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## LETTERS TO THE EDITOR

## Unusual Reaction of Trifluorophenylsilane with Dimethyl Sulfoxide

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We previously showed that alkyltrichlorosilanes react with dimethyl sulfoxide to give cyclic oligoalkylchlorosiloxanes and methyl chloromethyl sulfide [1]. Proceeding with these studies, we found that the reaction of  $PhSiF_3$  with dimethyl sulfoxide at a 1:1 reagent ratio leads to formation of a stable crystalline substance of the composition  $2(Me_2SO) \cdot SiF_4$  and difluorodiphenylsilane.

The reaction results point to C–Si bond cleavage in trifluorophenylsilane in dimethyl sulfoxide medium.

$$2(Me_2SO) + 2PhSiF_3 \longrightarrow 2(Me_2SO) \cdot SiF_4 + Ph_2SiF_2.$$

Hence, we showed a principal possibility of disproportionation of organylfluorosilanes in an organic solvent, yielding a complex compound.

**Reaction of trifluorophenylsilane with dimethyl sulfoxide.** Trifluorophenylsilane, 16.2 g, was added dropwise to 7.8 g of dimethyl sulfoxide. The solution was left to stand for 3–4 days at room temperature. Colorless cubic crystals formed and were filtered off

and dried in a vacuum (10 mm). Yield 8.3 g (32%), sublimation point 110°C. Found, %: C 18.73; H 4.87; F 29.23; S 24.47.  $C_4H_{12}F_4O_2S_2Si$ . Calculated, %: C 18.45, H 4.65; F 29.19; S 24.63. IR spectrum, cm<sup>-1</sup>: 734 [v(SiF)], 478 [ $\delta_{hexa}$ (SiF)], 940, 951 [ $v_{coord}$ (S=O)], 1025, 1045 [ $\rho$ (Me)]; 1317, 1330 [ $\delta_s$ (SCH)], 1416, 1430 [ $\delta_{as}$ (CH)].

Analysis of the liquid fraction showed the presence difluorodiphenylsilane. IR spectrum, cm<sup>-1</sup>: 467 [ $\delta$ (SiF)], 854 [ $\nu$ <sub>s</sub>(SiF)], 950 [ $\delta$ <sub>as</sub>(SiF)], 1139 [ $\nu$ (SiF)], 1581, 1595 [ $\nu$ (C=C)], > 3000 [ $\nu$ (CH)]. <sup>19</sup>F NMR spectrum (CCl<sub>3</sub>F),  $\delta$ <sub>F</sub>, ppm: –142.12 (J<sub>SiF</sub> 290.11 Hz).

The <sup>19</sup>NMR spectra were recorded on a Jeol FX-90Q spectrometer (90MHz) for 15–20% solutions in  $CDCl_3$  (CCl<sub>3</sub>F). The IR spectra were recorded on a Specord IR-75 spectrometer.

## REFERENCES

 Basenko, S.V., Voronkov, M.G., and Gebel', I.A., *Izv. Ross. Akad. Nauk, Ser. Khim.*, 2000, no. 2, pp. 361–364.