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Synthesis of Various N-heterocycles Using the Ugi Four-Center Three-Component Reaction

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Abstract

Ugi four-center three-component reaction (U-4 C-3CR) as actually an important development of the well-known Ugi four-component reaction (U-4CR). In U-4 C-3CR, one of the components is bifunctional, reducing the components of U-4CR to three components. This review aims to provide the application of U-4 C-3CR in the synthesis of different N-heterocyclic compounds with four-, five-, six-, and seven-membered rings as well as fused heterocycles**.**

Keywords: Intramolecular Ugi reaction, Isocyanides, Multicomponent reaction, U-4 C-3CR, Ugi four-center three-component reaction