

COVER PICTURE

The cover picture shows the pair of quinidine and quinine, two *pseudo*-enantiomeric alkaloids from the bark of the *Cinchona* tree which is cultivated in tropical parts of Africa. A view over African medicinal trees in Kirstenbosch Botanical Gardens, situated on the eastern slopes of Table Mountain (Cape Town, South Africa; picture taken by I. Schmelzer), is used as a backdrop. Also shown are selected new products of novel key transformations which are discussed in the Microreview by H. M. R. Hoffmann and J. Frackenpohl on p. 4293 ff. These alkaloids are a valuable resource for the discovery and invention of new chemistry, embracing both basic and applied science.



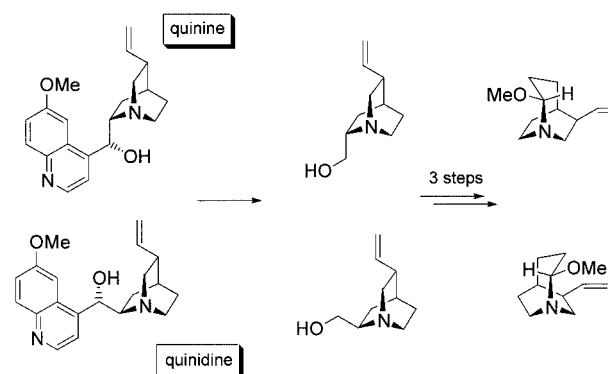
MICROREVIEW

Contents

4293 H. M. R. Hoffmann*, J. Frackenpohl

Recent Advances in *Cinchona* Alkaloid Chemistry

Keywords: Alkaloids / Chirality / Molecular rearrangements / Quinidine / Quinidine

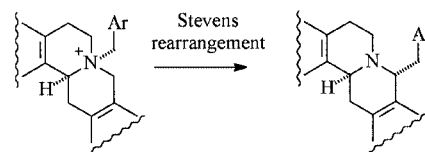


SHORT COMMUNICATIONS

4313 M. Valpuesta,* A. Diaz, R. Suau, G. Torres

Regio- and Stereoselective Stevens Rearrangement of Benzyltetrahydroprotoberberinium Salts

Keywords: Rearrangement / Alkaloids / Ylides / Elimination / Conformation

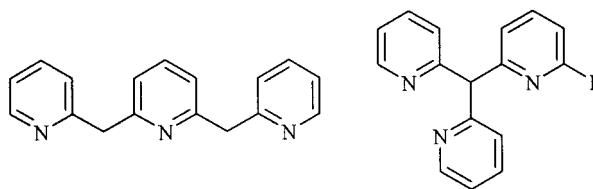


1 Ar = Ph
2 Ar = 4-MeO-C₆H₄

4319 G. Dyker,* O. Muth

Synthesis of Methylene- and Methine-Bridged Oligopyridines

Keywords: Multidentate ligands / Lithiation / Nucleophilic substitution / Nitrogen heterocycles

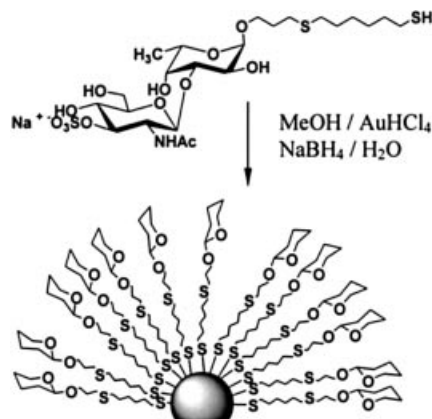


FULL PAPERS

4323 A. Carvalho de Souza, K. M. Halkes,
J. D. Meeldijk, A. J. Verkleij,
J. F. G. Vliegthart, J. P. Kamerling*

Synthesis of Gold Glyconanoparticles: Possible Probes for the Exploration of Carbohydrate-Mediated Self-Recognition of Marine Sponge Cells

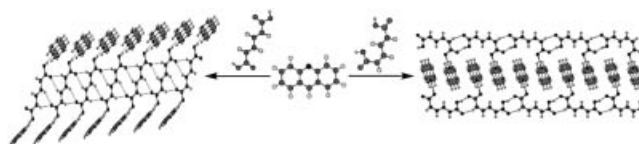
Keywords: Oligosaccharides / Carbohydrate-carbohydrate recognition / Gold glyconanoparticles / Marine sponges



4340 X. Mei, C. Wolf*

Neutral and Ionic Supramolecular Structures of Unsaturated Dicarboxylic Acids and Acridine: Significance of Molecular Geometry and Proton Transfer

Keywords: Crystal engineering / Supramolecular synthesis / X-ray diffraction / Dicarboxylic acid / Acridine

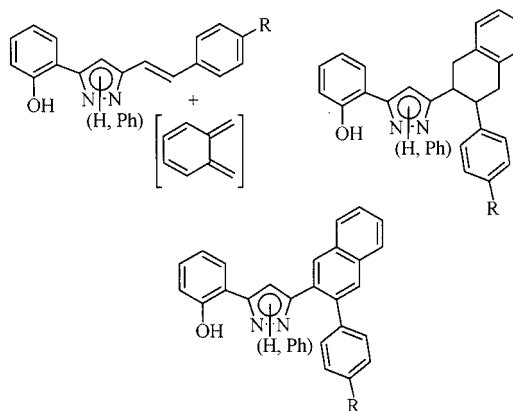


4348

V. L. M. Silva, A. M. S. Silva,*
D. C. G. A. Pinto, J. A. S. Cavaleiro,
J. Elguero

3(5)-(2-Hydroxyphenyl)-5(3)-styrylpyrazoles:
Synthesis and Diels–Alder Transformations

Keywords: *ortho*-Benzoquinodimethane / DDQ /
Dehydrogenation reactions / Diels–Alder
reactions / NMR spectroscopy / Pyrazoles

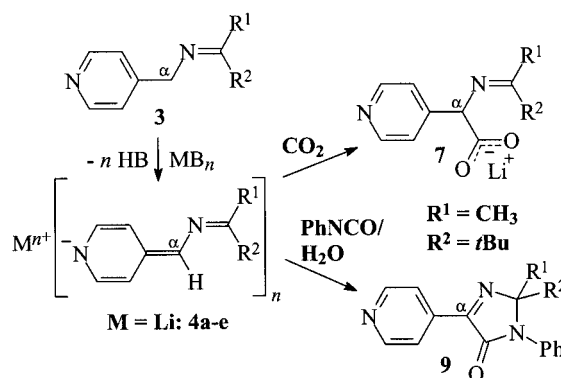


4357

D. Hampe, W. Günther, H. Görls,
E. Anders*

Metal 4-Alkylidene-4*H*-pyridin-1-ides and 2*H*-
Imidazol-4-ones from Novel Highly *N*-(Pyridin-
4-yl)methyl-Substituted Azomethines

Keywords: Metalated azomethines / Heterocumulene
fixation / Carboxylation / DFT calculations

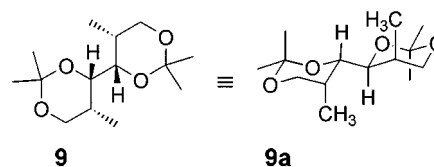


4373

T. Brandl, R. W. Hoffmann*

Conformational Analysis of Axially Substituted
4,4'-Bi-1,3-dioxanyls

Keywords: Conformational analysis / Oxygen hetero-
cycles



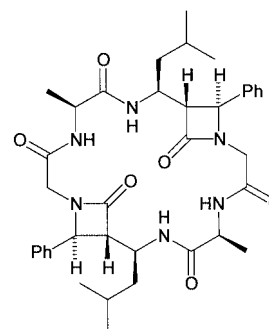
4379

T. C. Maier, J. Podlech*



β -Lactam-Containing Cyclopeptide Analogs

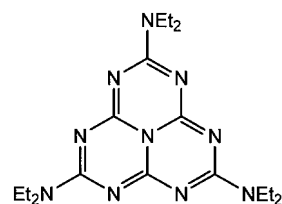
Keywords: Peptidomimetics / Lactams / Cyclization /
Peptide coupling / Peptide conformation



4387 B. Traber, T. Oeser, R. Gleiter, M. Goebel, R. Wortmann*

Donor-Substituted Heptaazaphenalene as a Nonlinear Optically Active Molecule with Multiple Charge-Transfer Transitions

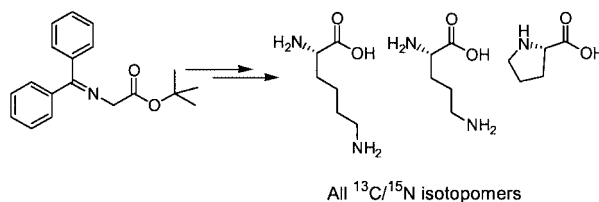
Keywords: Heptaazaphenalene / Nonlinear optics / UV/Vis spectra



4391 A. H. G. Siebum, R. K. F. Tsang, R. van der Steen, J. Raap, J. Lugtenburg*

Synthesis of (ϵ - ^{13}C -, ϵ - ^{15}N)-Enriched L-Lysine – Establishing Schemes for the Preparation of All Possible ^{13}C and ^{15}N Isotopomers of L-Lysine, L-Ornithine, and L-Proline

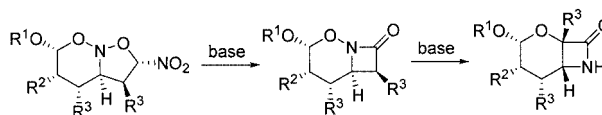
Keywords: Amino acids / Carbon labels / Asymmetric synthesis / Rhodopsin



4397 L. W. A. van Berkomp, G. J. T. Kuster, R. de Gelder, H. W. Scheeren*

Synthesis and Rearrangement of *N*-Organyloxy β -Lactams Derived from a (4+2)/(3+2) Sequential Cycloaddition Reaction Involving Enol Ethers and Nitro Alkenes

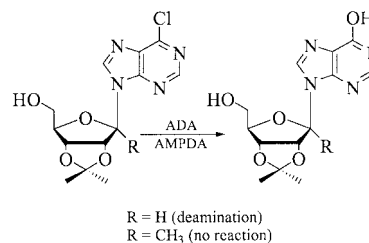
Keywords: β -Lactams / Cycloaddition / High-pressure chemistry / Rearrangement / Multi-component reactions



4405 P. Ciuffreda, B. Buzzi, L. Alessandrini, E. Santaniello*

Activity of Adenosine Deaminase (ADA) and Adenylate Deaminase (AMPDA) Towards 6-Chloropurine Nucleosides Modified in the Ribose Moiety

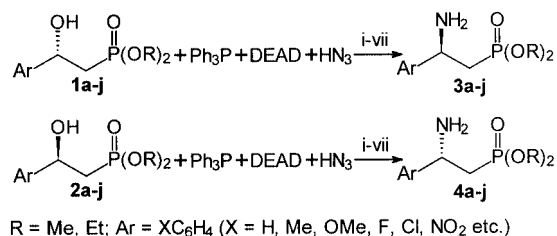
Keywords: Nucleosides / Enzyme catalysis / Biotransformations / Deamination



4410 C. Xu, C. Yuan*

A Facile Synthesis of Optically Active β -Amino- β -arylethylphosphonates by Mitsunobu Reaction

Keywords: β -Amino- β -arylethylphosphonates / Mitsunobu reaction / S_N2 mechanism

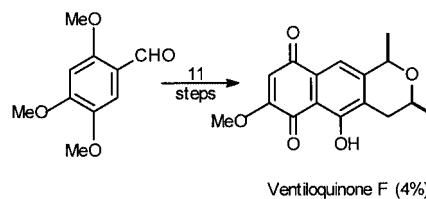


4416

R. G. F. Giles, I. R. Green,* N. van Eeden

The Synthesis of Ventiloquinone F and Iso-ventiloquinone F as Racemates

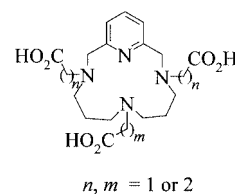
Keywords: Natural products / Quinones / Cyclization / Oxidation / Hydrogenolysis



4424

F. Dioury, I. Sylvestre, J.-M. Siaugue, V. Wintgens, C. Ferroud, A. Favre-Réguillon, J. Foos, A. Guy*

Regioselectively *N*-Functionalised 14-Membered Azapyridinomacrocycles Bearing Trialkanoic Acid Side Chains as Ligands for Lanthanide Ions

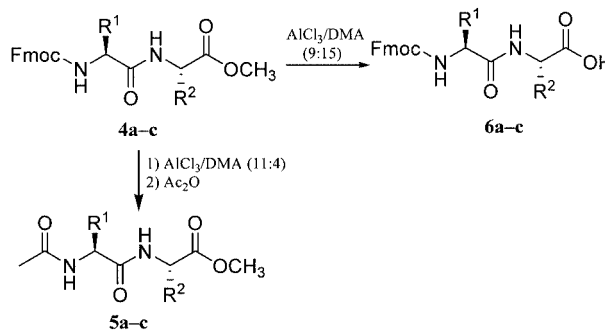


Keywords: Lanthanides / Luminescence / Macrocyclic ligands / N,O ligands / UV/Vis spectroscopy

4437

M. L. Di Gioia, A. Leggio, A. Le Pera, A. Liguori,* F. Perri, C. Siciliano

Alternative and Chemoselective Deprotection of the α -Amino and Carboxy Functions of *N*-Fmoc-Amino Acid and *N*-Fmoc-Dipeptide Methyl Esters by Modulation of the Molar Ratio in the AlCl_3 /*N,N*-Dimethylaniline Reagent System

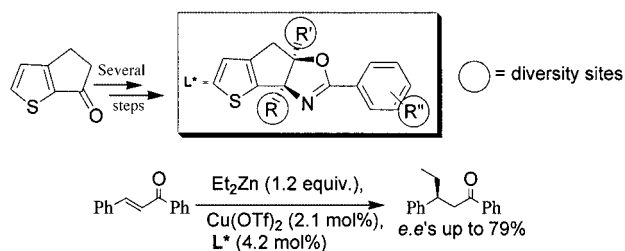


Keywords: Aluminium trichloride / Amino acids / Deprotection / Dipeptides / *N,N*-Dimethylaniline

4442

B. F. Bonini, E. Capitò, M. Comes-Franchini, A. Ricci,* A. Bottoni, F. Bernardi, G. P. Miscione, L. Giordano, A. R. Cowley

Diastereoselective Synthesis of Thieno[3',2':4,5]-cyclopenta[1,2-*d*][1,3]oxazolines – New Ligands for the Copper-Catalyzed Asymmetric Conjugate Addition of Diethylzinc to Enones



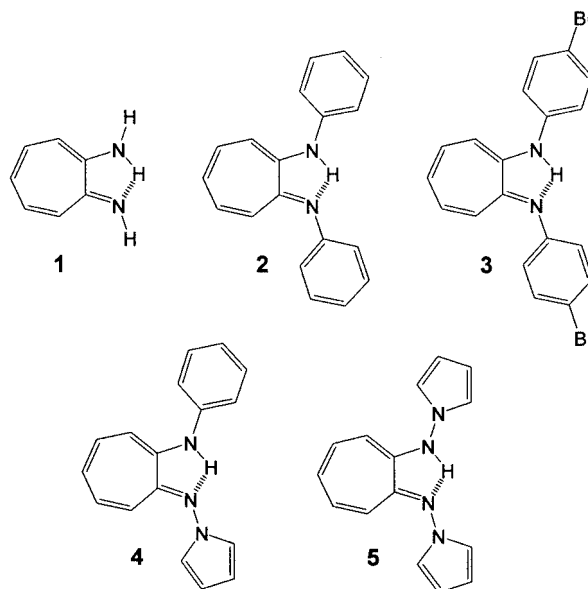
Keywords: Thieno-oxazolines / Conjugate addition / Computational investigation

4452

R. M. Claramunt,* D. Sanz,
M. Pérez-Torralba, E. Pinilla, M. R. Torres,
J. Elguero

Solid-State Structure and Tautomerism of 2-Aminotroponimines Studied by X-ray Crystallography and Multinuclear NMR Spectroscopy

Keywords: Hydrogen bond / Tautomerism / Amino-troponimines / Aminotropones / X-ray diffraction / NMR spectroscopy / Density functional calculations

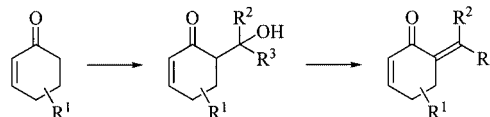


4467

L. Mediavilla Urbaneja, N. Krause*

Synthesis of Novel Bifunctional Michael Acceptors

Keywords: Aldol addition / Appel bromination / Dienones / Eliminations / Michael additions

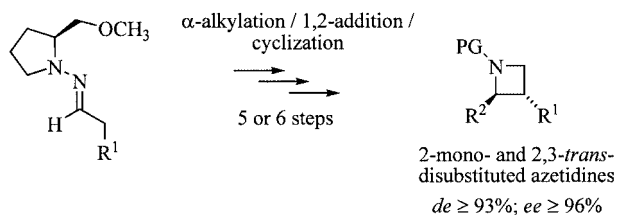


4471

D. Enders,* J. Gries, Z.-S. Kim

Asymmetric Synthesis of 2-Mono- and 2,3-*trans*-Disubstituted Azetidines

Keywords: Azetidines / Amino alcohols / Asymmetric synthesis / Hydrazones / Cyclisation

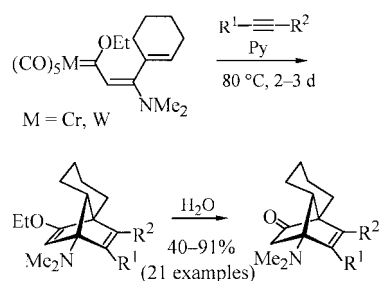


4483

Y.-T. Wu, T. Labahn, A. Demeter,
K. A. Zachariasse, A. de Meijere*

7-(Dimethylamino)tricyclo[5.2.2.0^{1,6}]undecene Derivatives from β -Cyclohexenyl β -Dimethylamino-Substituted α,β -Unsaturated Fischer Carbenes

Keywords: Fischer carbene complexes / Organometallics / Sequential reactions / Pericyclic reactions / Diels–Alder reactions / Dual fluorescence / Radiative rate constants



4492

B. D. Zlatopolskiy, H.-P. Kroll, E. Melotto,
A. de Meijere*

Convergent Syntheses of *N*-Boc-Protected (2*S*,4*R*)-4-(*Z*)-Propenylproline and 5-Chloro-1-(methoxymethoxy)pyrrol-2-carboxylic Acid – Two Essential Building Blocks for the Signal Metabolite Hormaomycin

Keywords: Amino acids / Nitrogen heterocycles / Synthetic methods / Chiral pool / Total synthesis

