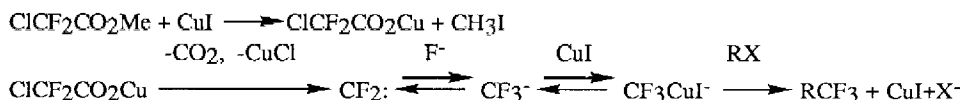


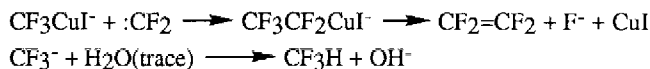
Table. Reactions of **1** with **2** in the presence of KF and CuI (1:2:KF:CuI=2:1:1:1)^a

Entry	RX	Temperature (°C)	Period (h)	Yield of 3 ^b (%)
1	2a	100-120	8	88
2 ^c	2a	100	8	80
3	2b	110-120	8	60
4	2c	110-120	8	82
5	2d	110-120	8	85
6	2e	110-120	8	81
7	2f	110-120	8	84
8	2g	110-120	8	46
9	2h	100-120	8	94
10	2i	100	8	81 ^d
11	2j	100	8	89
12	2k	100	10	56
13	2l	110-120	8	5

a: In DMF unless noted otherwise. b: Isolated yields based on **2**, all the products are known and their physical constants (¹H, ¹⁹F NMR, MS) are consistent with those of the authentic samples. c: In HMPA. d: No p-CF₃C₆H₄CF₃ was detected.



Because HCF₂Cl and the compound with ClCF₂ group are absent in the products, the CF₂Cl⁻ seems to be absent in the reaction in contrary to the case of the decomposition of **1** by LiCl⁵. Therefore the decomposition of the salt is a concerted rather than a stepwise process. As **1** is inert to CuCl, and CH₃Cl and/or CH₃Br are present in the reaction mixture, it implies that CH₃I reacted with CuI to give CH₃Cl and regenerated CuI during the reaction. Control experiment has proved the possibility. The trace of CF₂=CF₂ and CHF₃ observed may be ascribed to the following reaction.



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- Compound **1** is in Aldrich Catalog and can also be prepared in laboratory as follows: Treatment of 2-chloro-1-iodotetrafluoroethane, prepared by bubbling tetrafluoroethene into ICl, with fuming sulfuric acid gives ClCF₂COF which then is reacted with methanol to afford **1**. The overall yield is nearly quantitative.
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