# Orthoamide, LXIV [1]. Aromatenformylierungen mit Tris(dichlormethyl)amin und Oligoformylamin-Derivaten in Gegenwart von Supersäuren

Orthoamides, LXIV [1]. Formylation of Aromatic Compounds by Tris(dichloromethyl)amine and Oligoformylamine Derivatives in the Presence of Superacids

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Tris(dichloromethyl)amine (**4**), triformamide (**1**) and tris(diformylamino)methane ("formyl-aalen") (**2**) can be activated by addition of trifluoromethanesulfonic acid. The formylating systems thus formed transform activated aromatic compounds, such as toluene, anisole or 2,4-dimethoxybenzene to the corresponding aldehydes. The formylating ability of systems from **4** and superacids, such as $FSO_3H$, $FSO_3H/SbF_5$, $C_4F_9SO_3H$, and mixtures of aluminum chloride with $C_4F_9SO_3H$ and chlorosulfonic acid, respectively, is compared. In general, low reaction temperatures (−20 to −10 °C) are necessary to obtain aldehydes with acceptable to good yields. Remarkably, at higher temperatures (∼ 100 °C) compound **4** can also act as a formylating agent in the presence of suitable zeolites, as *e. g.* zeolite HBEA. Reaction mechanisms of the new formylation reactions are proposed.

*Key words:* Formylation, Aromatic Aldehydes, Tris(dichloromethyl)amine, Triformamide, Formyl-aalen, Superacids, Zeolites