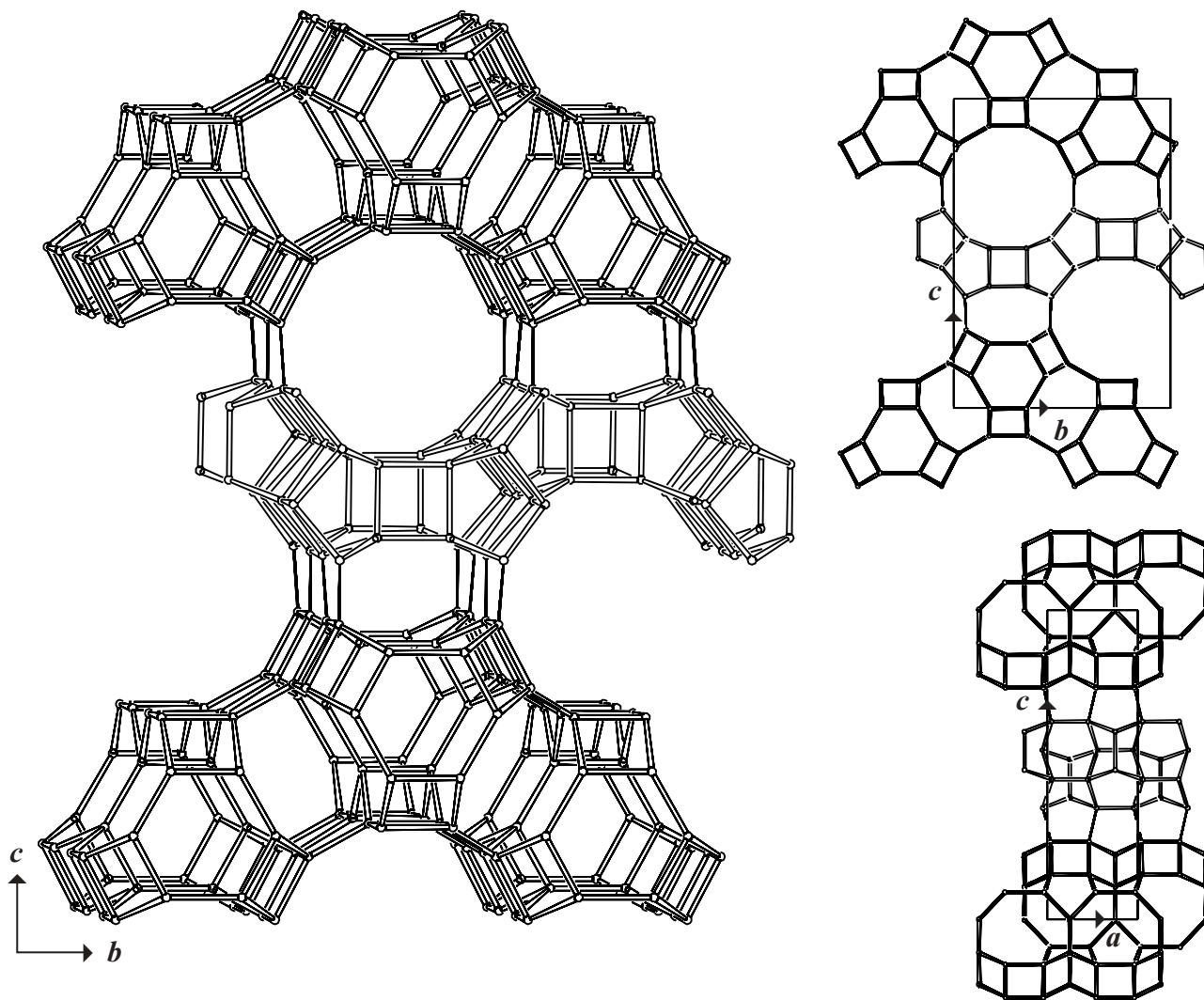


Figure 2. Connection mode in **EON** viewed along a (left), and projection of the unit cell content along a (top right), and along b (bottom right). ▲

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

4. Channels and/or cages:

One-dimensional non-interconnecting 12-ring channels and 8-ring channels are parallel to a as shown in Figure 3 on next page. The **pore descriptors** are added. Columns of *gme* cavities are interconnected along b through 8-ring channels of type 1 (Figures 1 and 2) and 12-ring channels and *gme* columns are interconnected along c through interconnecting cavities and 8-ring channels (Figures 2 and 4) leading to a rather complicated three-dimensional channel system with 8-ring windows. The linkage between channels is illustrated in Figure 4 on next page.

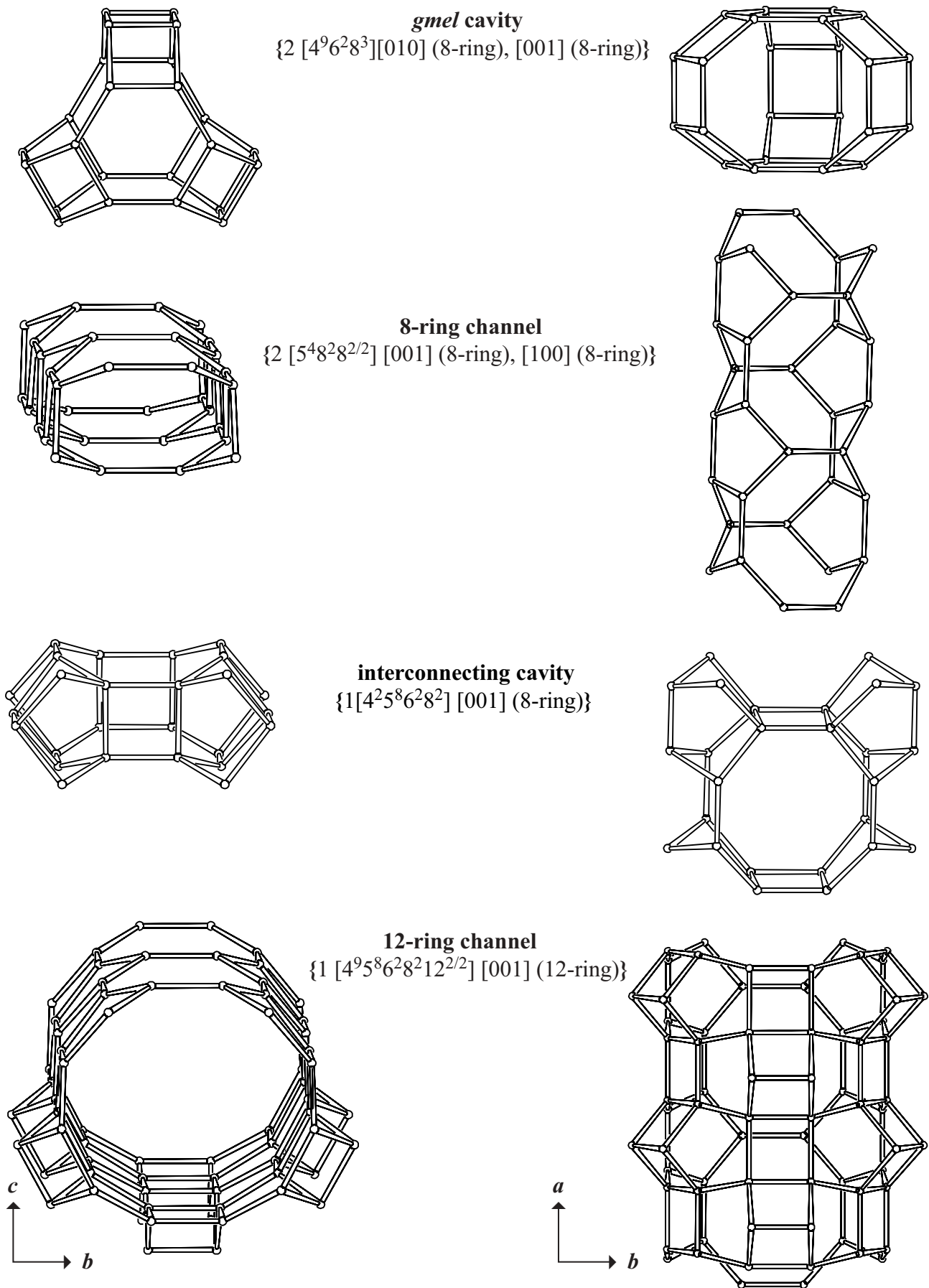


Figure 3. From top to bottom: *gme* cavity, 8-ring channel, interconnecting cavity, and 12-ring channel viewed along *a* (left), and along *c* (right). [Figure 4 is on next page]

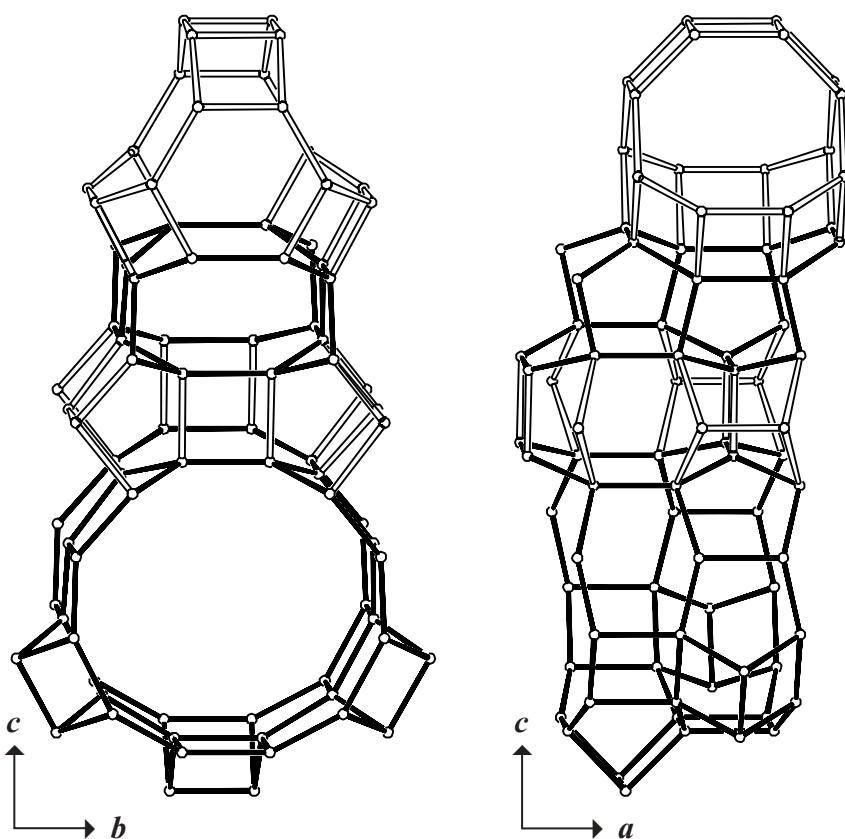


Figure 4. Linkage of 8- and 12-ring channels (in bold) through the connecting cavity and the fusion of the 8-ring channel and a *gme* cavity viewed along *a* (left), and along [001] (right). The linkage of *gme* columns through more 8-ring channels is illustrated in Figures 1(a) and 2.



5. Supplementary information:

Other framework types containing saw chains

In several framework types at least one of the unit cell dimensions is about $n \cdot 7.5 \text{ \AA}$ (where $n = 1, 2, 3 \dots$ 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 using (modified) 5-rings

Several framework types, like **EON**, can be constructed using (modified) 5-rings.

In the [INTRO](#) pages links are given to detailed descriptions of these framework types (choose: **5-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 6**).

