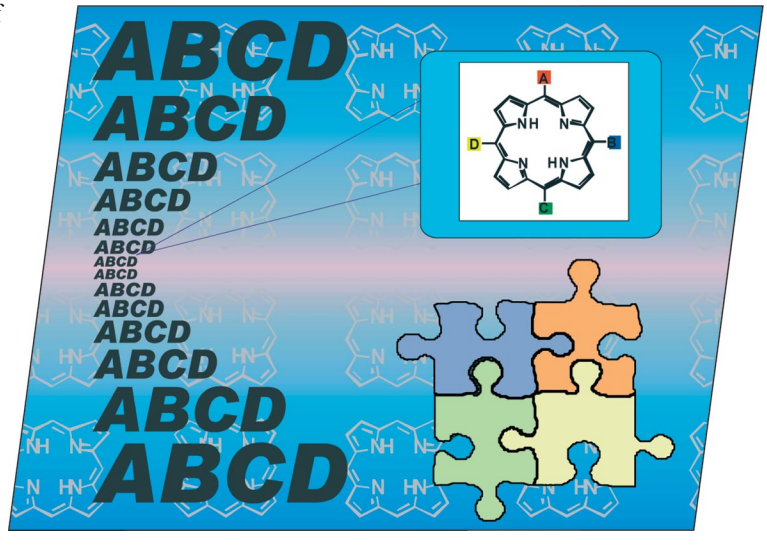
EurJOC is co-owned by 11 societies of ChemPubSoc Europe, a union of European chemical societies for the purpose of publishing high-quality science. All owners merged their national journals to form two leading chemistry journals, the *European Journal of Organic Chemistry* and the *European Journal of Inorganic Chemistry*. Three further members of ChemPubSoc Europe (Austria, Czech Republic and Sweden) are Associates of the two journals.

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

COVER PICTURE

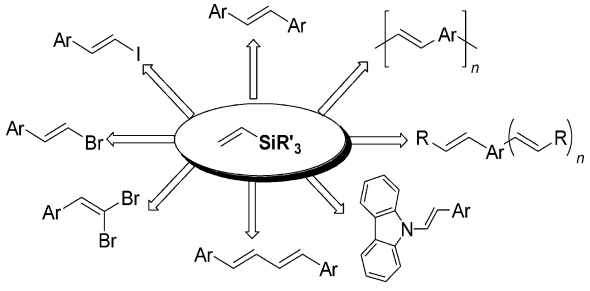
The cover picture shows that the preparation of ABCD-type porphyrins from porphyrin precursors is not as difficult as an eye exam or a puzzle. The use of porphyrin precursors and modern organometallic methods allow the preparation of all types of A_x- and ABCD-type porphyrins. Details are discussed in the article by M. O. Senge et al. from Trinity College Dublin on p. 237ff.



CONTENTS

MICROREVIEW

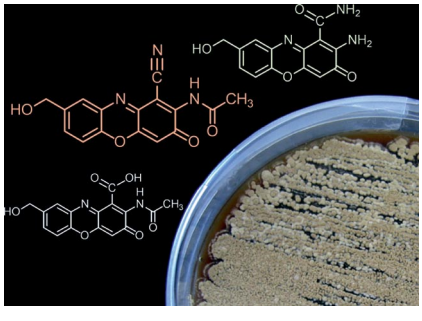
Silylative Coupling



From simple vinylsilanes to complex π-conjugated molecules: recent applications of sequential silylative coupling/desilylative coupling methodology to the synthesis of functionalized arylvinyl derivatives are reviewed.

SHORT COMMUNICATION

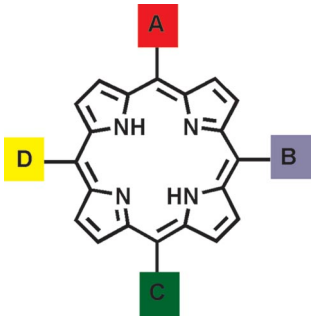
Natural Products



Three phenoxazinones, which primarily differ in the carboxy, carboxamide and nitrile substituents at C-1, were isolated from a *Streptomyces griseus* strain. The cooccurence of the rare nitrile-functionalized bezerramycin C with carboxy and carboxamide substituted congeners implies a biogenetic relationship.

FULL PAPERS

Porphyrins

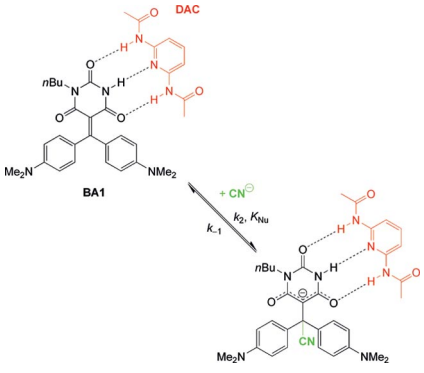


A comprehensive study of contemporary synthetic methods by using organolithium and Pd-catalyzed C–C coupling reactions for ABCD-porphyrins reveals that it is now possible to prepare almost any desired *meso*-substituted porphyrin.

Supramolecular Chemistry

Keywords: Donor-acceptor systems / Supramolecular chemistry / Hydrogen bonds / Lewis acids / Acidity / Electrophilicity

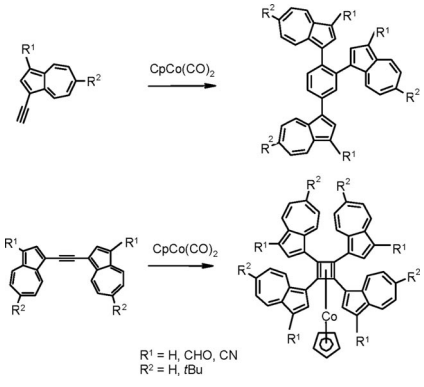
For the first time it is demonstrated that it is possible to influence the reactivity of a neutral electrophile which possesses a hydrogen bonding motif by using a complementary receptor: Upon complexation of **BA1** with the receptor **DAC** both the electrophilicity and the Lewis acidity of **BA1** are markedly increased.



Cyclooligomerization of Alkynes

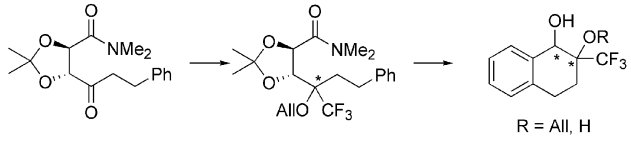
Keywords: Cobalt catalyst / Ethynylazulenes / Azulenylbenzenes / Azulenylcyclobutadienes / Cyclooligomerization / Cross-coupling / Polycycles

Co-catalyzed cyclooligomerization of ethynylazulenes as well as diazulenylethynes to the corresponding azulenyl-substituted cyclobutadienes and benzenes is described.



Nucleophilic Trifluoromethylation

Keywords: Aromatic substitution / Asymmetric synthesis / Chiral pool / Cyclization / Fluorine

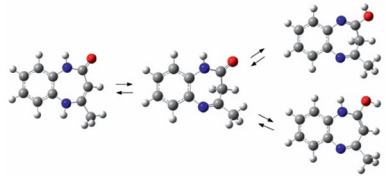


The enantiopure stereoisomers of the title compound were prepared and characterized, starting from a tartaric acid derived keto amide.

Heterocyclic Chemistry

Keywords: Nitrogen heterocycles / Tautomerism / Density functional calculations

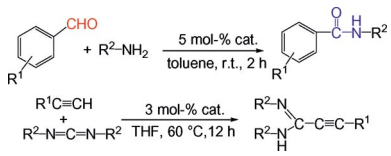
An exhaustive study of tautomerization in three kinds of dihydro-1,5-benzodiazepin(e)-2-(thi)one systems through theoretical calculations is reported.



CONTENTS

Amidation of Aldehydes

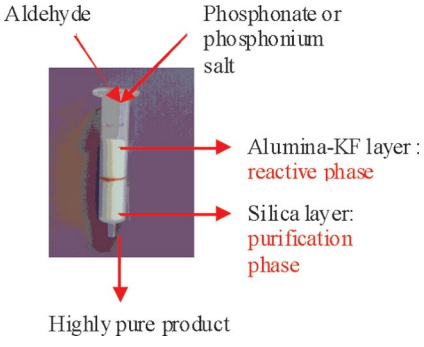
Cyclopentadienyl-free rare-earth metal amides $[\{(CH_2SiMe_2)\{(2,6\text{-}iPr_2C_6H_3)N\}_2\}Ln\{N(SiMe_3)_2\}(THF)]$ have been found to be versatile catalysts for C−N and C−C bond formation.



Keywords: Lanthanides / N,O ligands / Amides / Amidines

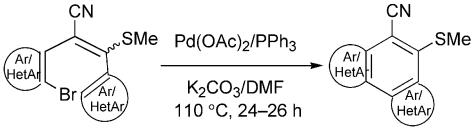
On-Column Reactions

The synthesis of some natural bioactive compounds, including (*E*)-stilbenes, alkylideneresorcinols, and 5-aryl-2,4-pentadienoates, over a column of alumina-KF under microwave irradiation was investigated by using the Wittig and Horner−Emmons reactions.



Keywords: Wittig reactions / Solid-phase synthesis / Supported catalysis / Reactive chromatography / Microwave chemistry

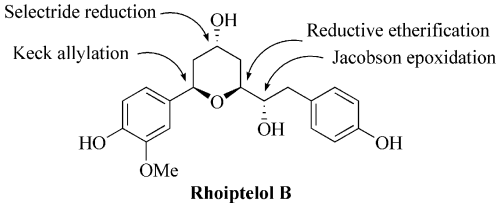
Pd-catalyzed Cyclization



An efficient route to substituted phenanthrenes and polycyclic heteroarenes by a direct, Pd-catalyzed, intramolecular arylation/heteroarylation of 2-(2-bromoaryl/heteroaryl)-3-(aryl/heteroaryl)-3-(methylthio)acrylonitriles has been reported.

Keywords: Cyclization / Heteroarenes / Palladium / Phenanthrenes / Polycycles

Natural Product Synthesis



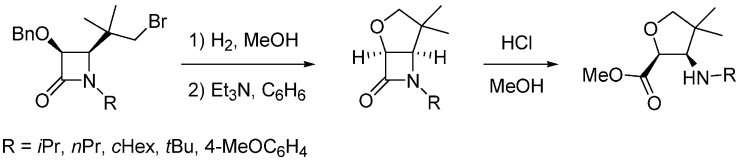
Rhoiptelol B

The first total synthesis of rhoiptelol B has been achieved in 15 steps in a stereoselective and convergent fashion. The key steps used were Keck allylation, Jacobson resolution, lithium-mediated aldol reaction and reductive etherification for the generation of required chiral centers.

Keywords: Rhoiptelol B / Total synthesis / Natural products / Reductive etherification / Aldol reactions

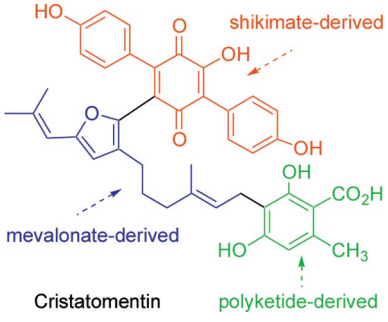
CONTENTS

β-Lactam Chemistry



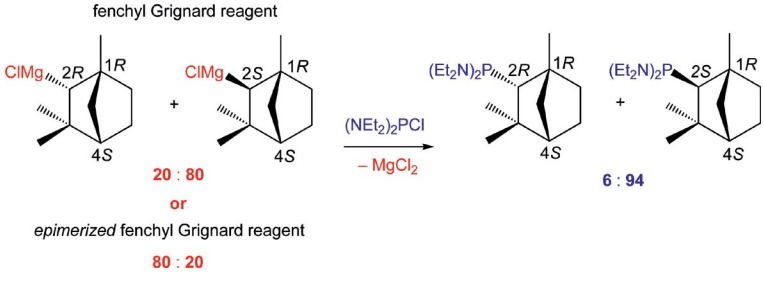
cis-3-Benzyloxy-4-(2-bromo-1,1-dimethylethyl)azetidin-2-ones were transformed into novel *cis*-2-oxa-6-azabicyclo[3.2.0]heptan-7-ones by a two-step procedure. The latter *cis*-2-oxa-6-azabicyclo[3.2.0]heptan-7-ones were subsequently converted into *cis*-3-amino-tetrahydrofuran-2-carboxylates through acidic methanolysis.

Green Toadstool Pigment



The structure of cristatomentin has been elucidated by MS studies and comparison of its NMR spectrum with those of cristatic acid and albatrellin. The furylbenzoquinone chromophore of cristatomentin may arise from cristatic acid and 2-*O*-acetylatromentin, which co-occur with the title compound in the fungus.

Diastereoselective Grignard Reactions



The reaction of the fenchyl Grignard reagent (ratio *endo*/*exo* = 20:80) **or** the *epimerized* fenchyl Grignard reagent (ratio *endo*/*exo* = 80:20) with $(NEt_2)_2PCl$ gave rise to a mixture of α- and β-fenchylbis(diethylamino)phosphane with an *endo*/*exo* ratio of 6:94 regardless of the original *endo*/*exo* ratio. The results of the substitution reactions are consistent with a SET mechanism involving the fenchyl radical as intermediate.

CORRECTION

* 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 1 were published online on December 16, 2009

