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LIF-ADDUCTS OF IMINOSILANES ANO CHLORINE—FLUORINE—EXCHANGE IN SI—N—COMPOUNDS

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Lithium salts of aminofluorosilanes crystallise from THF as LiF-adducts of iminosilanes. The imino character of

is proved by a crystal structure analysis. The Si-N-bond is 161.9(5) pm, a double bond, and the Si-N-C angle is $172.1(4)^{\circ}$, an imine angle.

Lithiated aminofluorosilanes react with halosilanes to give the corresponding substituted compounds. Most of the di- and trichlo-rosilylfluorosilylamines are unstable and undergo a chlorine-fluorine-exchange reaction.

For example:

An analogous exchange reaction occurs in the fluorosilylphosphorine system:

$$- \underset{F}{\text{Si-N}} = \text{PC1}_{3} \xrightarrow{\sim F, C1} - \underset{C1}{\text{Si-N}} = \text{PC1}_{2}F$$

The interconversion mechanisms are discussed.