PREPARATION AND PROPERTIES OF TETRAKIS(TRIFLUOROMETHYL)TELLURIUM

J. Fischer and D. Naumann

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

Tetrakis(trifluoromethyl)tellurium is prepared by the reaction of $(CF_3)_2 TeCl_2$ with $Cd(CF_3)_2$ complexes at low temperature [1] and can be isolated by vacuum distillation. It is the first compound of a chalcogen element with more than two perfluoroalkyl groups. $Te(CF_3)_4$ is characterized by physical data and n.m.r., mass, and vibrational spectra. The chemical behaviour will be discussed. With Lewis acids $[Te(CF_3)_3]^+$ is easily formed. $Te(CF_3)_4$ behaves as polar as well as radical trifluoromethylation reagent.

In similar reactions also the higher homologous tetrakis-(perfluoroalkyl)tellurium compounds can be prepared.

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