

Nucleophilic ring-opening of donor-acceptor cyclopropanes in the synthesis of γ -lactam derivatives

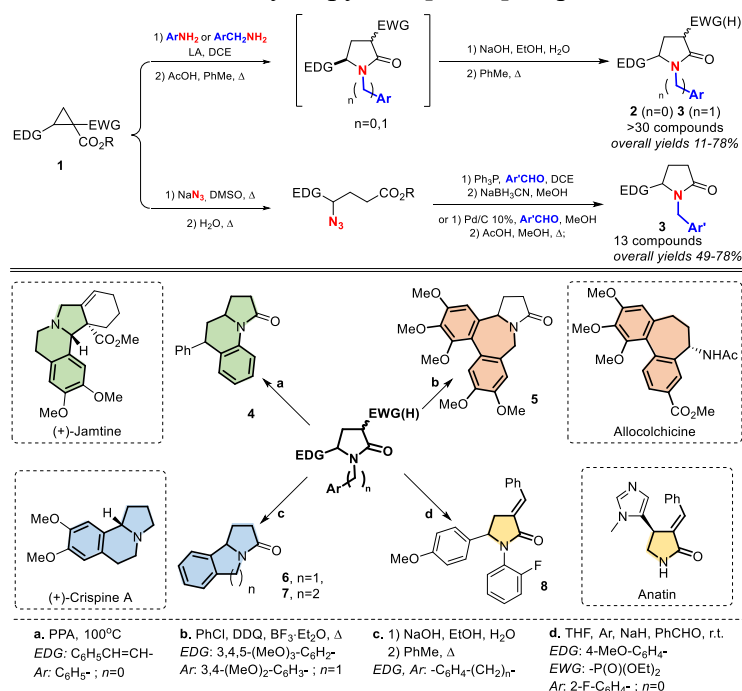
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The γ -pyrrolidone based skeletons is a constituent of many biologically active molecules, both natural and synthetic, and a key component of clinically relevant entities [1]. In this work two effective and simple synthetic approaches to polysubstituted pyrrolidin-2-ones **2,3** from donor-acceptor cyclopropanes **1**, bearing the ester group as the one of acceptor substituents, and azide [2] or amines were developed. In addition, polysubstituted γ -pyrrolidones are advanced precursors for the development of original and efficient transformations of such compounds into a wide diversity of azaheterocycles with monocyclic, bicyclic and polycyclic skeleton. On basis of simple transformations of synthesized γ -pyrrolidones we developed straightforward and efficient approaches to tetrahydropyrrolo[1,2-*a*]quinolin-1(2*H*)-one **4**, dibenzo[*c,e*]pyrrolo[1,2-*a*]azepines **5**, tetrahydro-3*H*-pyrrolo[2,1-*a*]isoindol-3-one **6**, hexahydropyrrolo[2,1-*a*]isoquinoline **7**.



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References

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