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

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9-Trimethylsilyl- and 9-trimethylgermyl substituted derivatives of 1-(9-fluorenyl)germatranes \( \text{C}_{13} \text{H}_8 (R) \text{Ge(OCH}_2 \text{CH}_2)_3 \text{N} \) (1 - 3) (1: \( R = \text{H} \); 2: \( R = \text{Me}_3 \text{Si} \); 3: \( R = \text{Me}_3 \text{Ge} \)) were prepared by the reaction of 9-tribromogermyl derivatives of fluorene \( \text{C}_{13} \text{H}_8 (R) \text{GeBr}_3 \) (4 - 6) with \( \text{N(CH}_2 \text{CH}_2 \text{OSnAlk}_3)_3 \) (7: \( \text{Alk} = \text{Et} \); 8: \( \text{Alk} = \text{Bu} \)). 1-(9-Trimethylstannyl-9-fluorenyl)germatrane (14) was synthesised by the reaction of the germatrane (1) with \( \text{Me}_3 \text{SnNMe}_2 \). Formulas and structures were established by elemental analyses, \(^1\text{H}, ^{13}\text{C}\) NMR spectroscopy and mass spectrometry; crystal structures of 2 and 14 are reported.

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