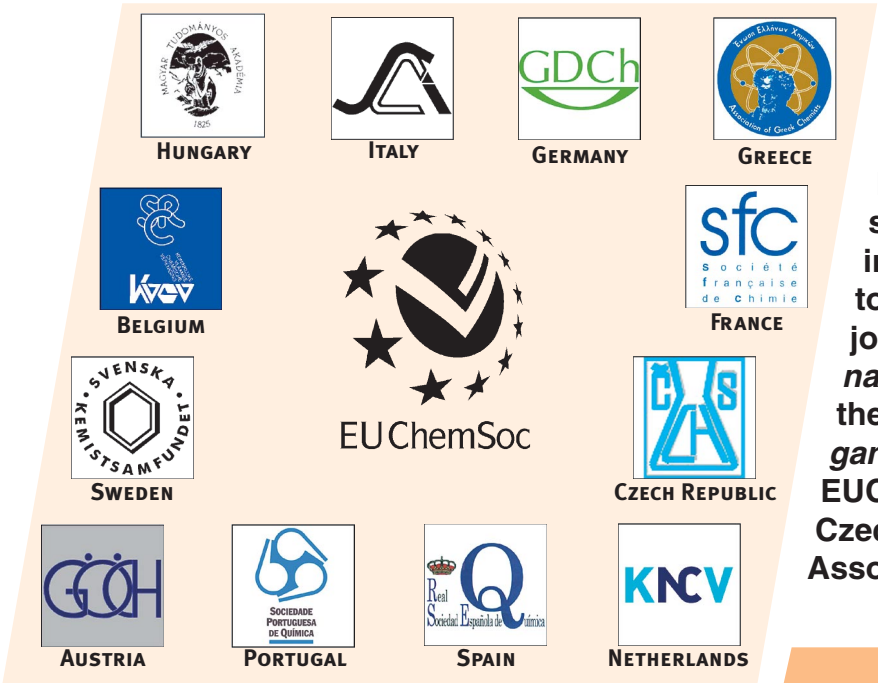
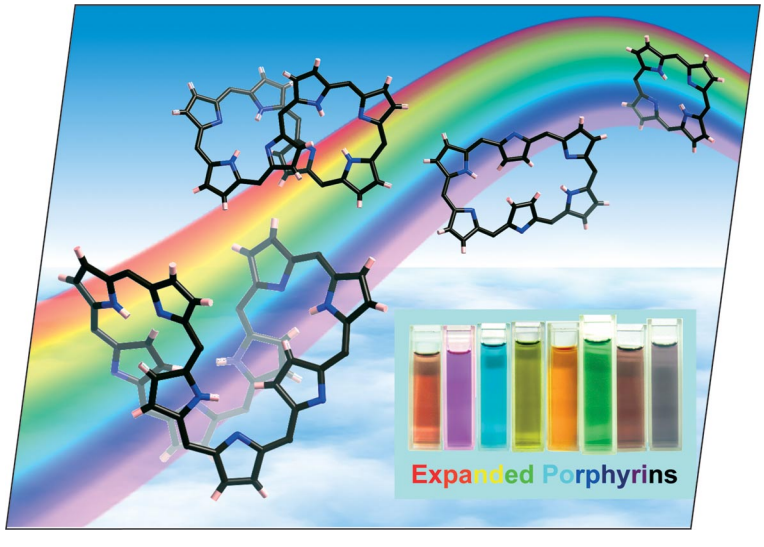


The EUChemSoc Societies have taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry*. Three further EUChemSoc Societies (Austria, Czech Republic and Sweden) are Associates of the two journals.

COVER PICTURE

The cover picture shows the crystal structures and colors of *meso*-pentafluorophenyl-substituted expanded porphyrins. [18]Porphyrin, [26]hexaphyrin, [36]octaphyrin, [44]decaphyrin, [52]dodecaphyrin, [62]tetradecaphyrin, [72]hexadecaphyrin, and [80]octadecaphyrin were synthesized and characterized. As indicated, the absorption bands of these expanded porphyrins are redshifted as their size increases, and [80]octadecaphyrin shows its absorption maximum at 953 nm. Their solutions exhibit various colors, reflecting the macrocyclic conjugation like a rainbow. Details are discussed in the article by A. Osuka et al. on p. 1341ff.



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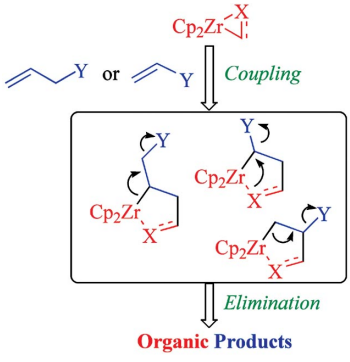
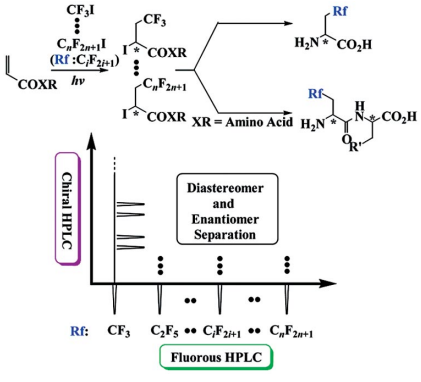
MICROREVIEW

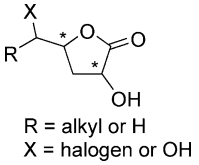


The tandem zirconocene-mediated or -catalyzed cross-coupling–elimination reaction is a powerful tool for the construction of scaffolds that in many cases are difficult to access by traditional organic chemistry. In this Microreview we discuss the reactivity of alkyne-, aryne-, alkene- and iminezirconocene complexes towards alkenes containing a heteroatom functionality at an appropriate position.

SHORT COMMUNICATIONS



A fluorous racemic mixture synthesis (FRMS) of nonproteinogenic polyfluoro amino acid and peptide precursors was developed by the orthogonal use of fluorous and chiral HPLC columns.

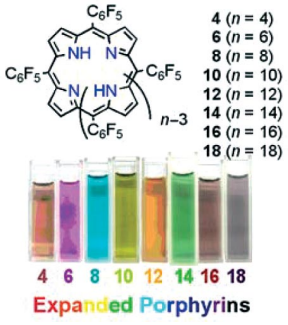


In this communication a one-pot hydrolysis-induced four-reaction lactonization cascade is described for the synthesis of 3′-deoxyribolactones. These γ-lactones are useful synthetic intermediates towards biologically active chiral 4-butanolides.

FULL PAPERS

Expanded Porphyrins

Large expanded porphyrins up to [80]octadecaphyrin **18** were synthesized and characterized. The solid-state structure of **10** was revealed by X-ray diffraction analysis to be a crescent-like conformation. The absorption bands of the porphyrins are redshifted as their sizes increase.



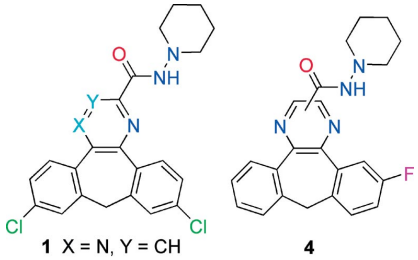
Y. Tanaka, J.-Y. Shin, A. Osuka* 1341–1349

Facile Synthesis of Large *meso*-Pentafluorophenyl-Substituted Expanded Porphyrins

Keywords: Porphyrinoids / Expanded porphyrins / Conjugation / Macrocycles

Synthesis of Rimonabant Analogues

A synthesis of methylene-bridged analogs of rimonabant is presented. The preparation of the desired compounds is based on a cyclocondensation reaction of tricyclic 1,2-diketones.

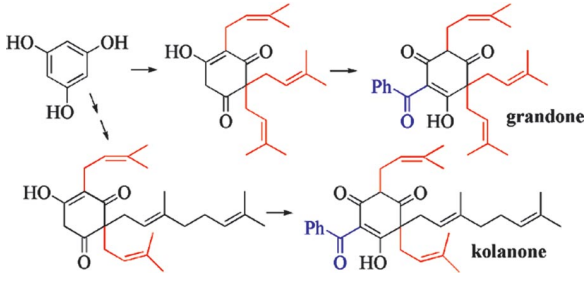


M. Ślusarczyk, W. M. De Borggraeve,* G. Hoornaert, F. Deroose, J. T. M. Linders 1350–1357

Synthesis and Biological Evaluation of Methylene-Bridged Analogs of the Potent Cannabinoid Receptor Antagonist Rimonabant

Keywords: Heterocycles / Cyclocondensation / Diels–Alder reaction

Phloroglucinol Prenylation



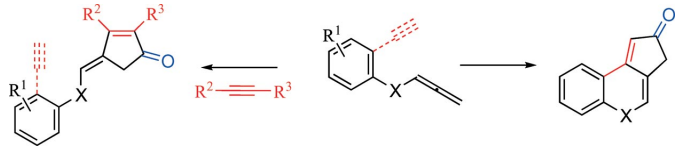
C-Alkylation of phloroglucinol with prenyl bromide in water provided a *gem*-disubstituted triprenylated derivative. Starting from geranyl- and isolavandulylphloroglucinol, compounds possessing a prenyl and a C_{10} chain at the same position were obtained. Subsequent *C*-benzoylation allowed the synthesis of natural products. Biomimetic-like electrophilic cyclization reactions were attempted with the aim of constructing polycyclic polyprenylated acylphloroglucinols (PPAPs).

S. B. Raikar, P. Nuhant,* B. Delpech,* C. Marazano 1358–1369

Synthesis of Polyprenylated Benzoylphloroglucinols by Regioselective Prenylation of Phloroglucinol in an Aqueous Medium

Keywords: Phloroglucinols / Prenylation / *C*-Benzoylation / Electrophilic cyclization / Natural products / Biomimetic synthesis

Allenic Pauson–Khand Reactions



Pauson–Khand reactions of functionalized allenes with different alkynes give monocyclic cyclopentenones with generally high regio- and stereoselectivities. The allenes react with the external double bonds, giving cyclopentenones with exocyclic double bonds at their β positions, mainly with *E* stereochemistry. Some intramolecular reactions with allenynes connected through aromatic rings are described.

Á. González-Gómez, L. Añorbe, A. Poblador, G. Domínguez, J. Pérez-Castells* 1370–1377

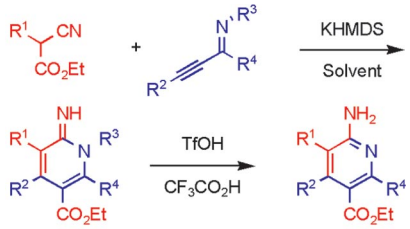
Intermolecular and Intramolecular Pauson–Khand Reactions of Functionalized Allenes

Keywords: Pauson–Khand reactions / Allenes / Cyclizations / Allenamides

CONTENTS

Iminopyridines

Multi-substituted 2-iminopyridines can be synthesized by conjugate addition of ethyl cyanoacetate derivatives to alkynyl imines. Deprotection of the substituent on the nitrogen of 2-iminopyridines under acidic conditions gives 2-aminopyridines.

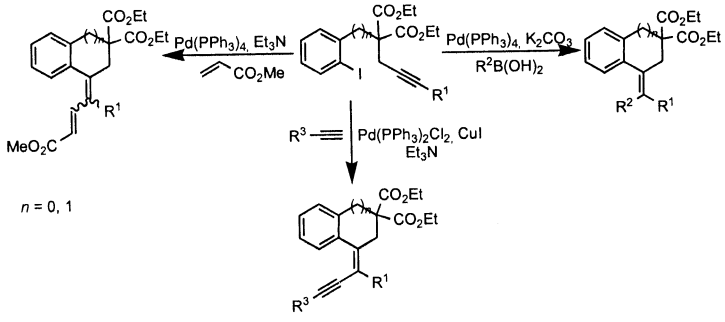


I. Hachiya, Y. Minami, T. Aramaki, M. Shimizu* 1411–1417

Synthesis of Multi-Substituted 2-Iminopyridine by Conjugate Addition of Ethyl Cyanoacetate Derivatives to Alkynyl Imines

Keywords: Conjugate addition / Imines / Pyridine / Ring-opening / Amines / Alkynes

Pd-Catalyzed Domino Reactions



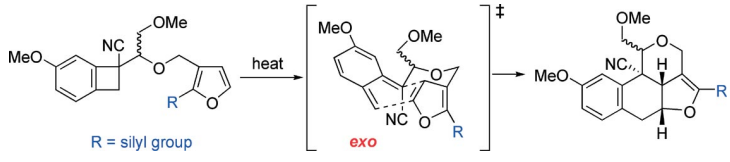
L.-N. Guo, X.-H. Duan, J. Hu, H.-P. Bi, X.-Y. Liu, Y.-M. Liang* 1418–1425

Synthesis of Indene and Naphthalene Derivatives by a Palladium-Catalyzed Domino Carbopalladation/Cyclization/Coupling Process

Keywords: Domino reactions / Carbopalladation / Cyclization / C-C coupling

Highly substituted indene and naphthalene derivatives have been readily prepared in good-to-high yields by a palladium-catalyzed domino reaction. This domino reaction involves a Heck carbopalladation/cyclization/coupling process.

Tandem Pericyclic Reactions



Y. Matsuya,* Y. Imamura, T. Miyahara, H. Ochiai, H. Nemoto* 1426–1430

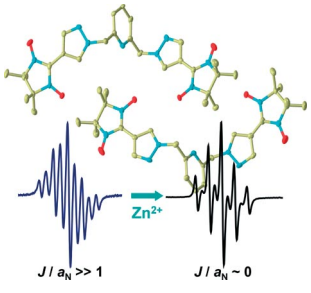
Approach to a New Dihydrofuran-Fused Cyclic System by a Remarkable Switching of *endo*/*exo* Selectivity of a [4+2] Cycloaddition Reaction

Keywords: Cycloaddition / Quinodimethanes / Pericyclic reaction / Diastereoselectivity / Anti-influenza agent

A new class of furan-fused tetracyclic compounds, which have an oxa-furanosteroidal framework, have been synthesized via an *o*-quinodimethane generated by thermal electrocyclic ring-opening of benzocyclobutene derivatives. The stereoselectivity could be controlled by preinstallation of a bulky silyl substituent onto the furan ring, enforcing an *exo* transition state. Preliminary biological evaluation of these compounds suggests they have potential as new anti-influenza agents.

Stable Biradical Systems

The novel nitronyl nitroxide biradical system based on the 2,6-bis(pyrazolylmethyl)-pyridine unit exhibits a through-bond ferromagnetic interaction ($0.06\ cm^{-1} < \Delta E_{ST} = 2J/k_B < 0.6\ cm^{-1}$) which vanishes ($2J/k_B \approx 0$) upon coordination with Zn^{2+} metal ions.



G. Zoppellaro, A. Geies, K. K. Andersson, V. Enkelmann, M. Baumgarten* 1431–1440

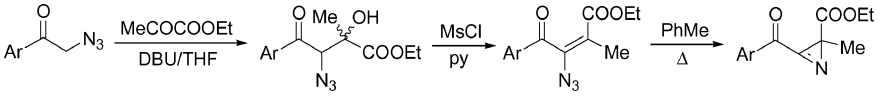
Synthesis, Optical Properties and Magnetic Studies of 2,6-Bis(pyrazolylmethyl)pyridine Functionalized with Two Nitronyl Nitroxide Radicals

Keywords: High-spin molecules / Radicals / EPR spectroscopy / Bis(pyrazolylmethyl)-pyridine / NMR spectroscopy

CONTENTS

C−C Coupling of α-Azido Ketones

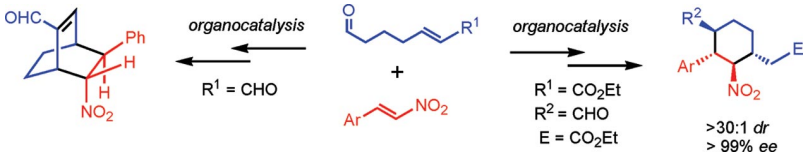
Keywords: Azides / Azirines / C−C coupling / Nitrenes / Thermolysis



Phenacyl azides can be transformed into ethyl 4-aryl-3-azido-2-methyl-4-oxobut-2-enoates by base-induced coupling of α-azido ketones with an α-oxo ester followed by elimination from the mesylate generated in situ from the labile aldol-type intermediates ethyl 4-aryl-3-azido-2-hydroxy-2-methyl-4-oxobutanoates. Thermolysis of the ethyl 4-aryl-3-azido-2-methyl-4-oxobut-2-enoates gives the hitherto unknown 3-aroyl-2-ethoxycarbonyl-2-methyl-2*H*-azirines.

Tandem Reactions

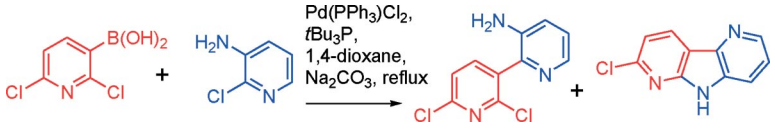
Keywords: Asymmetric synthesis / Organocatalysis / Michael additions / Domino reactions / Tandem reactions



Organocatalytic conjugate addition of 7-oxohept-2-enoate and nitrostyrene followed by intramolecular cyclization affords the highly functionalized cyclohexane carboester with four stereogenic centers with high diastereoselectivity and high enantioselectivity (>99% *ee*).

Functionalised Heterocycles

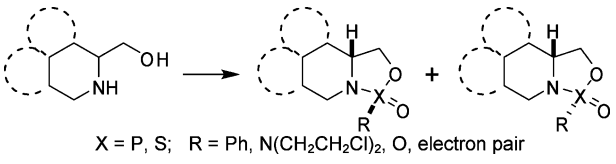
Keywords: Pyridine / Lithiation / Boronic acid / Cross-coupling / Diazacarbazole



Functionalised heteroarylpyridines have been synthesized by Suzuki methodology using (2,6-dimethoxy-3-pyridyl)boronic acid, (2,3-dimethoxy-4-pyridyl)boronic acid, (2,6-difluoro-3-pyridyl)boronic acid, (2,6-dichloro-3-pyridyl)boronic acid and (2,3-dichloro-4-pyridyl)boronic acid as key reagents.

Phosphorus and Sulfur Heterocycles

Keywords: Phosphorus heterocycles / Sulfur heterocycles / Fused-ring systems / Conformational analysis / Molecular modelling



The cyclizations of tetrahydroisoquinoline 1,2-amino alcohols with phenylphosphonic dichloride, bis(2-chloroethyl)phosphoramidic dichloride, thionyl chloride and sulfuryl chloride were utilized to synthesize 5-membered O,P,N- and O,S,N-heterocycles. NMR spectroscopic analysis revealed the existence of conformational equilibria that are fast on the NMR timescale.

If not otherwise indicated in the article, papers in issue 7 were published online on February 13, 2008

