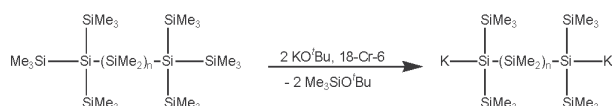


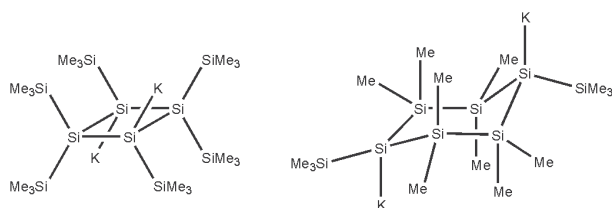
s13.m35.p2 Comparison of Oligosilyl Dipotassium Structures. Judith Baumgartner and Christoph Marschner, *Institut für Anorganische Chemie, Technische Universität Graz, Austria. E-mail: baumgartner@anorg.tu-graz.ac.at*

Keywords: Silyl anion; Potassium; Crystal structure

Recently we have developed a method for the synthesis of oligosilyl potassium compounds. [1] By the reaction of trimethylsilylated precursors with potassium tert-butoxide trimethylsilyl *tert*-butylether and the respective potassium silyl is formed. Reaction of bridged bisoligosilyl compounds with two equivalents of potassium tert-butoxide in the presence of crown ether affords α,ω -dipotassium compounds.[2]



The formed oligosilyl dianions crystallize as crown ether adducts and have been subject to X-ray diffraction analysis. As an extension of this work also cyclosilanes have been reacted under the same conditions and again dipotassium compound could be obtained in clean reactions. Crystal structure analyses revealed the formation of 1,3- and 1,4-*trans* dipotassium cyclosilanes, respectively.[3]



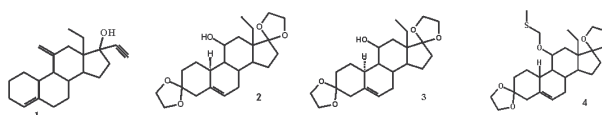
A comparison of structural parameters of the obtained dipotassium compounds will be given.

- [1] Ch. Marschner, *Eur. J. Inorg. Chem.* 1998, **221**.
 [2] R. Fischer, D. Frank, W. Gaderbauer, Ch. Kayser, Ch. Mechtler, J. Baumgartner, Ch. Marschner, *Organometallics*, 2003, **22**, 3723.
 [3] R. Fischer, T. Konopa, S. Uilly, J. Baumgartner, Ch. Marschner, *J. Organomet. Chem.*, 2003, **685**, 79.

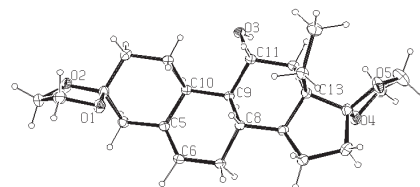
s13.m35.p3 Steroidal Structures from the Synthesis of Desogestrel. Gabriella Bombieri^a, Diego Colombo^b, Nicoletta Marchini^a and Emilia Modica^b, ^a*Istituto di Chimica Farmaceutica e Tossicologica, Università di Milano*, ^b*Dipartimento di Chimica, Biochimica e Biotecnologie per la Medicina, Università di Milano, Italy. E-mail: Milano.Gabriella.bombieri@unimi.it*

Keywords: Steroids; Synthesis; Structure

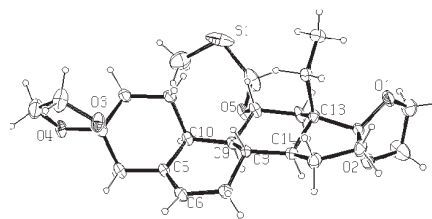
13-Ethyl-11-methylene-18,19-dinor-17 α -pregn-4-en-20-y n-17ol, desogestrel **1**, is a powerful progestagen[1] and one of the most used steroids in the oral contraceptives of third generation. All the biological studies show its great activity and the complete absence of side effects.



We have isolated two new compounds, along with the foreseen intermediates, in different steps of the synthetic pathway. During the ketalization of 13-ethyl-gona-4-en-11 β -ol-3,17-dione a partial inversion of configuration at C-10 occurred and compound **3**, together with compound **2** which has the natural stereochemistry, was isolated. In the Swern oxidation of the 11 β -ol, beside the expected keto derivative, compound **4**, containing a sulfur atom, is formed. The compounds have been characterized by 1D and 2D high field NMR spectroscopy and the X-Ray structure of **2,3**, and **4** has been determined. An ORTEP view of **3** and **4** is given below.



3



4

- [1] Viinikka, L. (1978). *J. Steroid. Biochem.* **9**, 979-82.