Asymmetric Decarboxylative Allylic Alkylation of Acyclic Enol Carbonates

Significance: The authors present the first enantioselective palladium-catalyzed decarboxylative allylic alkylation of fully substituted non-cyclic enol carbonates. The reaction delivers the linear α-quaternary ketones in excellent yields. The phosphino-oxazolidine ligand controls the stereoselectivity of the reaction regardless of the Z/E geometry of the enolate starting material.

Comment: This work outlines a general method to access linear α-quaternary ketones with high enantioselectivity. A dynamic kinetic resolution of the two Z/E geometries of the enolate starting material is postulated under optimal reaction conditions, which comprise the use of an electron-deficient phosphino-oxazolidine ligand.