The combined interpretation of the X-ray intensity distribution of vitreous silicas, its autocorrelation function and a rotatory distorted model of the high cristobalite symmetry $\text{P}_{\text{D}3}\text{m}$ for the first time yields a threedimensional solution of this paracrystalline structure. A 17° twist of adjacent SiO$_4$-motives clockwise and counter-clockwise around one gall axis bends the tetrahedral angles by 17° and 45° and 81.0°-81.5° angles by 25°. The calculated convolution product of this arrangement leads to a radial density function, which is in good agreement with the reduced radial intensity distribution of vitreous silica.

By R. Hosenmann, M.-P. Hentschel, A. Lange, U. Schmeller, Gruppe Parakristalforschung, c/o BAM, and R. Brückner, Institut für Nichtmetallische Werkstoffe der TU, Berlin, FRG.

The shift on the peak positions (= 0.2 Å) is due to the variation of coordination bond lengths. The difference in peak intensities are correlated to the chain length. So a structural model has only been designed for the Ni complex. This model corresponds to the theoretical RDF in figure 2 and can be described by the following features:

- The ligand is in trans conformation and planar.
- The coordination is ensured by the four donor atoms.
- The ribbons, thus formed, stack perpendicularly to the ligand plane with an interval equal to 3.6 Å.
- This very high symmetry of the model must be attenuated by a kind of variability in the local structure (small variations in bond lengths and angles -small deviations to the ligand planeity and to the stacking interval-...) to explain the amorphous nature of the studied materials.