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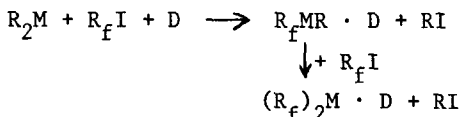
PERFLUOROALKYL COMPOUNDS OF CADMIUM AND ZINC: SYNTHESIS AND REACTIONS

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$(CF_3)_2Hg$ is known to react with $(CH_3)_2Cd$ or $(CH_3)_2Zn$ to give $(CF_3)_2Cd$ and $(CF_3)_2Zn$ respectively [1,2].

We obtained perfluoroalkyl compounds of Cd and Zn in quantitative yields by reacting the corresponding perfluoroalkyl iodides with R_2M . The presence of complexing agents like e.g. diglyme is necessary to induce the reaction and to stabilize the resulting compounds:



M = Cd: R = CH_3 , C_2H_5 ; $R_f = CF_3$, C_2F_5 , $n-C_3F_7$, $i-C_3F_7$, $n-C_4F_9$, C_6F_5 , CF_3CH_2 .

M = Zn: R = CH_3 , C_2H_5 ; $R_f = CF_3$, C_2F_5 , C_6F_5 .

D = glyme, diglyme, 2 CH_3CN , 2 pyridine.

The ^{19}F , ^{13}C and ^{113}Cd n.m.r. data will be discussed.

The properties and some selected reactions of $(R_f)_2Cd$, e.g. with $(CH_3)_3MOCOCF_3$ (M = Si, Sn, Pb) will be reported and underline the carbanionic nature of the R_f group.

The thermal decomposition of $(CF_3)_2Cd \cdot diglyme$ and $(CF_3)_2Zn \cdot diglyme$ results in the formation of ICF_2 , which was identified by means of IR matrix spectroscopy.

1 L.J. Krause, J.A. Morrison, *Inorg. Chem.* 19, 604 (1980).

2 E.K.S. Liu, *Inorg. Chem.* 19, 266 (1980).