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Tetrahedron Letters

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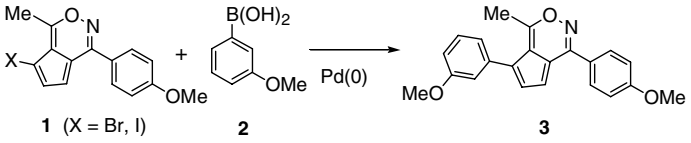
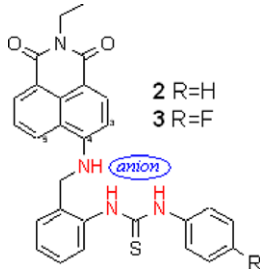
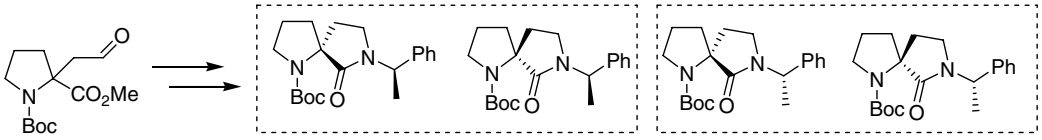
Contents

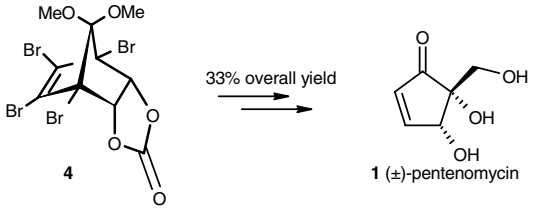
COMMUNICATIONS



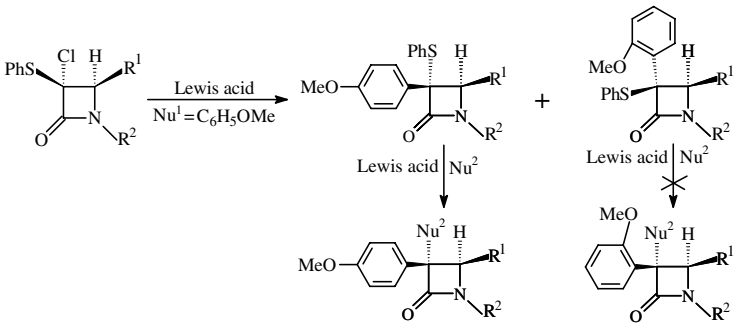


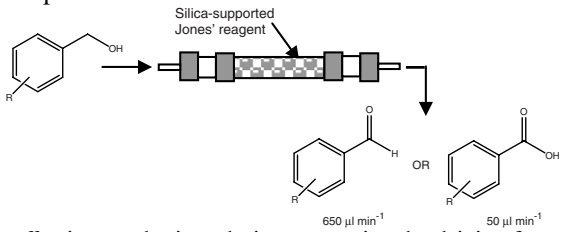


Reductive amination of homochiral primary amines ((*R*)- or (*S*)-α-methylbenzylamine, and (*R*)- or (*S*)-alanine methyl ester) with a racemic proline derived aldehyde, followed by cyclisation, gave diastereoisomeric [4.4]-spirolactams.

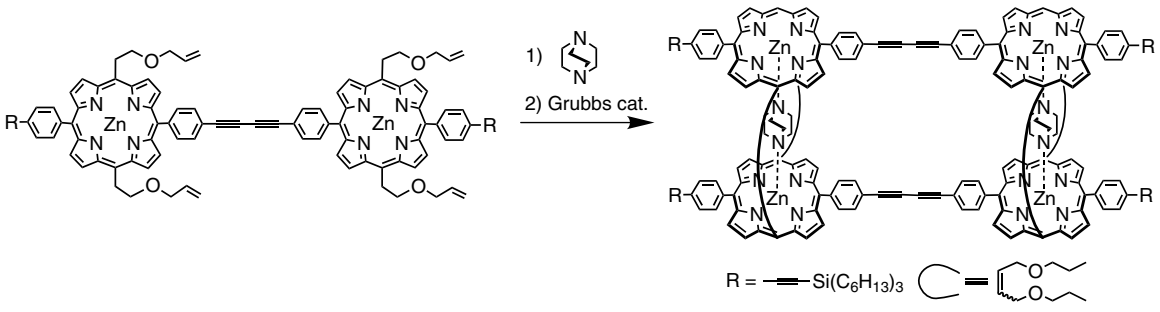


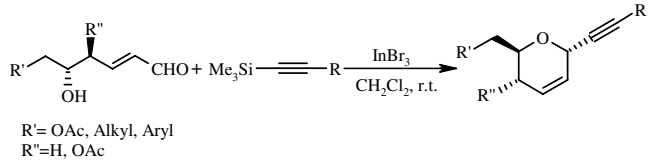
A concise stereoselective route to (±)-pentenomycin **1** in 33% overall yield starting from the readily accessible Diels–Alder adduct **4** is reported. The key reaction involves decarbonylation of a β-methoxy-α,β-unsaturated aldehyde.



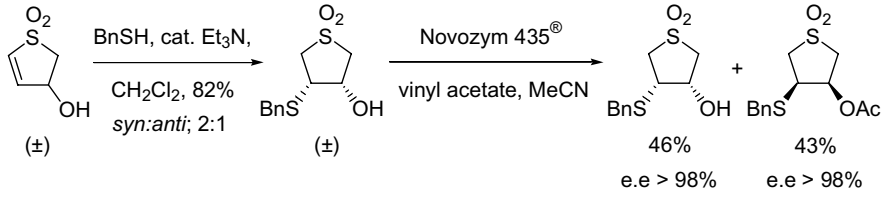


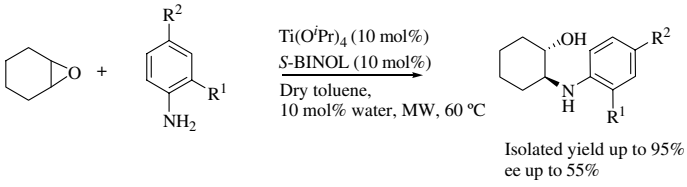
Increased demand for efficient and cost effective synthetic techniques remains the driving force behind the development of alternative methodologies. With this in mind, we describe the use of continuous flow reactors for the selective oxidation of primary alcohols to aldehydes or carboxylic acids depending on the flow rates, and hence residence times, employed.

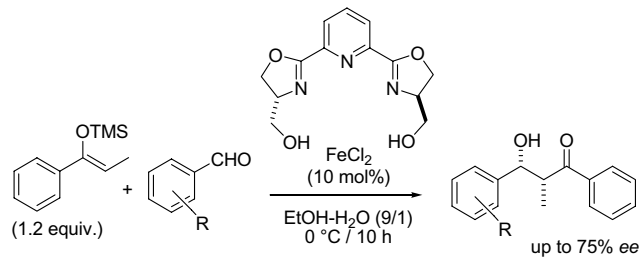


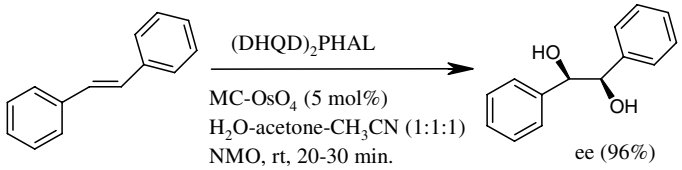


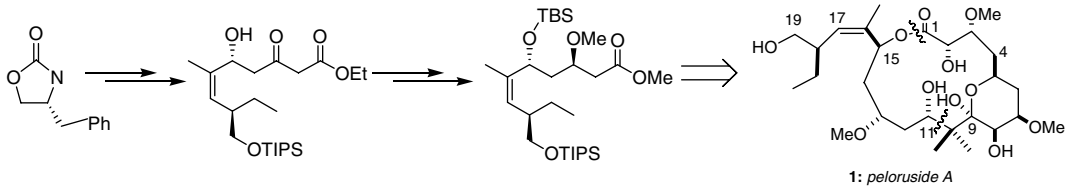
An efficient methodology for the synthesis of *C*-(alkynyl)-pseudoglycals from δ-hydroxy-α,β-unsaturated aldehydes and alkynyl silyl acetylenes has been developed.



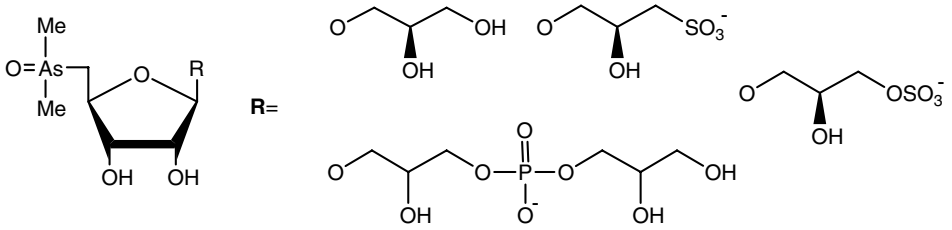


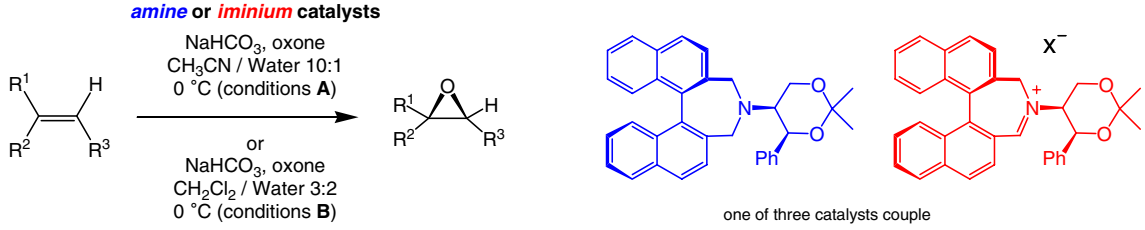


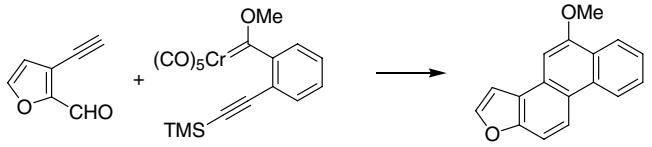


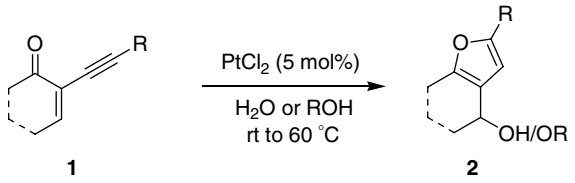


A new route to the synthesis of the C11–C19 fragment of peloruside A is described.

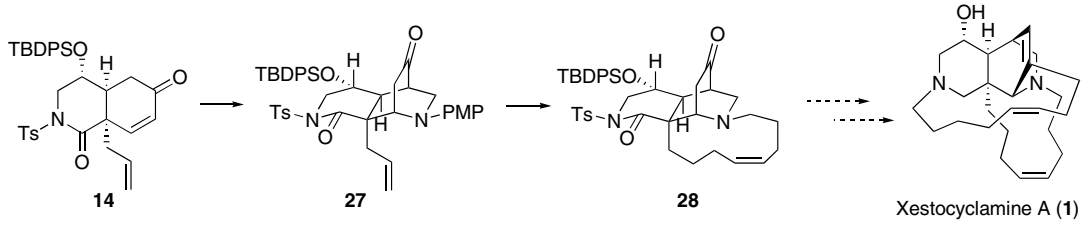


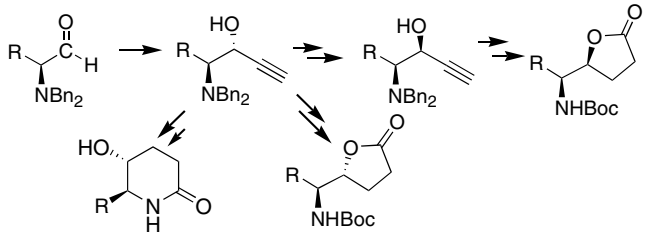


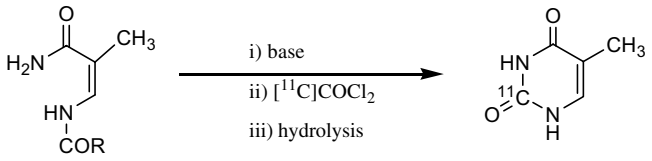


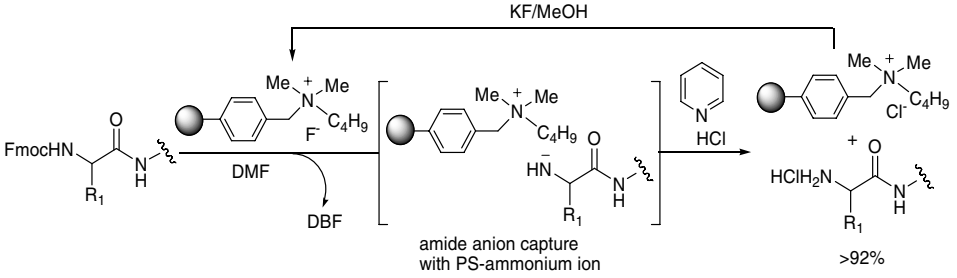


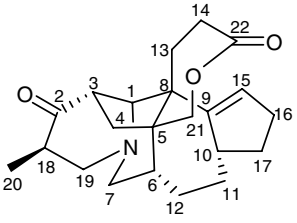
A new and efficient Pt-catalyzed hydroxy- or alkoxy cyclization of 2-(1-alkynyl)-2-alkene-1-ones offers a general synthetic pathway to a wide range of highly substituted furans in good to excellent yields.

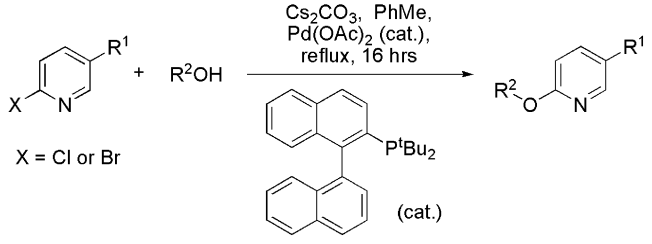


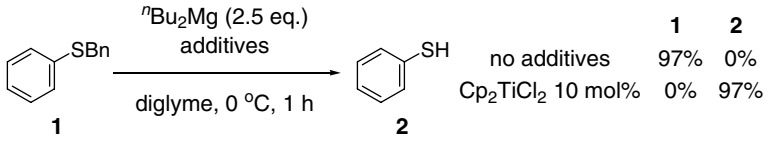


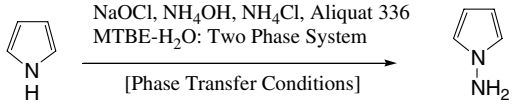




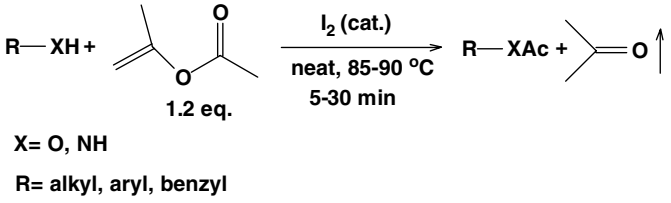


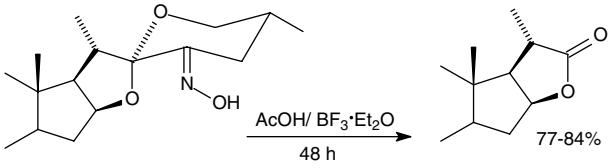




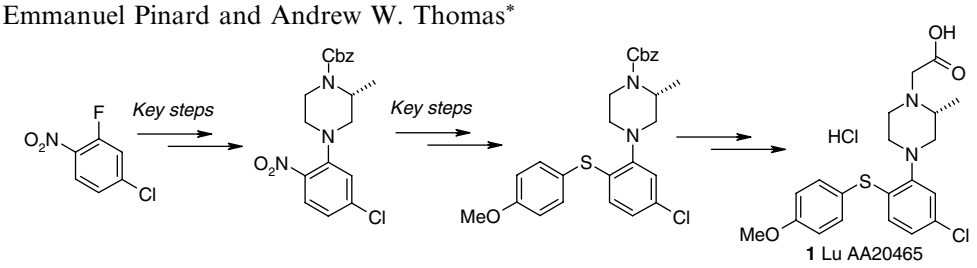


An efficient, one-pot, phase transfer N-amination technology was developed. The protocol utilizes chloramine, an inexpensive and safe electrophilic aminating agent potentially viable for commercial manufacturing.

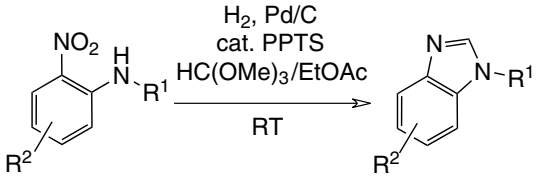


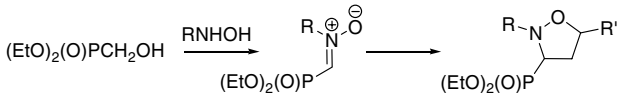


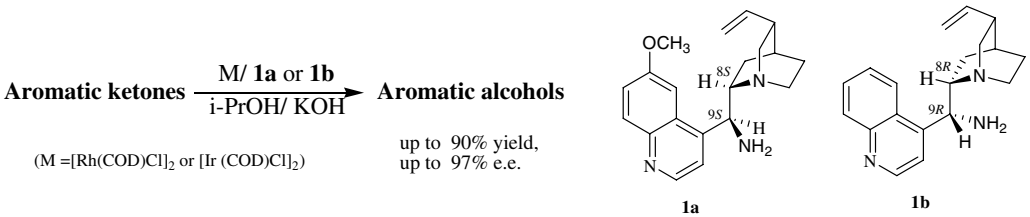
Treatment of different 23-hydroxyiminosapogenins with BF$_3$·Et$_2$O in acetic acid produced good yields of the corresponding bisnorcholanic lactones as the sole products.



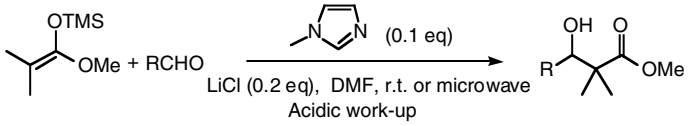
An improved synthesis of Lu AA20465 is reported where the key steps include a regioselective amination reaction, a chemoselective reduction of an aryl nitro group, a diazotization and iodination sequence under nonaqueous conditions and a copper catalyzed thioarylation reaction.



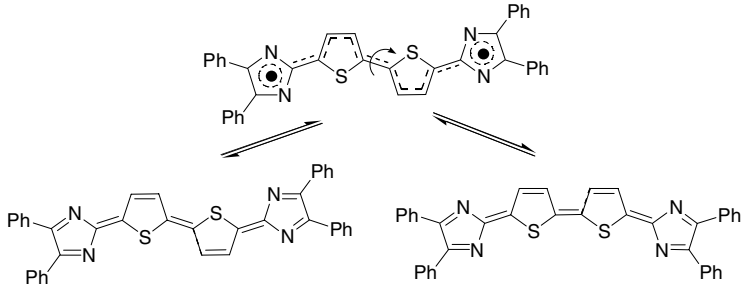


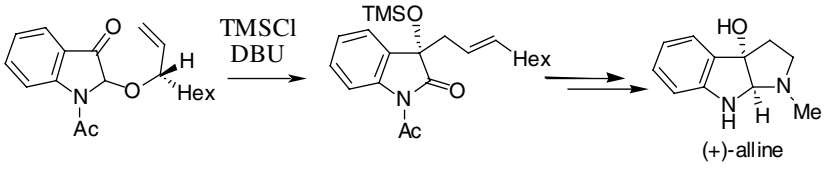


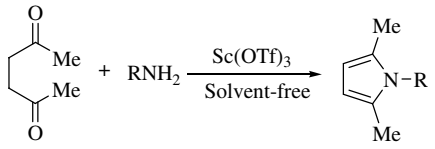
9-Amino(9-deoxy)epiquinine and 9-amino(9-deoxy)epicinchonine were successfully applied in asymmetric transfer hydrogenation in both iridium and rhodium catalytic systems. Moreover, the Ir complex and Rh complex of 9-amino(9-deoxy)epicinchonine were recovered in high yields with dilute hydrochloric acid.



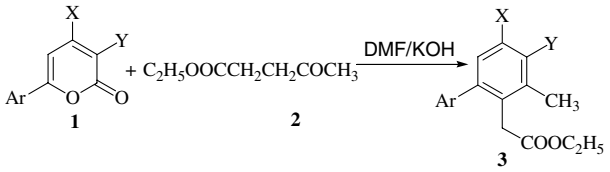
Unaffected substituents on R: HO, THPO, TBDMSO, AcO
MeS, Pyridyl, olefinic, *etc.*

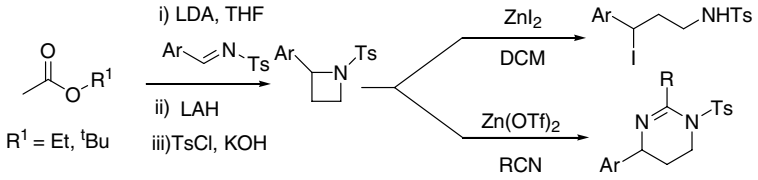




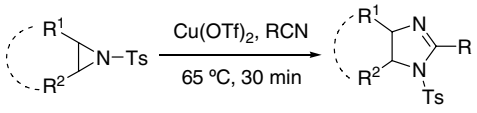


A facile synthesis of N-substituted pyrroles by the Paal–Knorr condensation has been accomplished using a simple procedure. Among different metal triflates screened, 1 mol % $Sc(OTf)_3$ efficiently promoted the reaction in excellent yield (89–98%) under mild reaction conditions. Additionally, $Sc(OTf)_3$ could be recovered easily after the reactions were completed and reused without evident loss of activity.



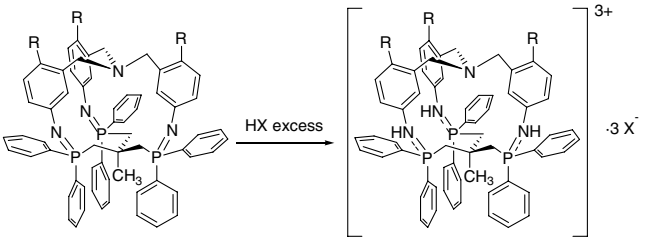


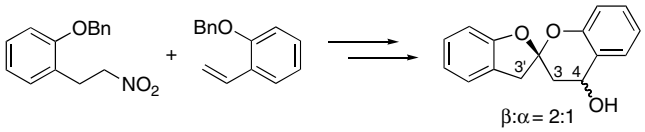
Ar = Ph, 2-ClC_6H_4, 4-ClC_6H_4, 3-BrC_6H_4, 4-$MeOC_6H_4$; R = CH_3, Ph, CH_2Ph, 4-EtC_6H_4



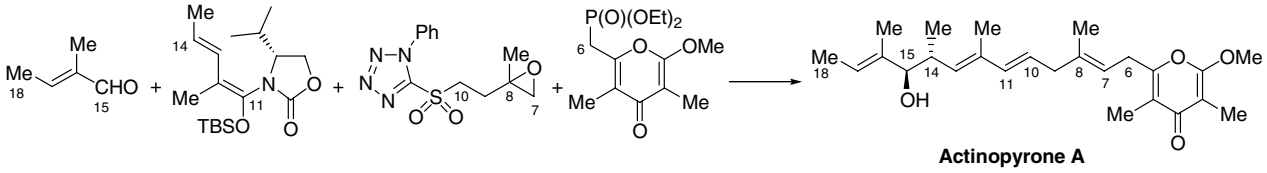
R^1 = Ar, alkyl; R^2 = H; R^1, R^2 = $-(CH_2)_4-$

R = CH_3, Ph, 4-EtC_6H_4





A mild and efficient [3+2] nitrile oxide/olefin cycloaddition provided a rapid and convergent entry into precursors of bisphenolic spiroketals, a structural type unique to the rubromycin family of natural products. In addition, implementation of the premise that a hydrogen bond from the C4-OH controls the stereochemistry of the purpuromycin core resulted in moderate diastereocontrol in the spiroketalization. Spectroscopic and X-ray data of these systems have provided the first assignment of the relative configuration of purpuromycin.



Actinopyrone A

OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

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