

Synthesis of highly substituted tetrahydroquinolines using ethyl cyanoacetate via aza-Michael-Michael addition

A three-component cascade reaction of 2-alkenyl aniline, aldehydes, and ethyl cyanoacetate mediated by DBU to synthesize highly substituted 1,2,3,4-tetrahydroquinolines. The reaction proceeded through the Knoevenagel condensation of ethyl cyanoacetate with aldehydes followed by the aza-Michael-Michael addition with 2-alkenyl anilines to prepare the tetrahydroquinoline scaffolds.



One pot -three component
No metals or strong oxidants
Simple reaction conditions
Versatile to different
Michael Acceptors

dr up to 93:7
yields upto 96%,
27 examples