

A CONVENIENT METHOD OF NUCLEOPHILIC POLYFLUOROARYLATION

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A convenient method has been worked out for the synthesis of polyfluoroaryl-containing silanes, germanes, stannanes and plumbanes by the reaction of polyfluoroaryl bromides or iodides with $P(NAlk_2)_3$ and R'_3MX ($M = Si, Ge, Sn, Pb$; $X = Cl, Br, I$).

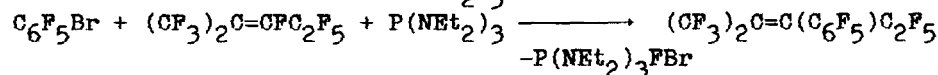
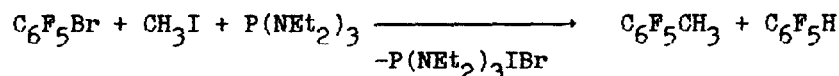


$Y = Br$: $R = PrO, C_5H_{10}N, F, Br, CF_3, CN, SiMe_3, GeEt_3$

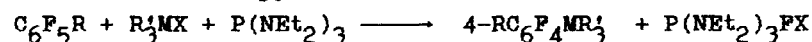
$Y = I$: $R = F, CF_3$

The effect of temperature, solvent and substituents R, R' and X on the yields of products has been investigated.

The possibility of pentafluorophenylating of C-electrophiles has been shown.



Instead of polyfluorobromides (iodides), one can use highly electrophilic perfluorinated arenes, pentafluoropyridine and 5-chlorotrifluoropyrimidine.



$R = CF_3, CN, COOEt$; $R \neq F, Cl$