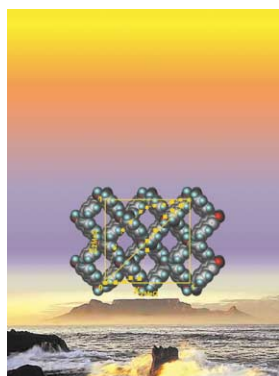


Organic & Biomolecular Chemistry

INDEXED IN MEDLINE

Incorporating Acta Chemica Scandinavica

**Cover**

See Mino R. Caira, Y. Paul Chang, Luigi R. Nassimbeni and Hong Su, pp. 655–659.

The figure shows the result of selective enclathration of 2-methylquinoline *versus* 8-methylquinoline superimposed on the structure of the host binaphthol. The background of Table Mountain associates this work with the University of Cape Town.



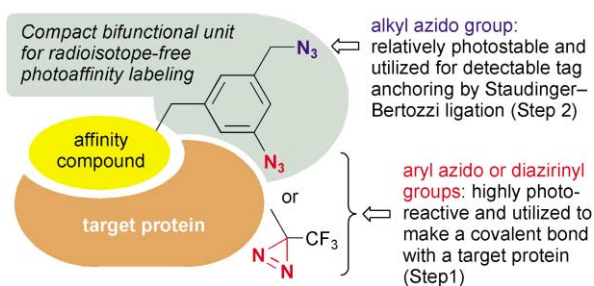
Chemical biology articles published in this journal also appear in the *Chemical Biology Virtual Journal*: www.rsc.org/chembiol

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COMMUNICATIONS



637 641

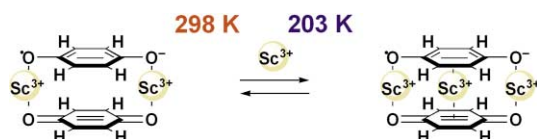


Novel bifunctional probe for radioisotope-free photoaffinity labeling: compact structure comprised of photospecific ligand ligation and detectable tag anchoring units

Takamitsu Hosoya, Toshiyuki Hiramatsu, Takaaki Ikemoto, Masayuki Nakanishi, Hiroshi Aoyama, Ayako Hosoya, Tomoya Iwata, Kei Maruyama, Makoto Endo and Masaaki Suzuki

A novel method for radioisotope-free photoaffinity labeling has been developed, in which a bifunctional ligand is connected to a target protein by activation of a photoreactive group.

642 644



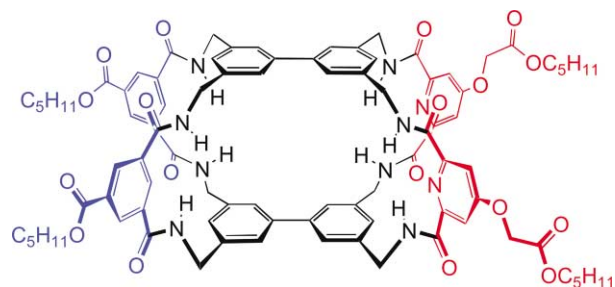
Thermochromism of the disproportionation equilibrium of π -dimer radical anion complexes bridged by scandium ions

Junpei Yuasa and Shunichi Fukuzumi

The number of binding scandium ions in π -dimer radical anion complexes changes depending on temperature, causing a remarkable color change.



645 647



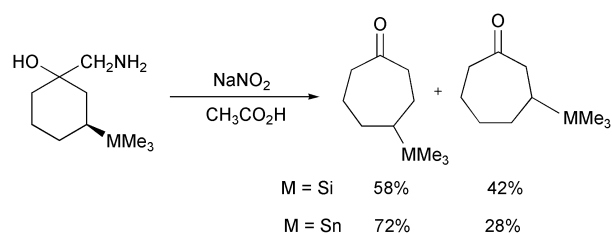
Tuning selectivity in macrotricyclic carbohydrate receptors; CH → N mutations in aromatic spacers

Trinidad Velasco, Gregory Lecollinet, Theo Ryan and Anthony P. Davis

The introduction of dipicolinoyl spacers (red) causes altered selectivities in macrotricyclic carbohydrate receptors.



648 650



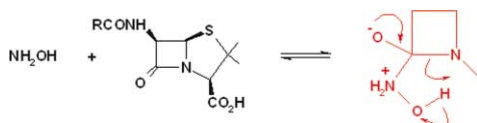
Silicon and tin-directed Tiffeneau–Demjanov reaction

Leonie Chow, Melanie McClure and Jonathan White

Silicon and tin substituents surprisingly have only a moderate directing effect on the Tiffeneau–Demjanov reaction.

ARTICLES

651 654



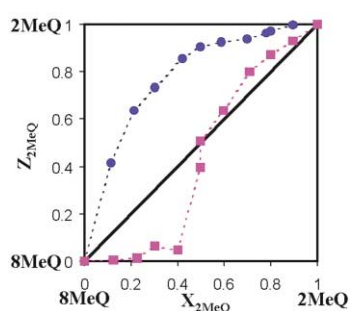
Intramolecular general acid catalysis in the aminolysis of β -lactam antibiotics

Antonio Llinás and Michael I. Page

The aminolysis of β -lactam antibiotics by hydroxylamine shows intramolecular general acid catalysis.



655 659

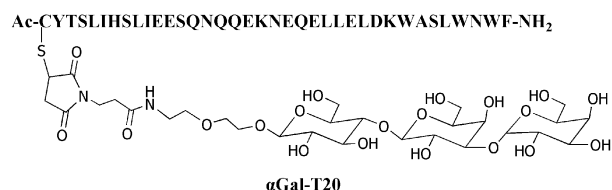


Inclusion of quinolines by binaphthol: structures and selectivity

Mino R. Caira, Y. Paul Chang, Luigi R. Nassimbeni and Hong Su

The selectivity of binaphthol towards quinoline guests is: 2-methylquinoline > quinoline > 8-methylquinoline \approx 6-methylquinoline, as established by competition experiments and thermal analysis.

660 664

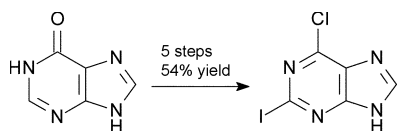


Design and synthesis of α Gal-conjugated peptide T20 as novel antiviral agent for HIV-immunotargeting

Kannan P. Naicker, Hengguang Li, Alonso Heredia, Haijing Song and Lai-Xi Wang

Chemo-enzymatic synthesis, anti-viral and anti-Gal antibody-binding activities of the title compound are described.

665 670

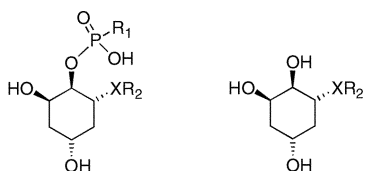


Synthesis and full characterisation of 6-chloro-2-iodopurine, a template for the functionalisation of purines

David Taddei, Petr Kilian, Alexandra M. Z. Slawin and J. Derek Woollins

A simple and efficient synthesis of 6-chloro-2-iodopurine from hypoxanthine has been achieved.

671 688



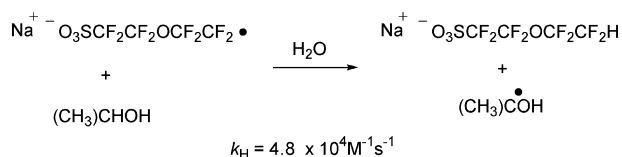
R₁ and R₂ = alkyl, X = O or NH

Removal of the phosphate group in mechanism-based inhibitors of inositol monophosphatase leads to unusual inhibitory activity

David J. Miller, M. Bashir-Uddin Surfraz, Mahmoud Akhtar, David Gani and Rudolf K. Allemann

Phosphonate substrates act as competitive inhibitors of IMPase, while product mimics showed various inhibitory modes of action.

689 694

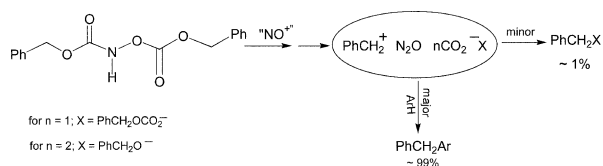


Absolute rate constants for some hydrogen atom abstraction reactions by a primary fluoroalkyl radical in water

Li Zhang, Joseph Cradlebaugh, Grzegorz Litwinienko, Bruce E. Smart, Keith U. Ingold and William R. Dolbier, Jr.

Absolute bimolecular rate constants are reported for hydrogen atom abstraction from a variety of organic substrates in water by the perfluoroalkyl radical, $\text{CF}_2\text{CF}_2\text{OCF}_2\text{CF}_2\text{SO}_3^- \text{Na}^+$.

695 700

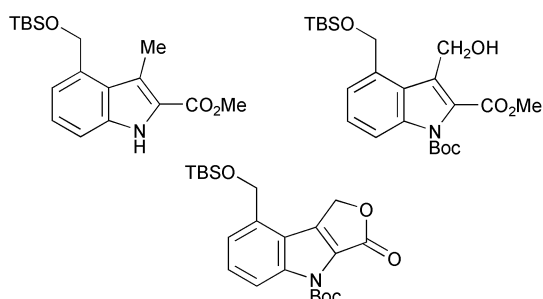


Highly efficient Friedel–Crafts-type benzylation *via* benzyl cations generated in multiple spacer-molecule separated ion-pairs

Ron W. Darbeau, Gregory A. Trahan and Luis M. Siso

Hyperdeamination generates multiple-spacer molecule separated ion-pairs containing highly reactive but long-lived carbocations that react almost quantitatively with poorly nucleophilic solvents.

701 708



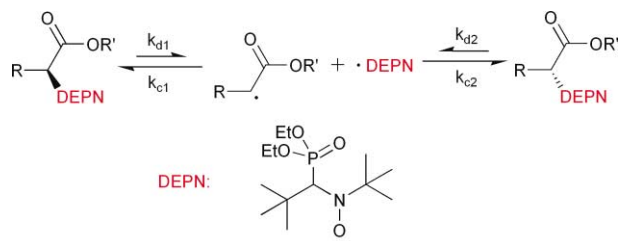
Synthesis of the 2,3,4-trisubstituted indole fragments of nosiheptide and glycothiohexide

David J. Bentley, John Fairhurst, Peter T. Gallagher, Astrid K. Manteuffel, Christopher J. Moody and Joanne L. Pinder

Two routes to the protected 4-hydroxymethyl-3-methylindole-2-carboxylate fragment of the thiopeptide antibiotic nosiheptide are described starting from methyl 4-methylindole-2-carboxylate, itself prepared in two steps, or from 3-amino-4-chlorobenzoic acid.



709 715



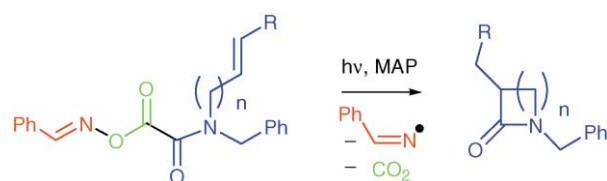
Diastereomeric excess upon cleavage and reformation of diastereomeric alkoxyamines

Gennady Ananchenko, Sylvain Marque, Didier Giges, Denis Bertin and Paul Tordo

For propionate-DEPN alkoxyamines, the diastereoselectivity of the cleavage generally prevails over that in the coupling reaction.



716 724



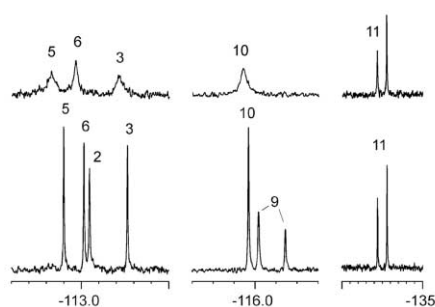
Preparation of β - and γ -lactams from carbamoyl radicals derived from oxime oxalate amides

Eoin M. Scanlan, Alexandra M. Z. Slawin and John C. Walton

Benzaldoxime oxalate amides dissociate to release carbamoyl radicals that may ring close to afford β - or γ -lactams.



725 731



PapD added at a 1:1 ratio

In absence of PapD

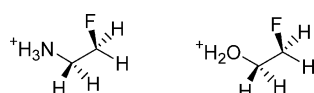
Use of ^{19}F NMR spectroscopy to screen chemical libraries for ligands that bind to proteins

Tobias Tengel, Tomas Fex, Hans Emtenäs, Fredrik Almqvist, Ingmar Sethson and Jan Kihlberg

One-dimensional ^{19}F NMR spectra reveal binding of fluorinated ligands to proteins through line broadening and chemical shift changes.



732 740



The observation of a large *gauche* preference when 2-fluoroethylamine and 2-fluoroethanol become protonated

Caroline R. S. Briggs, Mark J. Allen, David O'Hagan, David J. Tozer, Alexandra M. Z. Slawin, Andrés E. Goeta and Judith A. K. Howard

Protonated 2-fluoroethylamine and 2-fluoroethanol exhibit significant fluorine-*gauche* effects.



741 748

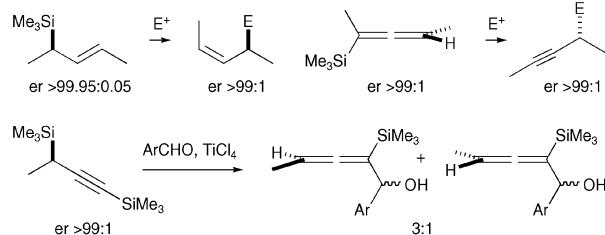


On the use of mixtures of organotin species for catalytic enantioselective ketone allylation—a detective story

Anthony Cunningham, Vijaya Mokal-Parekh, Claire Wilson and Simon Woodward

Two roles for water in asymmetric tin-based allylation: formation of Sn–O–Sn catalysts and eliminating background reactions.

749 769

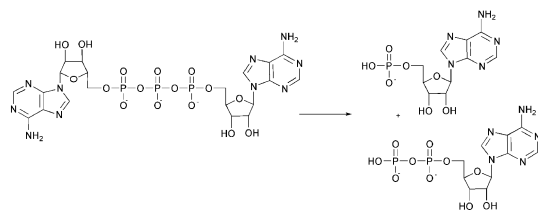


Accurate determinations of the extent to which the $S_{\text{E}}2'$ reactions of allyl-, allenyl- and propargylsilanes are stereospecifically *anti*

Michael J. C. Buckle, Ian Fleming, Salvador Gil and Kah Ling Christine Pang

An allylsilane and an allenylsilane underwent highly stereospecific $S_{\text{E}}2'$ reactions, but a propargylsilane gave a pair of enantiomers in a 3 : 1 ratio.

770 776

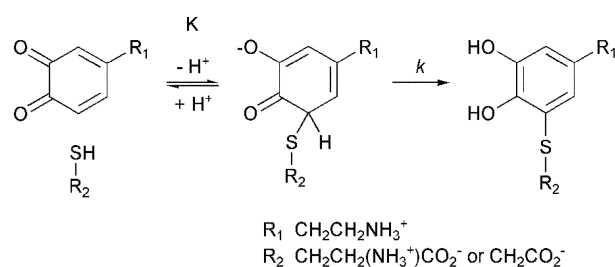


Hydrolytic reactions of diadenosine 5',5'-triphosphate

Satu Mikkola

The hydrolysis of diadenosine 5',5'-triphosphate to AMP and ADP has been studied over a wide pH-range.

777 782

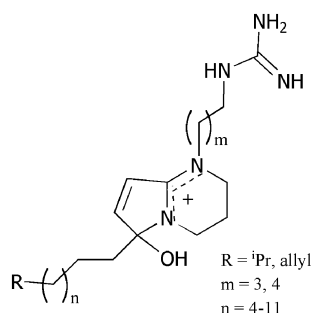


Kinetic evidence that cysteine reacts with dopaminoquinone *via* reversible adduct formation to yield 5-cysteinyldopamine: an important precursor of neuromelanin

Guy N. L. Jameson, Jie Zhang, Reginald F. Jameson and Wolfgang Linert

A detailed mechanistic study of *in vitro* 5-cysteinyldopamine formation allows important conclusions to be made about its formation *in vivo*.

783 787

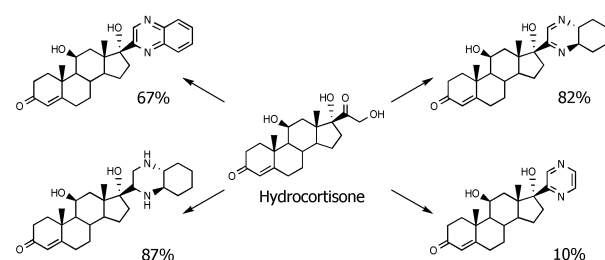


New 1,2,3,4-tetrahydropyrrolo[1,2-*a*]pyrimidinium alkaloids (phloeodictynes) from the New Caledonian shallow-water haplosclerid sponge *Oceanapia fistulosa*. Structural elucidation from mainly LC-tandem-MS-soft-ionization techniques and discovery of antiplasmodial activity

Ines Mancini, Graziano Guella, Michel Sauvain, Cécile Debitus, Anne-Gaëlle Duigou, Frédéric Ausseil, Jean-Louis Menou and Francesco Pietra

The compounds showed activity against a chloroquine-resistant strain of *Plasmodium falciparum*, with IC_{50} values from 0.6 μM .

788 796



Tandem oxidation processes for the preparation of nitrogen-containing heteroaromatic and heterocyclic compounds

Steven A. Raw, Cecilia D. Wilfred and Richard J. K. Taylor

A novel procedure for the conversion of α -hydroxyketones into the corresponding quinoxalines, dihydropyrazines, pyrazines and piperazines *via* manganese dioxide-mediated oxidation processes with *in situ* trapping using 1,2-diaminoaromatics is described.



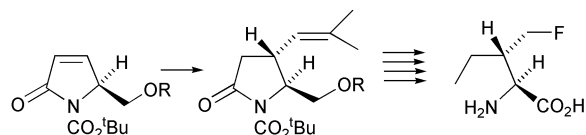
797 802

ARTICLES

Synthesis of (2*S*,3*S*)-3'-fluoroisoleucine

Jean-Damien Charrier, David S. Hadfield, Peter B. Hitchcock and Douglas W. Young

The homochiral hydrophobic amino acid (2*S*,3*S*)-3'-fluoroisoleucine, containing a reporter group for protein studies, has been synthesised from (2*S*)-pyroglutamic acid.



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