

Abstract

Main aim of this diploma work was to develop new method for preparation of spiro compounds based on synergistic catalysis. First part deals with preparation of corresponding starting materials, substituted pyrazol-3-ones and (*E*)- α,β -unsaturated aldehydes. Second part is focused on cyclization reaction affording spiro compounds and optimization of the conditions (metal and organocatalyst screening, solvent, concentration screening). The last part is the study of scope of the reaction.