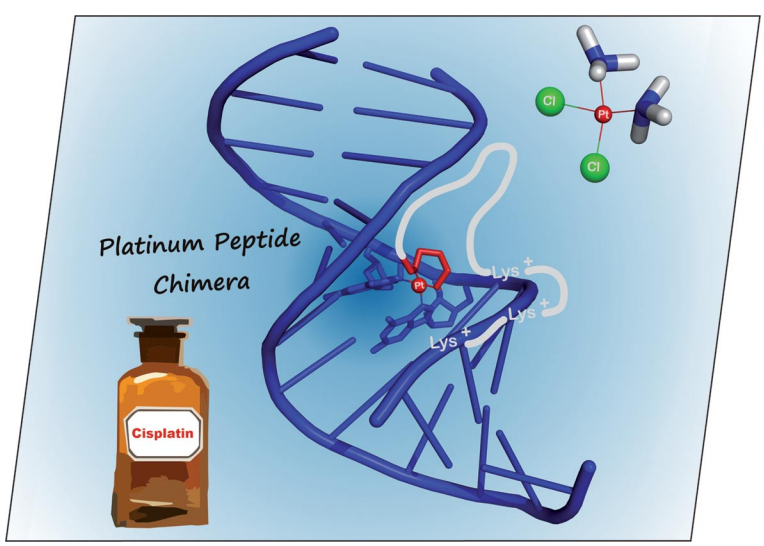
HUNGARY ITALY GERMANY GREECE
CZECH REPUBLIC FRANCE
ChemPubSoc Europe
SWEDEN BELGIUM
AUSTRIA PORTUGAL POLAND SPAIN NETHERLANDS

EurJOC is a journal of ChemPubSoc Europe, a union of 16 European chemical societies formed for the purpose of publishing high- quality science. All owners merged their national journals to form two leading chemistry journals, the *European Journal of Organic Chemistry* and the *European Journal of Inorganic Chemistry*.

Other ChemPubSoc Europe journals are *Chemistry – A European Journal*, *ChemBioChem*, *ChemPhysChem*, *ChemMedChem*, *ChemSusChem* and *ChemCatChem*.

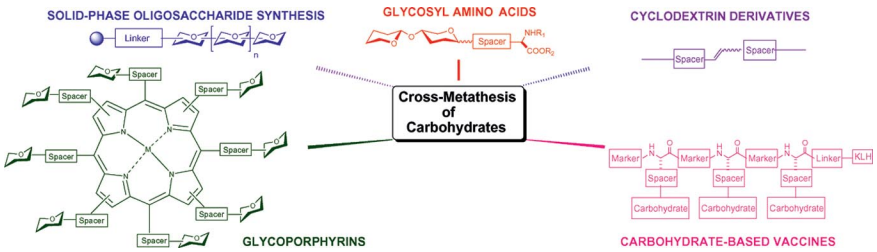
COVER PICTURE

The cover picture shows the covalent DNA binding of cisplatin-like complexes. These molecules were designed as hybrids between the platinum coordination site and positively charged peptides, which involves the covalent binding of one or two nucleobases by cisplatin-analogous platinum complexes and the bending of double-stranded DNA initiated by the peptide chain. An optimization of cisplatin-like anticancer drugs is intended. Binding of cisplatin analogs is facilitated by simultaneous DNA bending. Details are discussed in the article by U. Diederichsen et al. on p. 6161ff.



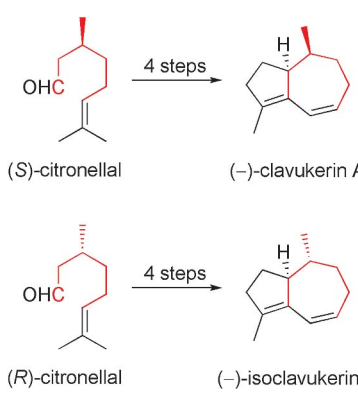
CONTENTS

MICROREVIEW

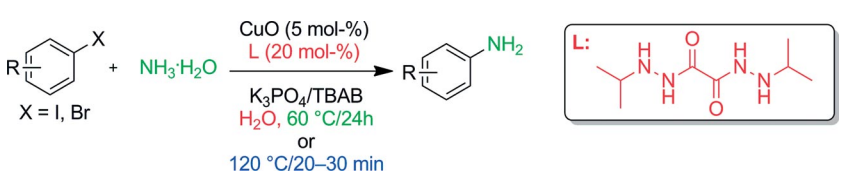


Cross-metathesis processes have been successfully applied to carbohydrate substrates during the last decade to give rise to a variety of glycoconjugates, including glycosyl amino acids, cyclodextrin derivatives, carbohydrate-based vaccines, oligosaccharides, and glycoporphyrins

SHORT COMMUNICATIONS



A combination of an organocatalytic Michael addition and a ruthenium-catalyzed dienyne metathesis allowed efficient access to the enantiopure title hydroazulenes from (*S*)- and (*R*)-citronellal, respectively, in only four steps.

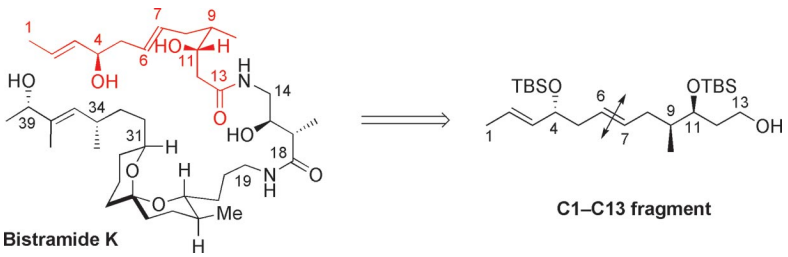


A highly efficient $N^2,N^{2\prime}$-diisopropyloxalohydrazide/CuO system was developed for the direct amination of aryl halides with aqueous ammonia in water at 60 °C for 24 h or at 120 °C for 20–30 min. The resulting aromatic primary amines were obtained in good to excellent yields.

FULL PAPERS

CONTENTS

Asymmetric Synthesis

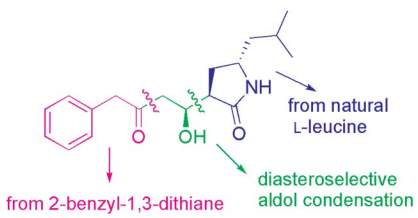


A synthesis of the C1−C13 fragment of the natural bistramide K is described.

Keywords: Asymmetric synthesis / Chiral auxiliary / Diastereoselectivity / Natural products / Olefination

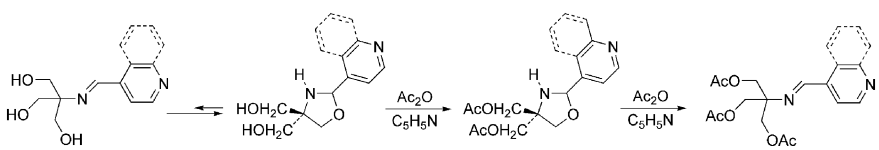
Diastereoselective Aldol Reactions

A stereoselective total synthesis of the Caspase 1 inhibitor (−)-berkeleyamide A is described, starting from commercially available L-leucinol



Keywords: Natural products / Total synthesis / Diastereoselectivity / Aldol reactions

Regioselective Ring-Opening



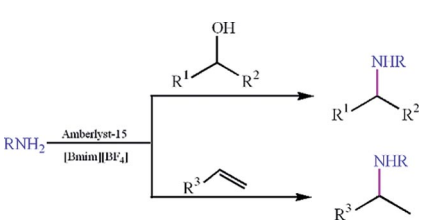
1,3-Oxazolidines derived from formylpyridines or -quinolines have been converted into imines under acetylating conditions.

DFT calculations point to the intermediacy of an iminium ion as the most plausible mechanism.

Keywords: Regioselectivity / Acylation / Schiff bases / Density functional calculations / Heterocycles

Reactions in Ionic Liquids

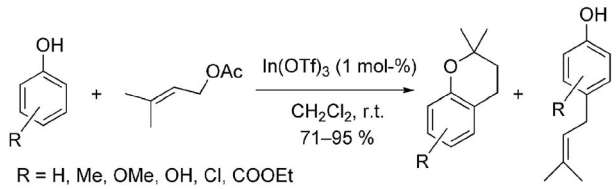
A facile protocol involving Amberlyst-15 in the ionic liquid [Bmim][BF_4] (= 1-butyl-3-methylimidazolium tetrafluoroborate) has been developed for nucleophilic substitution of alcohols and hydroamination of alkenes.



Keywords: Hydroamination / Heterogeneous catalysis / Ionic liquids / Nucleophilic substitution / Amidation

CONTENTS

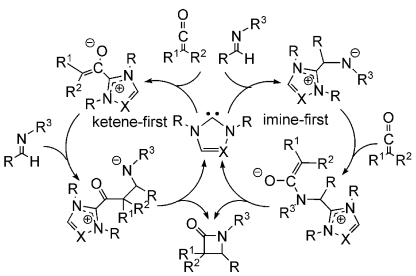
Indium Triflate Catalysis



Keywords: Indium / Lewis acids / Allylation / Oxygen heterocycles / Tandem reactions

Tandem allylation–intramolecular hydroalkoxylation carried out in the presence of an indium catalyst (1 mol-%) under mild conditions provides the dihydrobenzopyran ring system in good yields. Kinetic, mechanistic and theoretical studies are presented.

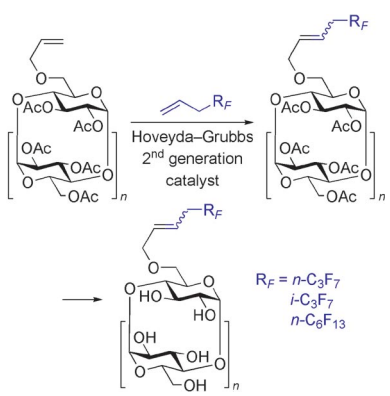
Staudinger Reaction



Keywords: Heterocycles / Carbenes / Reaction mechanisms / Stereoselectivity / Density functional calculations

Theoretical investigation by employing density functional theory reveals that the energy barrier of the "imine-first" mechanism is dramatically higher than that of the "ketene-first" mechanism and only the latter is actually feasible for the N-heterocyclic carbene (NHC)-catalyzed Staudinger reaction.

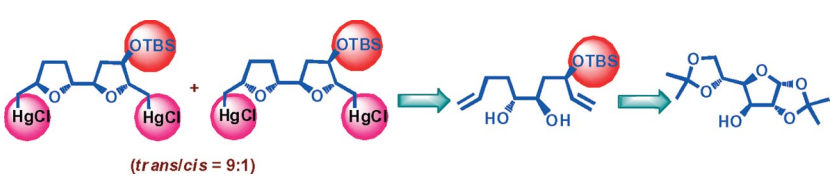
Perfluoroalkylated Cyclodextrins



Keywords: Metathesis / Cyclodextrins / Fluorine / Alkylation / Amphiphiles

Mono(perfluoroalkyl)cyclodextrin derivatives were prepared by cross metathesis with perfluoroalkylpropenes. After removal of the acetyl groups, aggregation properties in water were studied.

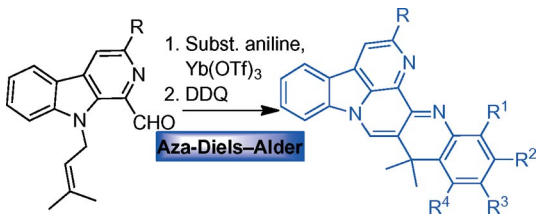
Double Oxymercuration



Keywords: Natural products / Stereoselectivity / Toxicity / Mercury / Oxygen heterocycles

An efficient preparation of a mono-hydroxylated bis-tetrahydrofuran ring system present in asimitrin and salzmanolin, two naturally occurring biologically active non-classical acetogenins, has been achieved by a one-pot stereoselective double intramolecular oxymercuration as the key reaction.

Fused-Ring Systems

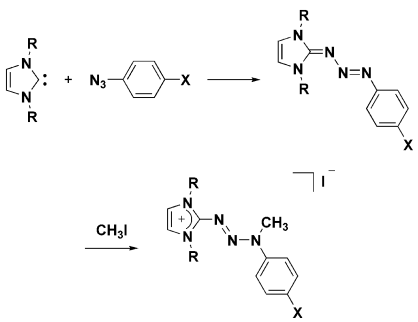


The synthesis of new canthines either by aza-Diels−Alder or carbonyl−ene reaction from *N*-prenylated 1-formyl-9*H*-β-carbolines has been accomplished.

Keywords: Cyclization / Aza-Diels−Alder reactions / Fused-ring systems / Lewis acids / Ytterbium

Ylidene-Triazene Reactiviy

Coupling of 1,3-dimesitylimidazolylidene (**1**) with a phenyl azide (**2**) afforded an ylidene-triazene **3**, which was methylated with CH_3I to yield the corresponding salt **4**. Crystallographic, ^1H and NOESY 1D NMR, as well as UV/Vis analyses provided insight into the structural and electronic features of **4**. Subsequent computational studies revealed that **3** should engage in dipolar cycloadditions, and the absence thereof may arise from kinetic factors.



Keywords: Nitrogen heterocycles / Dipolar cycloaddition / Click chemistry / N-Heterocyclic carbenes / Azides / Triazenes

* Author to whom correspondence should be addressed.

Supporting information on the WWW (see article for access details).

If not otherwise indicated in the article, papers in issue 31 were published online on October 19, 2010

