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Tetrahedron Letters

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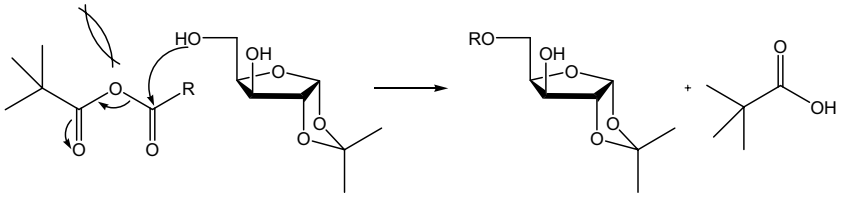
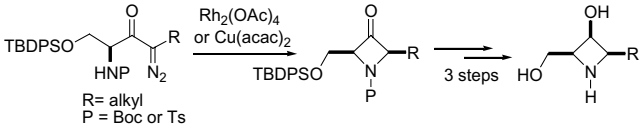
Contents

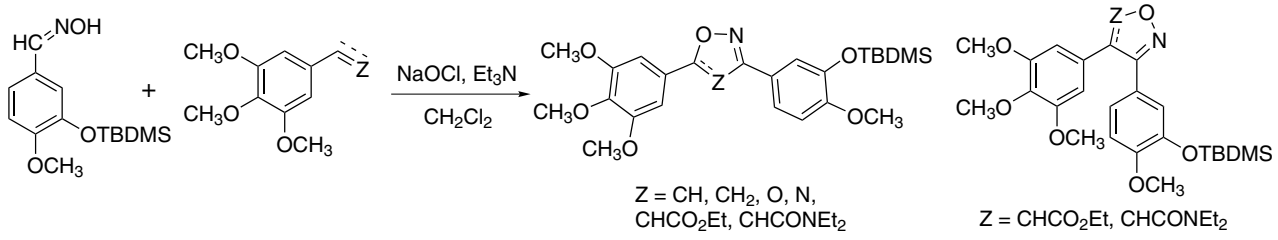
COMMUNICATIONS

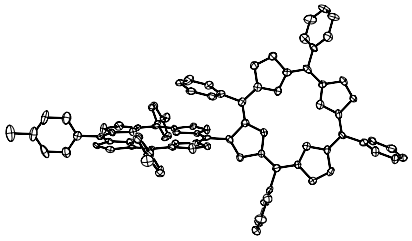


A simple methodology to achieve high chemoselective O-acylation of primary hydroxy groups was performed. Thermodynamic and kinetic factors were evaluated by means of semiempirical calculations (AM1 and PM3).

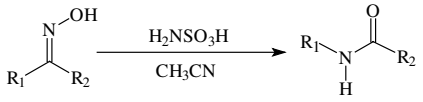


The syntheses of all *cis* substituted azetidines were accomplished in few steps from L-serine in modest to high yields. The key step was based on a rhodium or copper carbenoid N–H insertion of α,α′-dialkyl-α-diazoketones to furnish *cis*-2,4-dialkyl-azetidin-3-ones as the only observable diastereoisomers.

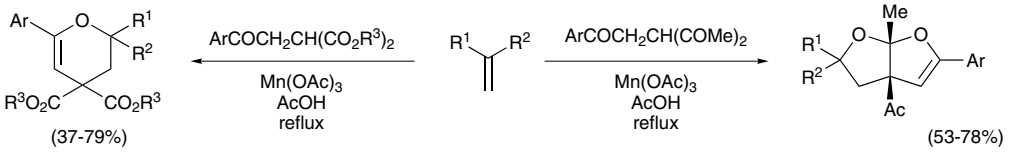


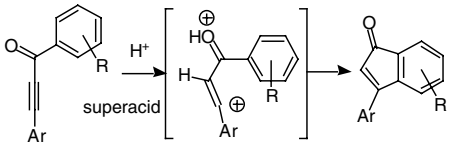


The synthesis of directly *meso*–β-linked bis- and trisporphyrins has been explored and used for the convenient preparation of P–P–Q donor–acceptor systems consisting of bisporphyrin, spacer, and quinone acceptor.

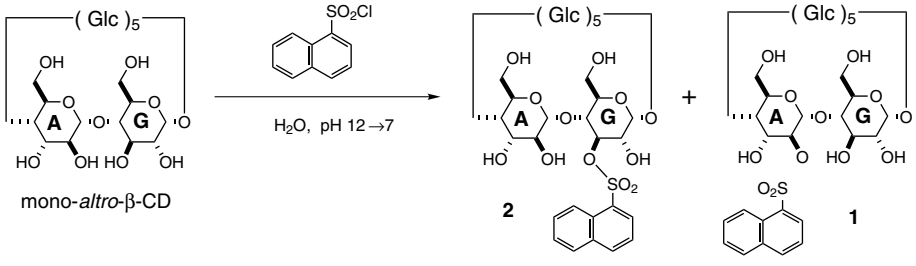


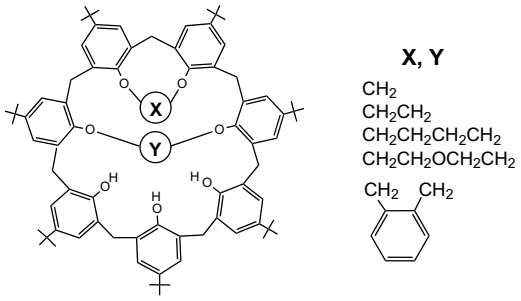
Sulfamic acid (H_2NSO_3H) has been proved to be an efficient and green catalyst for liquid Beckmann rearrangement of ketoxime in dried acetonitrile. The use of basic neutralization agent has been avoided due to the intrinsic zwitterionic property of sulfamic acid. Moreover, it has been proved to be an efficient route for separating corresponding products of Beckmann rearrangement of ketoximes. Thus it may be a green process for the preparation of amide from ketoxime without producing any waste.

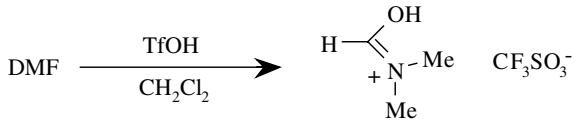




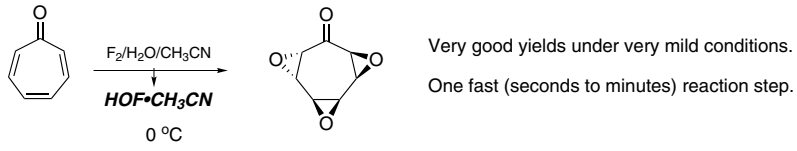
1,3-Diarylpropynones were cleanly converted in a fast (⩽30 min) and efficient (up to 95% yields) one-pot reaction to the corresponding 3-arylindenones in superacidic media.



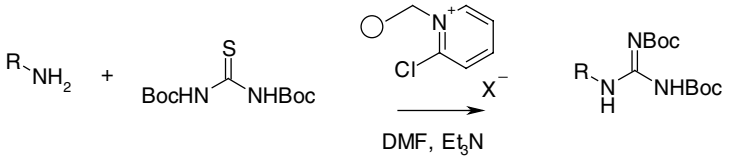


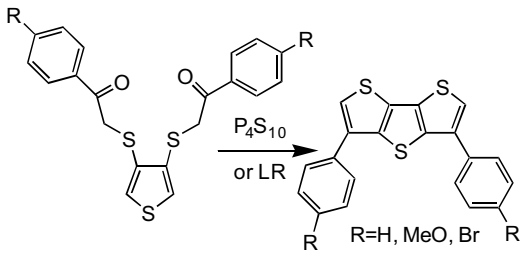


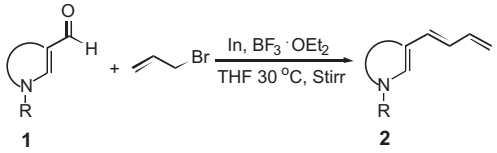
Triflate and triflimide salts of DMF, DMSO and MeCN are prepared in excellent yields.



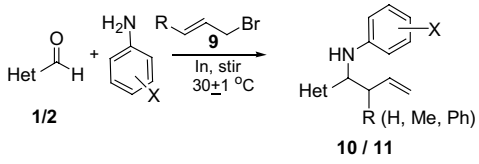
Epoxidation of eight other difficult-to-epoxidize enes and polyenes are presented.



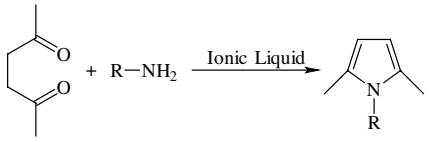




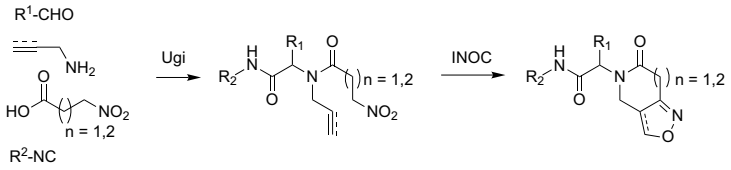
Vinylogous formamides—5-formyluracils and 4-formylpyrazoles-undergo smooth olefination in THF in the presence of indium metal (0.8 equiv) and $BF_3{\cdot}OEt_2$ (1 equiv) and allyl bromide (1 equiv) to provide the respective diene-substituted heterocycles in a single step.

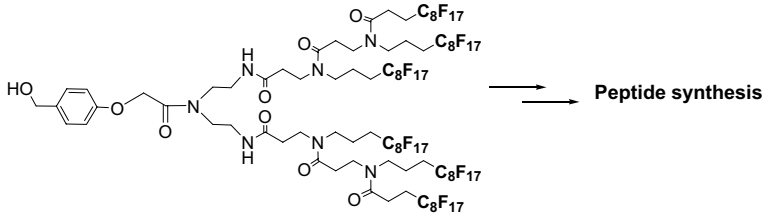


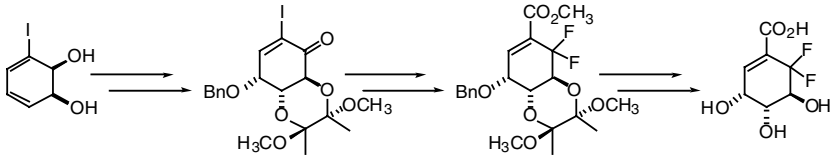
The imines generated in situ from 2-pyridine-/2-quinoline-carboxaldehydes and aryl amines undergo indium-mediated Barbier allylation in aqueous media to provide the respective homoallylic amines with d.r. up to 98:2.

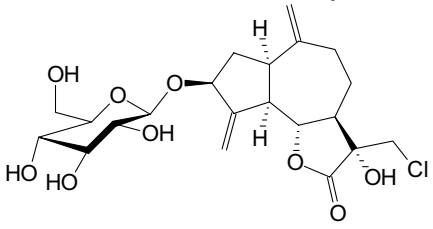


Paal–Knorr condensation of 2,5-hexandione with primary amines was successfully carried out in ionic liquids. The reaction, using ionic liquids as solvent, exhibited many advantages over in conventional organic solvents of simple product isolation procedure, improved yields and exclusive selectivity, the mild conditions and the avoidance of using toxic catalysts. Recovery and reuse of ionic liquids are also satisfactory, which demonstrate the cost efficiency and green aspect of our methodology.

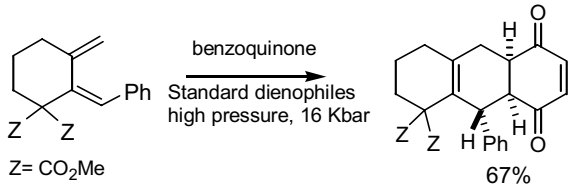


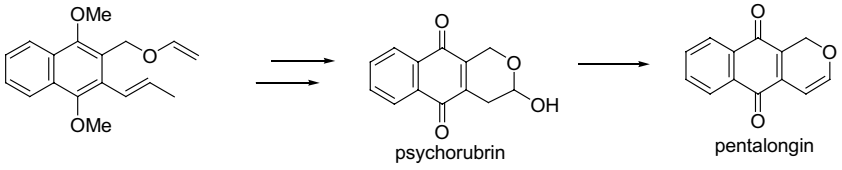


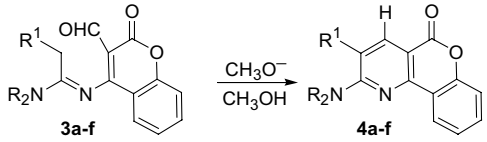


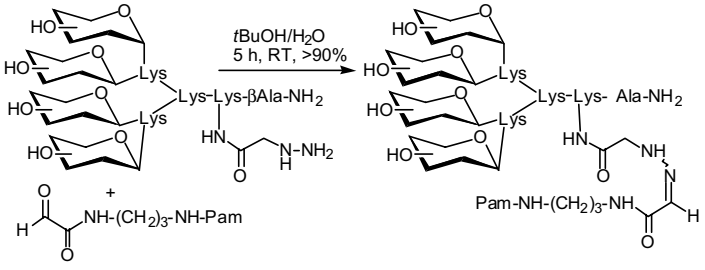


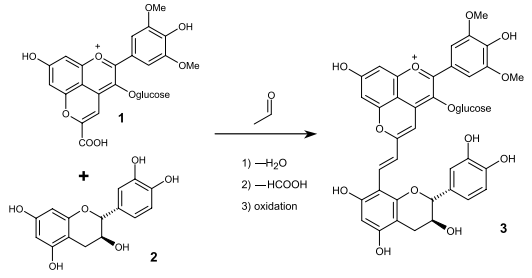
13-Chloro-3-*O*-β-D-glucopyranosylsolstitialin has been isolated from the Southwestern European plant *Leontodon palisae* (Asteraceae, tribe Lactuceae). The compound represents the first naturally occurring chlorinated sesquiterpene lactone glucoside. The cytotoxicity of the new compound and related ones was evaluated using the MTT assay.

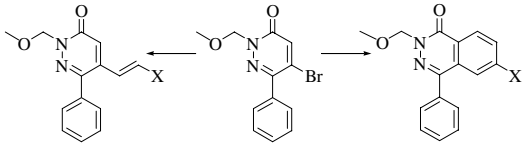


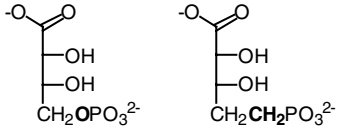


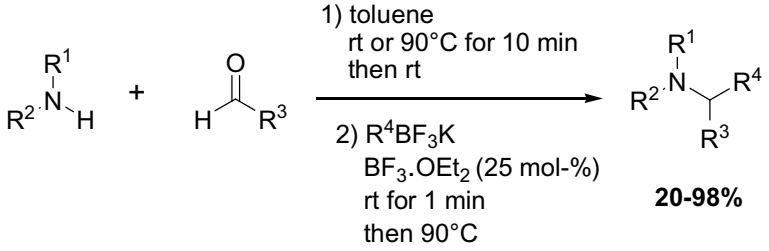


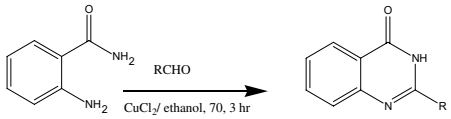


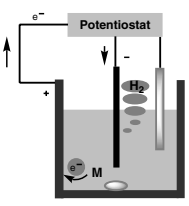


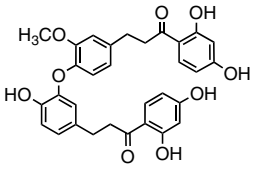






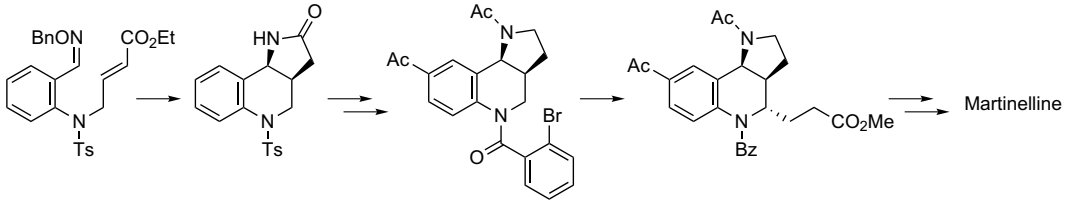


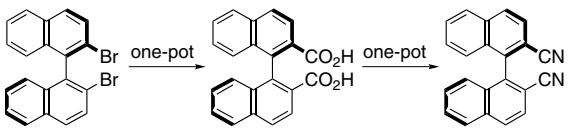


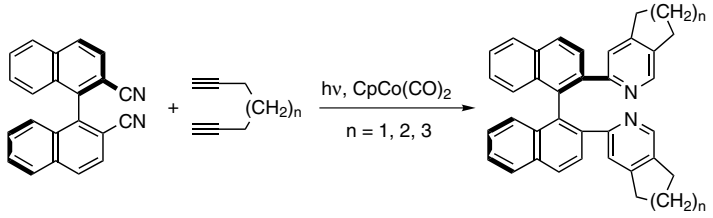


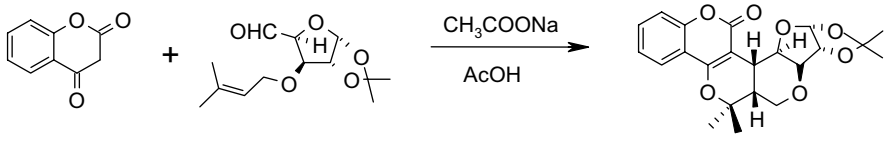
Verbenachalcone

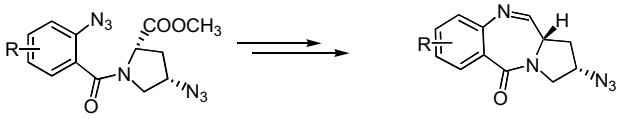
A synthesis of verbenachalcone was accomplished by using anodic oxidation of the phenol as the key step.

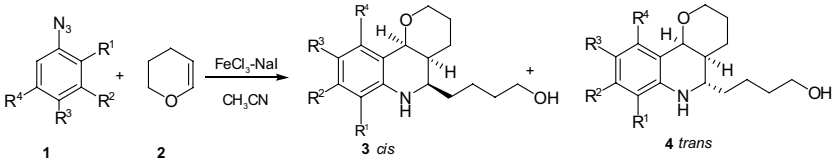


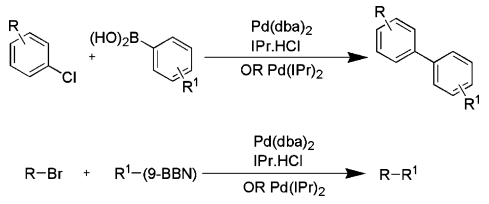


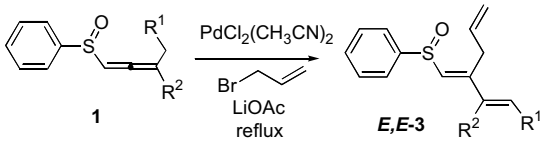


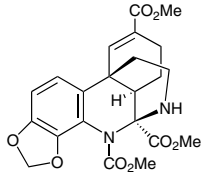






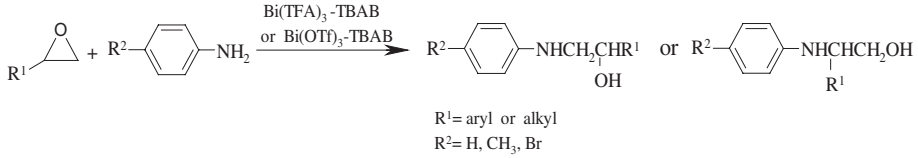






Mersilongine

A novel quinolinic alkaloid, viz., mersilongine, incorporating a novel tetracyclic carbon skeleton was obtained from a Malayan *Kopsia* species. The structure was established by spectroscopic analysis and a possible pathway from a mersinine-type precursor is presented.



An efficient and chemoselective ring opening of epoxides with anilines in the presence of catalytic amounts of $Bi(TFA)_3$ or $Bi(OTf)_3$ via the use of molten tetrabutylammonium bromide (TBAB) as an ionic liquid is reported.

OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

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