ELSEVIER

Tetrahedron Letters

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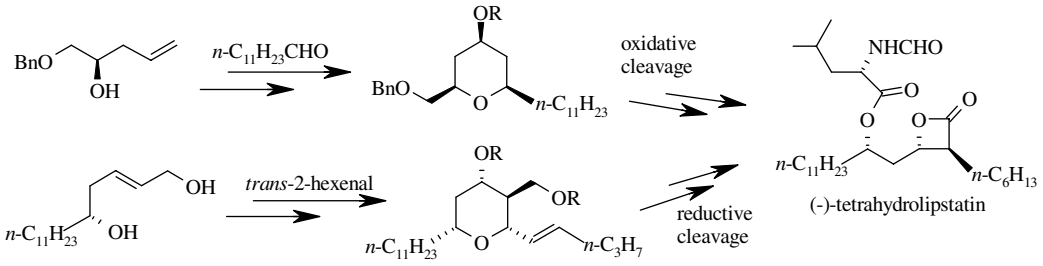
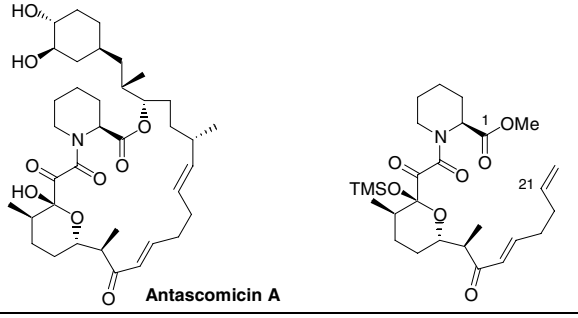
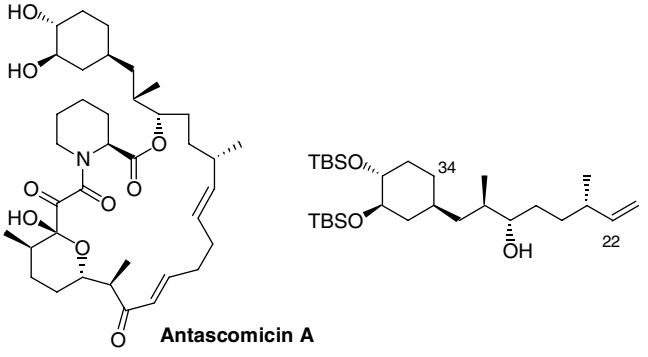
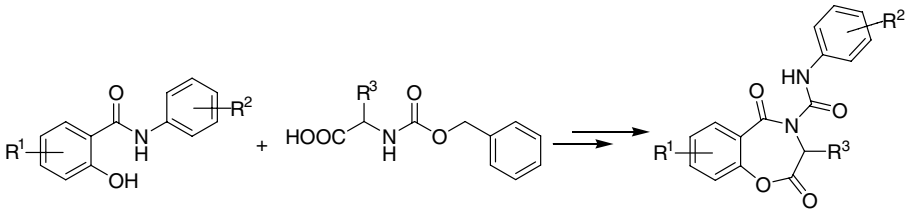
Contents

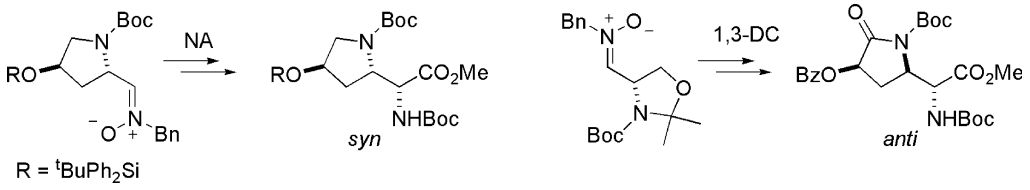
COMMUNICATIONS

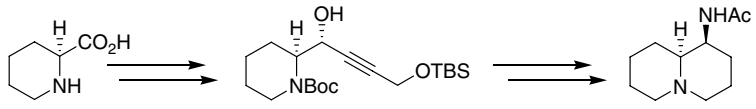


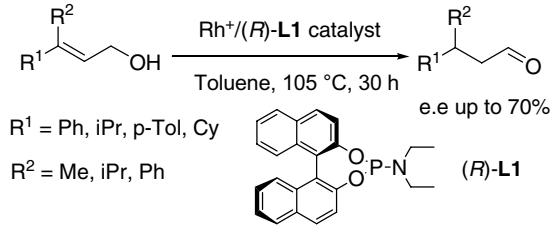


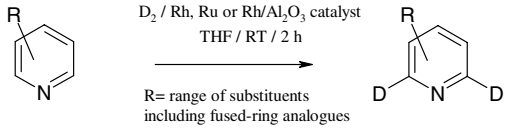


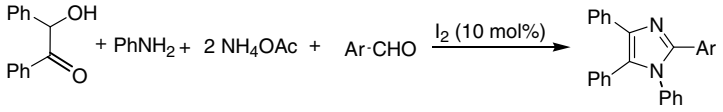






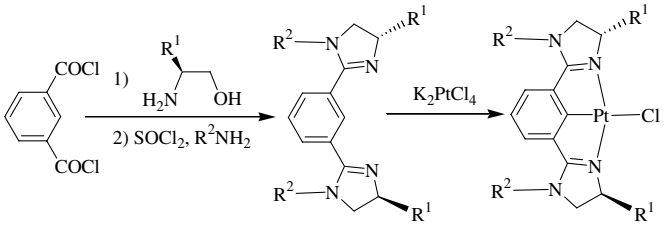




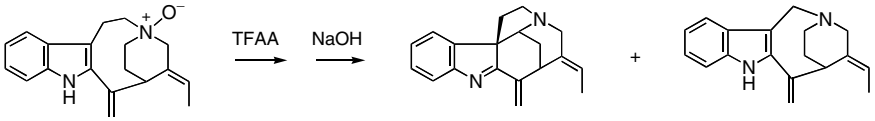


Molecular iodine acts as an efficient catalyst for the one-pot synthesis of 1,2,4,5-tetraarylimidazoles using benzoin, an aromatic aldehyde and an amine in the presence of ammonium acetate.

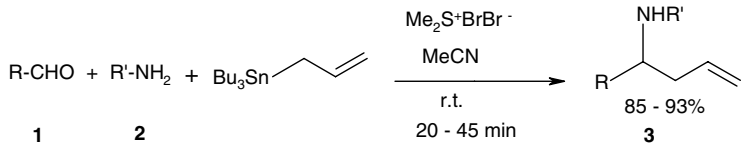
Chiral C_2-symmetric bis(imidazoline) pincer ligands **2a**–**d** have been synthesized for the first time. Direct cycloplatination of these ligands with K_2PtCl_4 in dry acetic acid afforded the corresponding cycloplatinated pincer complexes **3a**–**d**. The X-ray single-crystal structure of platinum complex **3d** and the preliminary studies on the photoluminescent properties of **3** are reported.

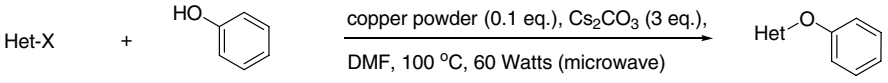


2a-2d **3a-3d**

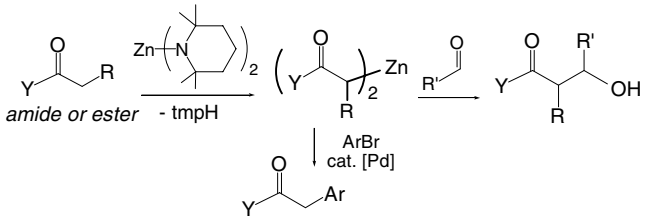


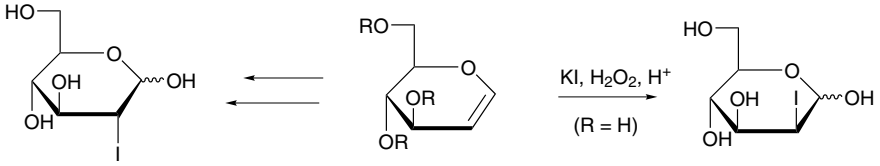
pericine-*N*-oxide valparicine (new) apparicine

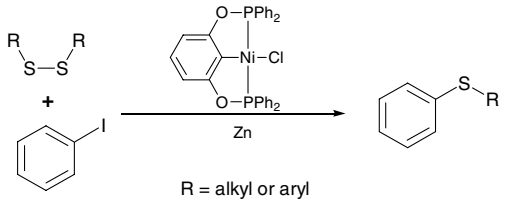




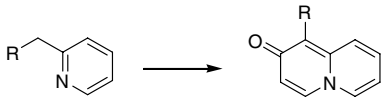
Ullmann ether synthesis was conducted on a variety of chloro-heterocycles with different phenols using optimized conditions involving copper powder and cesium carbonate. On many substrates, microwave heating afforded higher yields in significantly shorter reaction times compared to conventional heating conditions. These findings provide a facile method for aryl ether synthesis from chloropyridines, chloroquinolines, and chlorobenzothiazoles.

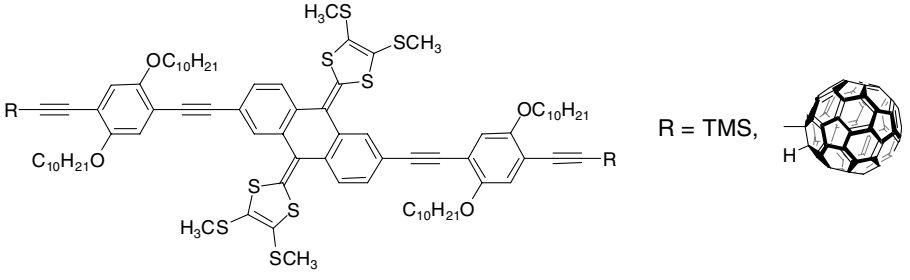


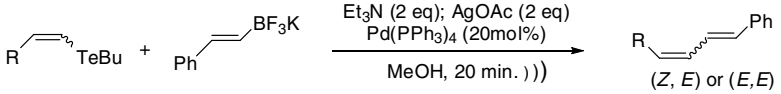




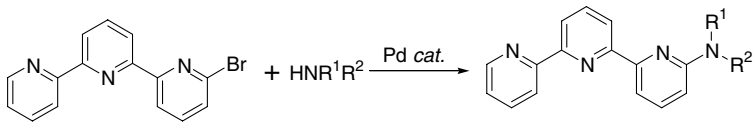
[NiCl{C_6H_3-2,6-$(OPPh_2)_2$}] efficiently catalyzes the thiolation of iodobenzene with a broad scope of disulfides in the presence of zinc, the coupled products are obtained in excellent and in many cases nearly quantitative yields.



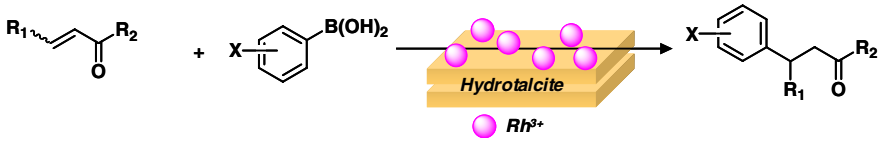


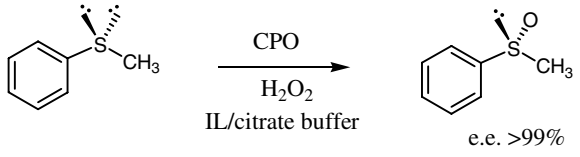


R=phenyl, naphtyl, alkyl, alkenyl, hydroxi.

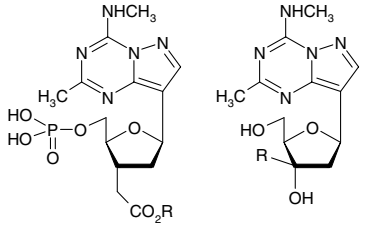


A new series of highly fluorescent tpy derivatives, N-substituted 6-amino- and 6,6″-diamino-2,2′:6′,2″-terpyridine was conveniently prepared in one-step by Pd-catalyzed amination of bromo-substituted tpys with various amines.

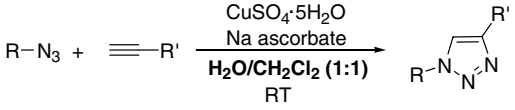




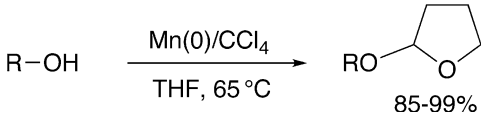
IL= [mmim][Me_2PO_4] or [N_{1112}OH][Citr] or [N_{1112}OH][OAc]



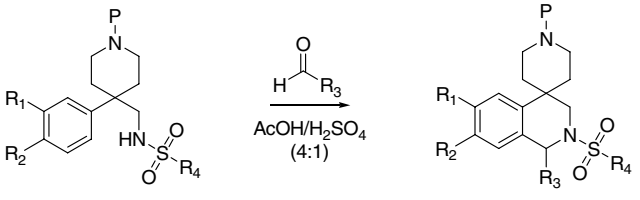
3′-Substituted 2′-deoxynucleoside analogues in the pyrazolotriazine series were prepared from the corresponding 3′-ketonucleoside via the Wittig reaction or a stereoselective addition of alkynylcerium reagents.

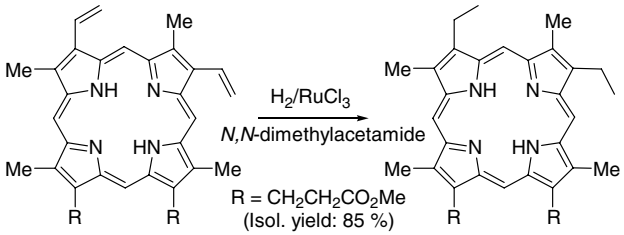


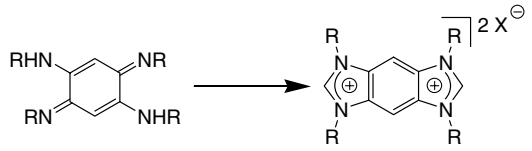
CH_2Cl_2/H_2O solvent system increased reaction rates and provided 1,2,3-triazoles in excellent yields compared to other known solvent systems.

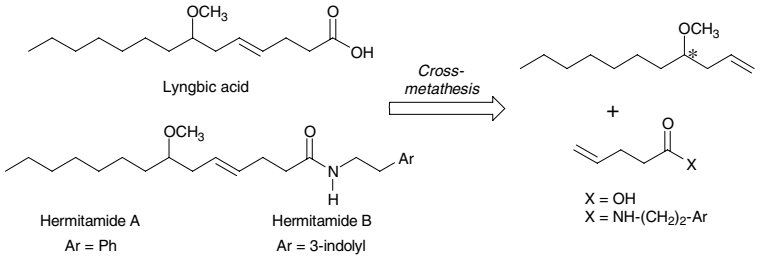


A wide variety of alcohols are efficiently transformed into the corresponding 2-tetrahydrofuranyl ethers by a combination of Mn(0) powder and CCl_4 in tetrahydrofuran.

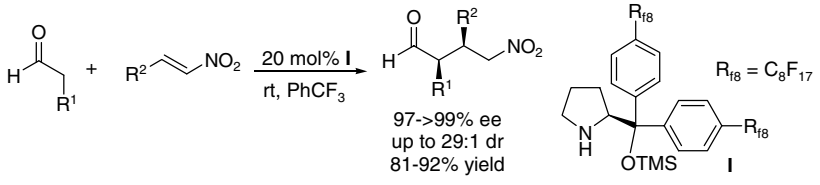


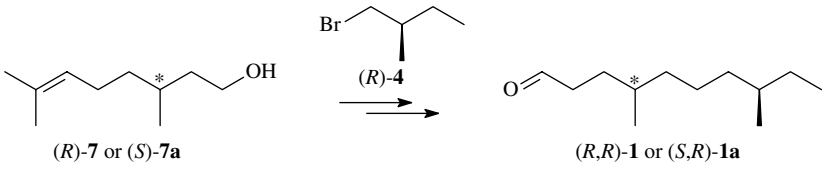


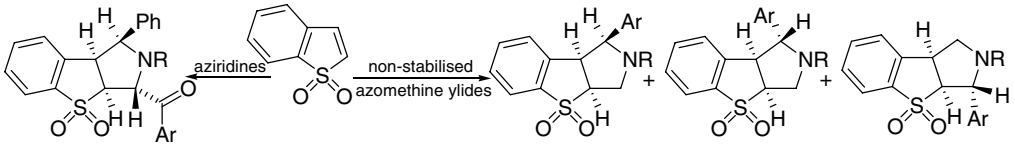


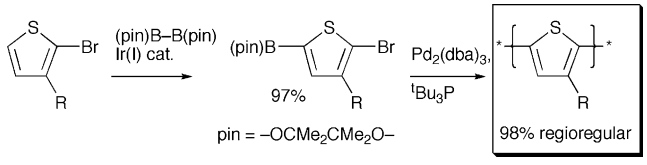


A short access to racemic lyngbic acid and hermitamides A and B and a formal enantioselective synthesis of theses compounds have been devised based on a cross-metathesis reaction between readily available substrates.

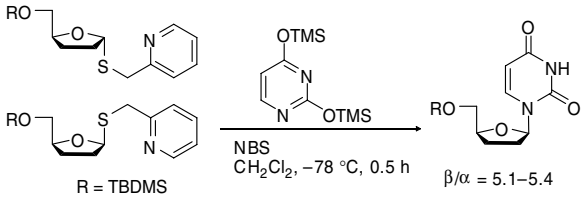


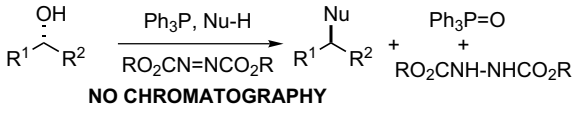




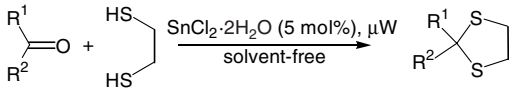


Bulky, electron-rich Pd(0)–phosphane complexes are effective catalysts for the preparation of regioregular polyalkylthiophenes using Suzuki coupling; the necessary monomer can be prepared in high yield by Ir-catalysed borylation, without the need for strong bases.



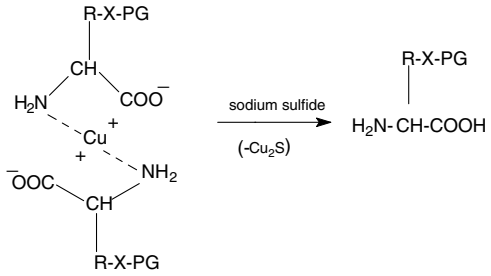


Products can easily be isolated in generally excellent yields from Mitsunobu reactions without resort to chromatography by prior oxidation using dilute hydrogen peroxide followed by simple filtrations through silica gel and aqueous washings.

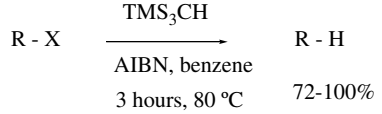


A mild, efficient and solvent-free protocol for conversion of aldehydes and ketones into their corresponding 1,3-dithiolanes using 1,2-ethanedithiol in the presence of a catalytic amount of $SnCl_2{\cdot}2H_2O$ is reported.

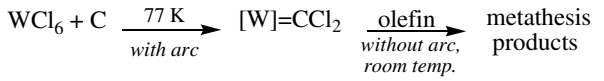
Sodium sulfide reductively removes copper from amino acid complexes to give the free colorless amino acid and insoluble copper(I) sulfide.

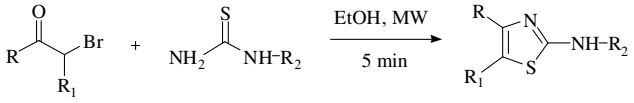


R= Side chain
PG = Protecting Group



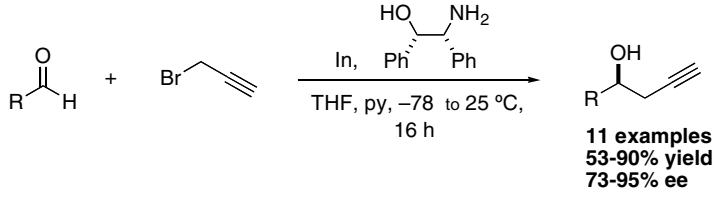
where X = Cl, Br, I, OC(S)SMe,
PTOC, C(O)ONMeC(S)SMe

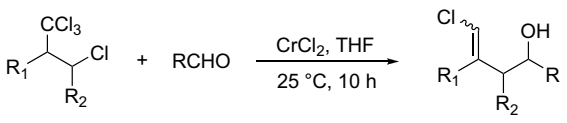




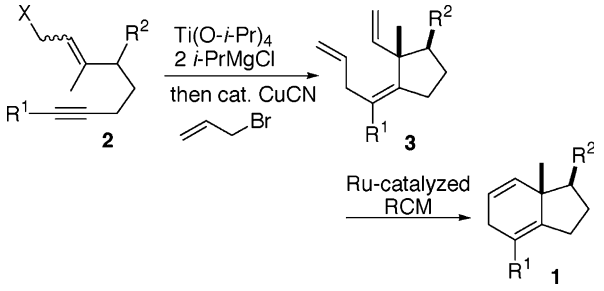
R = Ar; R_1 = H, CH_3, Ph; R_2 = H, CH_3, Ph

Microwave irradiation promotes the rapid one-pot synthesis of 2-aminothiazoles formed via the condensation of α-bromoketones with thiourea.

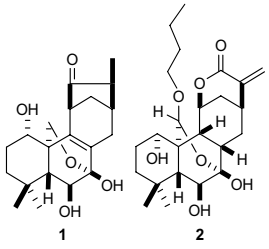


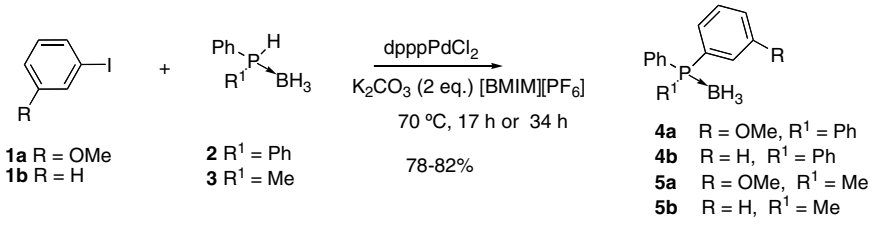


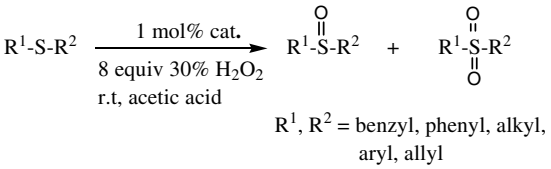
R_1, R_2 = -$(CH_2)_4$- R = Tol, *i*-Pr
R_1 = R_2 = *n*-Bu



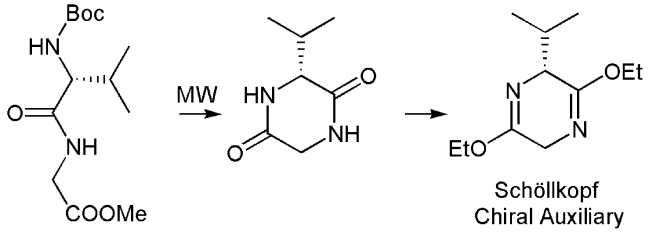
Parvifoline X (**1**), a new rearranged *ent*-kaurane diterpenoid, and parvifoline Y (**2**), a new 8,15-*seco*-*ent*-kaurane diterpenoid, were isolated from the leaves of *Isodon parvifolius*. Their structures were elucidated by spectroscopic methods including 2D NMR analysis, and supported by a biogenetic pathway. Parvifoline X (**1**), possessing a new 15(8→11)-*abeo*-7α,20-epoxy-*ent*-kaurane skeleton, was found from the genus *Isodon* for the first time. Compounds **1** and **2** were evaluated for their inhibitory activity against A549, HT-29, and K562 cell lines. Parvifoline Y (**2**) was the most cytotoxic against A549 cells with an IC_{50} value of 4.97 μM.

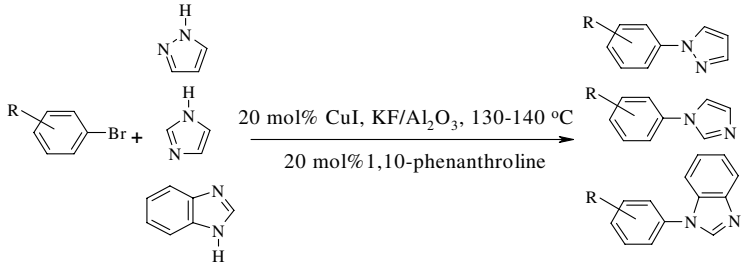




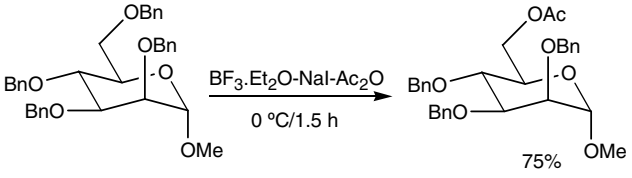


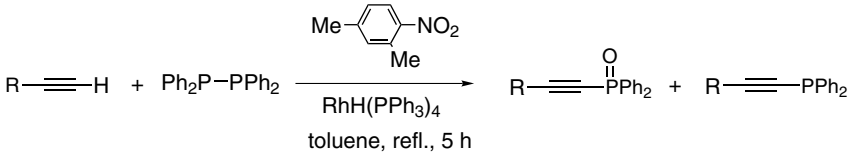
Sulfides were selectively oxidized to the corresponding sulfoxides in good yields with hydrogen peroxide using a manganese(III) Schiff-base complex as catalyst in glacial acetic acid as solvent under mild conditions.

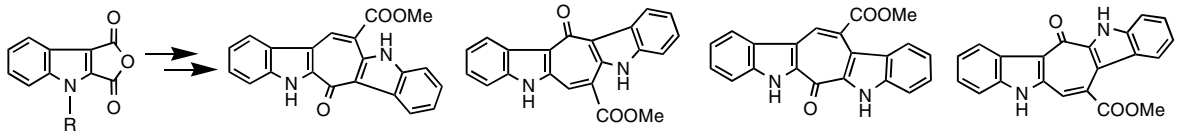


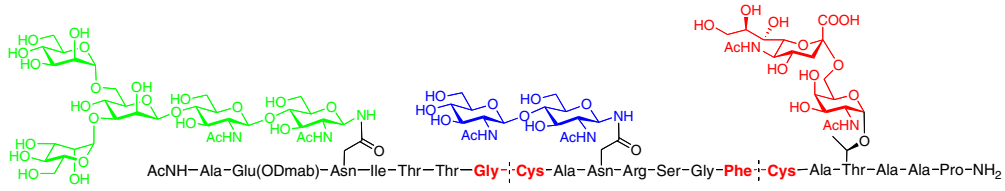


A simple and efficient method for the coupling of aryl bromides with heterocyclic compounds such as diazoles that does not require the use of alkoxide bases is described.









*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

We have demonstrated the synthesis of a multifunctional glycopeptide through reiterative native chemical ligation. The compatibility of both N-linked and O-linked glycans in this process is noteworthy. Its ability to encompass the biologically critical sialic acid glycosides is particularly encouraging. In our ongoing quest to develop methodologies to enable the total synthesis of multiply glycosylated complex glycoproteins of potential clinical value, this new reiterative coupling protocol constitutes an important, if early, entry. We expect that the strategies and protocols of the type disclosed herein will be extendable in pursuing our quest of building homogeneous complex glycoproteins of medicinal value. *Tetrahedron Letters* **2006**, *47*, 5219–5223.

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