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HALOALKYLATION REACTION OF POLYFLUOROAROMATIC AMINO, HYDROXY AND THIO DERIVATIVES WITH ArCCl<sub>3</sub> CR ArCF<sub>3</sub>IN THE PRESENCE OF Alcl<sub>3</sub>. SYNTHESIS OF POLYFLUOROAROMATIC COMPOUNDS OF VARIOUS CLASSES.

T.D.Petrova, V.E.Platonov, I.S.Popova and I.V.Kolesnikova Novosibirsk Institute of Organic Chemistry, Siberian Division of the USSR Academy of Science, 630090, Novosibirsk (USSR)

A general haloalkylation reaction of polyfluoroaromatic amino, hydroxy and thio derivatives with compounds of the formula  $\operatorname{ArCCl}_3$ or  $\operatorname{ArCF}_3$  in the presence of  $\operatorname{AlCl}_3$  has been found. The reaction proceeds at heteroatom and leads to compounds of various classes. The products of the reactions of polyfluoroaromatic amines and  $\operatorname{AlCl}_3$  with benzotrichlorides or benzotrifluorides have been shown to be polyfluoroaromatic imidoyl chlorides. For compounds containing several  $\operatorname{CF}_3$  or  $\operatorname{CCl}_3$  groups in a molecule only one trihalomethyl group is involved in formation of the imidoyl chloride group. Polyfluorinated phenols react with benzotrichlorides and benzotrifluorides in the presence of  $\operatorname{AlCl}_3$  to give polyfluorophenol esters of the respective carboxylic acids. The haloalkylation reaction of polyfluorinated thiophenols with  $\operatorname{CCl}_4/\operatorname{AlCl}_3$ leads to bis(arylthio)dichloromethanes. With benzotrichlorides or benzotrifluorides bis(arylthic)arylchloromethanes are formed.

$$\frac{\operatorname{Ar}_{F}(\operatorname{Ar})\operatorname{CCl}_{3}}{\operatorname{Ar}_{F}\operatorname{OH}_{2.\operatorname{H}_{2}\operatorname{O}}} \xrightarrow{\operatorname{Ar}_{F}\operatorname{NH}_{2}} \operatorname{Ar}_{F}\operatorname{OCOAr}_{F}(\operatorname{Ar})$$

$$\operatorname{Ar}_{F}(\operatorname{Ar})\operatorname{CF}_{3} \xrightarrow{\operatorname{Ar}_{F}\operatorname{SH}} (\operatorname{Ar}_{F}\operatorname{S})_{2}\operatorname{CClAr}_{F}(\operatorname{Ar})$$

$$\operatorname{Ar}_{F}\operatorname{SH} \xrightarrow{\operatorname{1.\operatorname{CCl}}_{2.\operatorname{H}_{2}\operatorname{O}}} (\operatorname{Ar}_{F}\operatorname{S})_{2}\operatorname{CCl}_{2}$$

Peculiarities of these processes are discussed as well as routes of transformations.