POST-CYCLIZATION OF UGA BISAMIDES BASED ON PYROLYL-β-CHLOROVINYLALDEHYDE

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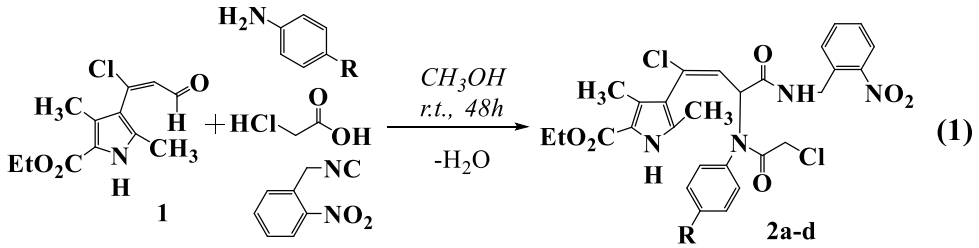
The classic multicomponent Ugi reaction today is a powerful tool for creating libraries of organic substances, among which there may be new biologically active compounds and new components of functional materials. A special role is played by so-called post-Ugi reactions, which may include, for example, various postcyclizations or subsequent modification of functional groups and amide bonds in Ugi products.

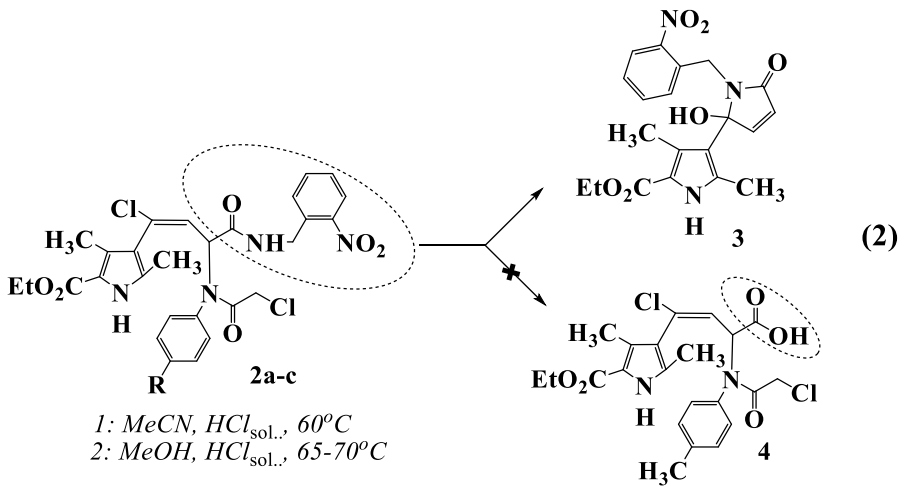
The combination of pyrrole-containing α,β-unsaturated aldehyde **1**, which has a Chlorine atom in the β-position, with convertible 2-nitrobesilisocyanide, *para*-substituted anilines and monochloroacetic acid as the smallest building blocks in the four-component reaction leads to the formation of bisamides Ugi **2a-d** (Scheme 1) and creates further favorable conditions for possible post-transformations.



(1)

R = OCH_3 ***(a)****, CH_3* ***(b)****, CF_3* ***(c)****, Br* ***(d)***

Under the conditions of acid hydrolysis of bisamides **2a-c** in acetonitrile or methanol, in the presence of an excess of concentrated hydrochloric acid, bipyrrole **3** is formed instead of the expected carboxylic acid **4** (Scheme 2).



(2)