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TRIFLUOROMETHYLATION REACTIONS OF INORGANIC AND ORGANIC ACID CHLORIDES WITH $(\text{CF}_3)_2\text{Cd}\cdot\text{D}$

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$(\text{CF}_3)_2\text{Cd}$ complexes react with inorganic and organic acid chlorides in polar reactions either as trifluoromethylating or as fluorinating reagents.

With acid chlorides till now only the reaction with benzoyl chloride is known, from which benzoyl fluoride was formed [1]. We could prove that these reactions depend on the presence of a suitable base [2]. In the presence of e.g. pyridine inorganic and organic acid chlorides react with $(\text{CF}_3)_2\text{Cd}$ complexes to form trifluoromethylated compounds. In other solvents mainly a fluorination reaction takes place and $|\text{CF}_2$ is eliminated.

The dependence of the kind of solvent on the reactions of $(\text{CF}_3)_2\text{Cd}$ complexes with SOCl_2 , SO_2Cl_2 , $\text{CF}_3\text{SO}_2\text{Cl}$ and several substituted benzoyl chlorides are discussed in detail. The application on the synthesis of other CF_3 element compounds will be described.

- 1 L.J. Krause and J.A. Morrison, J. Am. Chem. Soc. 103 (1981) 2995.
- 2 H. Lange, Dissertation, Universität Dortmund, 1983.