Synthesis and Structures of Cycloalkanetellurium(IV) Fluorides and Azides

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Telluracycloalkanes were fluorinated with XeF_2 and the resulting tellurium(IV) fluorides were reacted with $(CH_3)_3SiN_3$ to obtain the corresponding tellurium(IV) azides. The products, $(CH_2)_5TeF_2$, $(CH_2)_4TeF_2$, $(CH_2)_5Te(N_3)_2$ and $(CH_2)_4Te(N_3)_2$, were characterized by spectroscopic methods. The molecular structure of $(CH_2)_4TeF_2$ as well as the structure of an oxygen bridged species, $[(CH_2)_5TeN_3]_2O$, have been determined by X-ray diffraction.

Key words: Tellurium Fluorides, Tellurium Azides, Multinuclear NMR Spectroscopy, X-Ray Crystallography