

Abstract

This diploma thesis is focused on the enantioselective synthesis of spiro[cyclopentane-oxindoles] from 3-alkylideneoxindoles and 1-bromo-3-nitropropane catalyzed by chiral bifunctional organocatalysts.

The first part of this work is devoted to the preparation of the proposed starting 3-alkylideneoxindoles and 1-bromo-3-nitropropane. In the second part, the reaction conditions of the enantioselective synthesis of chiral spirooxindoles were optimized, and then the scope of the method's use on selected substrates was studied under the optimized conditions.