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Tetrahedron Letters

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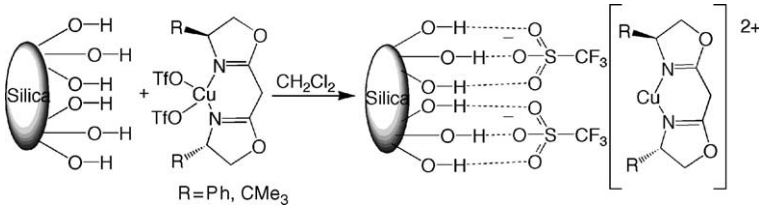
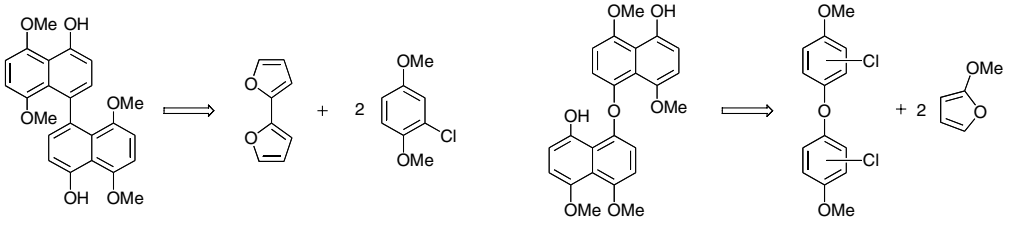
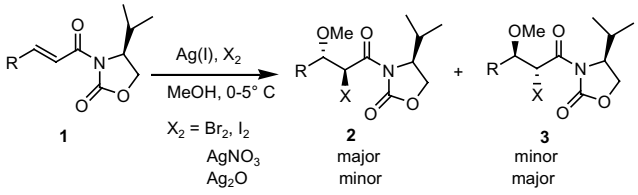
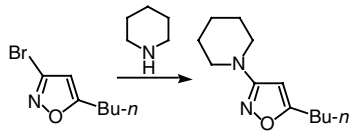
Contents

COMMUNICATIONS

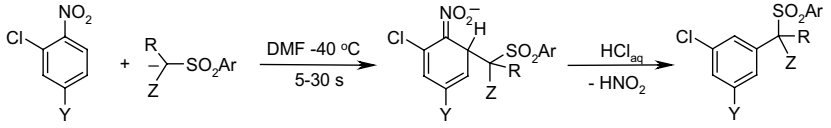




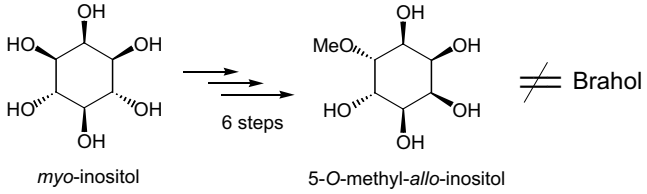


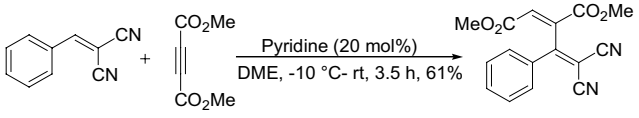


Heating: 106 °C, 92 h, cat. DMAP, sealed vessel; No reaction. *Microwave:* MeCN, ps-BEMP, 200 °C, 15 min; 57%.

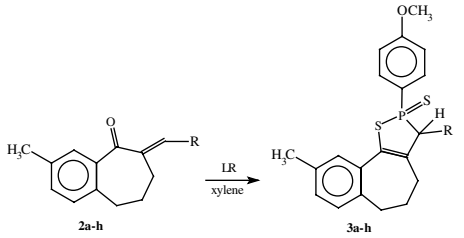


Y = Cl, CF_3, CN; R = H, Me, Et; Z = Cl, Ph, CH=CH_2, Ar = Ph, *p*-Tol

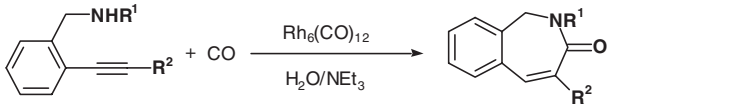




A pyridine catalysed addition of dimethyl acetylenedicarboxylate to various arylmethylidenemalononitriles to afford highly substituted 1,3-butadienes with complete stereoselectivity is described.



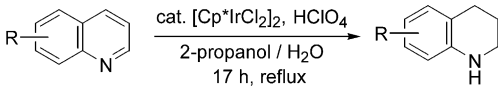
This paper describes the synthesis of phosphorus-containing compounds using Lawesson's reagent.



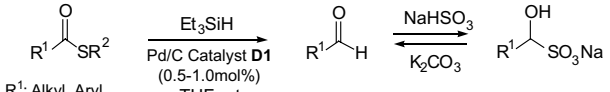
R^1 = H, Pr^i, Bu^t, Cy

R^2 = Me, Bu^n, Bu^t, Mes, 4-$MeOC_6H_4$

The title reaction under water–gas shift reaction conditions gives 2,4-disubstituted-1,4-hydrobenz[*c*]azepin-3-one in a good yield.

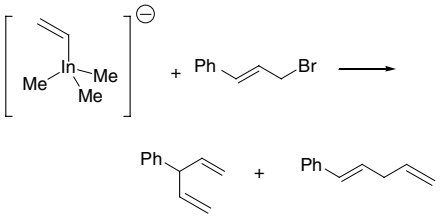


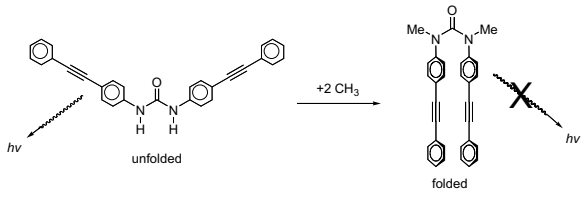
R = H, Me, NO_2, Cl, Br, CO_2H, and OMe

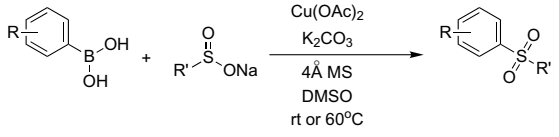


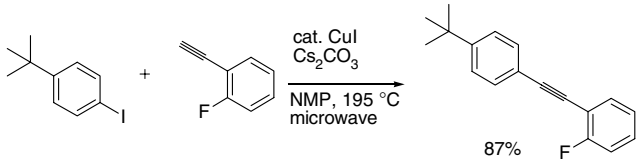
R^1: Alkyl, Aryl

R^2: Et, -$(CH_2)_{11}CH_3$

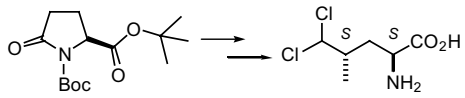




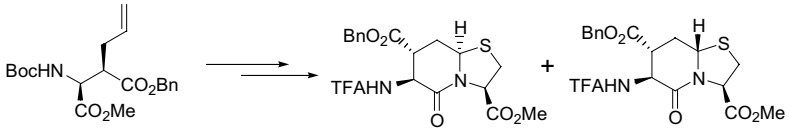


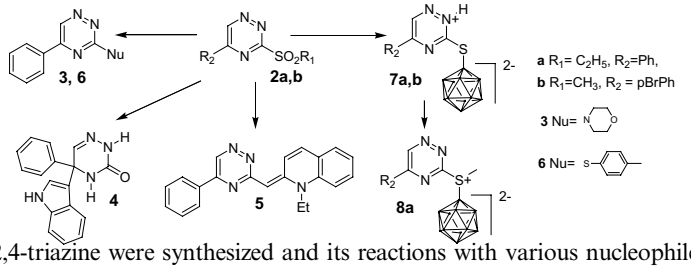


An efficient copper-catalyzed cross-coupling of aryl iodides with aryl acetylenes under microwave irradiation is described. The reaction proceeds under microwave heating with 10 mol% CuI and 2 equiv Cs_2CO_3 in 43–87% yields.

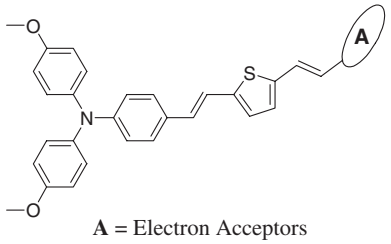


The first total synthesis of (2*S*,4*S*)-5,5-dichloroleucine has been achieved in 11 steps from L-pyroglutamic acid.



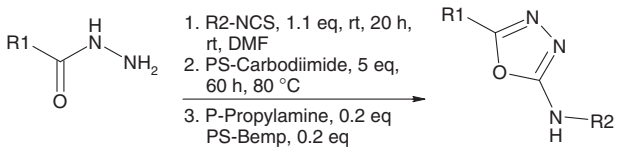


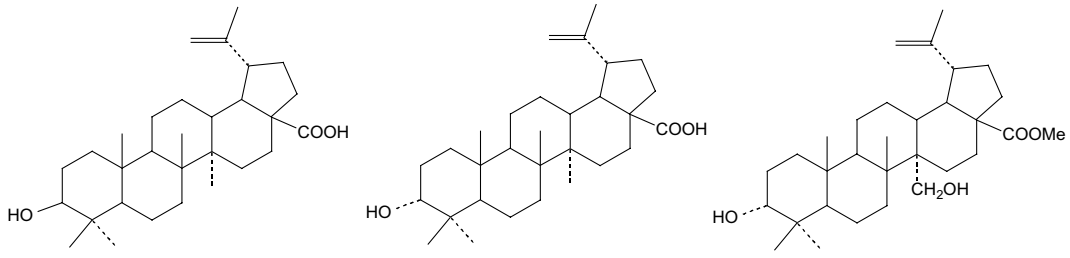
3-Alkylsulfonic derivatives of 1,2,4-triazine were synthesized and its reactions with various nucleophiles were investigated. Interaction of the alkylsulfonic derivatives with $Na_2B_{12}H_{11}SH$ led to the first boron-containing derivatives of as-triazine. The structures of the obtained compounds were investigated by NMR spectroscopy, mass spectrometry and X-ray analysis.

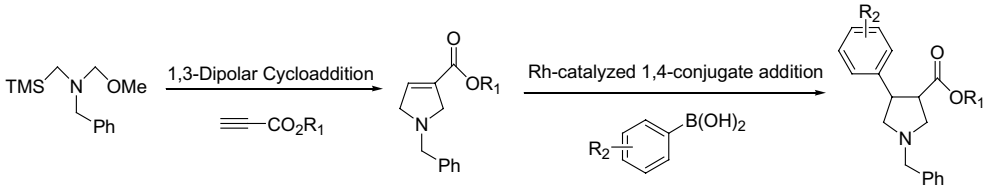


A = Electron Acceptors

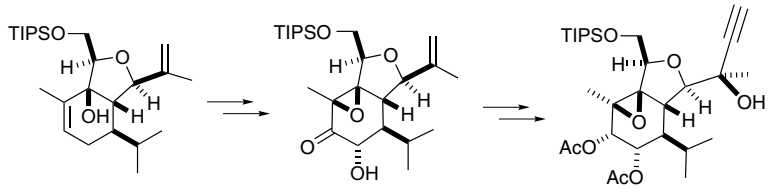
The synthesis of a series of high temperature triaryl amino chromophores with unprecedented hyperpolarizability values for potential EO applications is described. 4-(*N*,*N*-di-*p*-anisylamino)phenyl donors are for the first time bridged to powerful acceptors such as tricyanovinyldihydrofuran via vinyl thiophene linkages.

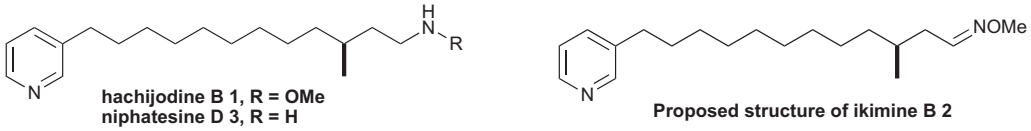




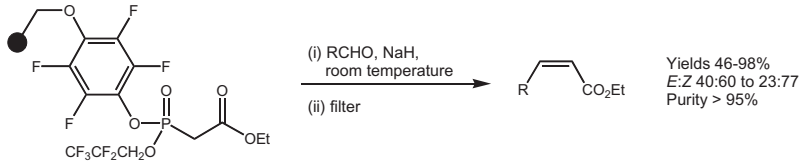


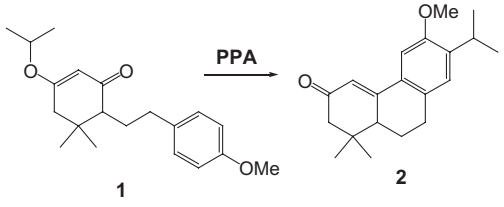
The asymmetric synthesis of 1,3,4-trisubstituted pyrrolidines was accomplished in two steps from readily available starting materials. A 1,3-dipolar cycloaddition of an azomethine ylide to a propiolate ester followed by a Rh-catalyzed asymmetric 1,4-arylation of the resulting pyrroline with an arylboronic acid provided the desired 1,3,4-trisubstituted pyrrolidine products in good to excellent enantioselectivities.



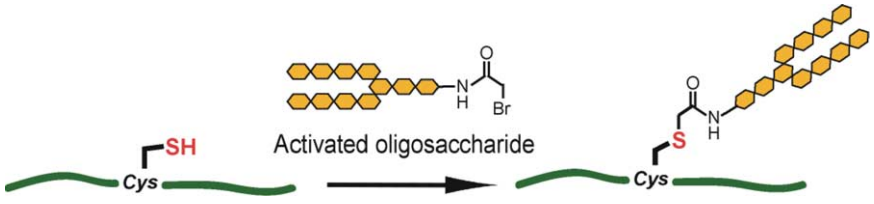


The syntheses of hachijodine B **1**, the proposed structure of ikimine B **2** and niphatesine D **3** from *S*-citronellol are described.

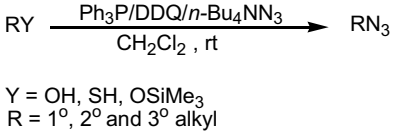




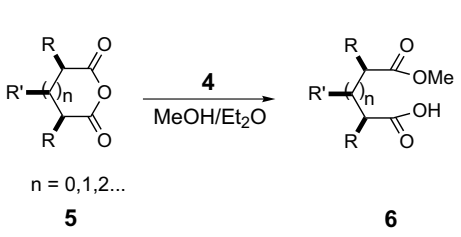
A novel approach has been found and the first total synthesis of (±)-Salvirecognine was accomplished by using it. In which intramolecular cyclization and Friedel–Crafts alkylation took place simultaneously to afford key intermediates for synthesis of aromatic tricyclic diterpenoids.

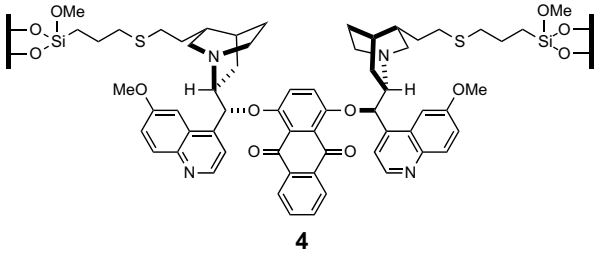


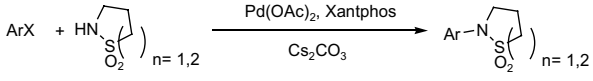
Glycopeptide analogue having a complex type disialyl-undecasaccharide was synthesized by use of the chemoselective reaction.



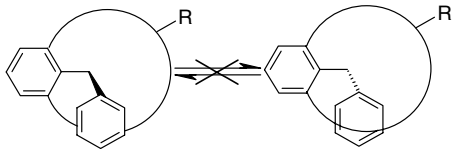
A zirconium borohydride piperazine complex (Ppyz)$Zr(BH_4)_2Cl_2$, obtained by the reaction of an ethereal solution of $ZrCl_4$ and $LiBH_4$ with piperazine, is a stable, selective and efficient reducing agent. (Ppyz)$Zr(BH_4)_2Cl_2$ reduces aldehydes, ketones, silylethers, α,β-unsaturated carbonyl compounds and esters. The reactions were performed in diethyl ether at room temperature or under reflux, and the yields of the corresponding alcohols were excellent. The selective reduction of aldehydes in the presence of ketones and complete regioselectivity in the reduction of α,β-unsaturated carbonyl groups were observed.

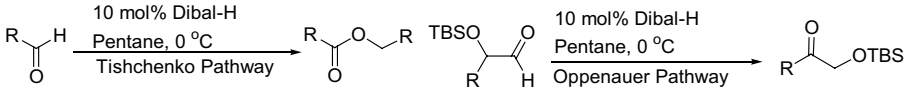




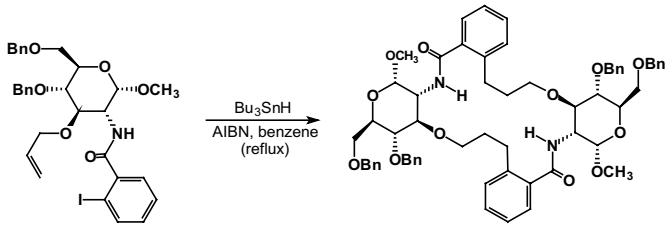


Palladium-catalyzed cross coupling of 1,4-butanesultam and 1,3-propanesultam with a variety of aryl halides was found to provide the desired products in 62–93% isolated yield using Xantphos as ligand. The Pd-catalyzed reaction is compared to the Cu-catalyzed reaction.

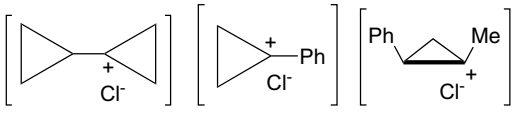




The aliphatic aldehydes react with 10 mol% of Dibal-H in *n*-pentane to give the corresponding Tishchenko products in good to excellent yields. Contrary, the α-silyloxyaldehydes give the α-silyloxyketones via Oppenauer oxidation under similar condition.



The Bu_3SnH-mediated reaction of methyl 3-*O*-allyl-4,6-di-*O*-benzyl-2-deoxy-2-(2-iodobenzoylamino)-α-D-glucopyranoside affords a 20-membered benzomacrodilactam. Its structure was deduced from ESI-MS and NMR analysis.



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*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

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