

CATIONIC POLAR CYCLOADDITION WITH α -CHLOROSULFIDES

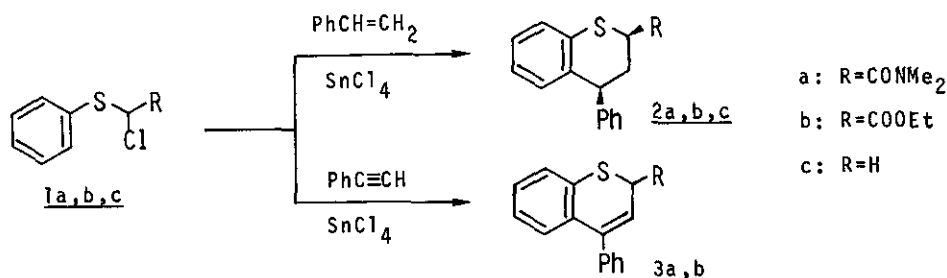
Y. Tamura, S. Akai, H.-D. Choi, H. Nakagawa, and H. Ishibashi

Faculty of Pharmaceutical Sciences, Osaka University, 1-6,

Yamada-oka, Suita, Osaka, 565 Japan

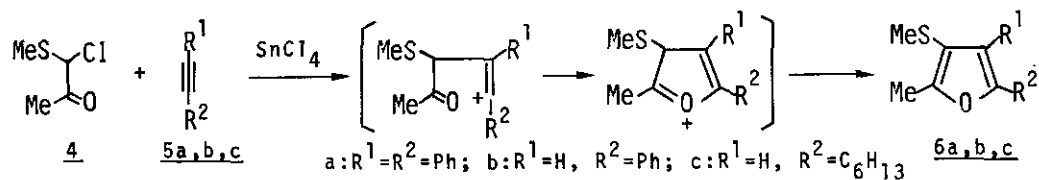
Cycloadditions with positively charged ionic components are known as cationic polar cycloadditions. A number of polar systems capable of cycloadditions have been described in the literature. In particular, the polar systems containing nitrogen-stabilized carbocation have been widely investigated. However, the cycloaddition with the system containing sulfur-stabilized carbocation has received scant attention. We wish to report here the following two types of cationic polar cycloadditions with α -chlorosulfides giving a variety of heterocycles.

1) $[4^++2]$ Cycloaddition : Syntheses of Thiochromans and Thiochromens¹⁾

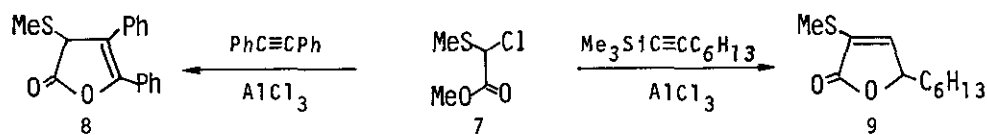


2) $[3^++2]$ Cycloaddition

a) Synthesis of Furans



b) Synthesis of 2-Furanones



1) Y. Tamura, et al., *Tetrahedron Lett.*, **22**, 3773 (1981).