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Tetrahedron Letters

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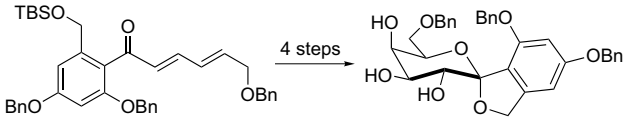
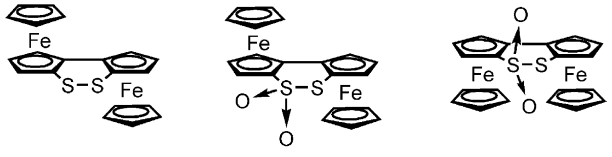
Contents

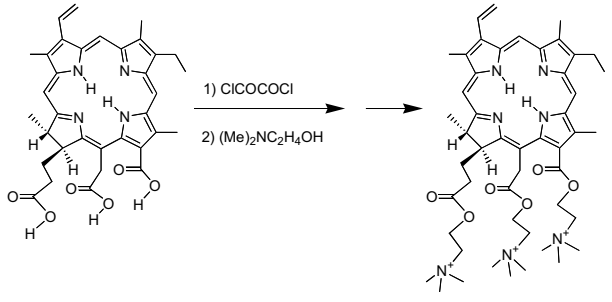
COMMUNICATIONS

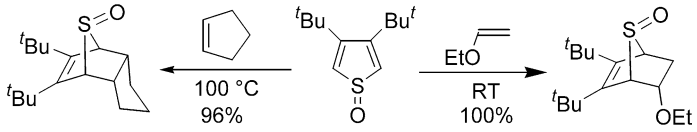




1 2 3

Three new biferrocenes annulated with 1,2-dithiin (**1**) and 1,2-dithiin 1,1-dioxides (**2**) and (**3**) were successfully synthesized satisfactory yields by the reaction of 2,2″-bis(*N*,*N*-dimethylaminosulfonyl)-1,1″-biferrocene with lithium aluminum hydride followed by treatment with chlorotrimethylsilane. The electrochemical properties of the biferrocenes (**1**)–(**3**) were furnished by cyclic and differential pulse voltammetries.

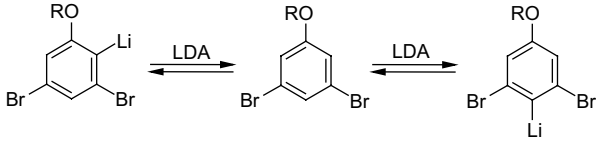


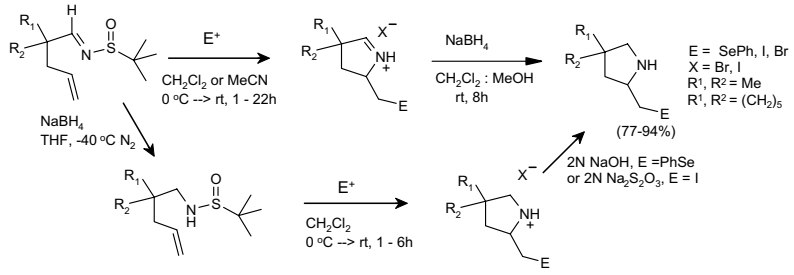


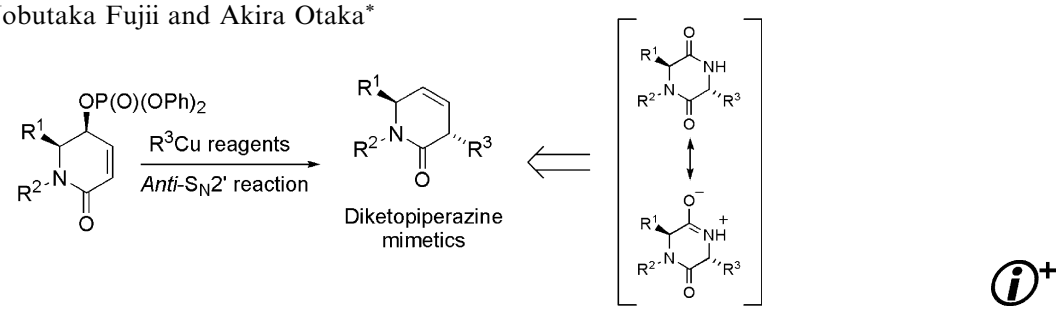
13a-p 14a-p

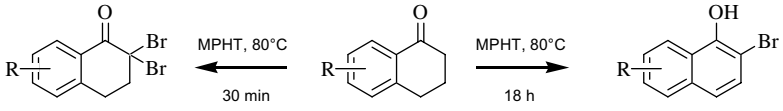
Where R_1=H, CH_3, R_2= H, CH_3
R_3=H, *n*-Bu CO_2Et, Ph
R_4= H, OTBS

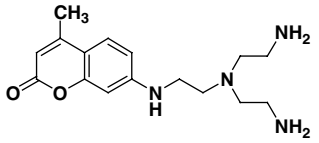
The exclusive formation of cyclopentenones was observed in molybdenum hexacarbonyl catalyzed Pauson–Khand reactions of 1,6-allenynes under 1 atm of CO (balloon) in excellent yields.



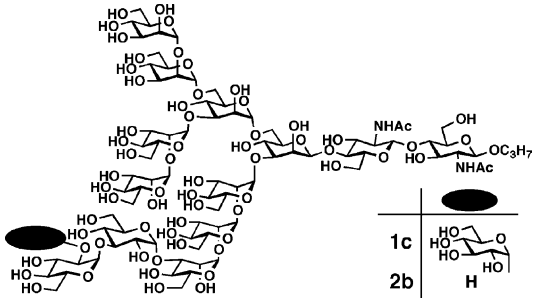


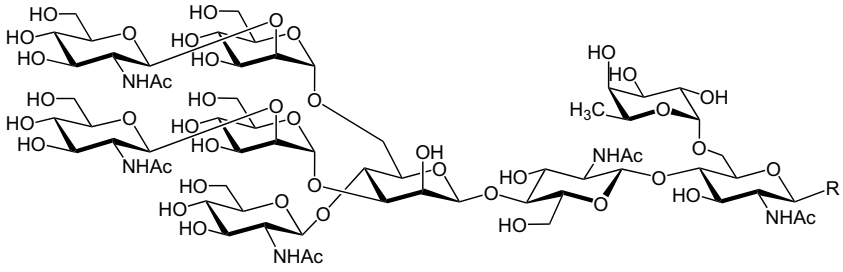


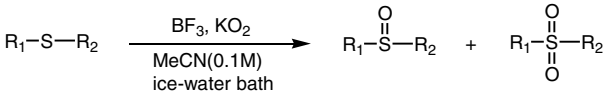




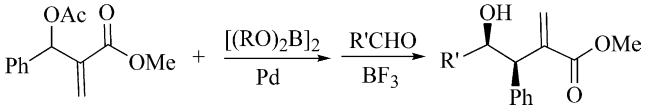
A new, UV-excited, fluorescent Zn^{2+} indicator was synthesized and the spectral profile of its free and Zn^{2+} bound forms was studied. The fluorescent properties of this probe are due to the 7-amino-4-methylcoumarin fluorophore, which is conjugated with the tris(2-aminoethyl)amine (TREN) that functions as the zinc-chelating moiety.



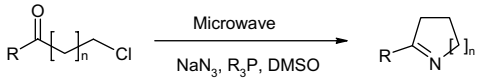


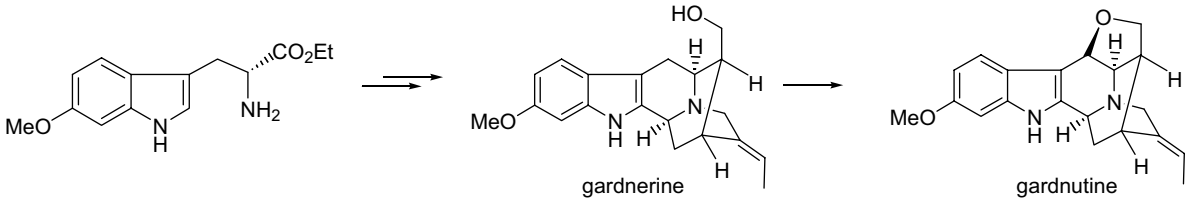


Activation of superoxide with BF_3 can facilitate highly chemoselective and efficient oxidation of sulfides to sulfoxides in 5 m with excellent yields and without any interference in the presence of ketone, olefin, ether, and hydroxyl functionalities.

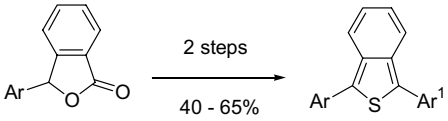


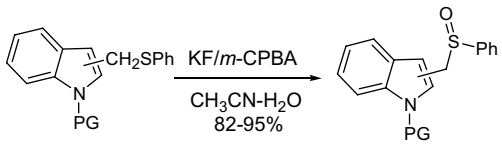
A one pot sequential cross-coupling/allylboration is described. Baylis–Hillman acetate adducts couple with bis(pinacolato)diboron to form substituted allylboronates, which react with aldehydes in the presence of a silica supported BF_3 catalyst to form highly functionalized homoallylic alcohols in excellent yields.

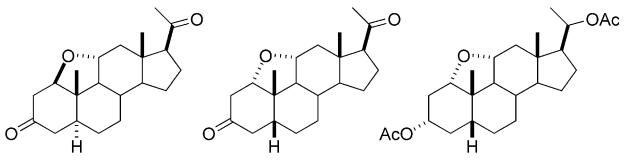




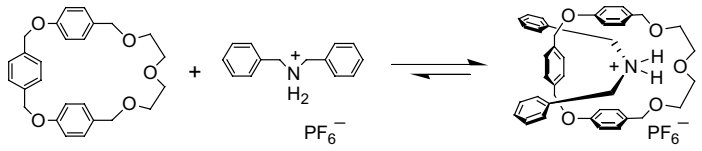
The first enantiospecific total synthesis of gardnerine and gardnutine has been achieved from 6-methoxy-D-tryptophan via the asymmetric Pictet–Spengler reaction, a stereocontrolled intramolecular enolate driven palladium-mediated cross-coupling reaction and a chemospecific, regiospecific hydroboration/oxidation sequence as key steps.

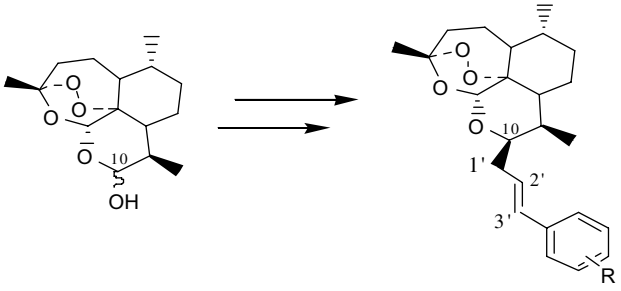


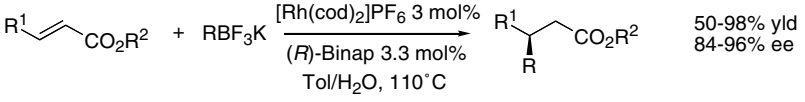


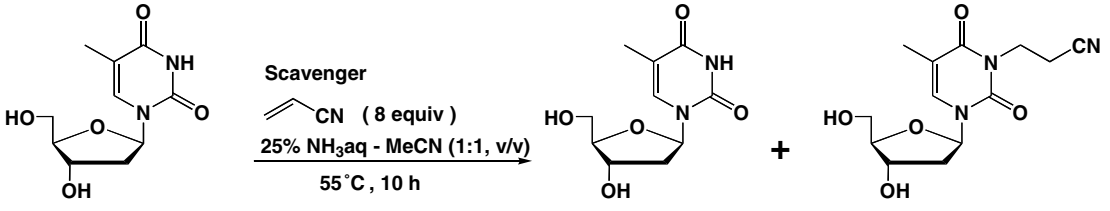


1,11-Epoxysteroids are obtained using a remote functionalization reaction of 11α-hydroxy-pregnanes with visible light in the presence of diacetoxyiodobenzene and iodine.

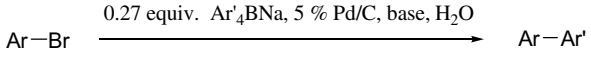




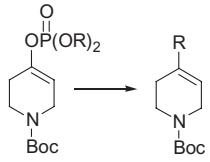




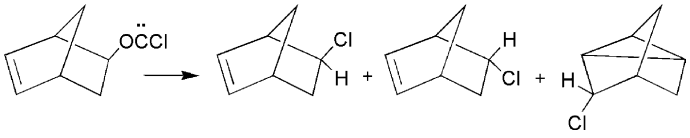
A new procedure for deprotection of synthetic oligonucleotides to prevent nucleobase alkylation.



(Ar: aryl group bearing carboxy or hydroxy group; Ar': phenyl or *p*-tolyl group)



Enol phosphates, synthesized from 4-piperidone, react by palladium catalyzed cross-coupling with arylboronic acids and by iron and palladium catalyzed cross-coupling with Grignard reagents to give 4-substituted tetrahydropyridines.



OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

First chemical synthesis of triglucosylated high mannose type tetradecasaccharide ($Glc_3Man_9GlcNAc_2$), a common precursor of asparagine-linked glycoproteins, as well as its glucosidase I product tridecasaccharide ($Glc_2Man_9GlcNAc_2$) were achieved using convergent and stereoselective manner. These oligosaccharides will be valuable standards to reveal protein–oligosaccharide interactions involved in glycoprotein biosynthesis. *Tetrahedron Letters* **2005**, *46*, 4197–4200.

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

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