BIFUNCTIONAL FLUORO-SULFUR-CARBON-DERIVATIVES

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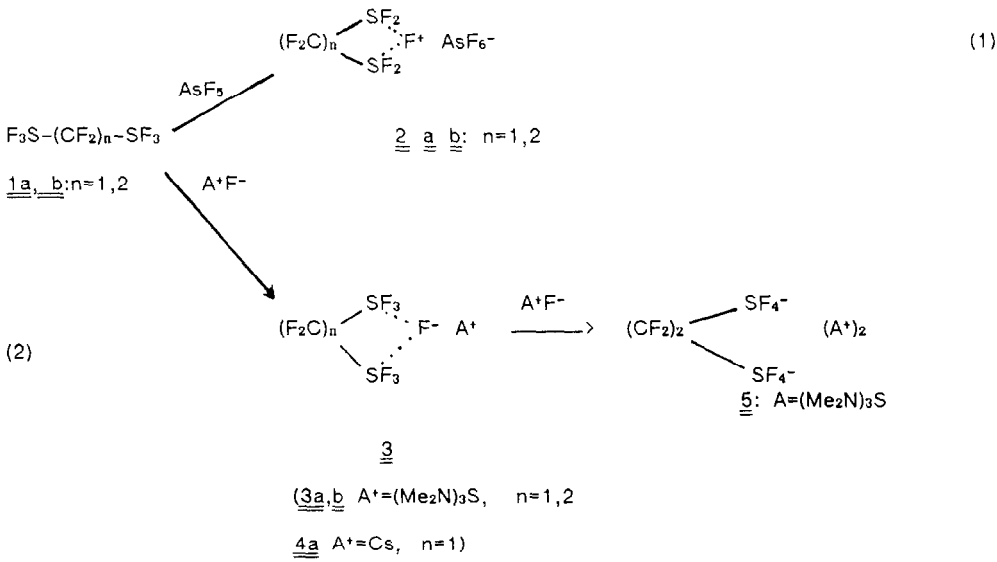
In α,ω-bis(trifluorosulfur)-perfluoroalkanes $F_3S-(CF_2-)_n-SF_3$ the interesting question is the interaction of the SF_3-groups in dependence of n. In the reaction of 1a and 1b with AsF_5 only monocations are observed, 3b forms with excess TAS-fluoride dianions:



Cations and mono-anions are fluxional in solution, preliminary X-ray-investigations on 4a show a symmetrical fluorine-bridge between the two SF_3-groups [1]. The thermal stability of the cations strongly depends on the ring-size. 2b is indefinitely stable at room temperature, 2a decomposes already below 0°C.

Structural aspects and the chemistry of the neutral specis and the ions wil be discussed.

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1 R.Herbst-Irmer, G.M. Sheldrick et.al., to be published