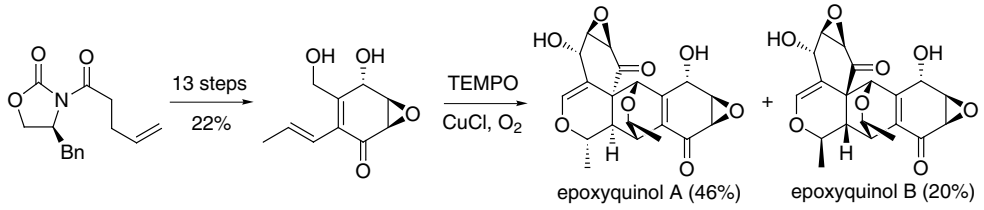
ELSEVIER

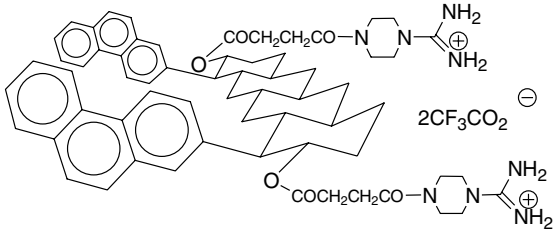
Tetrahedron Letters

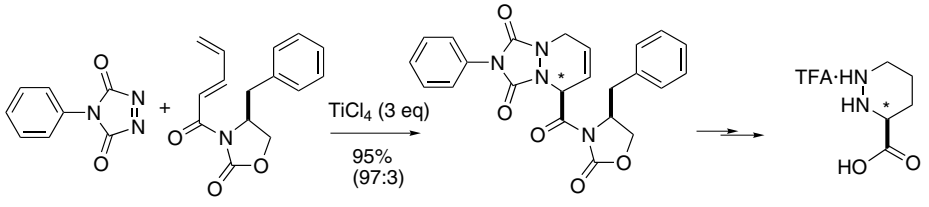
Tetrahedron Letters Vol. 46, No. 4, 2005

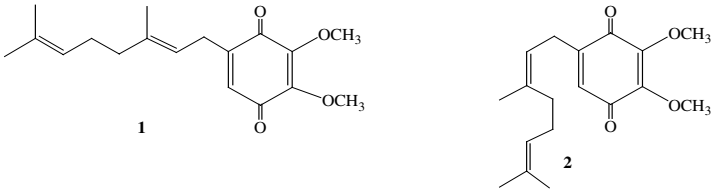
Contents

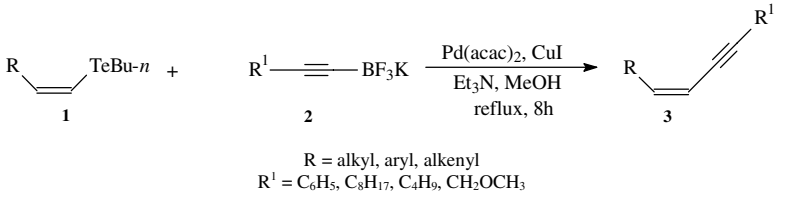
COMMUNICATIONS

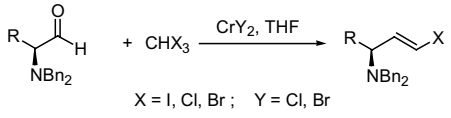


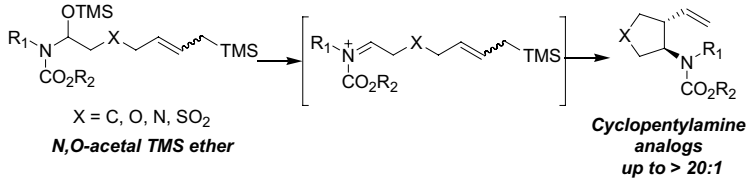


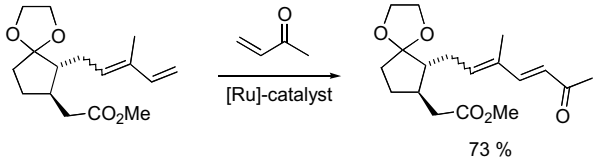




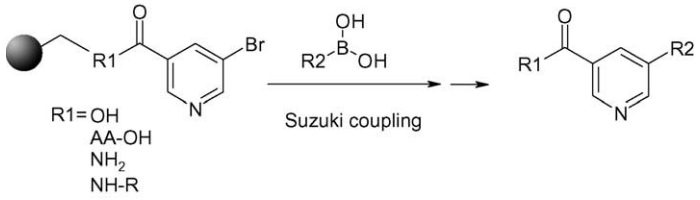




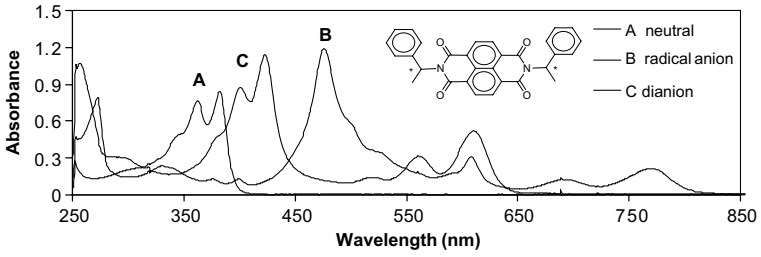


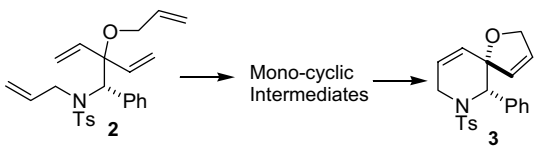


Cross-metathesis reactions between 1,3-dienes and electron-deficient olefins have been studied. Using 1,3-dienes possessing a trisubstituted internal double bond and methyl vinyl ketone as the coupling partner, the cross products were obtained in moderate to good yields.

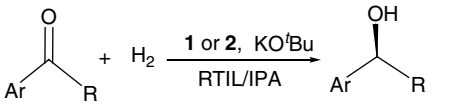


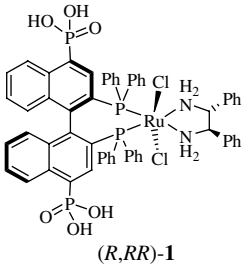
The application of the Suzuki coupling reaction to the preparation of small combinatorial libraries using 5-bromonicotinic acid as a scaffold onto three different types of solid support (Wang, Rink, and BAL resin) is described.

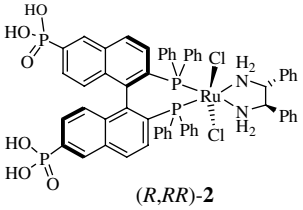


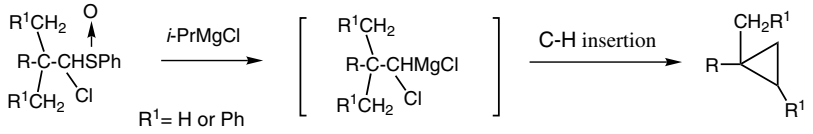


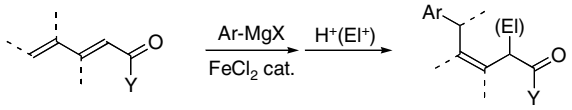
A detailed study of the steps involved in the double ring-closing metathesis reaction of **2** to **3** has been carried out. Both the selectivity and mechanism were affected by choice of catalyst.

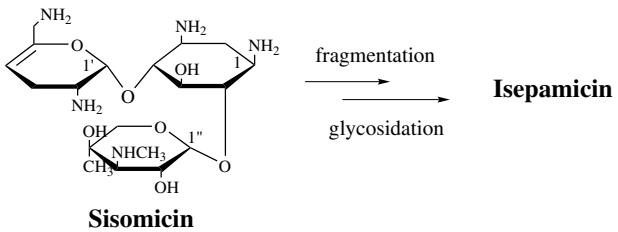


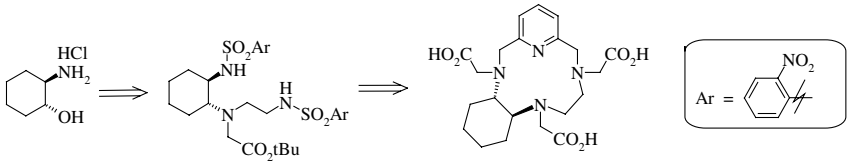

(*R*,*RR*)-**1**

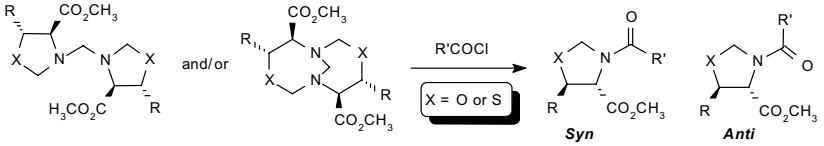

(*R*,*RR*)-**2**

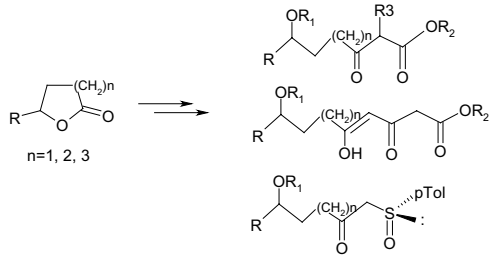


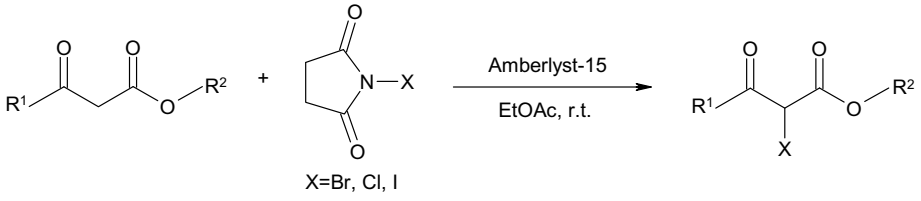


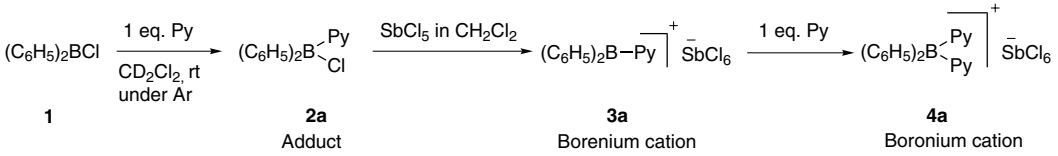


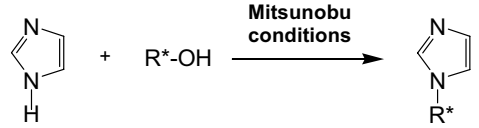


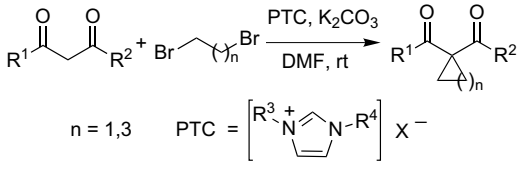




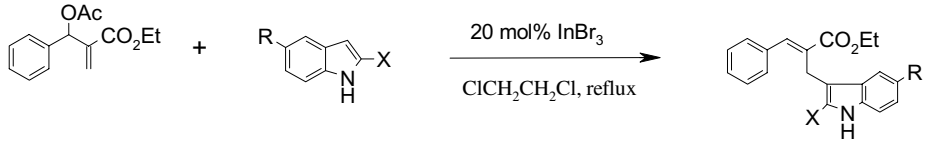


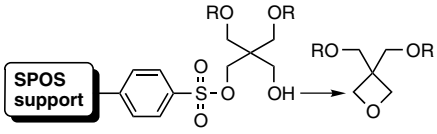


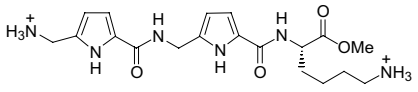


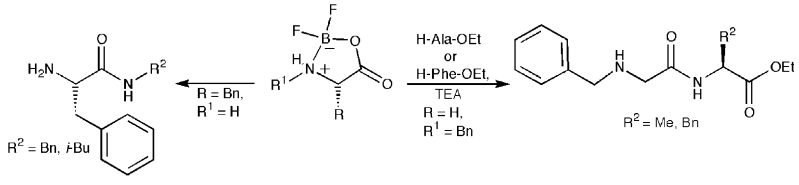


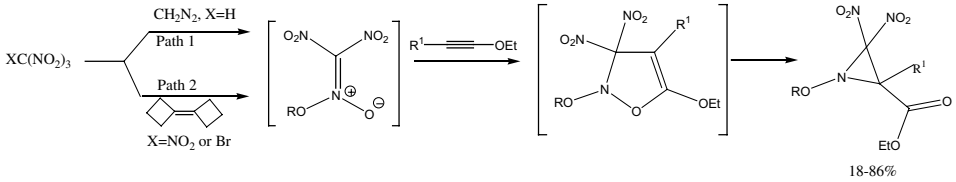
The efficient synthesis of 1,1-disubstituted derivatives and the construction of cyclopropane and cyclopentane ring systems via dialkylation and cycloalkylation reactions of active methylene compounds using imidazolium salts as phase transfer catalyst is described.



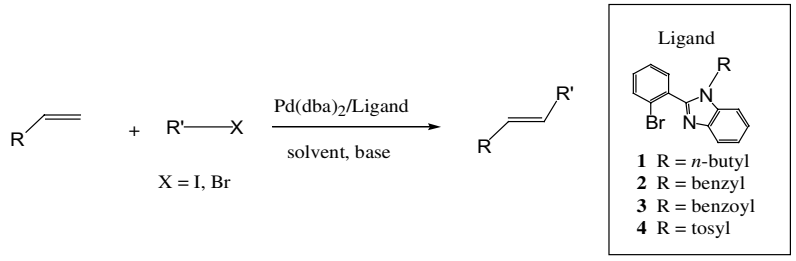


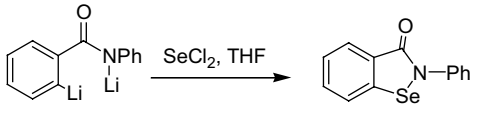


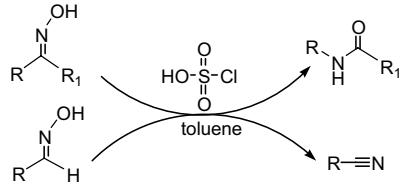


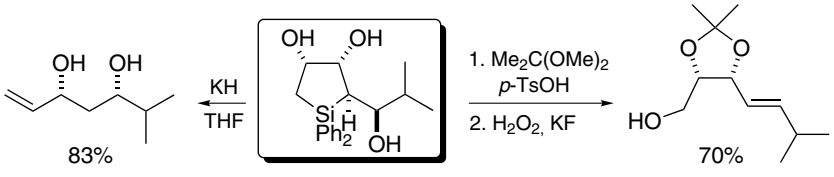


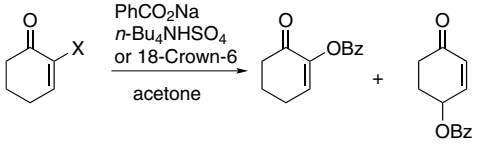
Three-component one-pot reactions of tetranitro- and bromotrinitromethanes with alkoxyacetylenes, mediated by diazomethane or bicyclobutylidene, yielding *gem*-dinitroaziridines via sequential electrophile transfer followed by [3+2]-cycloaddition, have been studied. A series of novel *N*-alkoxy-2,2-dinitroaziridines have been prepared by these reactions.





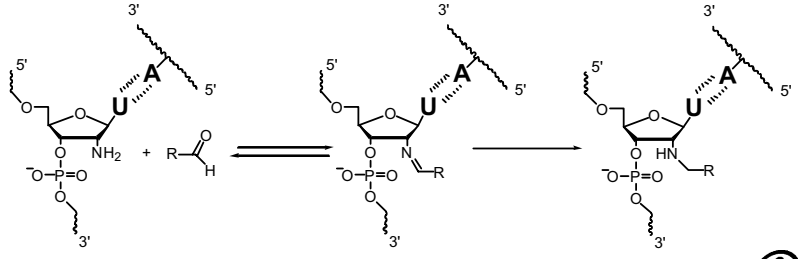


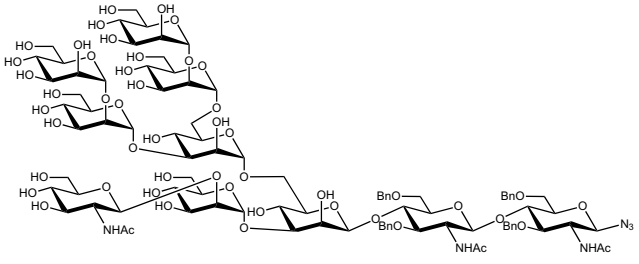


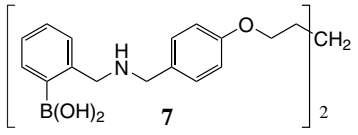


Sodium benzoate reacts with α-halo-α,β-enones in the presence of tetrabutylammonium hydrogensulfate or 18-Crown-6 to afford α- and/or γ-benzoyloxylated α,β-enones in good yield. The α/γ and γ/γ′ selectivities are dependent on the substrate and reagent.

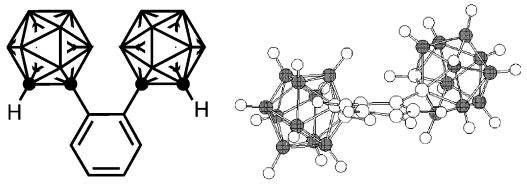
A dynamic combinatorial chemistry (DCC) approach has been used to identify a conjugated oligonucleotide with an increased affinity for its complementary target. The result obtained demonstrates positional selection using DCC.



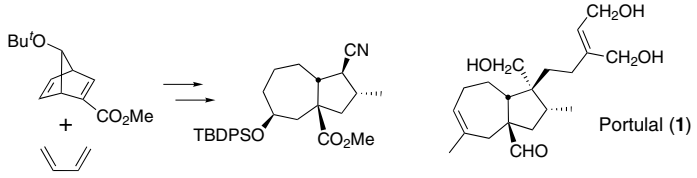


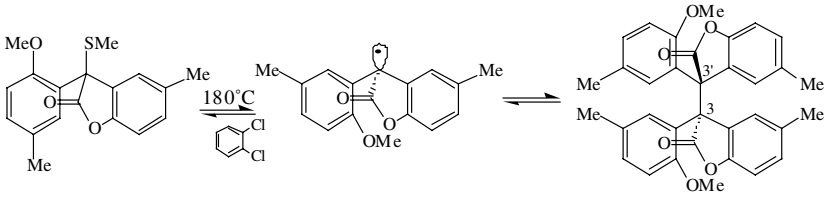


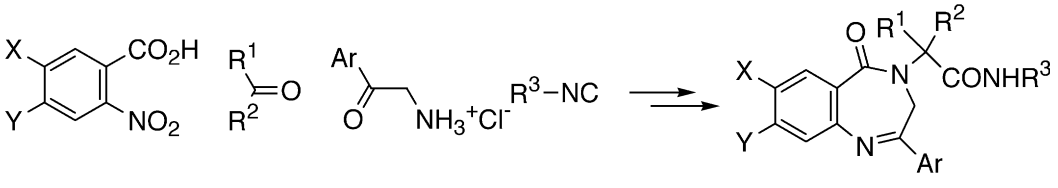
Compound **7**, based on pentamidine, was designed to increase the parent compound's affinity for the *Leishmania* cell surface. The leishmanicidal activity of **7** is similar to that of the nonboronated diamine **4** and appears to be more effective at lower concentrations.

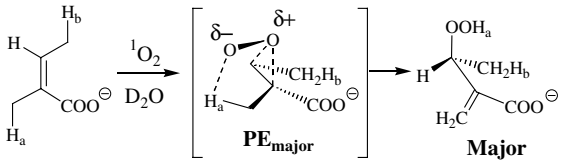


Synthesis and structural X-ray analysis of 1,2-bis(*o*-carboranyl)benzene were performed to examine the steric effects of the two extremely bulky *o*-carborane cages at adjacent positions on the planarity of the benzene ring.









The singlet oxygen photooxidations of several carboxylic acid salts were conducted in deuterated water. We attribute the observed regiochemistry to stabilizing hydrogen bonding interactions between the solvent and the perepoxide, which leads to the major ene product.

OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

A new enantioselective total synthesis of antiangeogenic pentaketide dimers, epoxyquinols A and B, was accomplished by oxidative dimerization of a monomeric pentaketide precursor prepared from a known oxazolidinone derivative in 22% overall yield by an operationally simple thirteen-step sequence including the Evans asymmetric aldol reaction as the source of chirality. *Tetrahedron Letters* **2005**, *46*, 547–549.

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