

HALO PENTAFLUOROSULFANYLATION OF ALKYNES

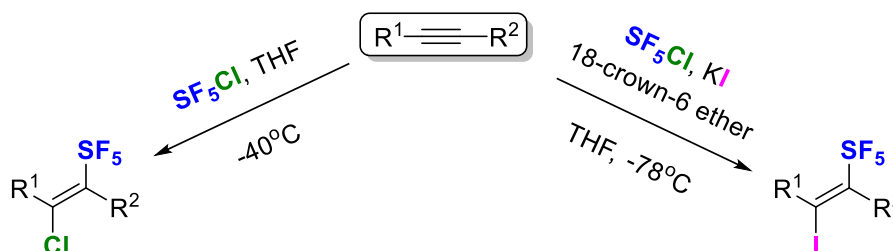


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The pentafluoro- λ^6 -sulfanyl group is an intriguing and emerging functional group in organic chemistry due to its high potential in a wide range of applications.¹ While the oxidative fluorination of organic thiols and disulfides was successfully developed to access Ar-SF₅ compounds,² the chemistry of pentafluorosulfanyl aliphatic compounds is still underdeveloped because of the limited number of pentafluorosulfanylation reagents (essentially SF₅Cl and SF₆).³ During the SECO 61, we will report on a robust protocol enabling the SF₅Cl addition to alkynes, providing a variety of (*E*)-chloro-pentafluorosulfanyl alkenes by using a solution of SF₅Cl in THF in absence of any additive.⁴ Besides, we will also demonstrate the direct synthesis of unprecedented (*E*)-iodo-pentafluorosulfanyl alkenes by means of a combination of SF₅Cl and KI as iodine source, as we would expect from manipulating the unknown SF₅I reagent.⁴



References:

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