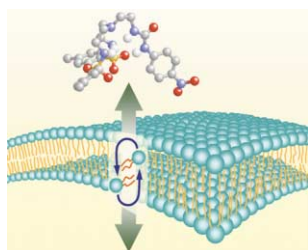


Organic & Biomolecular Chemistry

INDEXED IN MEDLINE

Incorporating Acta Chemica Scandinavica

**Cover**

See Y. Sasaki, R. Shukla and B. D. Smith, pp. 214–219.

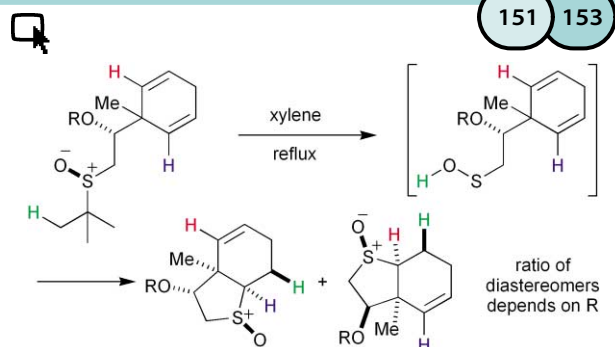
The cover shows phospholipids undergoing flip-flop across a bilayer membrane.

This inherently slow translocation process can be accelerated by small organic molecules that associate with the phospholipid headgroups, forming supramolecular complexes that diffuse through the lipophilic interior of the membrane.

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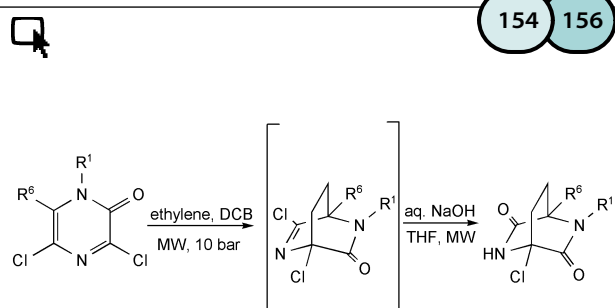
contents

COMMUNICATIONS



Diastereotopic group selective intramolecular cycloadditions of sulfenic acids to 1,4-dienes

Richard S. Grainger, Patrizia Tisselli and Jonathan W. Steed

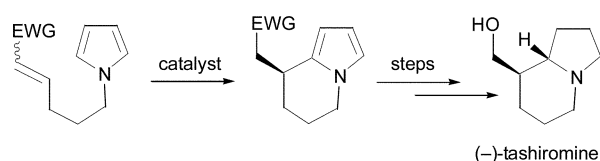
A stereocontrolled synthesis of oxygenated *cis*-fused perhydrobenzothiophenes related to the breynolide ring system is described.

The effect of pressure on microwave-enhanced Diels–Alder reactions. A case study

Nadya Kaval, Wim Dehaen, C. Oliver Kappe and Erik Van der Eycken

It is demonstrated that microwave-assisted Diels–Alder reactions of substituted 2(1*H*)-pyrazinones with ethylene are significantly more effective utilizing pre-pressurized (up to 10 bar) reaction vessels.

157 159



EWG = CHO, CO₂R*, CONCO₂CH₂CH₂

catalyst = MacMillan's catalyst, AlCl₃, box ligand

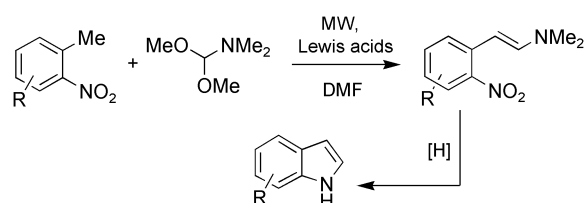
The influence of chiral auxiliaries and catalysts on the selectivity of intramolecular conjugate additions of pyrrole to *N*-tethered Michael acceptors

Martin G. Banwell, Daniel A. S. Beck and Jason A. Smith

Useful and predictable levels of asymmetric induction can be obtained in the title reactions, one of which has been employed in an enantioselective synthesis of the alkaloid (-)-tashiromine.

ARTICLES

160 167



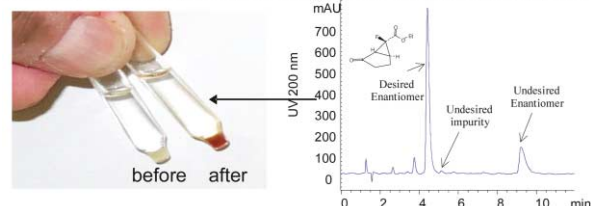
Microwave assisted Leimgruber–Batcho reaction for the preparation of indoles, azaindoles and pyrrolylquinolines

Jason Siu, Ian R. Baxendale and Steven V. Ley

The development of enhanced conditions for Lewis acid catalysed Leimgruber–Batcho indole synthesis using microwave acceleration is described.

168 174

Diamine resin treatment removes troublesome chloroketone impurity

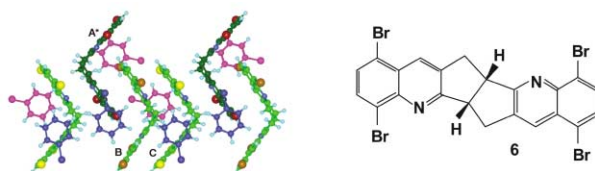


Reactive resin facilitated preparation of an enantiopure fluorobicycloketone

Audrey Wong, Christopher J. Welch, Jeffrey T. Kuethe, Enrique Vazquez, Mohamed Shaimi, Derek Henderson, Ian W. Davies and David L. Hughes

Stereoselective catalytic cyclopropanation is augmented by chromatographic upgrade following removal of a problematic chloroketone impurity by reactive resin treatment.

175 182

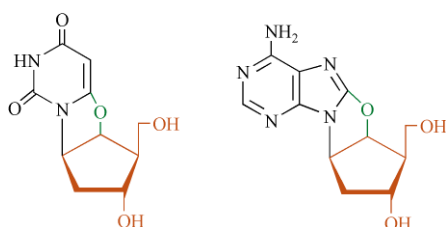


Pi–halogen dimer interactions and the inclusion chemistry of a new tetrahalo aryl host

A. Noman M. M. Rahman, Roger Bishop, Donald C. Craig and Marcia L. Scudder

Inclusion of guest molecules by the tetrabromo aryl host **6** results in introduction of the pi–halogen dimer packing motif and concomitant lowering of the crystal packing energy.

183 189

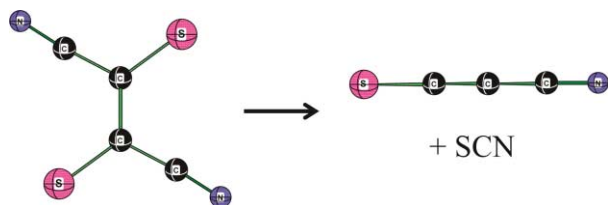


Synthesis and hybridization properties of L-oligodeoxynucleotide analogues fixed in a low *anti* glycosyl conformation

Hidehito Urata, Hidetaka Miyagoshi, Tetsuya Kumashiro, Takashi Yumoto, Keiji Mori, Keiko Shoji, Keigo Gohda and Masao Akagi

The hybridization properties of oligonucleotides containing L-nucleoside analogues fixed in a low *anti* glycosyl conformation with DNA and RNA were evaluated.

190 194

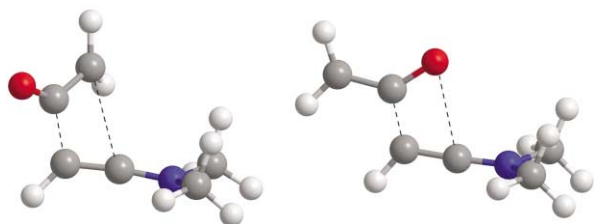


Formation of the heterocumulene anion SCCCN^- by a cyano migration from the radical anion of 1,2-dicyanoethylene-dithiolate

Tom Waters, Stephen J. Blanksby, Lianyi Zhang and Richard A. J. O'Hair

Collisional activation of the radical anion of 1,2-dicyanoethylene-dithiolate yields the anionic heterocumulene SCCCN^- by a cyano migration.

195 199

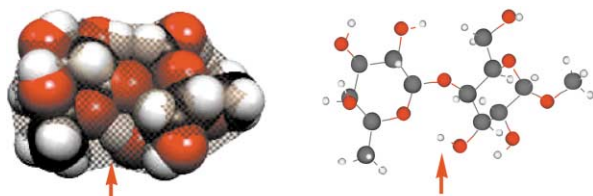


Ketene–acetylene [2 + 2] cycloadditions: cyclobutenone and/or oxete formation?

Rainer Koch and Curt Wentrup

G2(MP2,SVP) calculations show the possibility of C=O addition for suitably substituted acetylenes to ketene, in contrast to normal C=C addition.

200 205



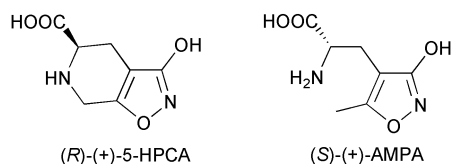
O(3)H of Me α -D-Galp ($\Delta\delta = -0.636$ ppm)

Ab initio and NMR studies on the effect of hydration on the chemical shift of hydroxy protons in carbohydrates using disaccharides and water/methanol/ethers as model systems

Somer Bekiroglu, Anders Sandström, Lennart Kenne and Corine Sandström

In carbohydrates, the hydration of a hydroxy proton is the key factor determining the value of the chemical shift of its NMR signal, and the $\Delta\delta$ is a direct measure of the change in hydration state.

206 213

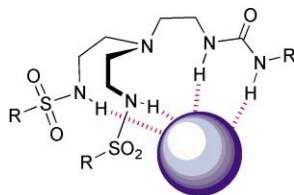


A stereochemical anomaly: the cyclised (*R*)-AMPA analogue (*R*)-3-hydroxy-4,5,6,7-tetrahydroisoxazolo[5,4-*c*]pyridine-5-carboxylic acid [(*R*)-5-HPCA] resembles (*S*)-AMPA at glutamate receptors

Stine B. Vogensen, Jeremy R. Greenwood, Annemarie R. Varming, Lotte Brehm, Darryl S. Pickering, Birgitte Nielsen, Tommy Liljefors, Rasmus P. Clausen, Tommy N. Johansen and Povl Krosgaard-Larsen

(*R*)-(+)-5-HPCA is an α -amino acid-based AMPA receptor ligand with an unusual stereoselectivity.

214 219

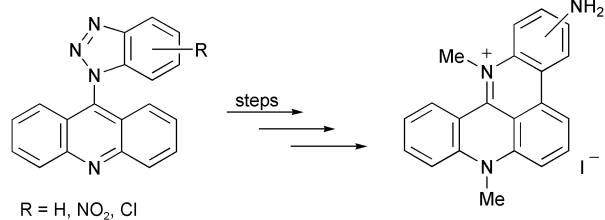


Facilitated phosphatidylserine flip-flop across vesicle and cell membranes using urea-derived synthetic translocases

Yoshihiro Sasaki, Rameshwer Shukla and Bradley D. Smith

Synthetic anion receptors can transport phospholipids across bilayer membranes and increase phosphatidylserine levels on a cell surface.

220 228

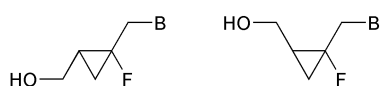


Synthesis and properties of bioactive 2- and 3-amino-8-methyl-8H-quinolizino[4,3,2-kl]acridine and 8,13-dimethyl-8H-quinolizino[4,3,2-kl]acridinium salts

Ian Hutchinson, Andrew J. McCarroll, Robert A. Heald and Malcolm F. G. Stevens

Cyclisation of 9-(benzotriazol-1-yl)acridine to the pentacyclic 8H-quinolizino[4,3,2-kl]acridine in a range of low-boiling solvents is mechanistically distinct from previously published photochemical (carbene) and thermolytic (radical) cyclisations. 8,13-Dimethyl-quinolizino[4,3,2-kl]acridinium salts display potent telomerase-inhibitory activity.

229 237



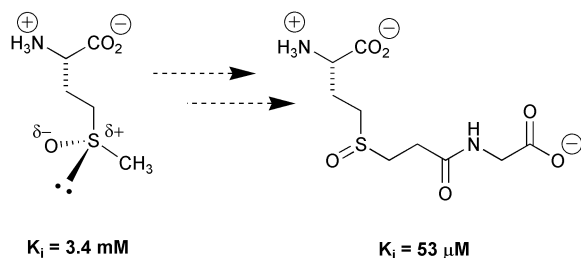
B = adenine, cytosine, guanine, thymine, uracil

Synthesis and antiviral activity of monofluorinated cyclopropanoid nucleosides

Thomas C. Rosen, Erik De Clercq, Jan Balzarini and Günter Haufe

Diastereopure monofluorinated cyclopropanoid nucleosides of adenine, cytosine, guanine, thymine and uracil were synthesized and antiviral activity analyzed.

238 245

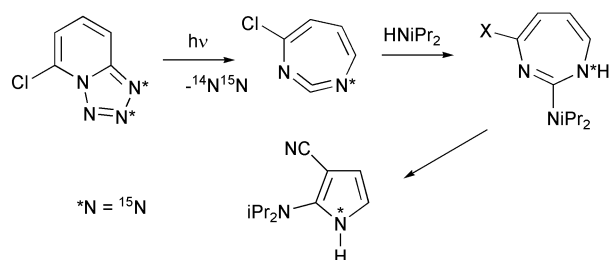


Probing the stereochemistry of the active site of gamma-glutamyl transpeptidase using sulfur derivatives of L-glutamic acid

Christian Lherbet and Jeffrey W. Keillor

Rat kidney γ -glutamyl transpeptidase (GGT) displays high stereoselectivity at the δ -position of γ -glutamyl donor substrates, as is demonstrated in the reported study of sulfoxides as a new type of competitive inhibitor.

246 256

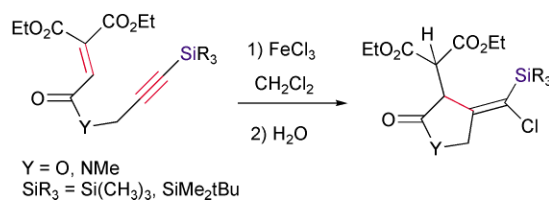


Synthesis of 1,3-diazepines and ring contraction to cyanopyrroles

Ales Reisinger, Paul V. Bernhardt and Curt Wentrup

Tetrazolo[1,5-*a*]pyridines/2-azidopyridines undergo photochemical ring expansion to 1*H*- and/or 5*H*-1,3-diazepines and in some cases ring contraction to 1*H*- or 3*H*-cyanopyrroles.

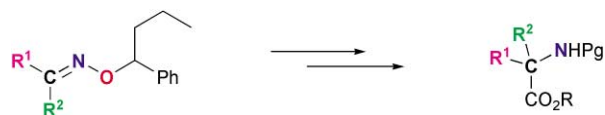
257 264



Lewis acid-promoted cyclization of heteroatom-substituted enynes

Shoko Yamazaki, Kuriko Yamada and Kagetoshi Yamamoto

Lewis acid-promoted reaction of silicon or phosphoryl-substituted enynes afforded the halogenated five-membered γ -lactones and γ -lactams as the main products.



Asymmetric synthesis of *N*-protected amino acids by the addition of organolithium carboxyl synthons to ROPHy/SOPHy-derived aldoximes and ketoximes

Tracey S. Cooper, Pierre Laurent, Christopher J. Moody and Andrew K. Takle

A new asymmetric synthesis of α -amino acids is described in which the key step is the highly diastereoselective addition of organolithium carboxyl synthons (2-furyllithium, phenyllithium, vinylithium) to (*R*)- and (*S*)-*O*-(1-phenylbutyl) oximes

CONFERENCE DIARY

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Dates, venues and contact details of forthcoming events.

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