

# Ring Expansion Approaches for the Synthesis of Functionalised Macrocycles

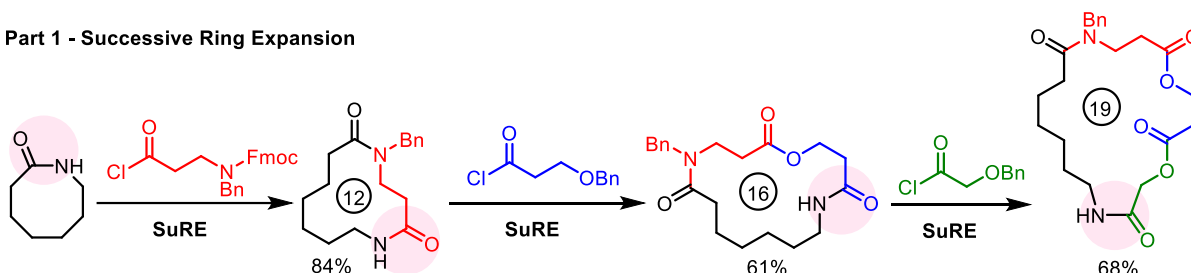
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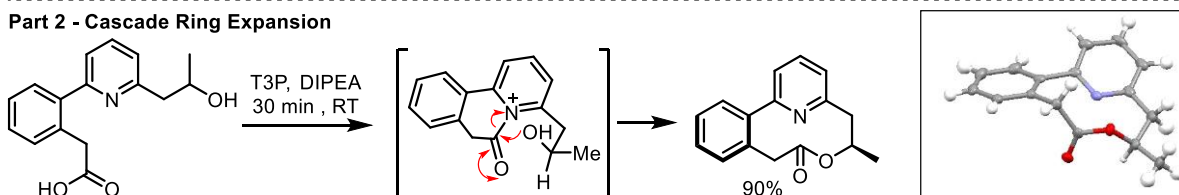
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This talk is focused on the development of new synthetic methods to construct functionalised macrocycles (12+ membered rings) and medium-sized rings (8–11-membered). These ring systems are usually difficult to make, with one of the key challenges being the effective control of intra- and intermolecular reaction during end-to-end cyclisation. In this talk I will discuss strategies by which the difficult end-to-end cyclisation step can be avoided, using ring expansion reactions. First, I will describe an iterative approach known as ‘Successive Ring Expansion’ (SuRE), that enables the controlled insertion of amino acid and hydroxy acid fragments into ring enlarged products via a telescoped acylation/rearrangement reaction sequence.[1,6] Then, a novel ring expansion cascade strategy will be described, that enables the atroposelective synthesis of medium sized rings and macrocycles directly from linear precursors.[7,8]

## Part 1 - Successive Ring Expansion



## Part 2 - Cascade Ring Expansion



Scheme 1: Ring Expansion Approaches for the Synthesis of Functionalised Macrocycles

## References:

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