

SOME REACTIONS OF  $F_5SC\equiv CH$  AND  $F_5SC\equiv CSF_5$ 

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The interesting  $F_5SC\equiv C$ -System is known, but its reactions are only partially investigated. Here we describe cyclisation reactions.

Thermal excitation up to 360°C does not show any results.  $HC\equiv CSF_5$  trimerises under uv irradiation ( $\lambda = 254$  nm) under formation of 1,3,5-trispentafluorothiobenzene.  $F_5SC\equiv CSF_5$  does not trimerise, however, under such conditions.

$Co_2(CO)_8$  incorporates  $HC\equiv CSF_5$ , giving  $Co_2(CO)_6(HCCSF_5)$  as intermediate and  $Co_2(CO)_4(HCCSF_5)_3$  as final product. The latter has been structurally investigated by x-ray. The three acetylene functions in the complex are linked together in such a manner, that under decomposition 1,2,4-trispentafluorothiobenzene must result.  $F_5SC\equiv CSF_5$  and  $(CH_3)_3SiC\equiv CSF_5$  react only to  $Co_2(CO)_6(F_5SCCSF_5)$  and  $Co_2(CO)_6[(CH_3)_3SiCCSF_5]$ , respectively.

The halogenated acetylenes  $XC\equiv CSF_5$  ( $X = Cl, Br, I$ ) have been prepared also and are surprisingly stable.