

Trisiloxane-Diols and Cyclosiloxanes with Bulky Substituents on the Si Atoms

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A series of siloxane compounds have been synthesized as monomers for the preparation of polymers used as polarisable stationary phases for capillary chromatography [1]. Four trisiloxane-1,5 diols (with different organic substitutes on the Si atoms, (R1 = 2-methoxybenzene and R2 = 2,6- dimethoxybenzene), have been found to have different configurations of the **O-Si-O-Si-O-Si-O** skeleton. In the crystal structure they are linked to one another by different types of hydrogen bonding. The terminal Si-O distances are significantly longer than the central Si-O distances as reported previously for similar compounds [2].

In a series of cyclosiloxane molecules, containing 3 to 5 **SiO** units and different organic substituents on the Si atoms (Me, Ph, R1, R2 and R3 = 2,4,6- trimethoxybenzene), it has been shown that the Si-O bond distances and packing of the molecules in the crystal structures are very different, depending on the size of the ring. These features will be discussed in relation to the formation of the polymers.

[1] Monziane M., *PhD thesis*, Université de Neuchâtel, 1995. [2] Graalman O., Klingebiel U., Clegg W. *Chem. Ber.*, 1984, **117**, 2988.

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