ELSEVIER

Tetrahedron Letters

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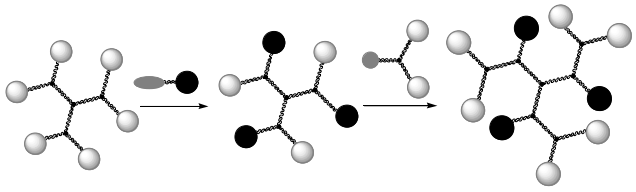
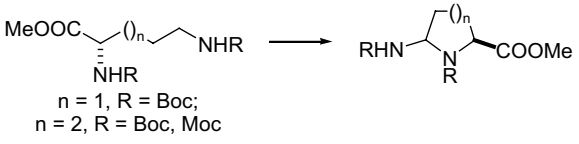
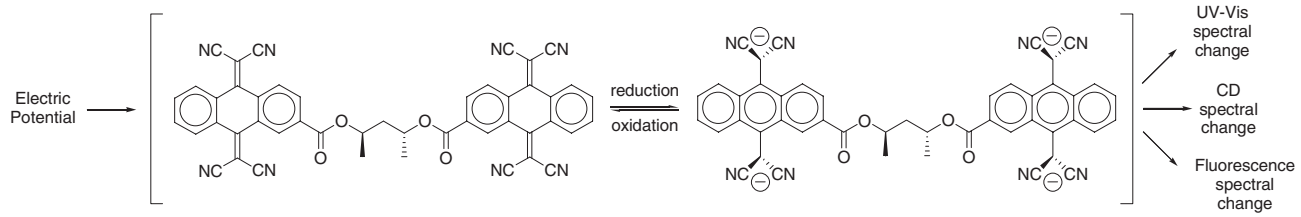
Contents

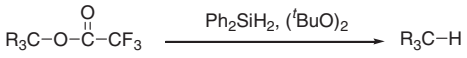
COMMUNICATIONS

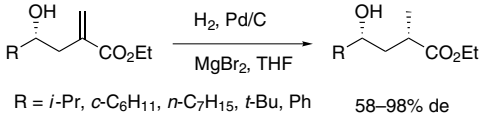


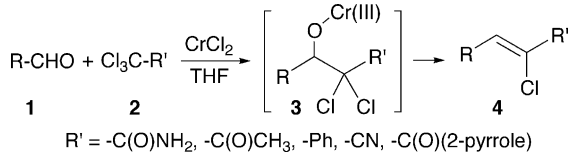
The selective reaction of one on two of each end group of a small dendrimer is the starting point of a new way for the internal functionalization of dendrimers. The unreacted functions are used later, for growing the dendrimers by applying a classical method of synthesis.



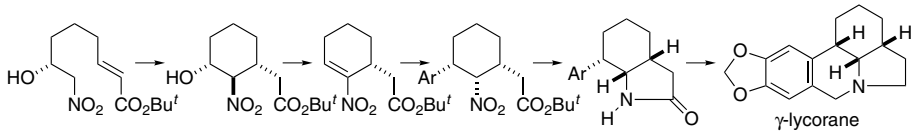


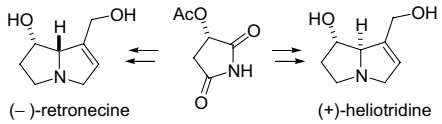


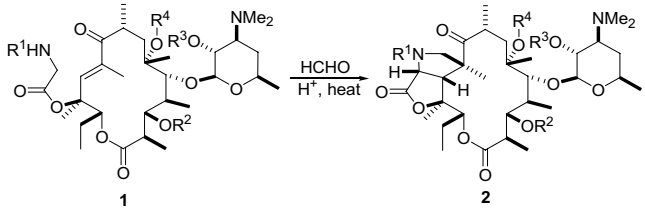




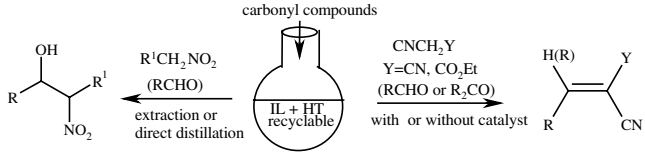
$CrCl_2$-mediated condensations of aldehydes with 1,1,1-trichlorides **2** afford trisubstituted chloroolefins **4** in excellent yields and generally high *Z*-stereoselectivity. The intermediate dichlorohydrins **3** can be isolated in good yields using limited reagent and reduced temperature.



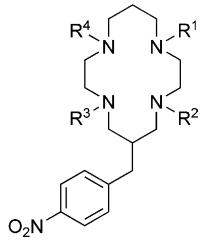




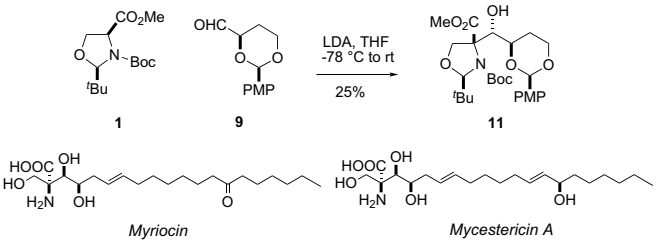
An intramolecular 1,3-dipolar cycloaddition of azomethine ylide, generated in situ via the reaction of **1** with formaldehyde, provided a novel tricyclic macrolide **2**. The high stereoselectivity of this [2+3] reaction was achieved by introducing a suitable directing group R^4 at C-6 position of macrolide.



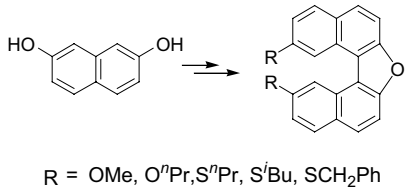
Knoevenagel condensation proceeds efficiently in recyclable [bmim]PF_6 and [bmim]BF_4 without any catalyst, and hydrotalcites in ionic liquid serve as a safe and recyclable reaction system for both Knoevenagel as well as nitroaldol condensations.

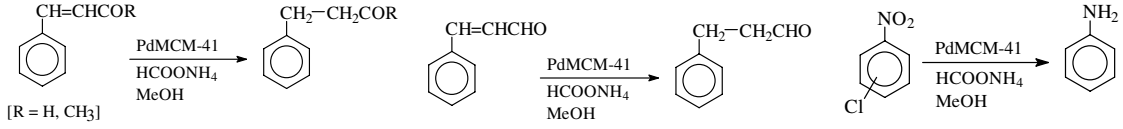


An efficient synthesis of C-functionalised cyclam macrocycles that employs bisaminal intermediates and allows subsequent N-substitution to be controlled is reported.

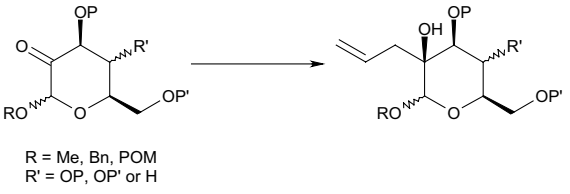


Highly diastereoselective aldol additions of pure (2*R*,4*S*)-2-*tert*-butyloxazolidinone-3,4-dicarboxylic acid 3-*tert*-butyl ester 4-methyl ester **1** are reported. While achiral carbonyl compounds lead to mixtures of diastereomers, the double stereodifferentiation of chiral aldehydes gave a single product isomer.

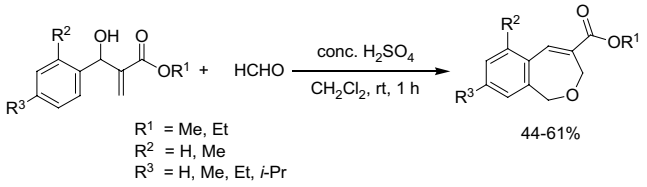


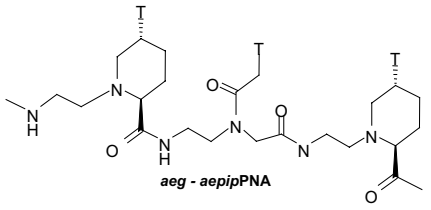


Palladium-incorporated mesoporous silicate (PdMCM-41) molecular sieves were found to be a highly efficient solid acid catalyst under transfer hydrogen conditions.

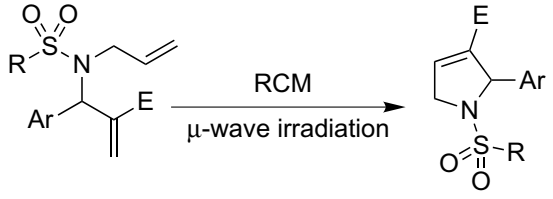


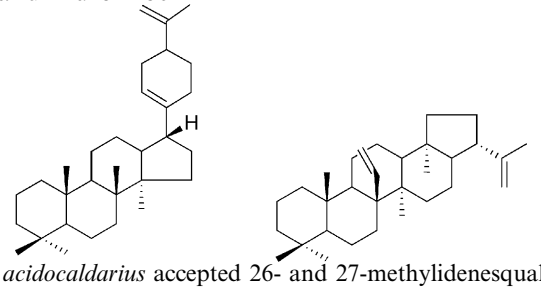
The addition of Grignard reagents to a number of 2-uloses has been investigated. Despite initial low diastereoselectivities it was found that tuning the ketone starting materials allowed formation of a single alcohol product.



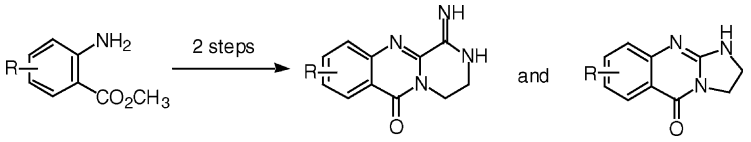


The six-membered pipecolic acid based *aepip*PNA is a higher homologue of aminoethylprolyl PNA. The synthesis of the thyminyl-2*S*,5*R*-*aepip*PNA monomer is reported. The preliminary results of the synthesis, characterization, and DNA binding properties of the triplex forming chimeric *aeg*PNA–*aepip*PNA oligomers are described.

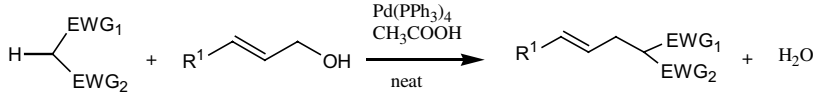


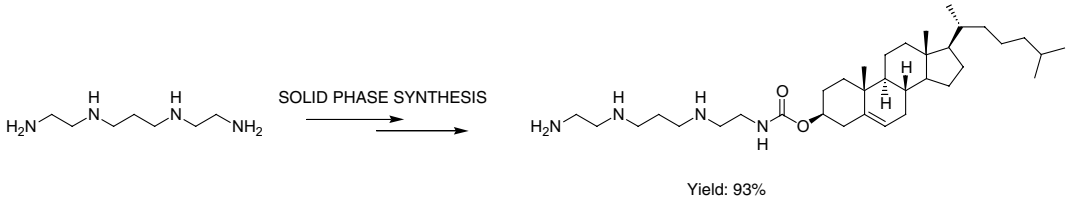


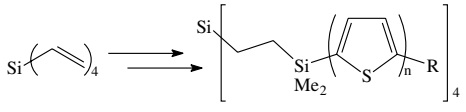
Squalene cyclase from *Alicyclobacillus acidocaldarius* accepted 26- and 27-methylidenesqualene as a substrate and converted to novel unnatural C_{31} polyprenoids.

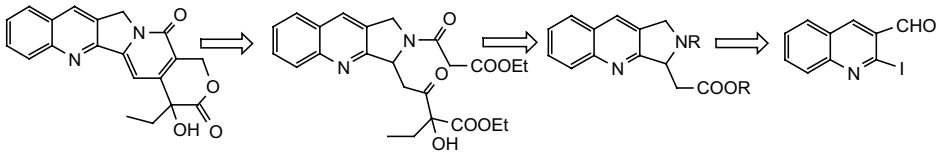


A rapid and original synthesis of novel pyrazino[2,1,-*b*]quinazolines and imidazo[2,1,-*b*]quinazolin-5-ones is described.

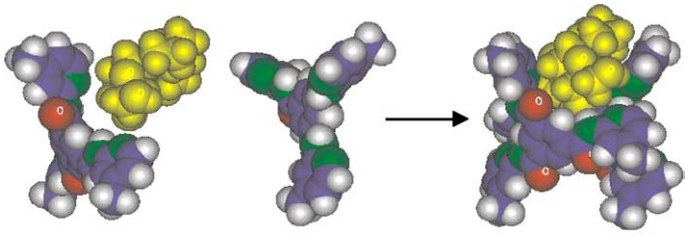


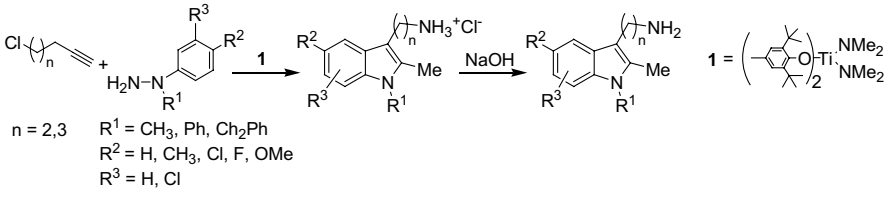




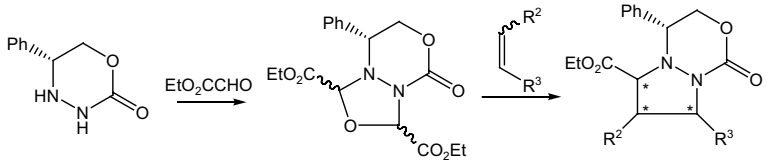


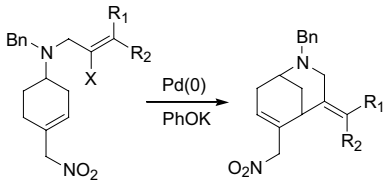
A total synthesis of camptothecin has been carried out. Central to our synthesis is the intramolecular condensation of a suitably designed ketol, which in turn was obtained from a tricyclic ABC ring synthon. A tandem reductive amination and Michael addition sequence on an unsaturated quinoline ester was employed for the assembly of the ABC skeleton.

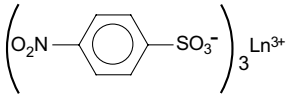


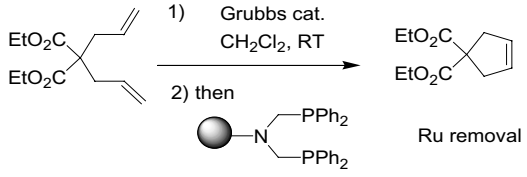


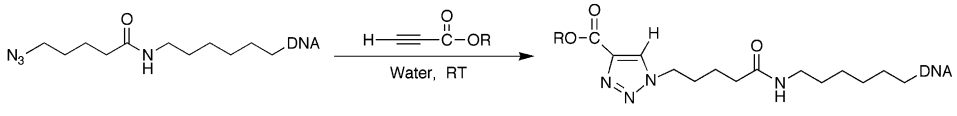
The first general method is presented for the direct synthesis of tryptamine derivatives from commercially available aryl hydrazines and chloroalkylalkynes.

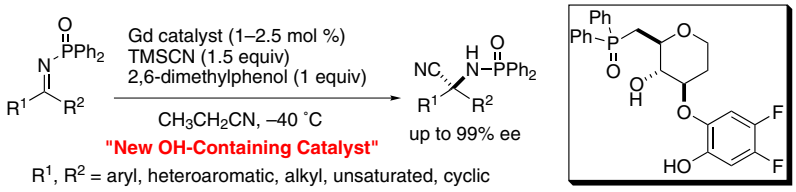


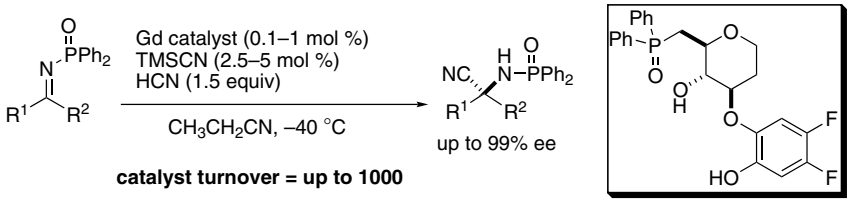


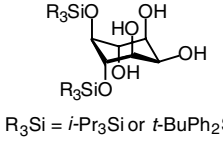




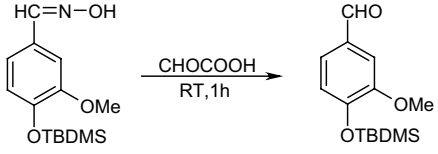


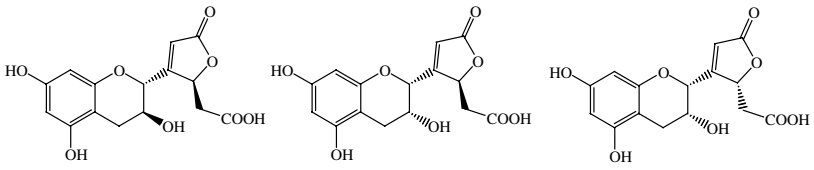






Introduction of two bulky silyloxy groups can flip multifunctionalized cyclohexane rings into the axial-rich chair conformation.





1 2 3

Three novel flavanol oxidative derivatives named viniferone A, B and C having structures 1, 2 and 3, respectively, were isolated from grape (*Vitis vinifera* L.) seeds.

OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

Catalytic enantioselective Strecker reaction of ketoimines with broad substrate generality was achieved using a chiral gadolinium catalyst and protic additives. Mechanistic consideration based on the catalyst structure led to the development of more advanced reaction conditions, using the combination of a catalytic amount of TMSCN and a stoichiometric amount of HCN. Catalyst turnover number reached up to 1000 while maintaining an excellent enantioselectivity. See *Tetrahedron Letters* **2004**, *45*, 3153–3155.

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