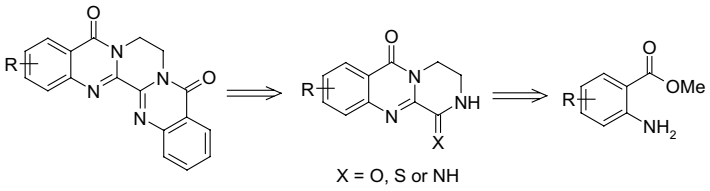
ELSEVIER

Tetrahedron Letters

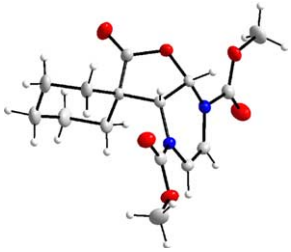
Tetrahedron Letters Vol. 46, No. 20, 2005

Contents

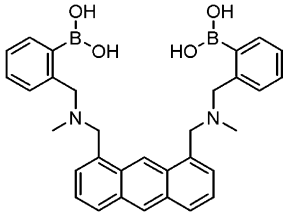
COMMUNICATIONS



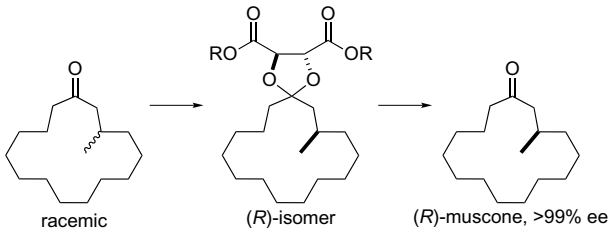
The convenient synthesis of novel tetraaza-pentaphene-5,8-diones is described, in two steps, from anthranilic acid derivatives.



Pyrazines react with 1 equiv of bis(TMS)ketene acetals in the presence of 2 equiv of methyl chloroformate to give polycyclic γ-lactones upon a double nucleophilic addition.

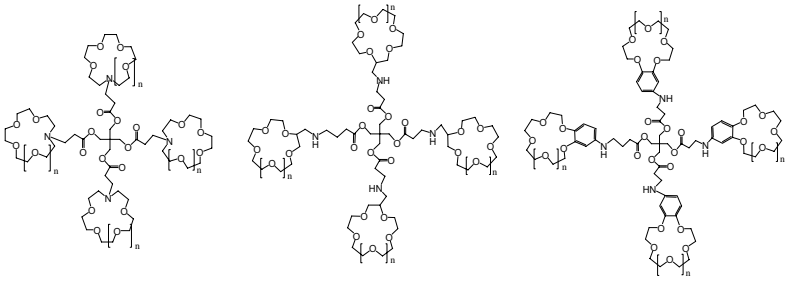


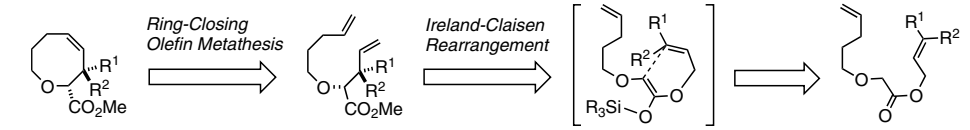
A new anthracene derivative bearing two phenylboronic acid groups at the 1,8-positions displayed a selective binding with sorbitol.

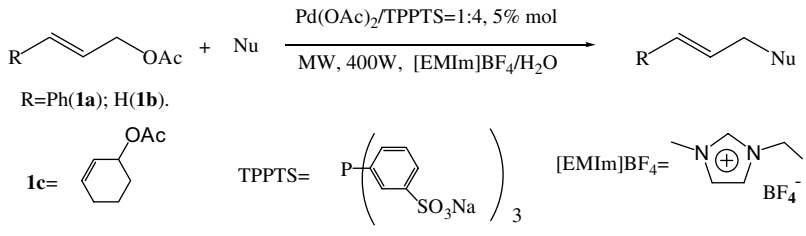


A simple and practical synthesis of (*R*)-(−)-muscone was achieved by optical resolution of *dl*-muscone using tartaric acid derivatives.

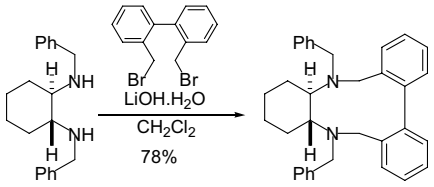
New structures of tetra-crown ethers were synthesized from tetramethylolmethane tetraacrylate with 1-aza crown ethers and amino-crown ethers.

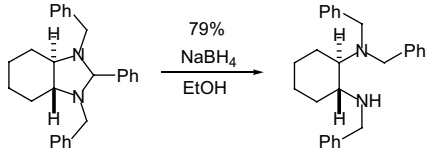


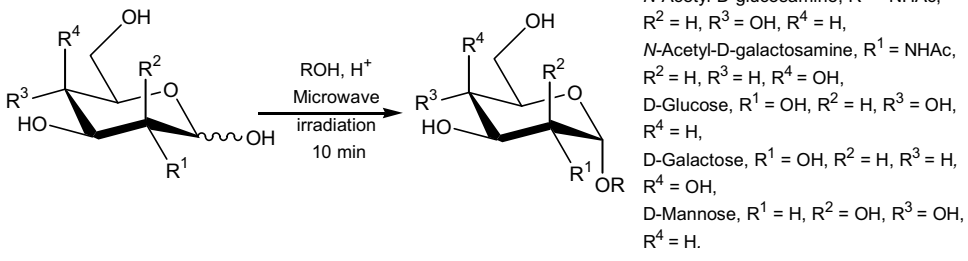




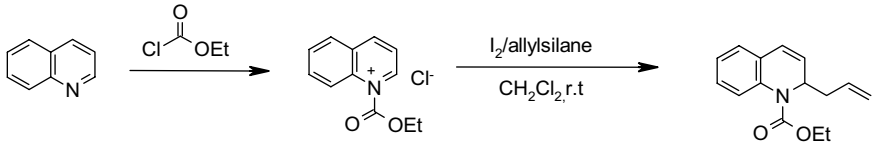
An efficient microwave protocol is described for Tsuji–Trost reaction catalyzed by $Pd(OAc)_2$/TPPTS in an $[EMIm]BF_4/H_2O$ medium. The ionic liquid/water containing catalyst system can be recycled eight times.

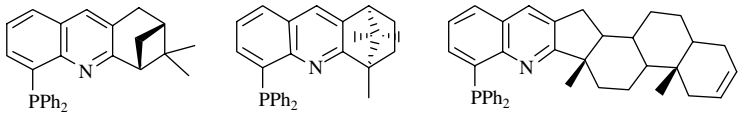


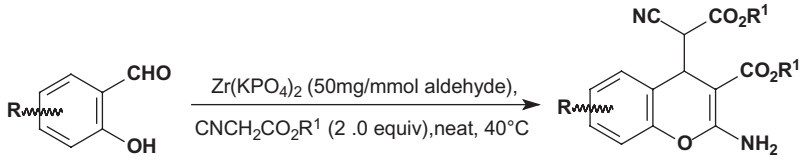




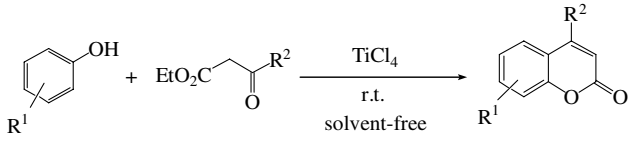
N-Acetyl-D-glucosamine, R^1 = NHAc, R^2 = H, R^3 = OH, R^4 = H,
N-Acetyl-D-galactosamine, R^1 = NHAc, R^2 = H, R^3 = H, R^4 = OH,
D-Glucose, R^1 = OH, R^2 = H, R^3 = OH, R^4 = H,
D-Galactose, R^1 = OH, R^2 = H, R^3 = H, R^4 = OH,
D-Mannose, R^1 = H, R^2 = OH, R^3 = OH, R^4 = H.

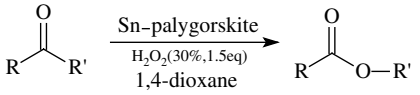




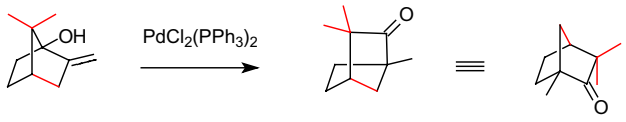


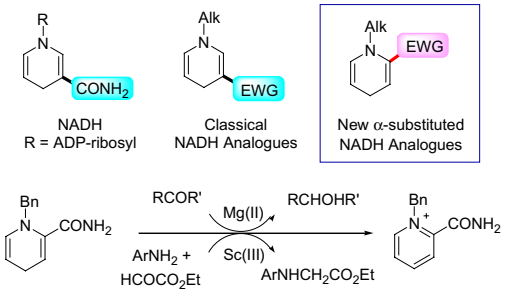
Substituted 4*H*-chromenes were easily prepared by reaction of salicylaldehydes and ethylcyanoacetate in solvent free conditions using potassium exchanged layered zirconium phosphate as catalyst.

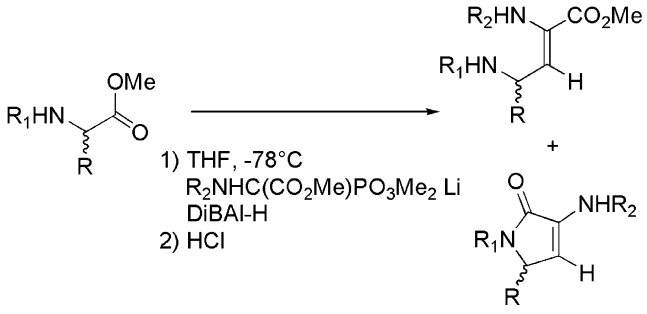




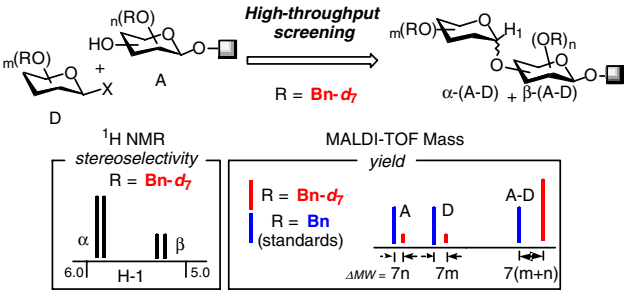
Palygorskite-supported Sn complexes were prepared by a simple procedure. Cyclic ketones and acyclic ketones were oxidized by hydrogen peroxide in a reaction catalyzed by palygorskite-supported Sn complexes, affording corresponding lactones or esters with selectivity for the product of 90–100%.

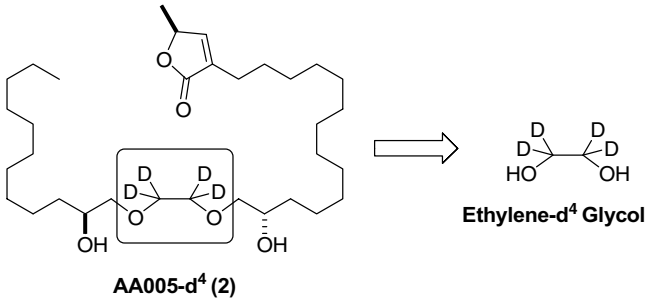


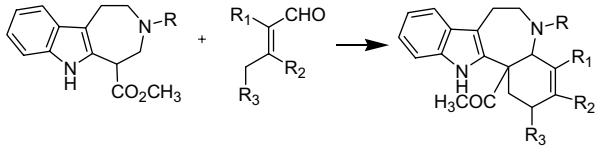


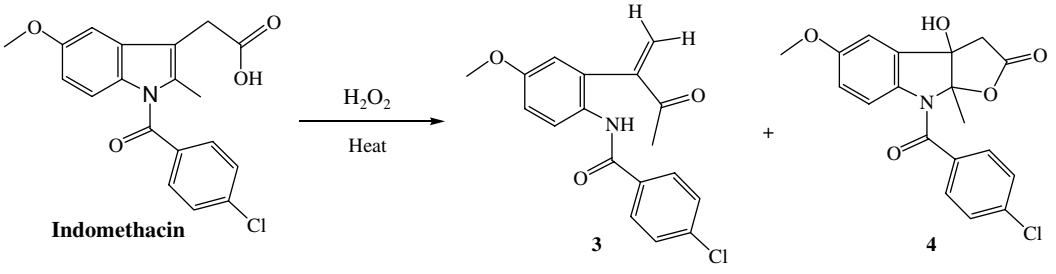


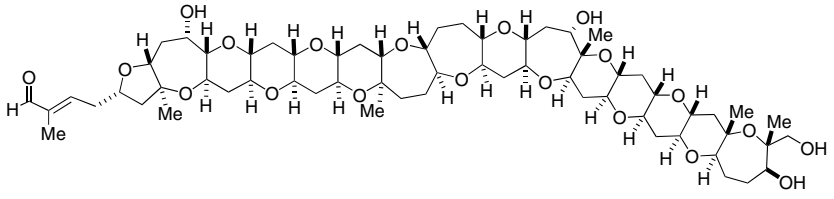
Rapid and quantitative screening of *O*-glycosylation reactions, using labeled compounds monitored by 1H NMR and MALDI-TOF MS, was developed and applied to the analysis of parallel reaction systems.

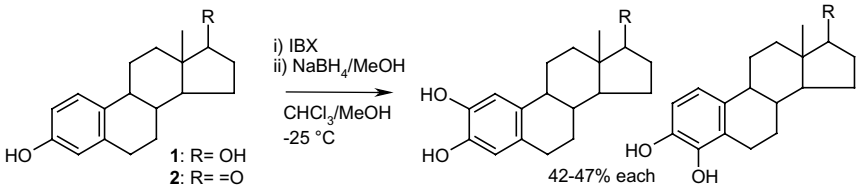


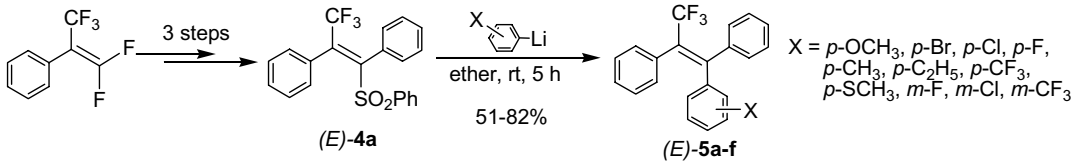


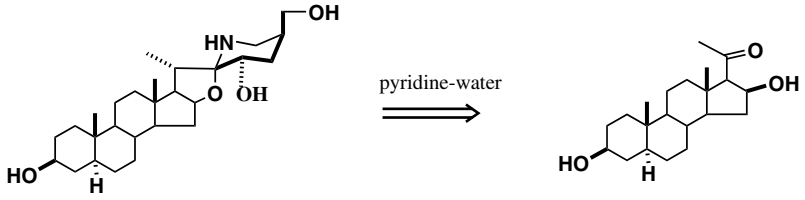


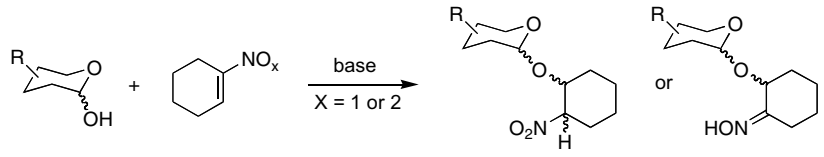




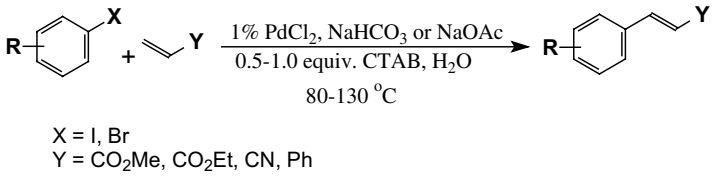


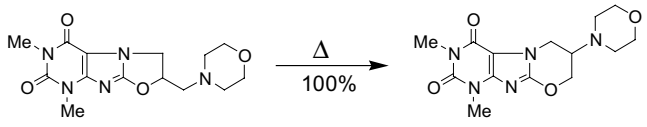


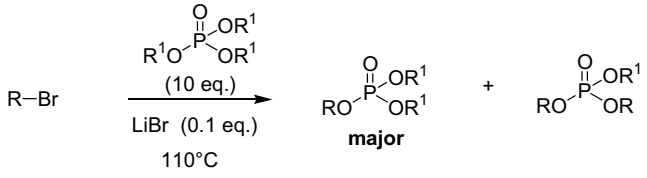




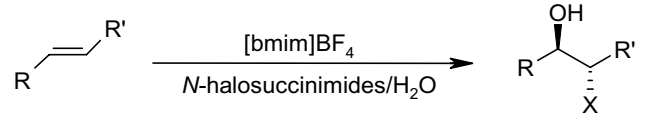
The conjugate addition of protected pyranose alkoxides to 1-nitro- and 1-nitrosoalkenes gave 2-nitroalkyl and 2-oximinoalkyl glycosides. In several cases, the reaction proceeded with preferential formation of the α-glycoside (α:β $\leqslant$ 4:1). The methodology was employed in model (L)-rhodinosylation reactions relevant to the total synthesis of lactonamycin.

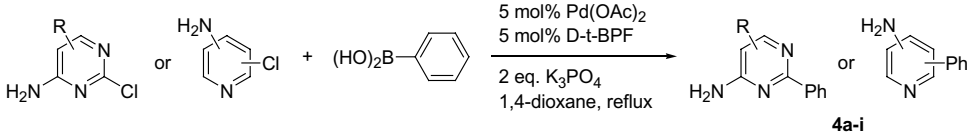


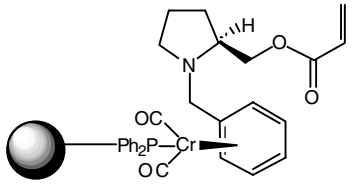




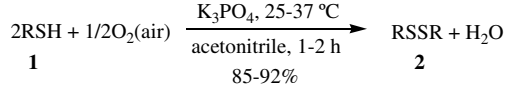
The treatment of trialkyl phosphate with different alkyl bromides provides facile access to mixed phosphate esters.



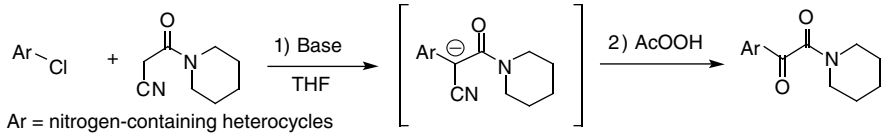


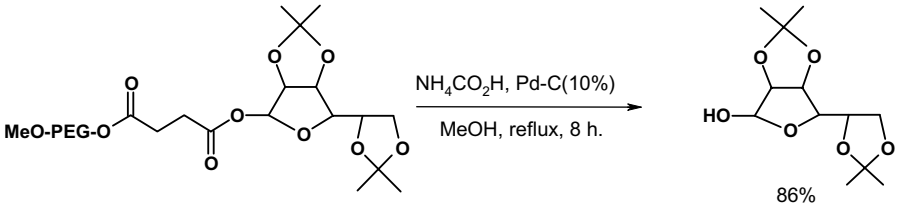


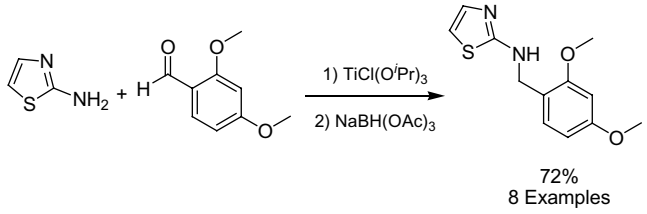
A highly selective chiral auxiliary, designed on the basis of π-shielding capability has been prepared from readily available L-proline. Cycloaddition diastereoselectivity as high as 99% was attainable using a polymer-metal supported variant.



where R=Ph, 4-ClC_6H_4, 4-*tert* butyl-C_6H_4, $PhCH_2$, cyclohexyl, *n*-C_5H_{11}, 2-pyridyl







OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

The number of contiguous ether rings of gymnocin-B is the largest among polyether compounds hitherto known. The complementary use of FAB CID MS/MS by choosing the lithiated molecular ion was highly effective to confirm the complex structure. *Tetrahedron Letters* **2005**, *46*, 3537–3540.

Indexed/Abstracted in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts, Chemical Engineering and Biotechnology Abstracts, Current Biotechnology Abstracts, Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei Compendex, EMBASE/Excerpta Medica, Medline, PASCAL, Research Alert, Science Citation Index, SciSearch

ISSN 0040-4039