

SIGMATROPIC REARRANGEMENT OF IMINIUM SALTS EXEMPLIFIED ON NORADAMANTANE DERIVATIVES

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We are going to present a new cascade reaction based on Brønsted acid promoted [1,2]-sigmatropic rearrangement of iminium salts and subsequent Friedel-Crafts alkylation described on noradamantane derivatives.^[1] In analogy with known Wagner-Meerwein reactions,^[2] the nucleophilic alkyl shift occurs first and generates a carbocation, which reacts as an electrophile in a Friedel-Crafts reaction.^[3] Depending on the choice of the starting material or solvent, the second reaction step can occur either intra- or intermolecularly. The generality of the protocol was demonstrated on various imines, prepared by condensation of different amines with noradamantyl carbaldehyde derivatives. This protocol allows the preparation of various heterocycles (5-7 membered rings) and open-chain secondary amines, which are difficult to prepare by other means, or their syntheses did not exist previously.^[4]

Sigmatropic rearrangement/Friedel-Crafts alkylation cascade reactions

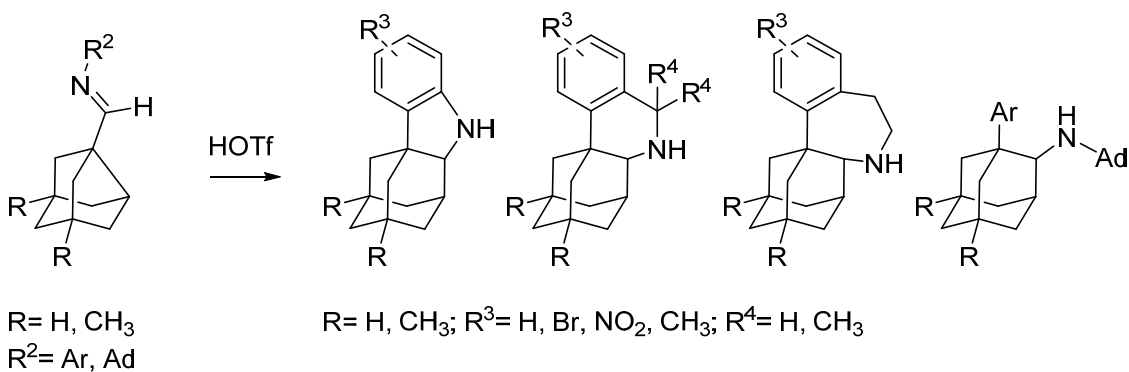


Figure 1. Syntheses of heterocycles and secondary amines from noradamantane aldimines.

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