

Abstract

First part is focused on finding suitable reaction conditions for organocatalytic domino Michael/Michael reaction of ethyl (*E*)-3-(2-thiophenyl)acrylate with α,β -unsaturated aldehydes. Second part deals with the preparation of pyrazolone derivatives from commercially available compounds and describes effects of various substituents in α -position on chemical efficiency and stereoselectivity of amination with azodicarboxylate catalyzed by quinine.