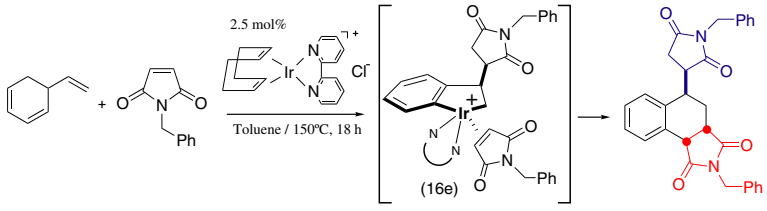
ELSEVIER

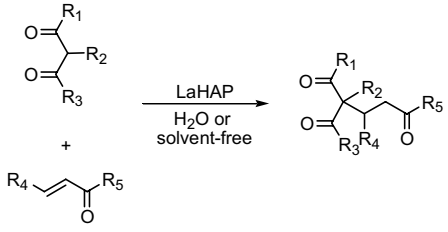
Tetrahedron Letters

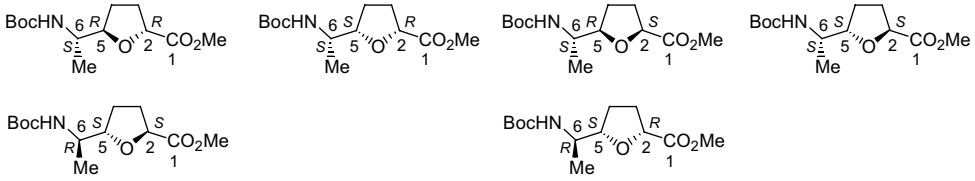
Tetrahedron Letters Vol. 46, No. 25, 2005

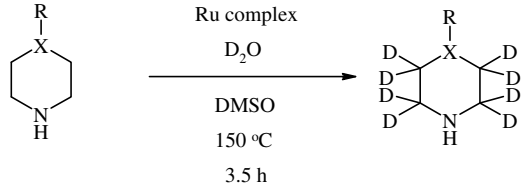
Contents

COMMUNICATIONS

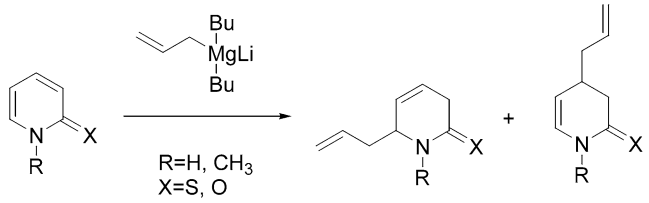


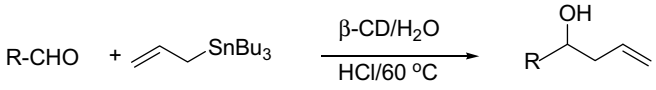


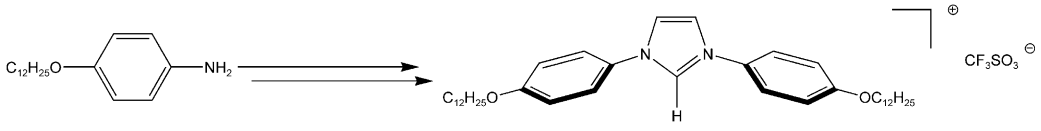




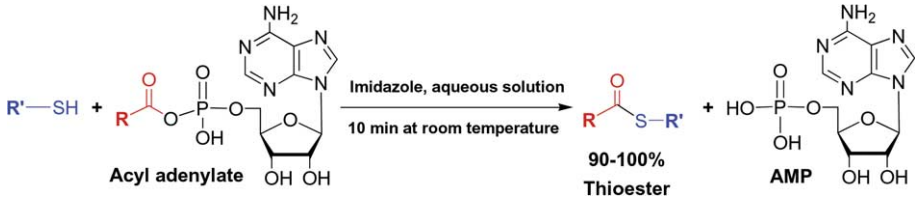
R = Various aryl and aralkyl groups
X = N or CH

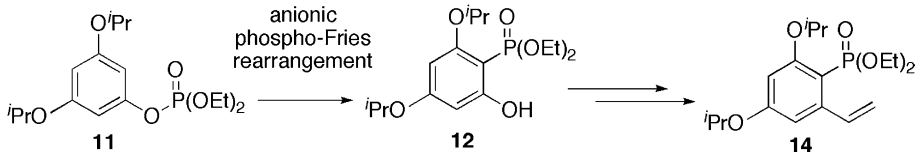


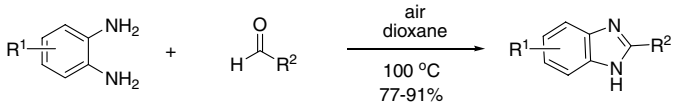




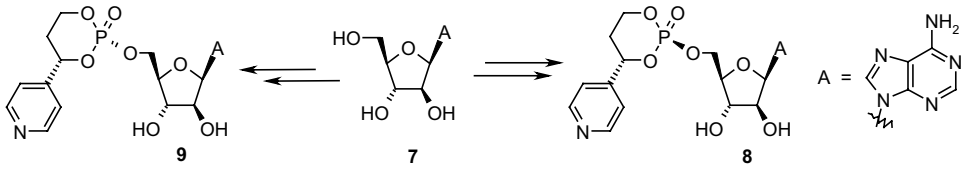
This imidazolium salt exhibits a lamellar liquid crystal mesophase.

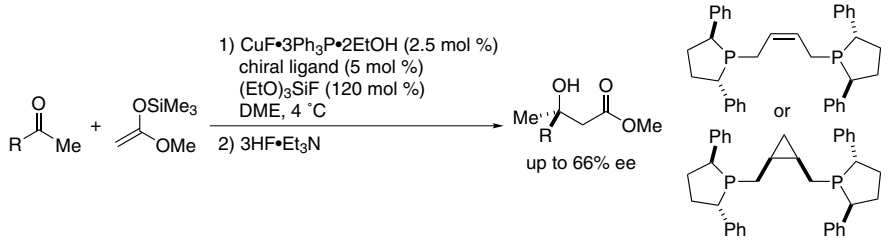


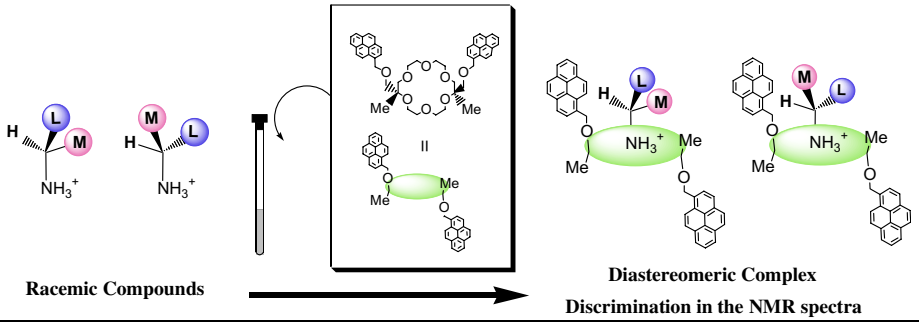


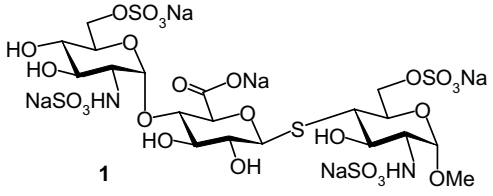


Direct one-step synthesis of various benzimidazoles from phenylenediamines and aldehydes is described using air as the oxidant. The salient features of this method include a simple procedure, mild conditions, no coupling agents or commercial oxidants/additives used, no waste produced (only by-product being water), easy purification, and high generality.

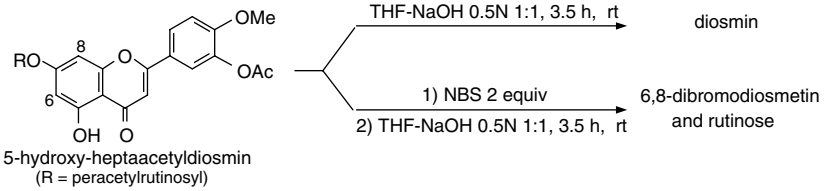


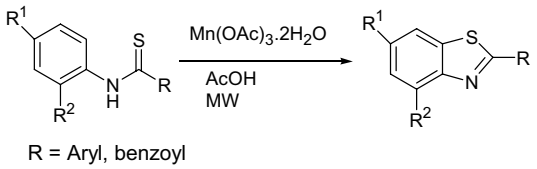




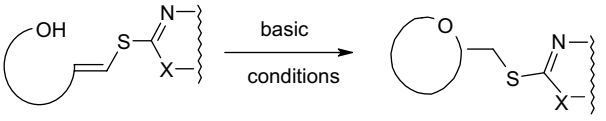


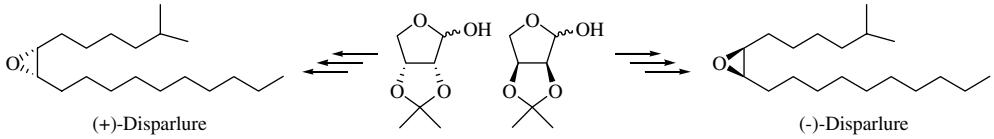
An approach to the construction of the β-(1→4)-*S*-linkage between a glucuronic and a glucosamine unit, and then to the synthesis of a heparan sulfate trisaccharide containing such a linkage (**1**) as a nonhydrolyzable substrate mimic of heparanase was developed.

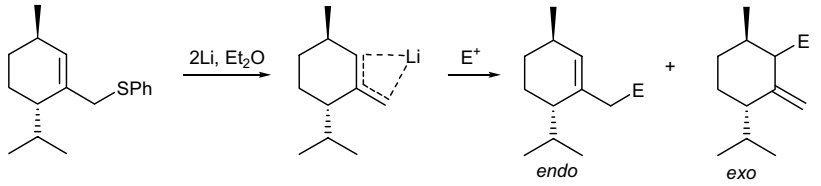


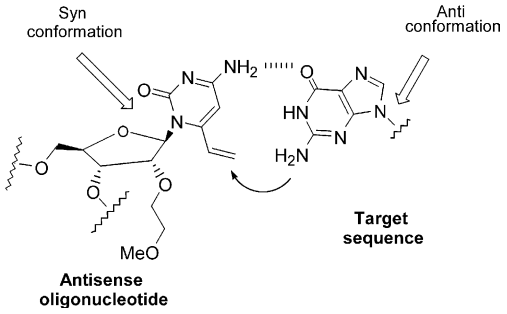


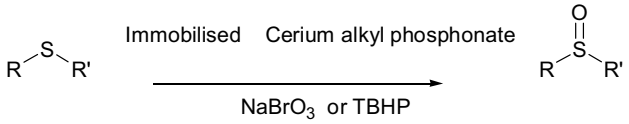
Manganese triacetate is introduced as a new reagent to replace potassium ferricyanide or bromine for radical cyclization of thioformanilides. 2-Substituted benzothiazoles are generated in 6 min under microwave irradiation.



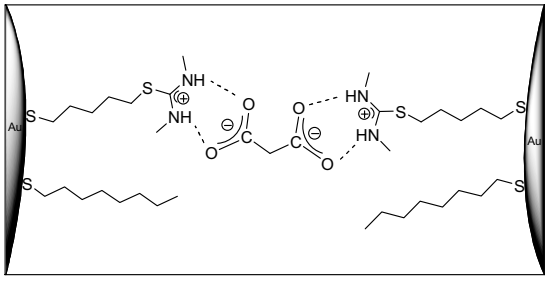


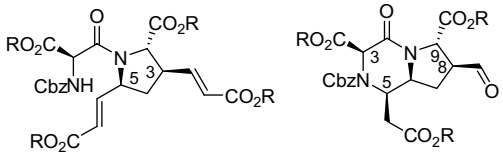




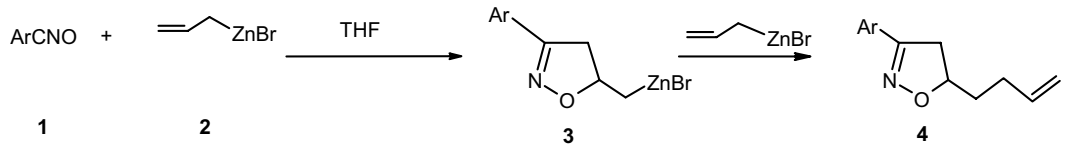


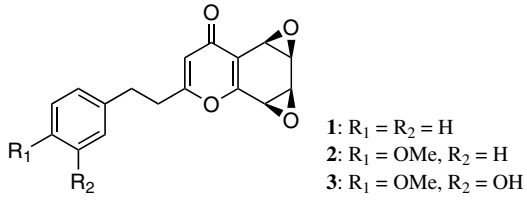
A range of sulfides can be selectively oxidised to the corresponding sulfoxides in good yields using catalytic quantities of immobilised cerium alkyl phosphonate and either sodium bromate or *tert*-butyl hydroperoxide as oxidants.



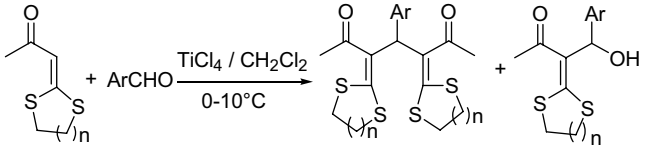


The synthesis of 3,5-disubstituted prolines and 5-substituted diazabicycloalkanes from a common precursor is described and a model for the observed stereoselectivities is proposed.

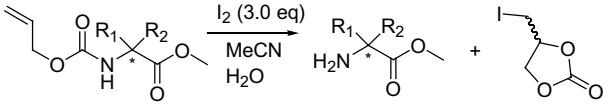


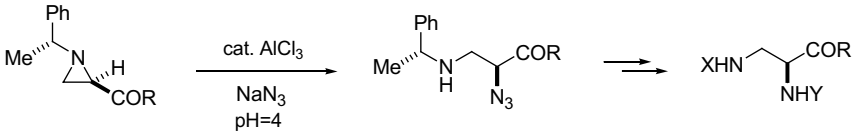


Three novel diepoxy tetrahydrochromones, oxidoagarochromones A (**1**), B (**2**), and C (**3**), were isolated from intentionally wounded agarwood and they are considered to be produced at the early stage of agarwood formation.



The first example of $TiCl_4$-mediated Baylis–Hillman type reaction of α-acetyl cyclic ketene dithioacetals with arylaldehydes was described. This methodology adds a new entry to the C–C bond formation at the α-carbon atom of α-oxo ketene dithioacetals.





OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

The cover picture shows a self-organized lamellar mesophase (Smectic A) formed from an imidazolium salt with alkyl tails. Ionic liquids incorporating imidazolium cations are the most extensively studied group of such materials due to their excellent solvent properties, thermal stability, negligible vapour pressure, high conductivity and electrochemical stability. Where a liquid-crystalline or mesomorphic state can be induced by supramolecular interactions, numerous applications such as in displays, sensors, actuators and even artificial muscles can be envisaged. This article deals with such prospects in considering the convergence of the chemistry of mesophases and ionic liquids. *Tetrahedron Letters* **2005**, *46*, 4303–4305.

Indexed/Abstracted in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts, Chemical Engineering and Biotechnology Abstracts, Current Biotechnology Abstracts, Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei Compendex, EMBASE/Excerpta Medica, Medline, PASCAL, Research Alert, Science Citation Index, SciSearch

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