REDUCTION OF CF_3-GROUP IN POLYFLUOROBENZENETRIFLUORIDES

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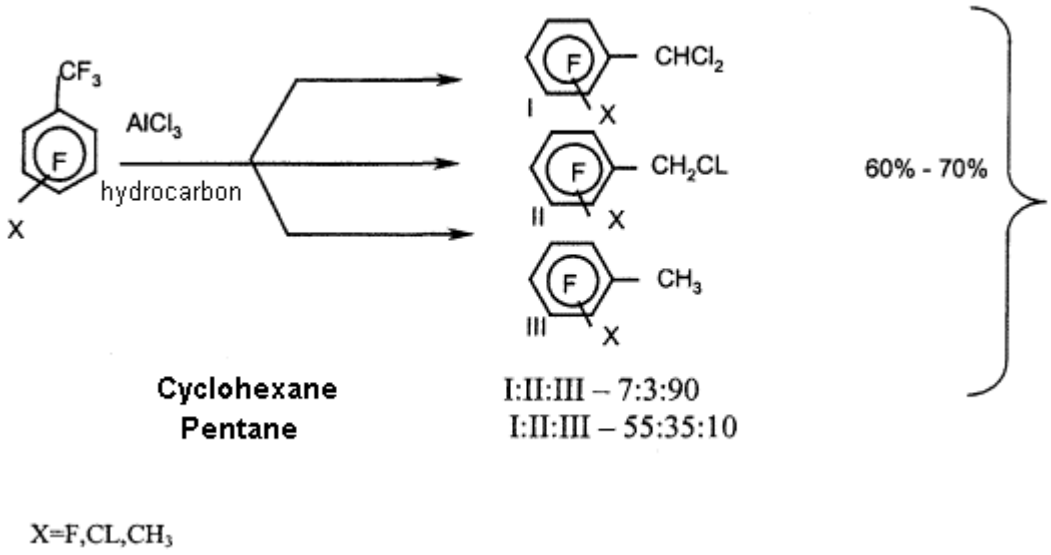
It is known that CF_3-group in benzotrifluorides can be reduced $HSiEt_3$ in the presence of $AlCl_3$ [1]. It is fixed that various aliphatic and cyclic hydrocarbons under the same conditions can be hydrogen donors.

Thus depending on the reaction conditions and ratio of reagents during reduction of polyfluorotoluenes the corresponding benzalchlorides, benzylchlorides and toluenes were synthesized.



X=F,CL,CH_3

Thus in the reaction of octafluorotoluene with two moles $AlCl_3$ with plenty of cyclohexane in dichloroethane mixture of products I, II, III in ratio 7:3:90 in the total yield around 60% is formed.

In the reaction of octafluorotoluene with 1,5 moles A1C13 with plenty of pentane mixture of I, II H III in ratio 5 5:3 5:10 in the total yield 70% is formed.

The above method opens the new posibilities of synthesis of substituted polyfluorinated toluenes.

1) M.E.Volpin, N.V. Schevchenko, G.I. Bolestova, Yu.A. Fialkov, Z.N.Pames. Mendeleev Commun. 1991 N. 118-119.