

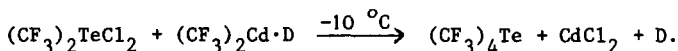
A-5

PREPARATIONS AND PROPERTIES OF TETRAKIS(PERFLUOROORGANO)-TELLURIUM COMPOUNDS

D. Naumann*, B. Wilkes and J. Hanke

Universität Dortmund, Anorganische Chemie, Postfach 500 500, D-4600 Dortmund 50 (F.R.G.)

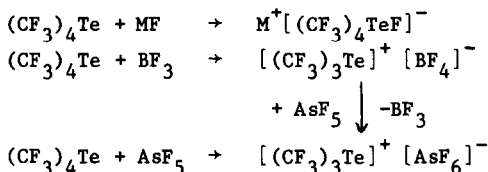
$(\text{CF}_3)_4\text{Te}$ is the first chalcogen compound with more than two CF_3 groups. It is formed from the reaction of equivalent amounts of $(\text{CF}_3)_2\text{TeCl}_2$ and $(\text{CF}_3)_2\text{Cd}\cdot\text{glyme}$ [1]:



$(\text{CF}_3)_3\text{TeCl}$ is detected as an intermediate.

$(\text{CF}_3)_4\text{Te}$ is a decomposable yellow liquid (m.p. ca. -45°C). The photolysis in the presence of cyclohexene yields $\text{C}_6\text{H}_{10}(\text{CF}_3)_2$, $\text{C}_6\text{H}_{10}(\text{CF}_3)(\text{TeCF}_3)$ and some decomposition compounds. During the thermal decomposition also CF_2 is formed.

$(\text{CF}_3)_4\text{Te}$ has amphoteric properties:



All these reactions and the spectra of the new compounds as well as some experiments to prepare other tetrakis(perfluoroorgano)Tellurium compounds are discussed.

1 D. Naumann and B. Wilkes, J. Fluorine Chem. 27 (1985) 115.