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Tetrahedron Letters

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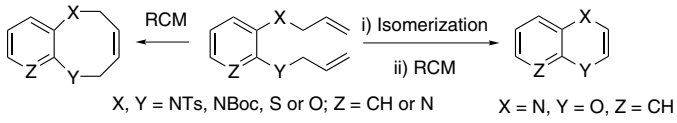
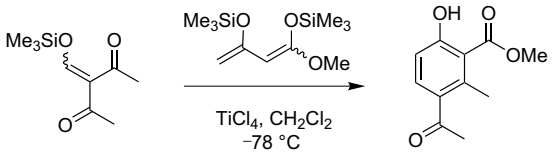
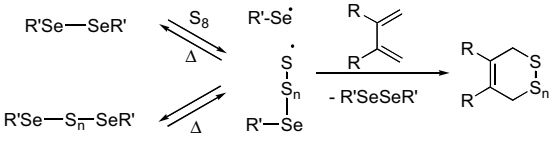
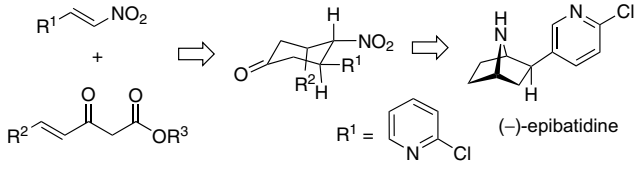
Contents

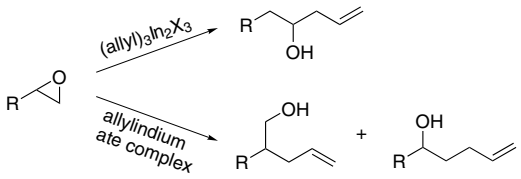
COMMUNICATIONS

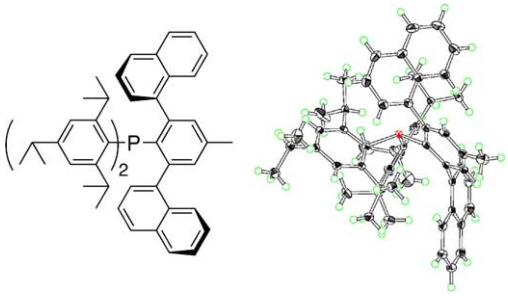


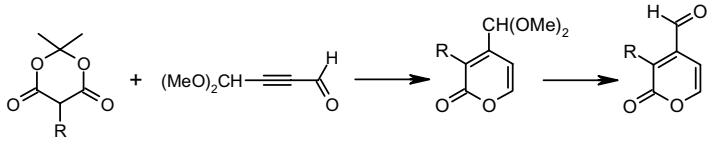




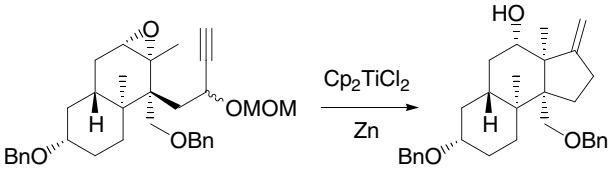


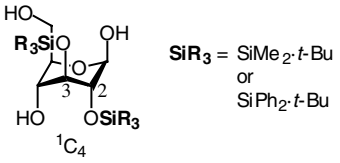


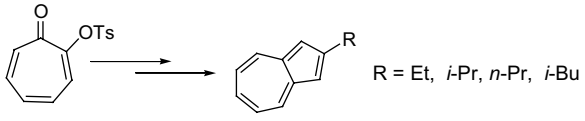


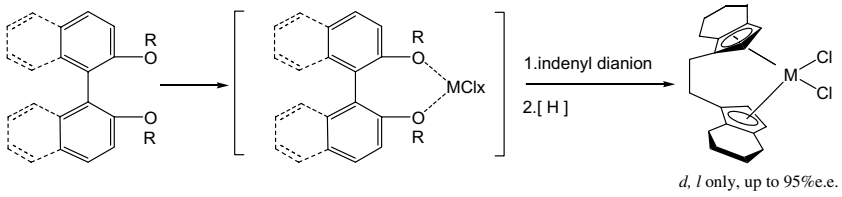


Reaction of acetylene dicarboxaldehyde monoacetal with substituted Meldrum's acid leads good yields in 2-pyranones-4-carboxaldehydes substituted at position 3.

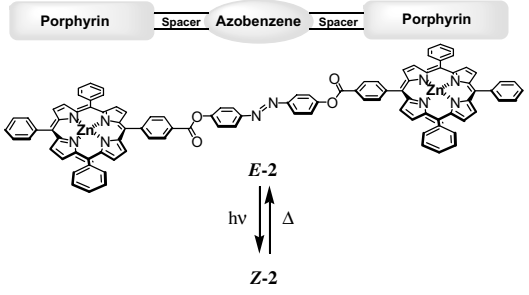


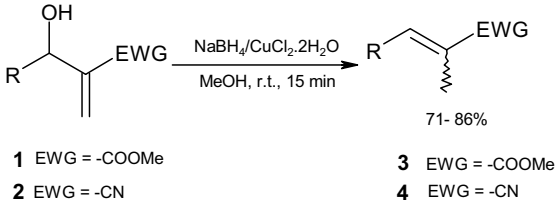


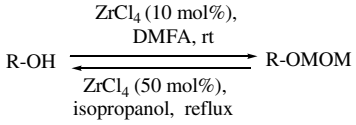




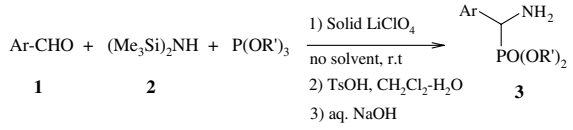
A diastereo- and enantioselective route to synthesize ethylene-bis(4,5,6,7-tetrahydro-1-indenyl)-titanium and -zirconium dichlorides is described using titanium trichloride or zirconium tetrachloride complexes with tropos biphenol and atropos binaphthol ethers.

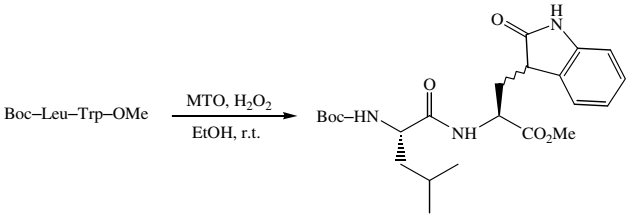


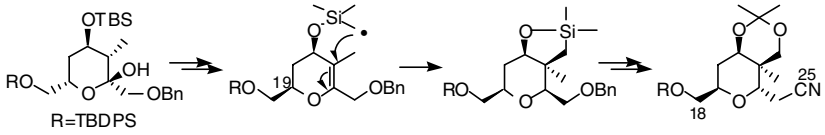


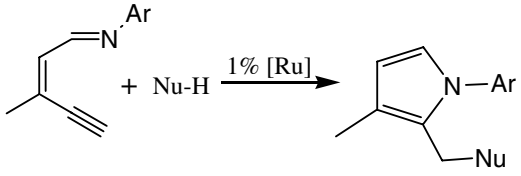


An efficient protocol for the preparation of MOM ethers from alcohols and formaldehyde dimethyl acetal (DMFA) using $ZrCl_4$ (10 mol%) at room temperature under solvent free conditions has been developed. Similarly, the same Lewis acid, $ZrCl_4$ (50 mol%), in isopropanol at reflux was utilised for the deprotection of MOM ethers.

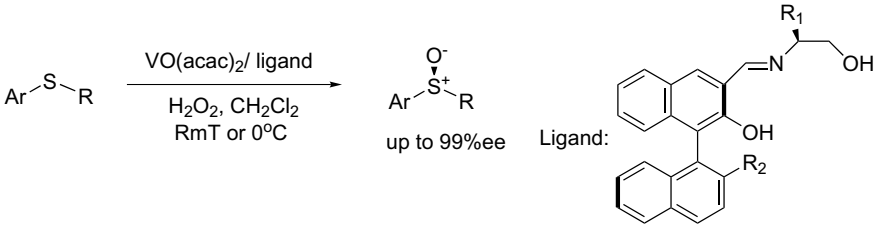


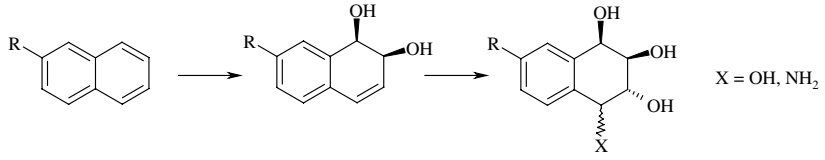




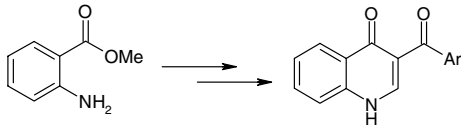


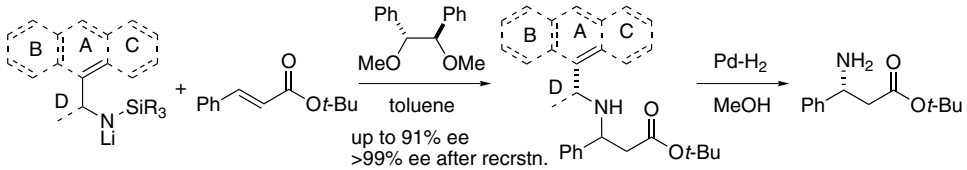
Ar = *p*-$MeOC_6H_4$
Nu-H = H_2O, ROH, $PhNH_2$
[Ru]=$TpRuPPh_3(CH_3CN)_2PF_6$

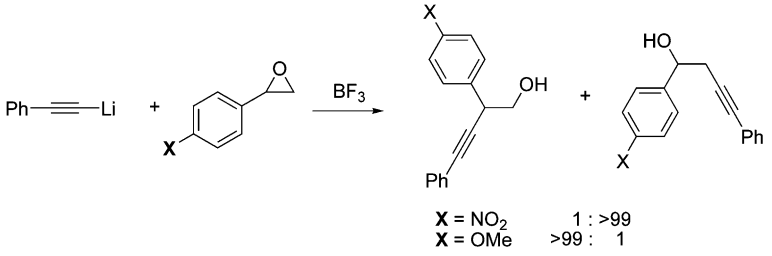


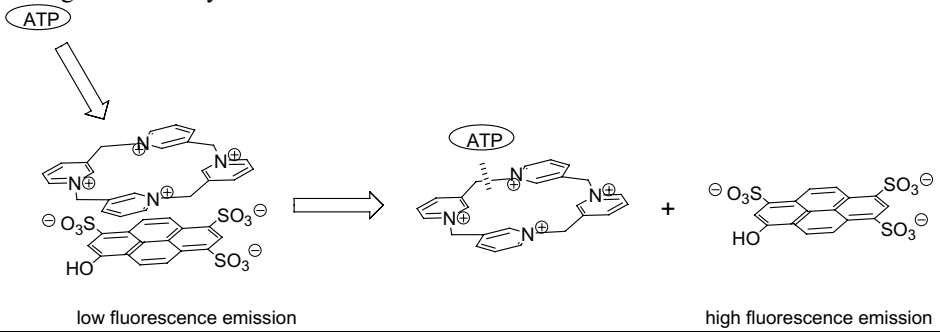


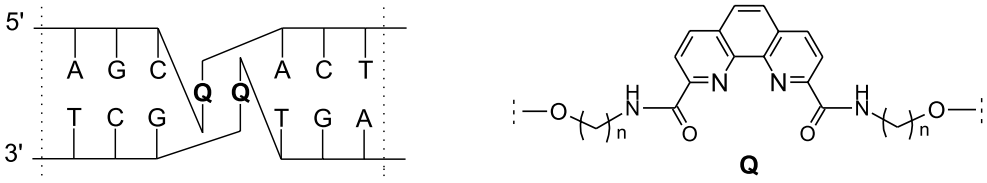
Several conduritol and conduramine analogues have been synthesized from β-substituted naphthalenes via a chemoenzymatic approach, in a high regio- and stereocontrolled way.

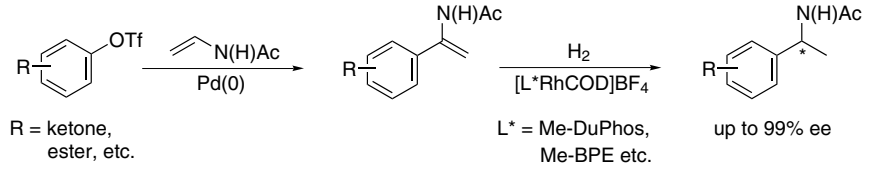




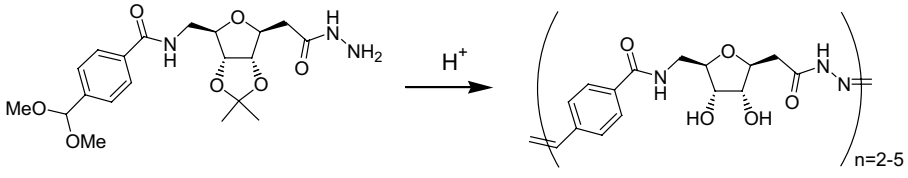




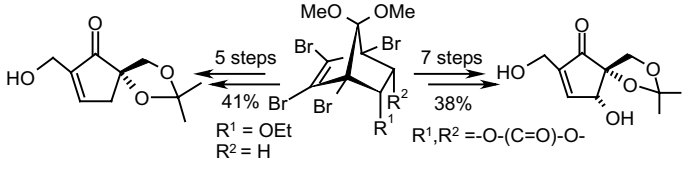




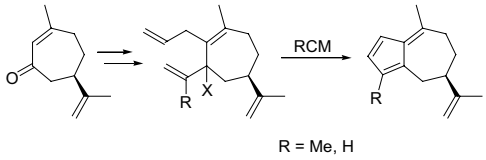
A series of *N*-acyl enamides were prepared using the Heck reaction. Asymmetric hydrogenation provided protected amines in up to 99% ee.

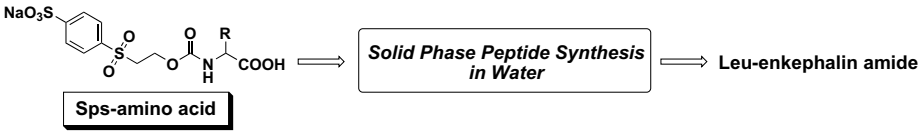


The synthetic advantages offered by dynamic combinatorial chemistry for cyclic oligomer synthesis have been applied to the rapid synthesis of a library of cyclic oligomers of a modified sugar amino acid.



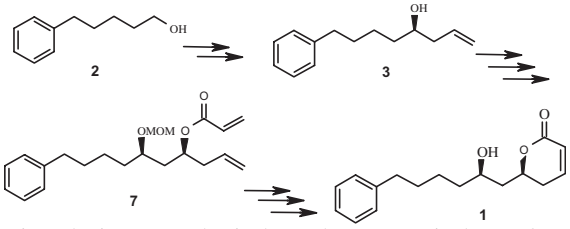
A short and stereoselective synthesis of 2-hydroxymethyl-4-deoxypentenomycin and 2-hydoxymethylpentenomycin derivatives is accomplished in five and seven steps starting from tetrabromonorbornyl derivatives in overall yields of 41% and 38%, respectively.





$$\mathrm{Cu[(Y)-amino\ acid]_2} \overset{\mathrm{NaBH_4}}{\rightarrow} \mathrm{(Y)-amino\ acid} + \mathrm{Cu_2O}$$

Sodium borohydride reductively removes copper from amino acid–copper complexes to give the free colorless amino acid and insoluble copper oxide.



Iterative asymmetric allylations and ring-closing metathesis have been effectively performed for the first stereoselective total synthesis of (6*S*)-5,6-dihydro-6-[(2*R*)-2-hydroxy-6-phenylhexyl]-2*H*-pyran-2-one, a novel α,β-unsaturated-δ-lactone having antifungal activity, isolated from *Ravensara crassifolia*.

OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

A total synthesis of (−)-epibatidine has been achieved in 10 steps in 21% overall yield. The asymmetric total synthesis features catalytic enantioselective double Michael reactions mediated by a chiral thiourea catalyst and tetramethylguanidine to form optically active 4-nitrocyclohexanones. *Tetrahedron Letters* **2004**, *45*, 9185–9188.

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