



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

Hexagonal SBN can be built using units of 5 T atoms (4=1 units; one bold in Figure 1). T5-units, related along a and b by pure translations, are connected into the two-dimensional PerBU depicted in Figure 1. 3-Rings and 9-rings are formed.

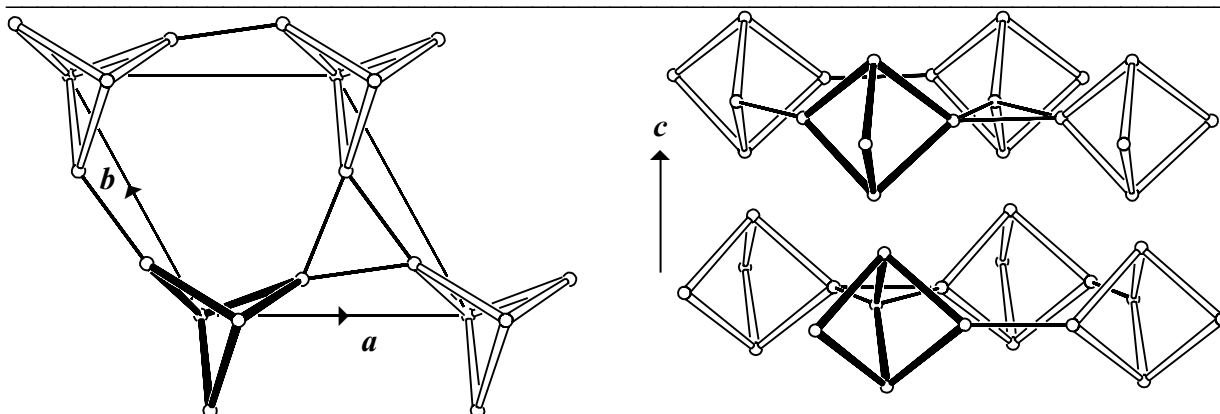


Fig. 1. PerBU viewed along c (left) and perpendicular to the ac plane (right). The PerBUs shown at the right differ by a rotation of 180° about a followed by a rotation of 120° about c .



2. Connection mode:

Neighboring PerBUs, related along c by a rotation of 180° about a followed by a rotation of 120° about c , are connected along c through 8-rings (Figure 2).

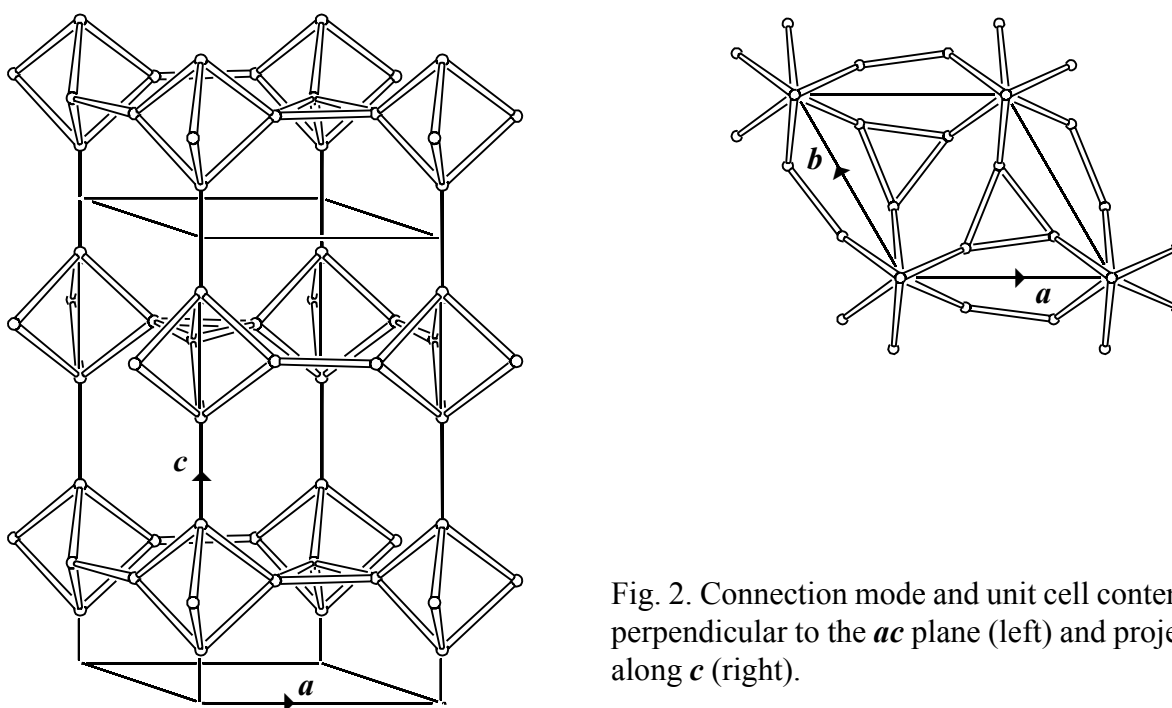


Fig. 2. Connection mode and unit cell content viewed perpendicular to the ac plane (left) and projected along c (right).



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



4. Channels and/or cages:

Intersecting 8-ring channels are parallel to $\langle 100 \rangle$. Intersections are interconnected along c through 9-rings into a cavity shown in Figure 3.

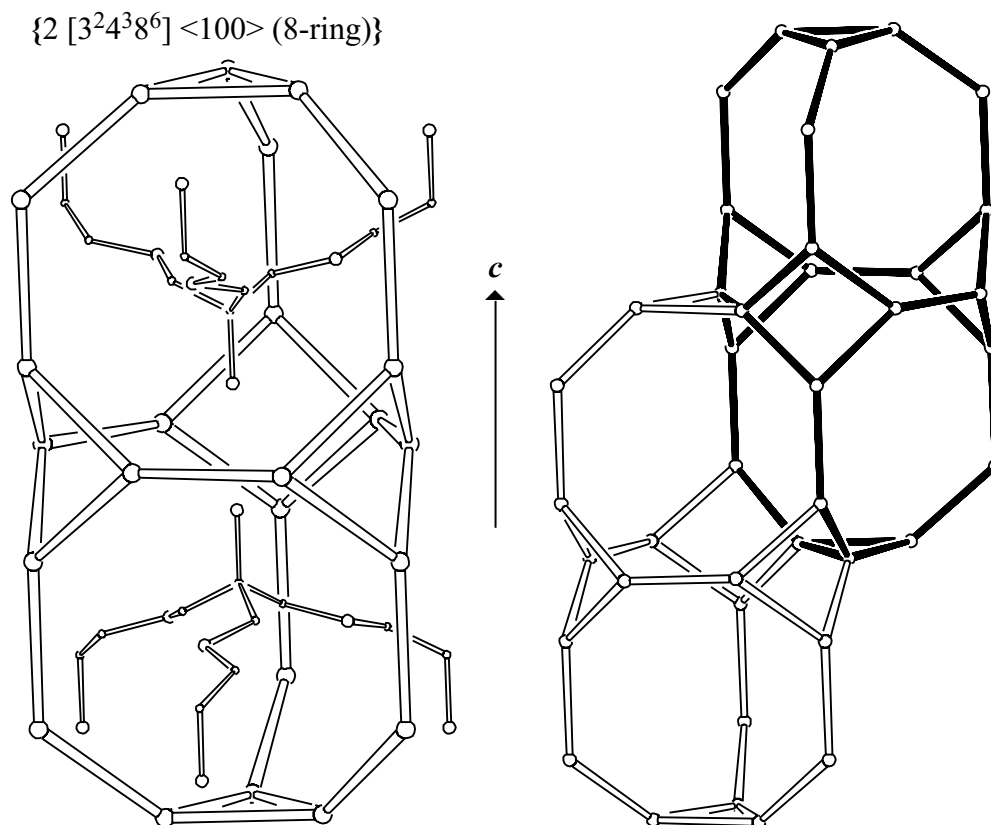
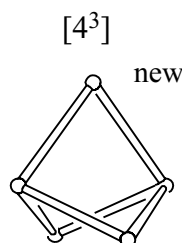


Fig. 3. Cavity in SBN viewed along $\langle 120 \rangle$ (left). The **pore descriptor** is added. The 3-fold disordered template molecules, which cannot be removed without losing the framework integrity, are also shown. The cavities are linked through common 8-rings into a three-dimensional channel system (right).



5. Composite Building Unit:



SBN
see also 6

[The numbering is used in
the Appendix to the
"Building Schemes"-book]

6. 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**).

