Abstract

This bachelor thesis is focused on the stereoselective Michael-alkylation reaction of alkylidene heterocycles using bifunctional organocatalysis.

Within the thesis, suitable starting materials were first prepared and then the organocatalytic reaction leading to the formation of spirocyclic compounds was optimized. Under optimized conditions, a study of the scope of application of the method on selected derivatives was also performed and the optical purity of the products was determined.

Key words

Organocatalysis, asymmetric synthesis, cascade reaction, Michael reaction, bifunctional organocatalysts, spirocyclic compounds