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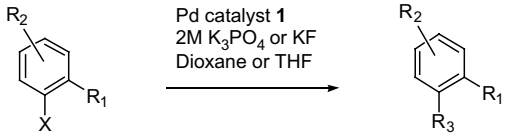
Tetrahedron Letters

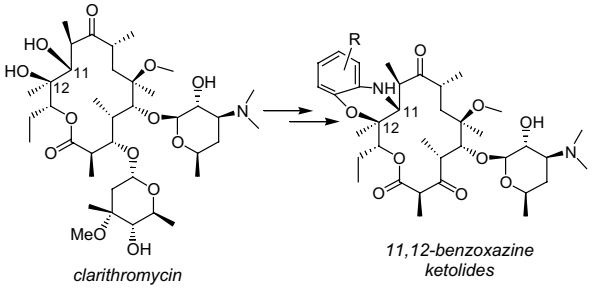
Tetrahedron Letters Vol. 46, No. 11, 2005

Contents

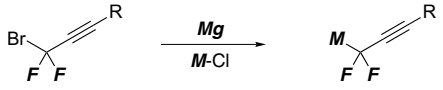
COMMUNICATIONS



X=Cl or Br
R_1=NH_2 or OH
R_2=COOMe, $CONH_2$, CN or Alkyl group
R_3=Aryl, Heteroaryl

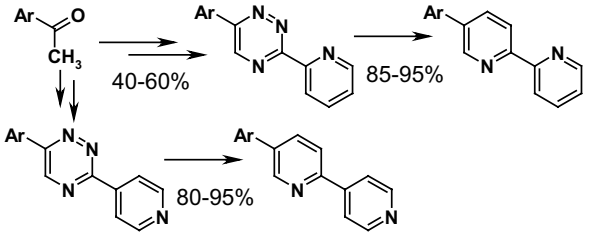


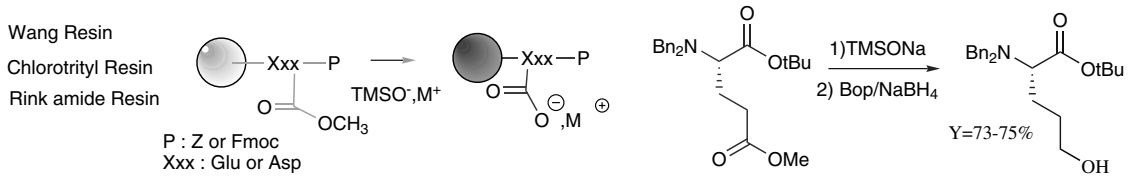
clarithromycin *11,12-benzoxazine ketolides*

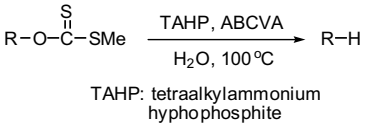


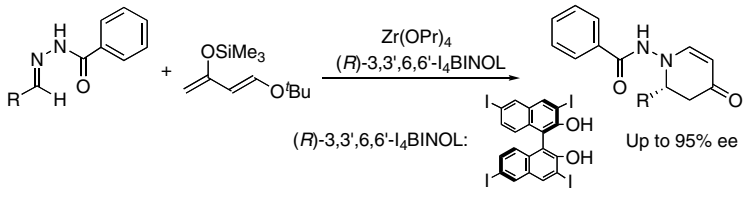
M = Me_3Si, Me_3Sn

A Mg(0)/Me_3SiCl system was found to be effective for the preparation of difluoropropargylsilane. Also, Me_3SnCl worked well to give the corresponding propargylstannane.

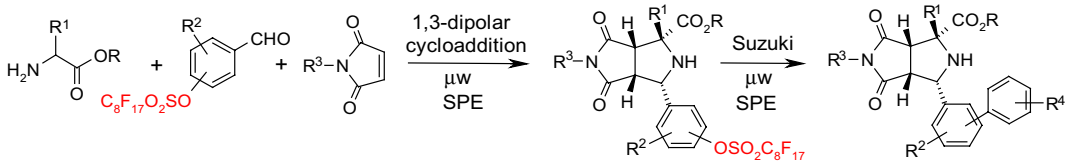


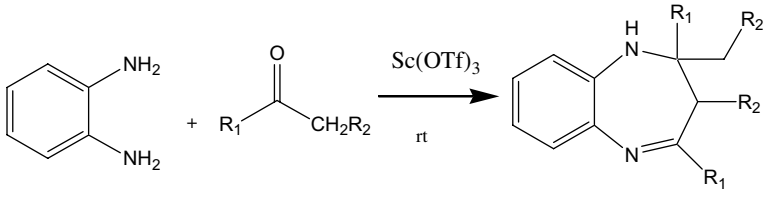


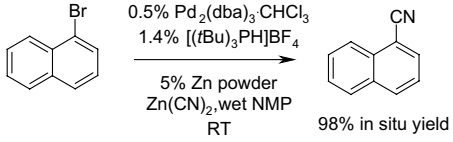




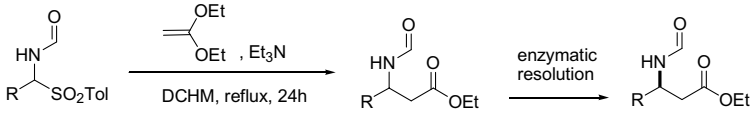
Catalytic asymmetric aza Diels–Alder reactions of hydrazones with Danishefsky's dienes proceeded in high enantioselectivities in the presence of a chiral zirconium catalyst. Formal synthesis of (*S*)-coniine was successfully attained using the present reaction.





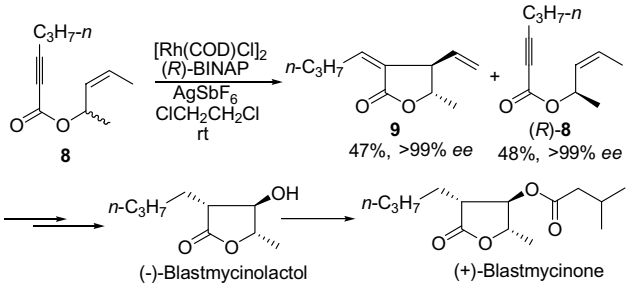


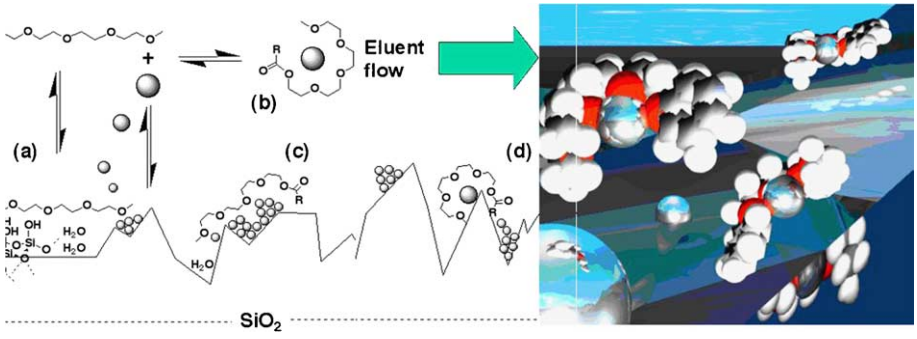
DOE-optimized conditions, 13 additional examples.

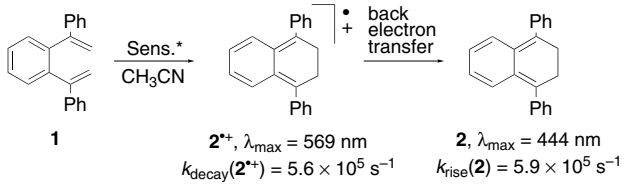


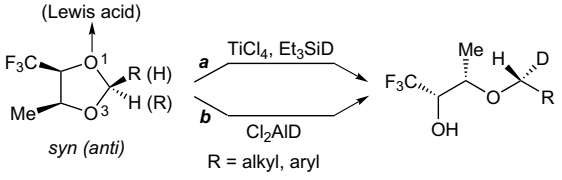
R=Ph, 4-OH-Ph, 4-NO_2-Ph, thiophene, 4-MeO-Ph, *t*-Bu

R=Ph, 95%ee, 43%

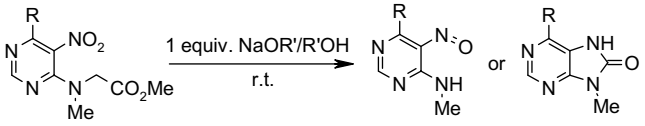


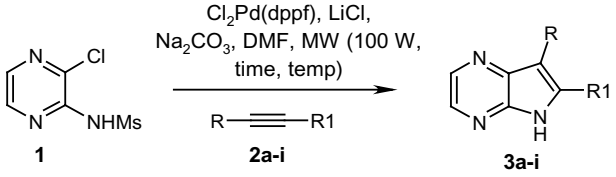


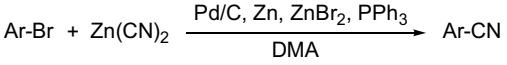




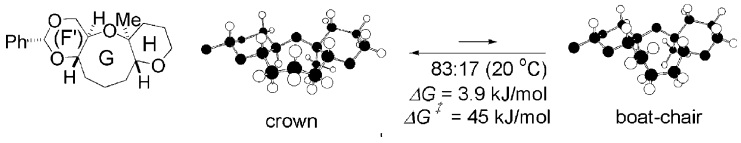
Reductive ring-opening of both *syn*- and *anti*-dioxolanes gives rise to the same stereochemical outcome using either $TiCl_4/Et_3SiD$ or Cl_2AlD as a reagent.

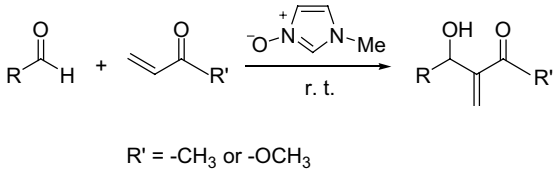


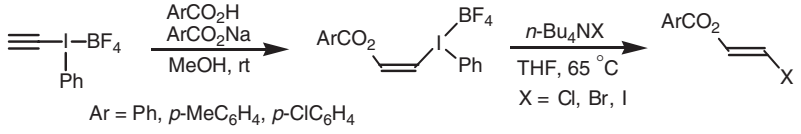




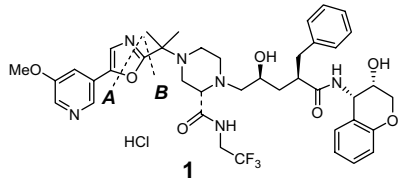
Ar: substituted phenyl, heteroaryl with a substituent involving sterically congested electron-rich groups





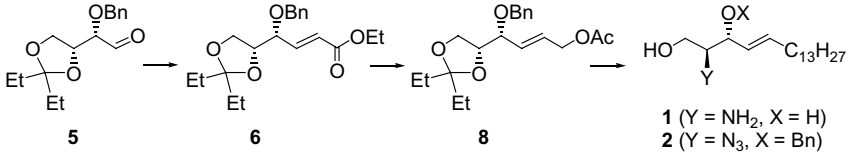


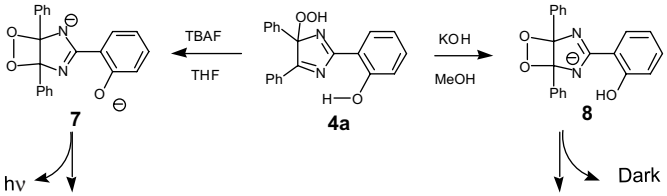
Exposure of (*Z*)-(β-benzoyloxyvinyl)phenyl-λ³-iodanes to *n*-Bu_4NX in THF at 65 °C results in a vinylic S_N2 reaction to give the inverted (*E*)-vinyl halides in high yields.



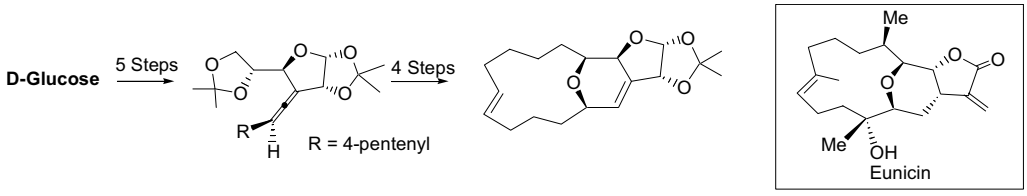
1

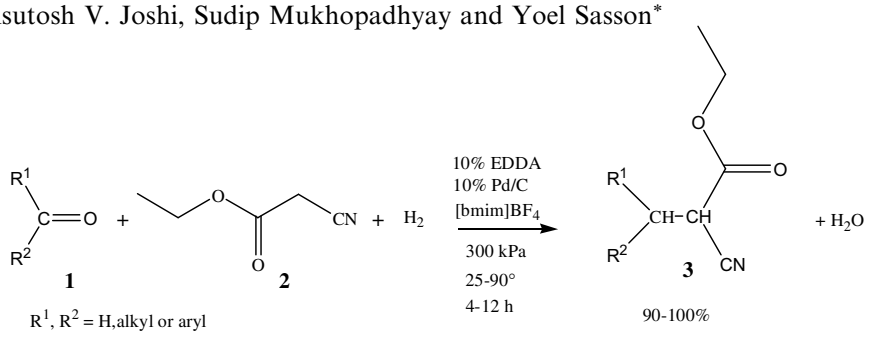
Two syntheses of the title compound **1** are described based on different approaches for installing the oxazole ring moiety. Formation and dehydration of ketoamide (***A***) was initially used and scaled up on several kilogram scale, then oxazole anion/iminium coupling (***B***) was developed for a more convergent approach.

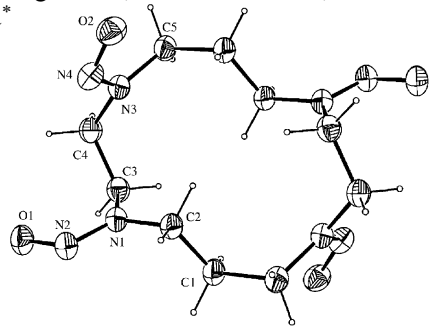




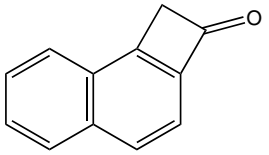
The location effect of an OH group on the chemiluminescence efficiencies of 4-hydroperoxy-2-(*o*-, *m*-, or *p*-hydroxyphenyl)-4,5-diphenyl-4*H*-isoimidazoles **4a**, **4b**, and **4c** was investigated. The efficiency of **4a** with *o*-OH was 0.28 times of that of lophine peroxide on the initiation with KOH/MeOH. When the trigger base was changed to TBAF/THF, the efficiency was 530-fold in a dry DMF. However, there is not such dramatic change in the efficiency for **4b** with *m*-OH and **4c** with *p*-OH by the change of trigger bases.

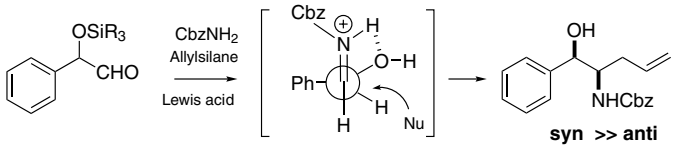


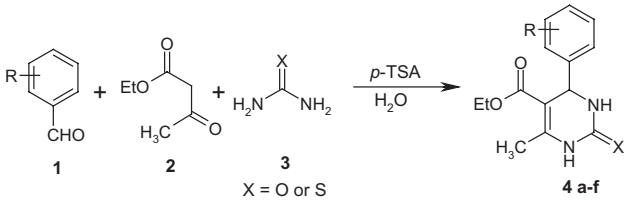




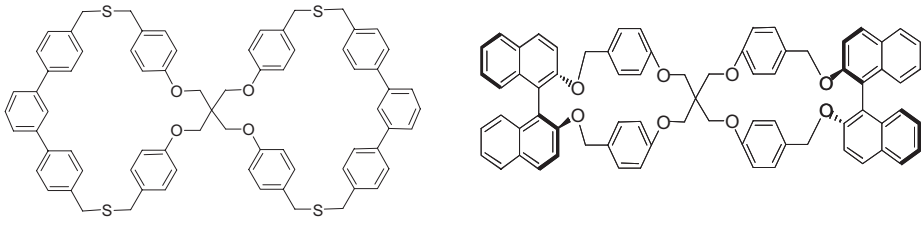
The nitrosylation of 1,4,8,11-tetraazacyclotetradecane (cyclam) generates a new cyclam-$(NO)_4$ compound. The structure was resolved by crystal X-ray analysis, and the photoreactivity study suggest that the cyclam$(NO)_4$ compound behaves as a nitrosyl donor through an heterolytic cleavage of N–NO bond.



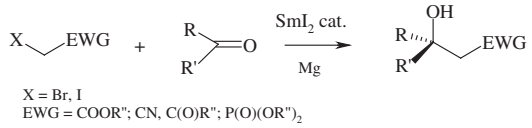




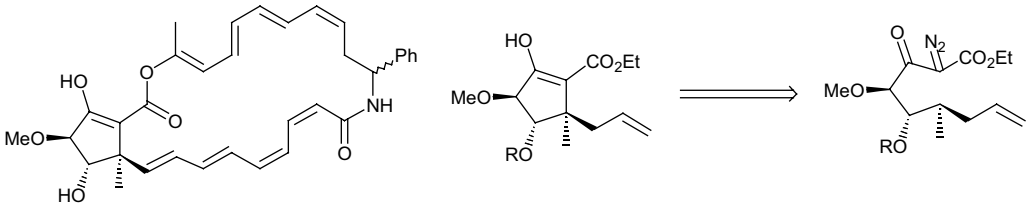
Rapid reactions with excellent yield and high atom economy are described.

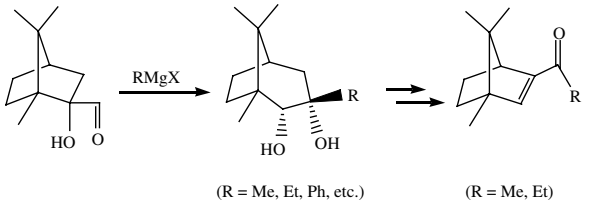


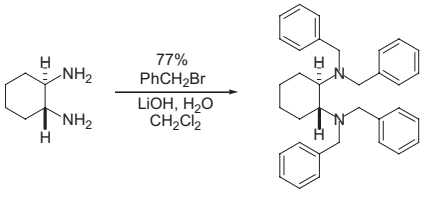
The synthesis of various thia- and oxa-spirobicyclic cyclophanes from a pentaerythrityl building block is described.

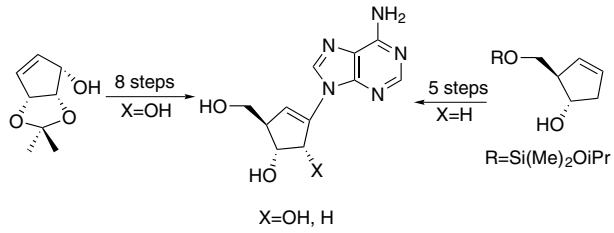


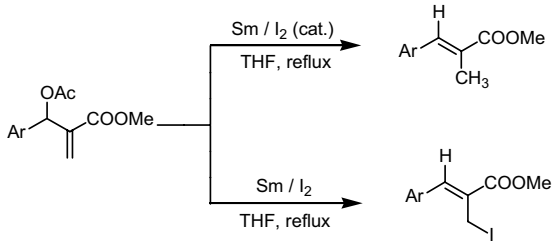
A substoichiometric protocol for Reformatsky-type addition of α-haloesters, α-haloketones, α-halonitriles and α-halophosphonates to carbonyl compounds has been developed. β-Hydroxyesters and β-hydroxynitriles were obtained in good to excellent yields.



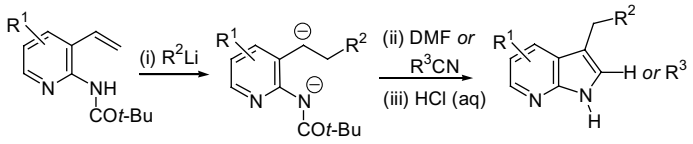


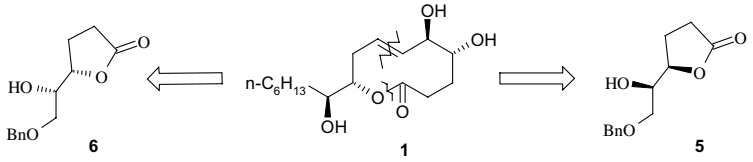




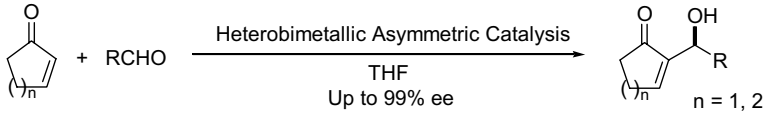


Promoted by samarium metal in the presence of a catalytic amount of iodine, the Baylis–Hillman adducts underwent reductive elimination to form (*E*)-methylcinnamic ester derivatives. When the iodine was used in 1:1 ratio with metallic samarium, stereospecific syntheses of allylic iodide derivatives, (2*Z*)-2-(iodomethyl)alk-2-enoates, were achieved. Thus, this gives a new approach to the selective construction of stereo-defined trisubstituted alkenes with the simple Sm/I_2 system.





A highly convergent and efficient synthesis of (−)-microcarpalide, a 10-membered lactone displaying remarkable microfilament disrupting activity is described. Ring-closing metathesis and Sharpless asymmetric dihydroxylations are the key steps. Our strategy highlights the application of novel hydroxy lactone precursors for the stereoselective synthesis of (−)-microcarpalide.



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*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

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