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Tetrahedron Letters

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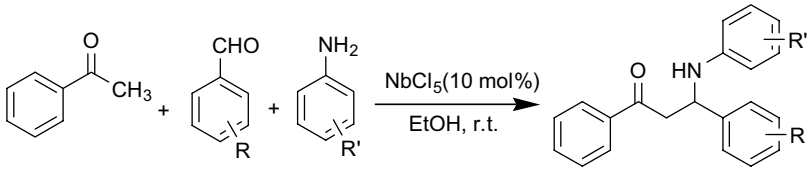
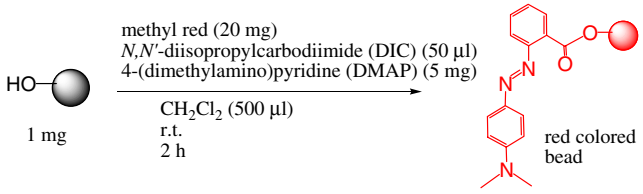
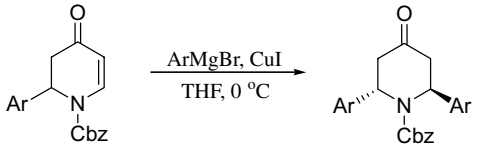
Contents

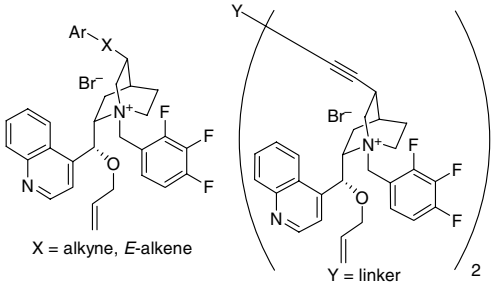
COMMUNICATIONS

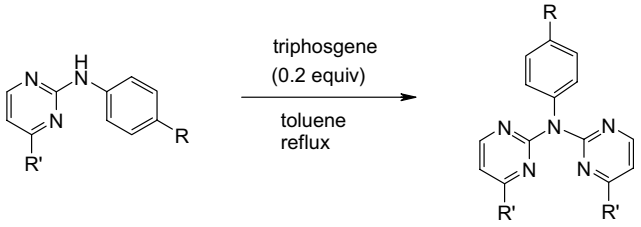


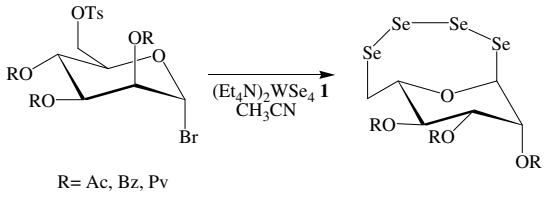
Three-component Mannich-type reaction of acetophenone, aromatic aldehydes and aromatic amines was efficiently catalyzed by $NbCl_5$ at ambient temperature to give various β-amino ketones in high yields.



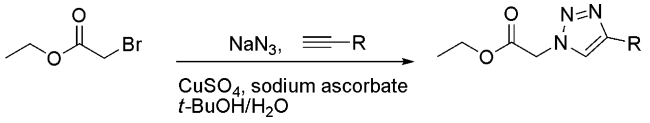




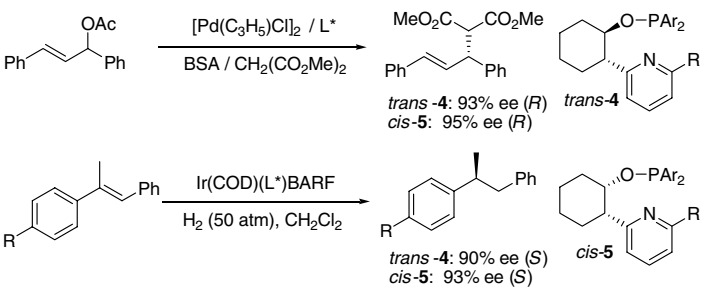


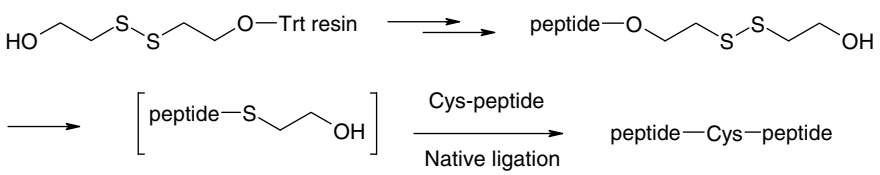


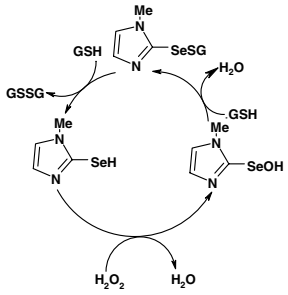
We disclose the synthesis of novel cyclic tetraselenides starting from mannose, which are very unusual and rare.

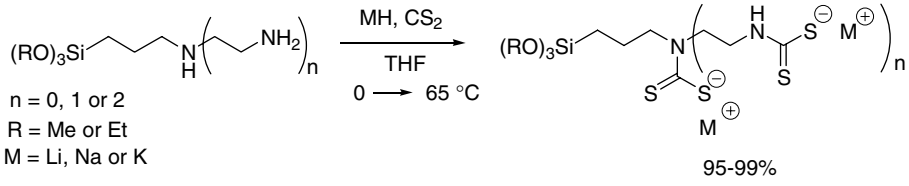


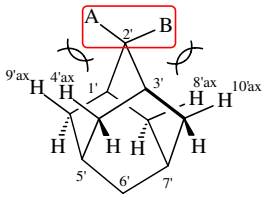
P,N-ligands *trans*-**4** and *cis*-**5** with a cyclohexane backbone were easily synthesized. The key step was chiral resolution of (±)-*trans*-2-pyridylcyclohexanols with DBTA. Enantiopure trans isomer was subjected to Mitsunobu reaction and deprotection to give the corresponding cis isomer. These ligands have been successfully used in asymmetric hydrogenation of arylalkenes with up to 93% ee using **5** and 90% ee using **4** and asymmetric allylic alkylations with up to 95% ee using **5** and 93% ee using **4**. Trans and cis P,N-ligands **4** and **5** all gave the product with the same configuration. It was suggested that the absolute configuration of the product was controlled by the configuration of the stereogenic pyridyl-bearing carbon of the ligands.



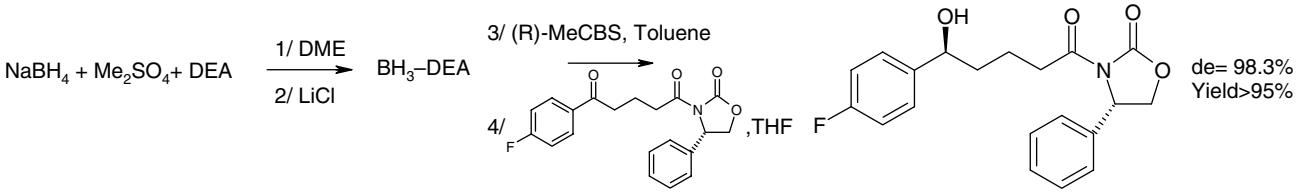


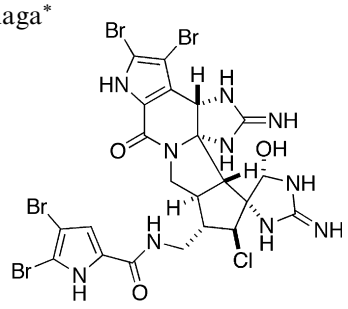




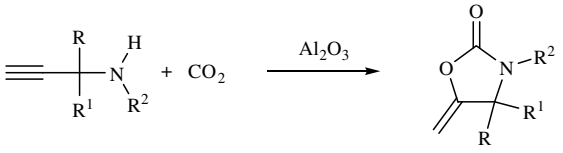


The ^{1}H chemical shift separation at 298 K within 4′,9′-H and 8′,10′-H methylenes was compared for different pairs of substituents A, B in various 2,2-disubstituted adamantanes. This provides an accessible protocol to compare the effect of [1A(ax), 1B(eq)] and [1A(eq), 1B(ax)] substitution on the ^{1}H resonance separation within cyclohexane ring γ-CH_2 protons.

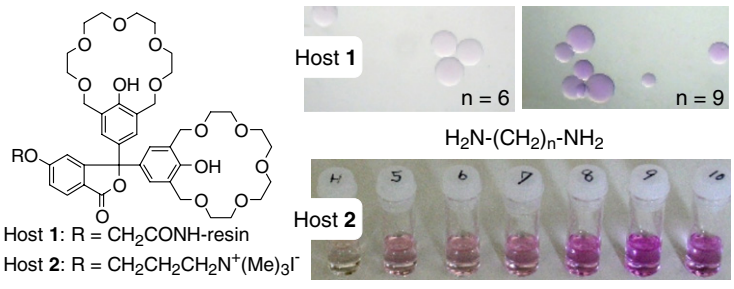


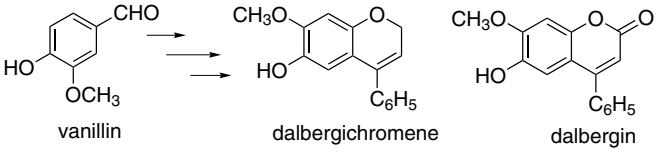


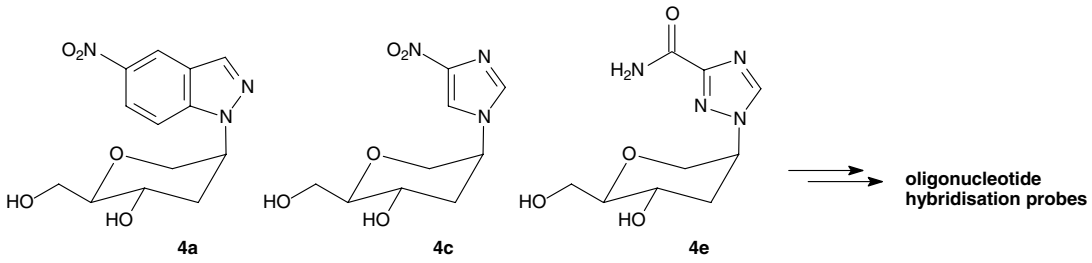
carteramine A (**1**)

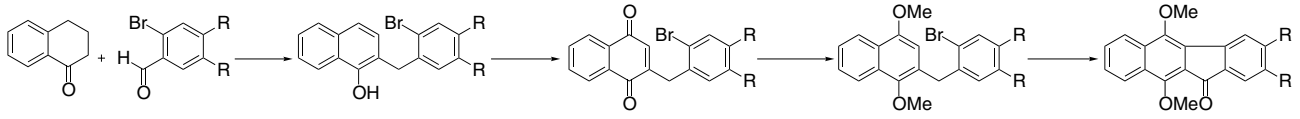


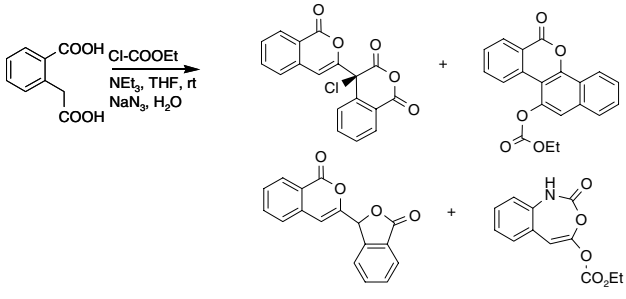
Basic alumina efficiently promotes the reaction of propargylamines with $scCO_2$ for the synthesis of variously substituted oxazolidinones that, after filtration of the catalyst (reusable for several runs) are isolated by methanol crystallization.

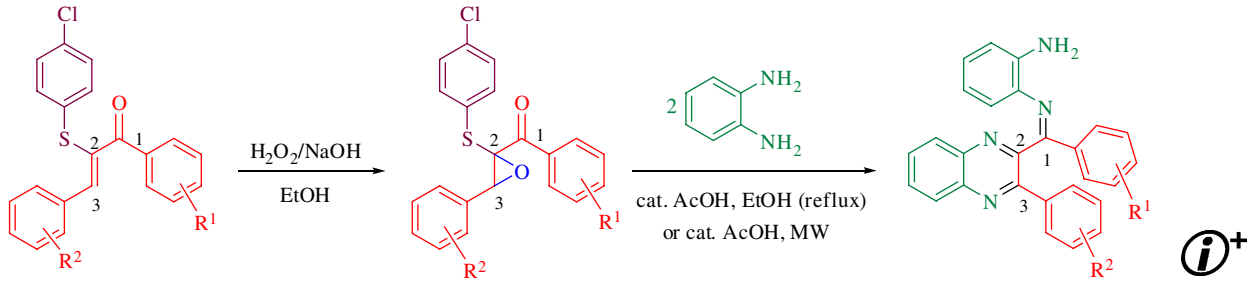


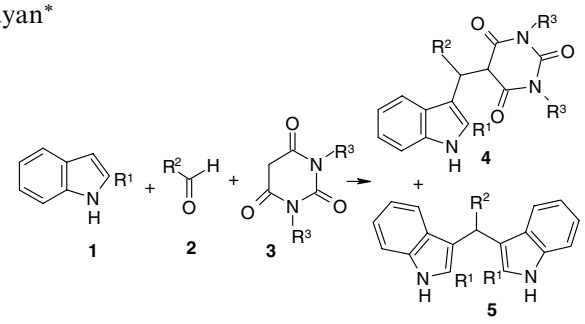


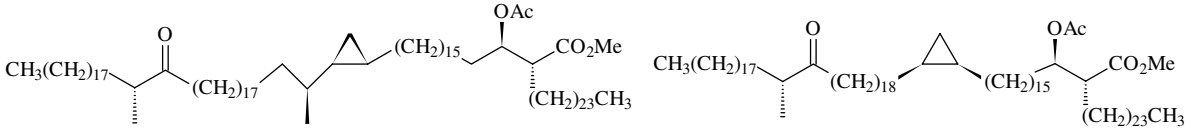




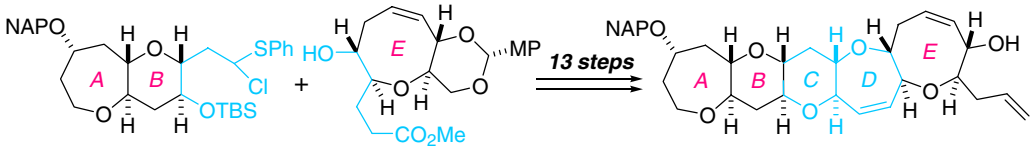


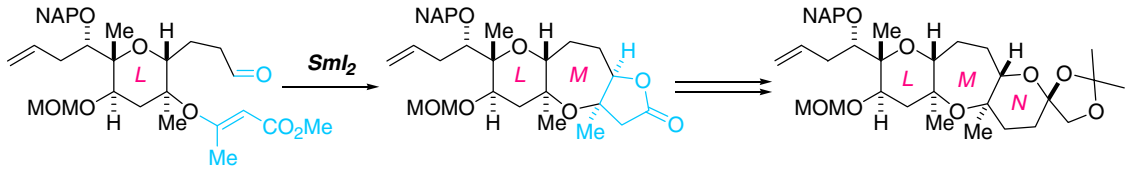


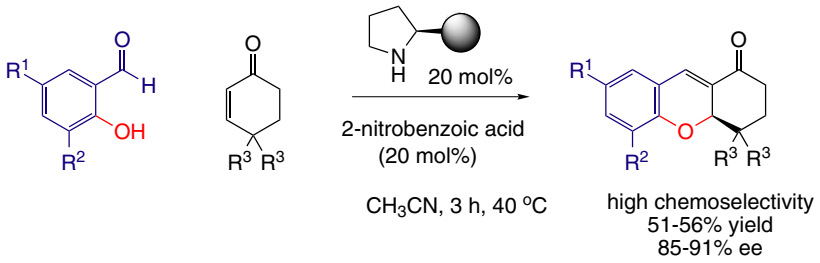


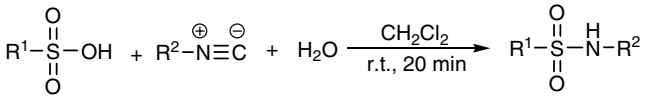


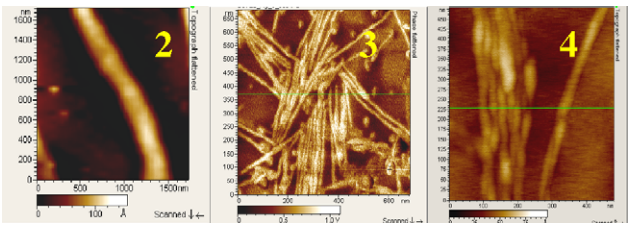
We report the synthesis of a single enantiomer of two protected ketomycolic acids, one containing a *cis*-cyclopropane the other an α-methyl-*trans*-cyclopropane, and of related hydroxy-mycolic acids.



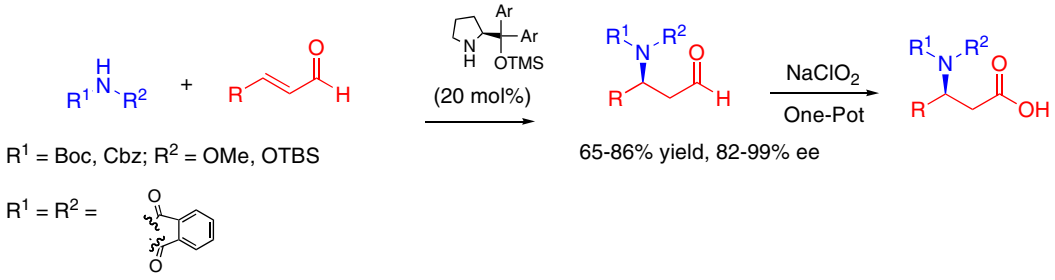


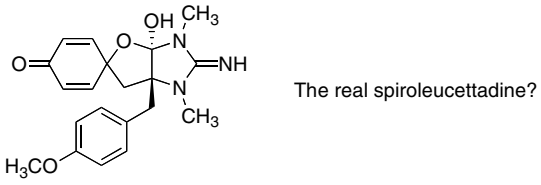




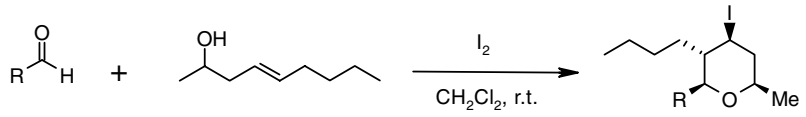


This report describes the generation of metalated peptide fibers, having a natural metal-binding peptide sub-segment, with high thermal stability making them suitable for potential nano(bio)technological applications.

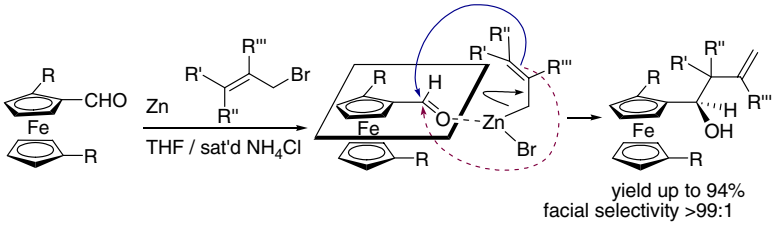


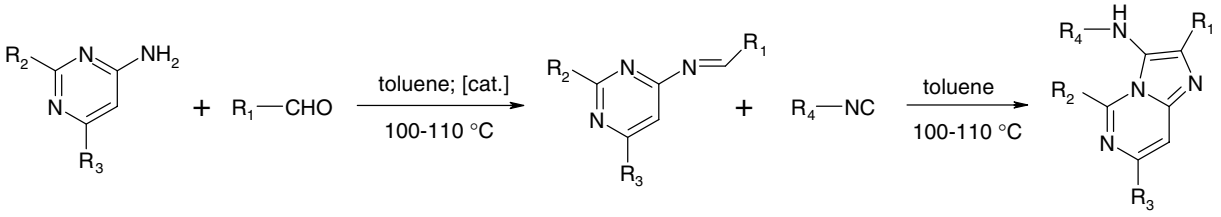


Density functional theory calculations were used to propose an alternative structure for spiroleucettadine.



2,2′-Disubstituted ferrocenecarboxaldehydes are subjected to zinc-mediated allylation to form homoallylic ferrocenyl alcohols. The effects of *ortho*-substituted functional groups on facial selectivities of planarly chiral aldehydes were studied and it was found that the corresponding homoallylic alcohols were obtained as single diastereomers in excellent yields.





OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

Ciguatoxin C-CTX-1 was isolated as a principan causative toxin of ciguatera seafood poisoning in the Caribbean Sea. In the two consecutive papers, we report the synthesis of the ABCDE- and LMN-ring fragments of C-CTX-1.
Tetrahedron Letters **2007**, *48*, 2171–2175 and 2177–2180.

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