Enantioselective Alkylation of β-Keto Esters

Significance: The Cu(OTf)$_2$/tert-butyl-bis-oxazoline catalyst system allows the asymmetric alkylation of β-keto esters with free benzylic alcohols, for example, xanthyls as alkylating agents. The reaction is environmentally benign as it generates only water as by-product.

Comment: The reaction between the asymmetric Cu(II)-β-keto ester derivative and the in situ generated carbocation proceeds via an $S_N$1 mechanism. Albeit unknown, the water produced has a specific role to facilitate the reaction.