

Abstract

This bachelor work is focused on enantioselective preparation of heterocyclic spirocompounds using organocatalytic approach.

First part deals with enantioselective synthesis of spirocycles by reaction of α,β -unsaturated aldehydes with heterocyclic nucleophiles under chiral secondary amin catalysis. This tandem Michael/Michael/aldol reaction is based on iminium and enamine activation of substrate.

Second part of the work is focused on the following oxidation of prepared spirocyclic aldehydes to the corresponding carboxylic acid.