A-12

## INVESTIGATIONS INTO THE CHEMISTRY OF THE PENTAFLUOROCHALCOGEN **HALIDES**

Joseph S. Trasher\*, Matthew Clark and Jon B. Nielsen

Department of Chemistry, The University of Alabama, University, AL 35486 (U.S.A.)

The first examples of compounds containing two pentafluorosulfanyl (SF5) groups attached to the same nitrogen were prepared only a short time ago by Waterfeld and Mews [1]. We have now found a new route to one of these materials, namely (SF<sub>5</sub>) 2NCl. The details of this reaction as well as others

$$SF_5NC1_2 + SF_5C1 \xrightarrow{hv} (SF_5)_2NC1 + Cl_2 + \dots$$

carried out in an attempt to prepare novel perfluorinated tertiary amines will be discussed. The results of our study of the reactions of pentafluorotellurium- and pentafluoroselenium halides with a variety of reactive nitrogen and carbon nucleophiles will also be presented.

- 1 a) A. Waterfeld, R. Mews, Angew. Chem., 94 (1982), 389.
  b) A. Waterfeld, H. Oberhammer, R. Mews, Angew. Chem., 94 (1982), 390.