

Synthesis and Molecular Structures of 2-Trimethylsilyl-, 2-Trimethylgermyl-, and 2-Trimethylstannyl-pyridines

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5-Methyl-2-trimethylsilyl-pyridine (**1**) has recently been prepared *via* the “*in situ*” Grignard reaction of 1-bromo-5-methyl-pyridine with magnesium and trimethylchlorosilane in refluxing tetrahydrofuran (thf) and structurally characterized. 2-Trimethylgermyl- (**2**) and 2-trimethylstannyl-pyridine (**3**) were now obtained from 2-bromo-pyridine through metallation (with *n*-BuLi) and treatment of the intermediates with Me₃GeBr and Me₃SnCl, respectively, in diethylether/ thf at -70°C. The crystal and molecular structure of compound **2** has been determined by low temperature (*in situ*) single crystal X-ray diffraction methods. There is a significant bending of the Me₃Ge substituent towards the nitrogen heteroatom [Ge-C-N = 114.7(2)°]. This phenomenon is known from previous studies of the silicon analogue **1** to be not due to intramolecular (peripheral) Si/Ge←N coordination, but to be rather an intrinsic property of the heteroarene skeleton, as also confirmed by quantum-chemical calculations. Furthermore, there is no evidence for *intermolecular* coordination in the crystals. Such interactions could also be ruled out for the solution state of **2** and **3** through variable temperature multinuclear NMR investigations.

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