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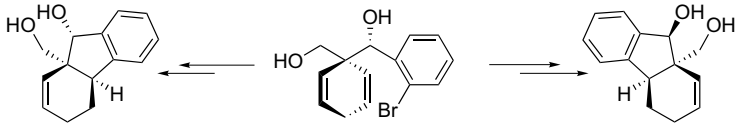
Tetrahedron Letters

Tetrahedron Letters Vol. 46, No. 17, 2005

# Contents

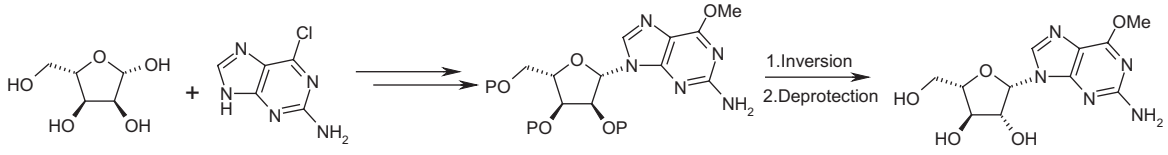
## COMMUNICATIONS





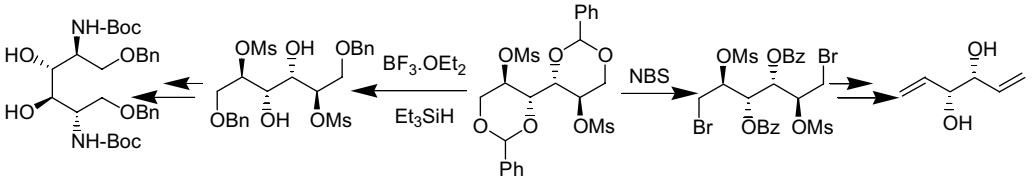

Either isomer can be formed with good stereocontrol depending on choice of protecting group on oxygen.

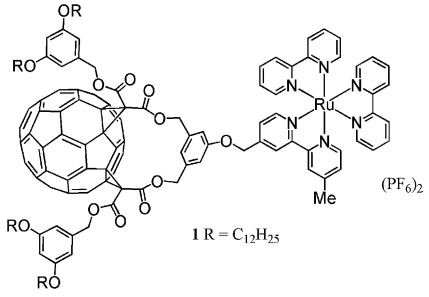





A synthesis of the enantiomer of nelarabine is described. Subtle changes in the protecting group strategy allow for an efficient inversion of the C-2′ stereocentre.

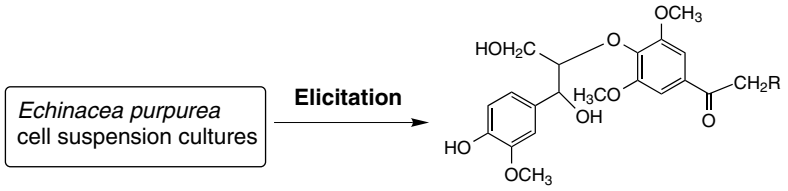






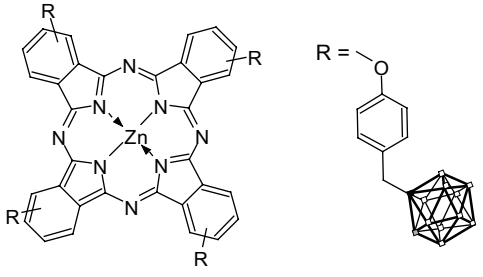

**1** R = $C_{12}H_{25}$



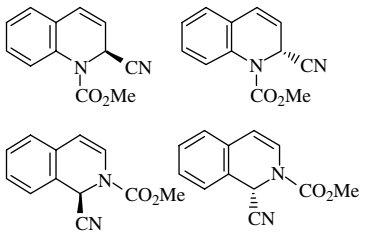



**1** R = OH
**2** R = H

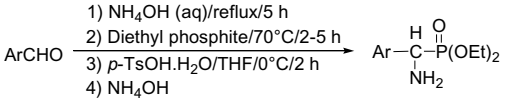




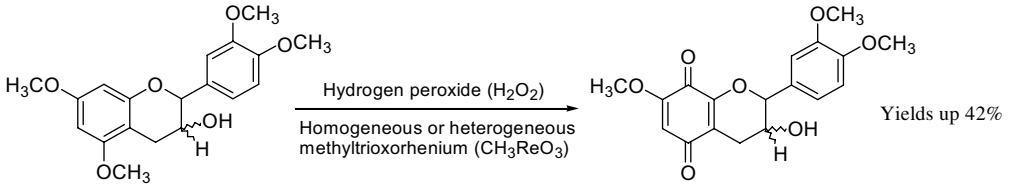


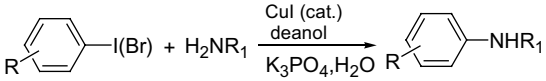

The asymmetric synthesis of each of the above Reissert adducts has been realised.





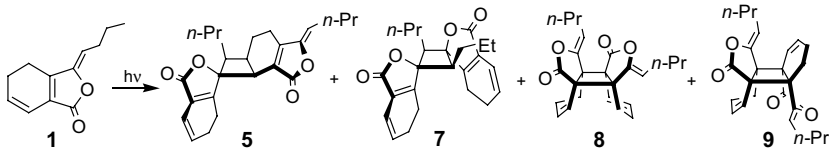





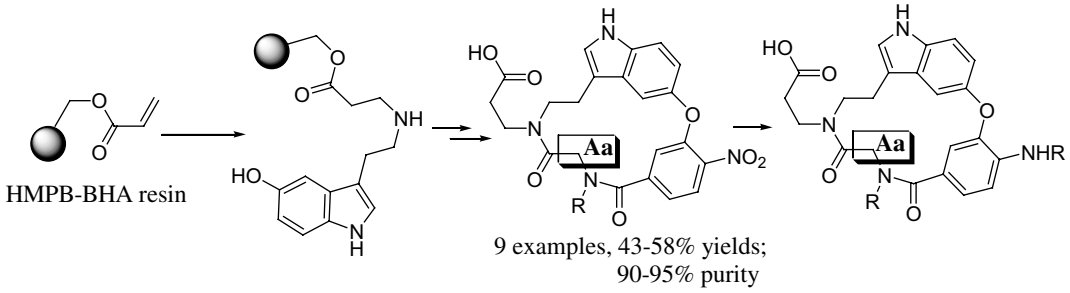




Copper-catalyzed amination of aryl bromides and iodides under mild conditions has been developed with 2-dimethylaminoethanol as ligand and water as solvent. A variety of hydrophilic and hydrophobic aryl halide substrates have been aminated in good yield with a variety of amino acids, amino alcohols and peptides.

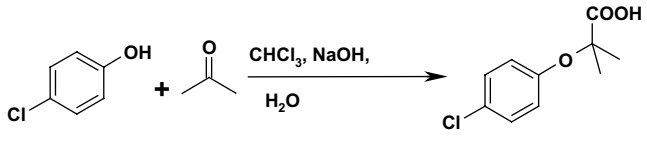





The irradiation of the natural phthalide *Z*-ligustilide (**1**) gave the natural dimeric phthalide riligustilide (**5**), and three novel dimeric phthalides **7**, **8** and **9**.

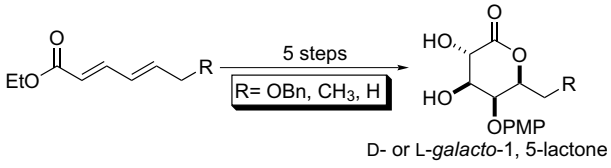




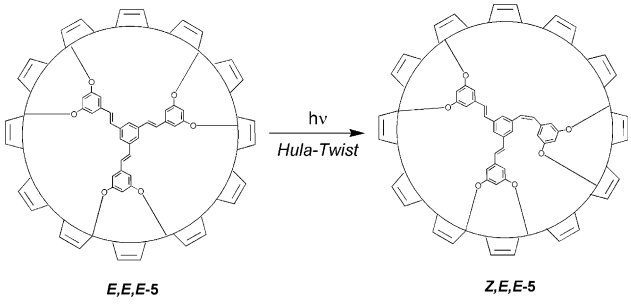



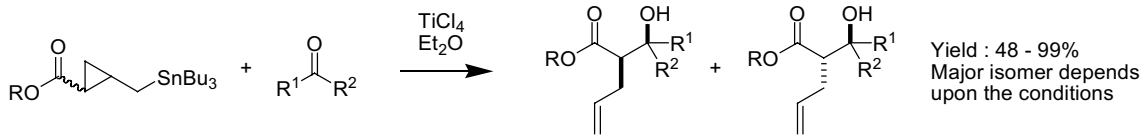

An eco-friendly improved procedure is described for the synthesis of clofibric acid and analogues.



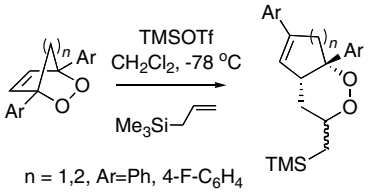




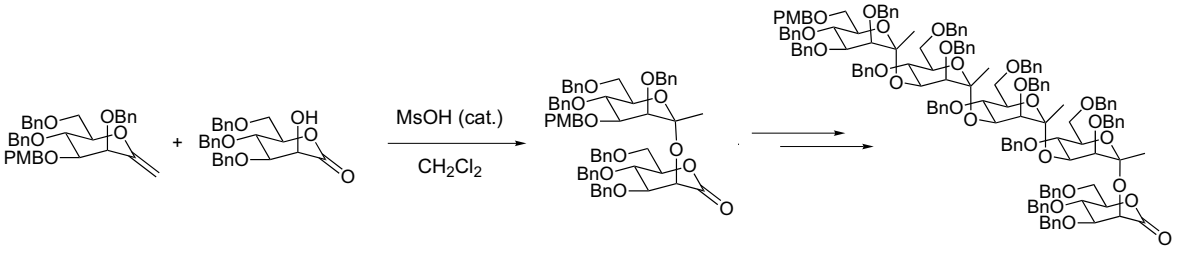




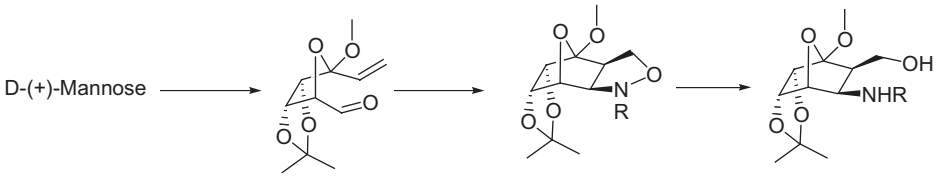



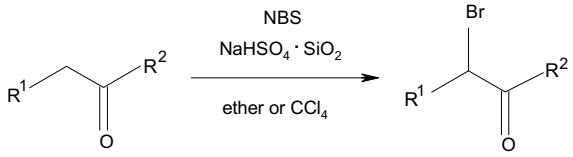

Five- and six-membered bicyclic [2.2.*n*] endoperoxides can readily be transformed into silyl containing endoperoxides in good yield and high stereoselectivity by treatment with allyltrimethylsilane and either TMSOTf or $SnCl_4$ as Lewis acid.



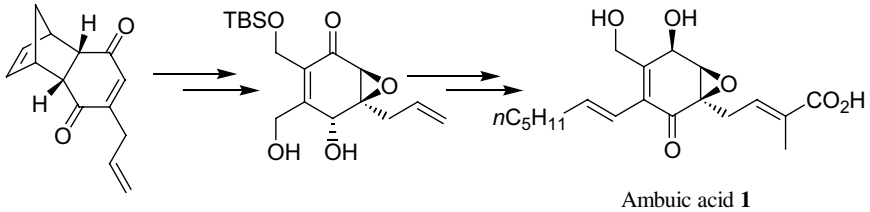




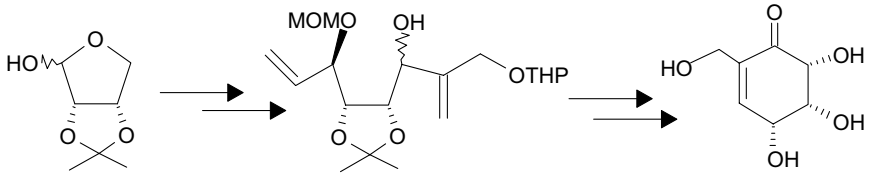




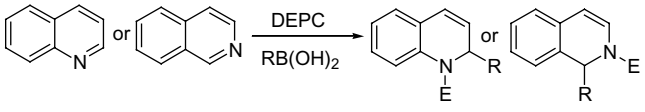



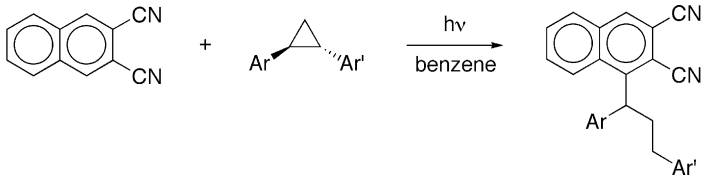

Ambuic acid **1**



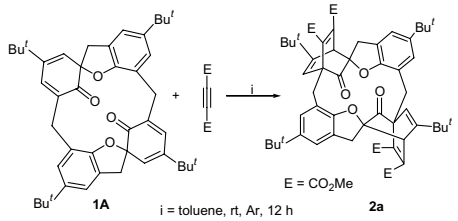




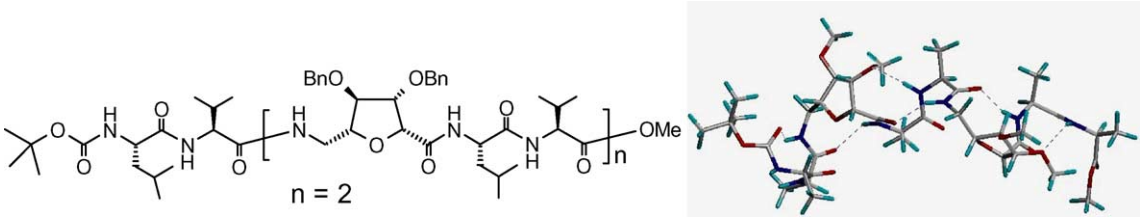




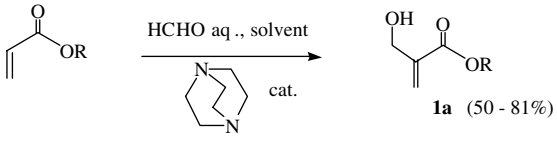




Highly regio- and stereoselective Diels–Alder reactions of bis(spirodienone) derivatives of calix[4]arene with acetylenes that provide easy access to bisbicyclo[2.2.2]octenones are described.

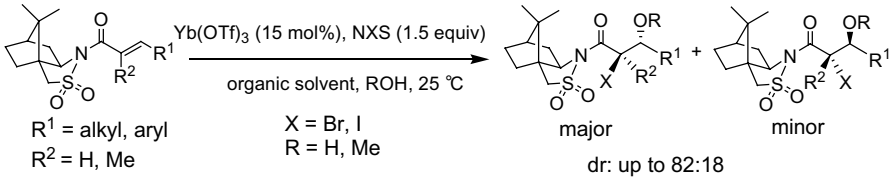




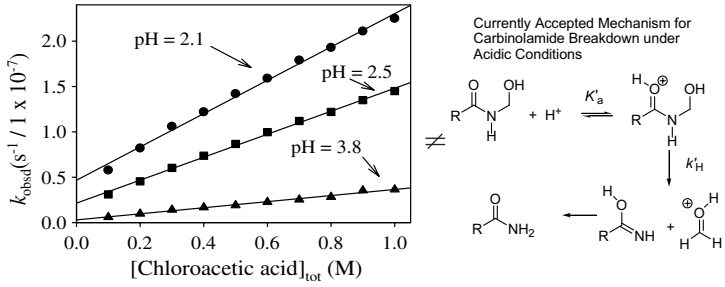



Alkyl α-(hydroxymethyl)acrylates are prepared in high yields by coupling alkyl acrylates with 30% aqueous formaldehyde using DABCO as the catalyst and DME or THF as solvent.

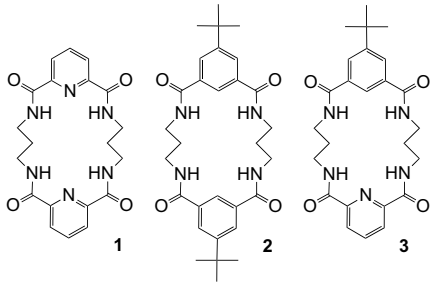




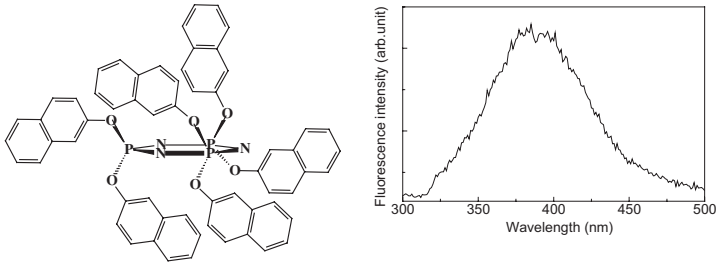



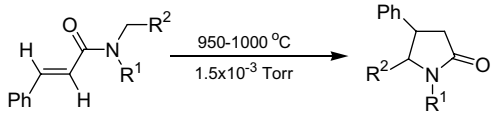



The hybrid tetraamide receptor **3** benefits from both suitable preorganization provided by the 2,5-diamidopyridine unit and good anion binding properties of the 1,3-diamidobenzene moiety and therefore is a better anion receptor than its homoaromatic counterparts **1** and **2**.

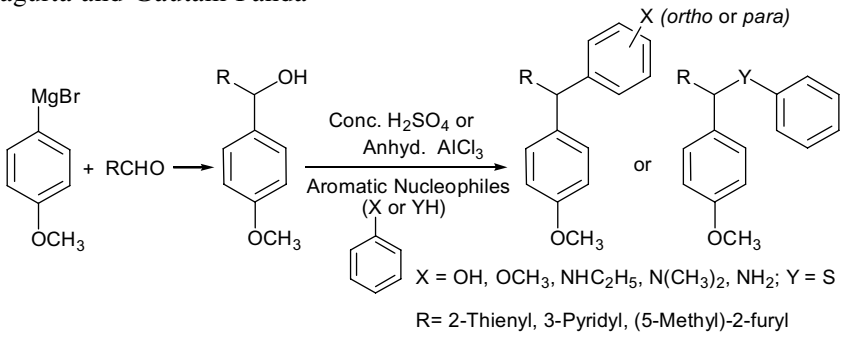




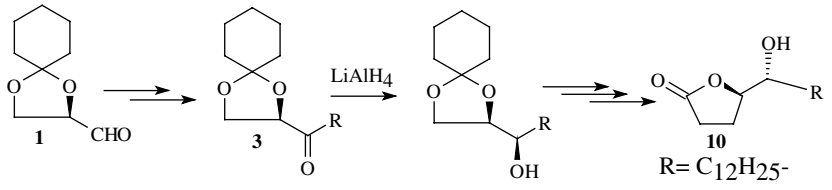





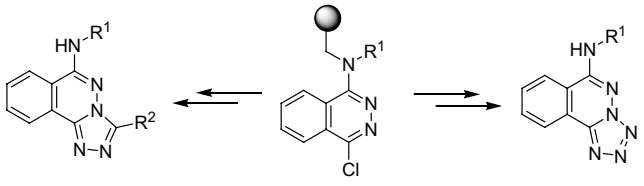


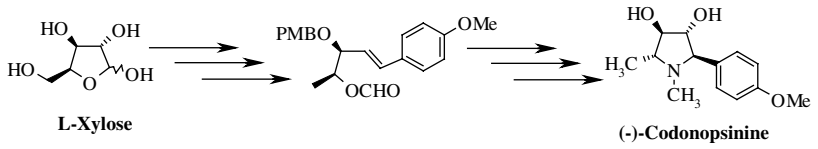





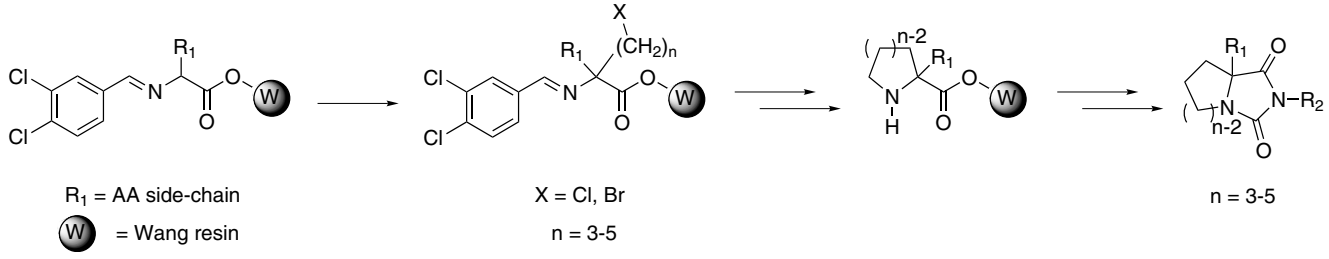


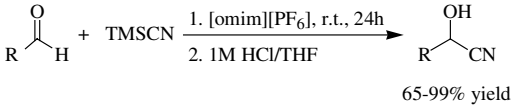



The total synthesis of (−)-codonopsinine is described from commercially available L-xylose in 20% overall yield. The key steps included Julia *trans* olefination and cascade epoxidation–cyclisation strategies.








Ionic liquid [omim][$PF_6$] has been demonstrated as an efficient, environmentally friendly and recyclable reaction media as well as a promoter for the cyanosilylation of aldehydes under mild conditions. The recovered ionic liquid could be reused for subsequent runs with only a gradual decrease in activity.

## OTHER CONTENTS



*Corresponding author
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