Copper-Catalyzed Amination of Silyl Ketene Acetals with N-Chloroamines

Significance: A copper-catalyzed amination reaction of silyl ketene acetals with N-chloroamines under mild reaction conditions has been developed. The formation of the corresponding α-amino esters is catalyzed by a copper(I)–2,2′-bipyridyl complex which furnishes them in high yield.

Comment: According to the authors, the bulky silyl group disfavors the formation of unwanted by-products and improves the yield of the desired α-amino ester. Furthermore, the facile availability of N-chloroamines from secondary amines with NCS permits a one-pot, two-step synthesis, especially if the N-chloroamine is too unstable for isolation.