Abstract

This work deals with the enantioselective synthesis of chiral cyclohexenones from substituted 4-nitroisoxazoles and *α*-bromo-*α*,*β*-unsaturated aldehydes using of *N*-heterocyclic carbenes (NHC) as organocatalysts. The work includes the preparation of commercially unavailable NHC-precursors and the synthesis of starting materials, substituted 4-nitroisoxazoles and *α*-bromo-*α*,*β*-unsaturated aldehydes. The second part of the work deals with the optimization of reaction conditions of the enantioselective synthesis of chiral cyclohexenones, proceeding via an azolium dienolate intermediate, and the detailed substrate scope screening.