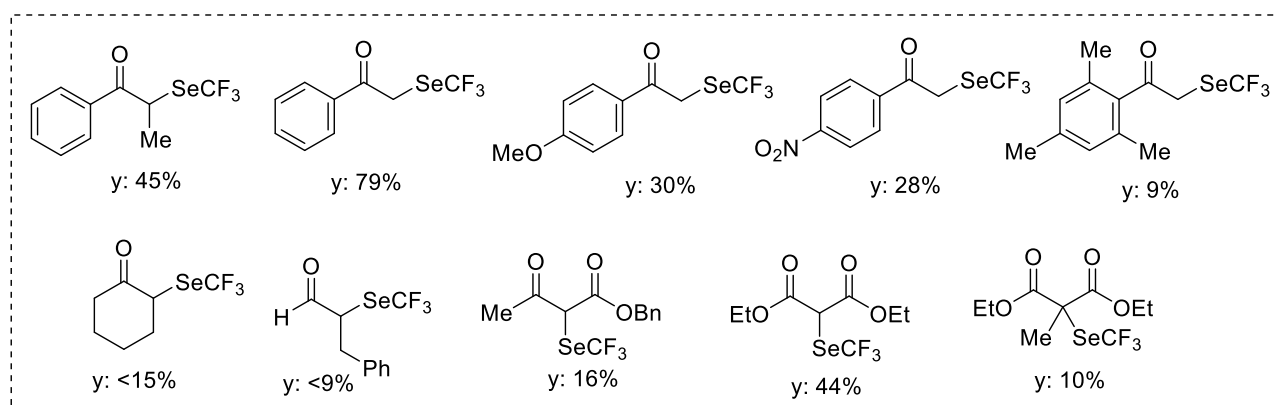
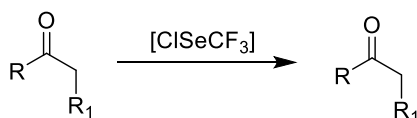


# $\alpha$ -Trifluoromethylselenation of carbonyl compounds

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Selenium containing compounds revealed relevant in a number of different areas ranging from health sciences to nanotechnology, through organocatalysis. Fluorinated substituents have already been widely employed to introduce significant changes in compounds' properties, and their association with calchogens led to the identification of structural units featuring unique physicochemical characteristics. In the last years, the effects of the incorporation of the XCF<sub>3</sub> (X = O, S, Se) groups in target molecules have been more and more studied. Methods available for the incorporation of the SeCF<sub>3</sub> group are still rather limited, yet significant advancements in the field have recently been reported.<sup>1</sup> Among the direct methods, allowing the formation of a C-SeCF<sub>3</sub> bond, those involving an electrophilic selenium source are less numerous and have never been employed in combination with enolizable carbonyl compounds. We thus studied the application of a recently established strategy, to achieve  $\alpha$ -trifluoromethyl selenated carbonyl derivatives. The reaction passes through the formation of the highly reactive ClSeCF<sub>3</sub> species, directly reacting with ketones. The desired products were obtained, unfortunately, in modest isolated yields and the use of additives did not lead to improvements. Despite further studies need to be undertaken to improve the synthetic utility, this approach already allows the straightforward preparation of highly versatile building blocks with potential for application in several fields.



1. A. Tlili, E. Ismalaj, Q. Glenadel, C. Ghiazza, T. Billard *Chem. Eur. J.* **2018**, *24*, 3659-3670.
2. Q. Glenadel, E. Ismalaj, T. Billard, *J. Org. Chem.* **2016**, *81*, 8268–8275.