

Synthese, Struktur und Reaktivität von 3-Triorganostannyl-N-diphenylmethylen-alaninestern

Synthesis, Structure and Reactivity of 3-Triorganostannyl-N-diphenylmethylen-alanine Esters

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Stannyl Alanine Ester Derivatives, Intramolecular Pentakoordination, NMR Data,
Crystal Structure

The deprotonation of N-diphenylmethylen-glycine esters, obtained from glycine ester hydrochlorides and benzophenone imine, and reaction of the resulting carbanions with iodomethyl triorganostannanes gives the 3-triorganostannyl-N-diphenylmethylen-alanine esters $\text{Me}_2\text{RSnCH}_2\text{CH}(\text{N}=\text{CPh}_2)\text{COOR}'$ (**1a - e**; R = Me, ^tBu; R' = Me, Et, ^tBu, Bz). These title compounds are transformed into their tin monochlorides $\text{MeR}(\text{Cl})\text{SnCH}_2\text{CH}(\text{N}=\text{CPh}_2)\text{COOR}'$ (**2a - e**) by a redistribution reaction with Me_2SnCl_2 . IR and NMR data and the crystal structure of $\text{Me}_2(\text{Cl})\text{SnCH}_2\text{CH}(\text{N}=\text{CPh}_2)\text{COOEt}$ (**2b**) reveal for **2a - e** an intramolecular coordination of the ester C=O group at the tin atom. Mild two-phase hydrolysis of **1a - e** with 1N HCl gives the 3-triorganostannyl-alanine ester hydrochlorides $\text{Me}_2\text{RSnCH}_2\text{CH}(\text{NH}_2)\text{COOR}' \cdot \text{HCl}$ (**3a - e**). The transformation of **3a - e** into the corresponding alanine esters $\text{Me}_2\text{RSnCH}_2\text{CH}(\text{NH}_2)\text{COOR}'$ (**4a - e**) could be realized with NH_3 in chloroform. **4a - e** are of limited thermal stability.

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