

9-Silyl(-Germyl,-Stannyl) Substituted Derivatives of 1-(9-Fluorenyl)-germatranes. Synthesis, Characterisation, and Crystal Structures

Galina S. Zaitseva^{a,*}, Sergey S. Karlov^a, Bettina A. Siggelkow^b, Evgeni V. Avtomonov^b,
Andrei V. Churakov^c, Judith A. K. Howard^c, Jörg Lorberth^{b,*}

^a Chemistry Department, Moscow State University,
B-234 Vorob'evy Gory, 119899 Moscow, Russia

^b Fachbereich Chemie, Philipps-Universität Marburg,
Hans-Meerwein-Straße, D-35032 Marburg / Lahn, Germany

^c Department of Chemistry, University of Durham, Science Laboratories,
South Road, Durham, DH1 3LE, England

Z. Naturforsch. **53 b**, 1247–1254 (1998); received June 15, 1998

Germanium, Germatrane, Organotin Reagents, X-Ray Data, NMR Data

9-Trimethylsilyl- and 9-trimethylgermyl substituted derivatives of 1-(9-fluorenyl)germatranes $C_{13}H_8(R)Ge(OCH_2CH_2)_3N$ (**1** - **3**) (**1**: R = H; **2**: R = Me₃Si; **3**: R = Me₃Ge) were prepared by the reaction of 9-tribromogermyl derivatives of fluorene $C_{13}H_8(R)GeBr_3$ (**4** - **6**) with N(CH₂CH₂OSnAlk₃)₃ (**7**: Alk = Et; **8**: Alk = Bu). 1-(9-Trimethylstannyl-9-fluorenyl)germatrane (**14**) was synthesised by the reaction of the germatrane (**1**) with Me₃SnNMe₂. Formulas and structures were established by elemental analyses, (¹H, ¹³C) NMR spectroscopy and mass spectrometry; crystal structures of **2** and **14** are reported.

* Reprint requests to Prof. Dr. J. Lorberth or Dr. G. S. Zaitseva.