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NEW FLUORO SULFUR-NITROGEN ANIONS

Werner Heilemann* and Rüdiger Mews

Institut für Anorganische und Physikalische Chemie der Universität Bremen, Leobenerstrasse NW2, D-2800 Bremen 33 (F.R.G.)

With "TAS-Fluoride" $(Me_2N)_3S^+Me_3SiF_2^-$ [1] F^- is added to all Lewis acids stronger than Me_3SiF. Stronger Lewis acids are all kinds of sulfur nitrogen species ($RNSOF_2$, $RNSF_2$, RNSO, $(RN)_2S$) where R is an electron-withdrawing group, e.g. perfluoroalkyl, FSO_2, SF_5. Stable sulfur nitrogen anions with differently coordinated sulfur (VI) and sulfur (IV) are generated by this route:

$$RNSOF_2 + \underset{\underline{\underline{1}}}{(Me_2N)_3S^+Me_3SiF_2^-} \xrightarrow[-Me_3SiF]{} RNSOF_3^- \; (Me_2N)_3S^+$$

$$RNSF_2 + \underset{\underline{\underline{1}}}{} \xrightarrow[-Me_3SiF]{} RNSF_3^- \; (Me_2N)_3S^+$$

$$RNSO + \underset{\underline{\underline{1}}}{} \xrightarrow[-Me_3SiF]{} RNSOF^- \; (Me_2N)_3S^+ \quad (R = R_f,\ FSO_2,\ SF_5)$$

$$R_fNSNR_f + \underset{\underline{\underline{1}}}{} \xrightarrow[-Me_3SiF]{} (R_fN)_2SF^-(Me_2N)_3S^+$$

The chemistry and the spectroscopic properties of these new classes of anions will be discussed.

1 W.J. Middleton, US. Pat. 3 940 402 (1976); Org. Synth. 64 (1985) 221; Cf. W.B Farnham, D.A. Dixon, W. J. Middleton, J.C. Calabrese, R.L. Harlow, J.F. Whitney, G.A. Jones, L.J. Guggenberger, J. Am. Chem. Soc. 109 (1987) 476 and W. Heilemann, Th. Meier, R. Mews, J. Fluorine Chem. 35 (1987) 145.