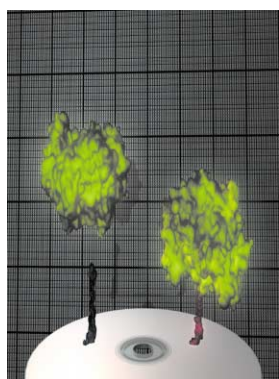


# Organic & Biomolecular Chemistry

FORMERLY PERKIN TRANSACTIONS 1 AND 2

Incorporating Acta Chemica Scandinavica

**Cover**

See James J. La Clair and Michael D. Burkart, page 3244.

Molecular recognition events can be identified through the interaction of molecules with a digital optical signal. Here, the binding of proteins (green) to small molecule receptors (blue and red) on the surface of a compact disc creates error during the reading of digital data (background) from the disc. Generation of this error can be directly used to evaluate molecular interactions.

Cover art by Nina Seiler.



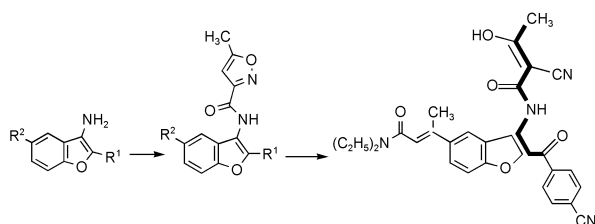
Chemical biology articles published in this journal also appear in the *Chemical Biology Virtual Journal*: [www.rsc.org/chembiol](http://www.rsc.org/chembiol)

## contents

## COMMUNICATIONS



3139 3141

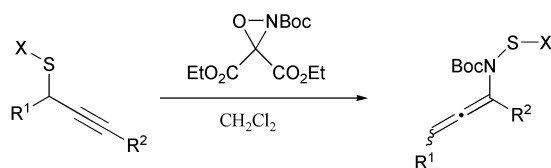


### Preparation of 3-acetoacetylaminobenzo[*b*]furan derivatives with cysteinyl leukotriene receptor 2 antagonistic activity

Eriko Tsuji, Kumiko Ando, Jun-ichi Kunitomo, Masayuki Yamashita, Shunsaku Ohta, Shigekatsu Kohno and Yoshitaka Ohishi

We report novel 3-acetoacetylaminobenzo[*b*]furan derivatives with valuable antagonistic activities, including one derivative with specific activity for cysLT2 receptors; a potential lead compound for structure-optimization.

3142 3143

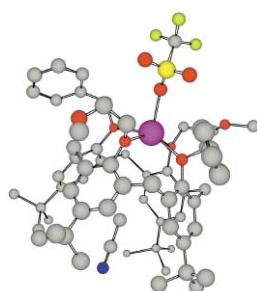


### Amination and [2,3]-sigmatropic rearrangement of propargylic sulfides using a ketomalonate-derived oxaziridine: synthesis of *N*-allenylsulfenimides

Alan Armstrong, Richard S. Cooke and Stephen E. Shanahan

Amination of propargylic sulfides with a ketomalonate-derived oxaziridine under metal free conditions gives *N*-Boc-*N*-allenylsulfenimides *via* [2,3]-sigmatropic rearrangement.

3144 3146



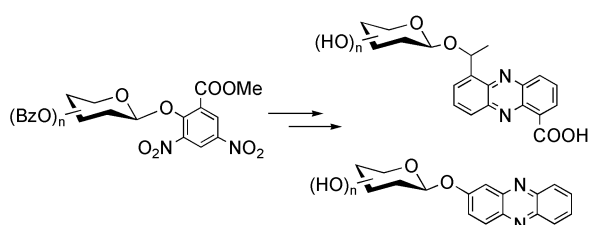
### Alkali metal ion complexes of functionalised calixarenes – competition between pendent arm and anion bonding to sodium

Rym Abidi, Lassaad Baklouti, Jack M. Harrowfield, Alexandre N. Sobolev, Jacques Vicens and Allan H. White

Determination of the crystal structure of the complex formed between sodium triflate and a hexaether derivative of calix[4]arene shows that the ligand functions only as a quadridentate species, with triflate bound instead of the fifth and sixth ether-*O*-donor atoms of the ligand.

## ARTICLES

3147 3153

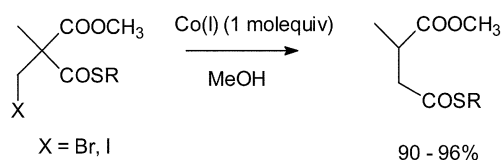


### Efficient synthesis of glycosylated phenazine natural products and analogs with DISAL (methyl 3,5-dinitrosalicylate) glycosyl donors

Jane B. Laursen, Lars Petersen, Knud J. Jensen and John Nielsen

New glycosylated phenazine analogs, one exhibiting topoisomerase II inhibitory activity, were synthesized by efficient and easily-handled glycosylation using DISAL (methyl 3,5-dinitrosalicylate) glycosyl donors.

3154 3159

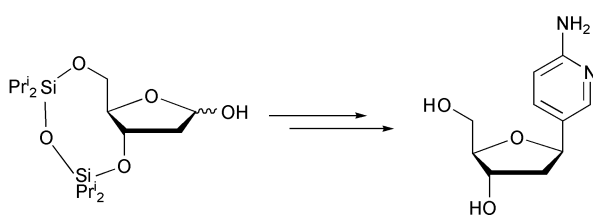


### The Co(I) induced methylmalonyl-succinyl rearrangement in a model for the coenzyme B<sub>12</sub> dependent methylmalonyl-CoA mutase

Fangping Sun and Tamis Darbre

The rearrangement of 2-bromomethyl-2-methylmonothiolates to succinyl derivatives takes place in quantitative yields in the presence of one molar equivalent of heptamethyl Cob(1)yrinate.

3160 3172

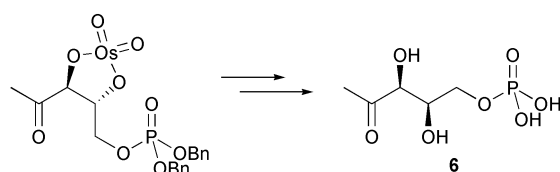


### Conversion of 2-deoxy-D-ribose into 2-amino-5-(2-deoxy-β-D-ribofuranosyl)pyridine, 2'-deoxypseudouridine, and other C-(2'-deoxyribonucleosides)

Colin B. Reese and Qinpei Wu

A convenient and perhaps general method for the synthesis of C-(β-D-2'-deoxyribofuranosides) derived from pyridine and pyrimidine aglycones has been developed.

3173 3177



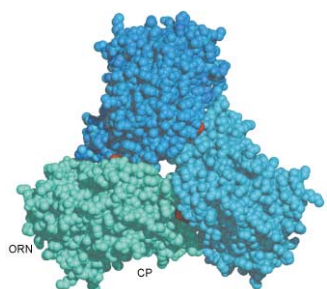
### Rapid and flexible synthesis of 1-deoxy-D-xylulose-5-phosphate, the substrate for 1-deoxy-D-xylulose-5-phosphate reductoisomerase

Russell J. Cox, Ana de Andrés-Gómez and Christopher R. A. Godfrey

A rapid, efficient synthesis of the key intermediate **6** in the non-mevalonate pathway to terpenoids is described.



3178 3185



### Functional and structural characterization of ovine ornithine transcarbamoylase

Ambra De Gregorio, Roberto Battistutta, Nicoletta Arena, Manuela Panzalorto, Pietro Francescato, Giovanna Valentini, Giuseppe Bruno and Giuseppe Zanotti

Anabolic ornithine transcarbamoylase from ovine liver has been characterized and the crystal structure of the unliganded or T state determined.

3186 3192



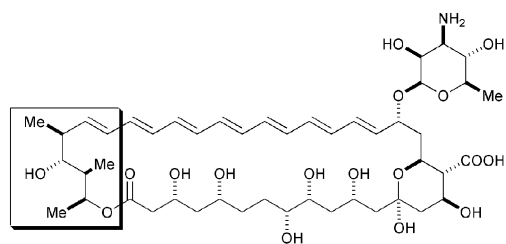
### Fluorescence studies on nyctinasty which suggest the existence of genus-specific receptors for leaf-movement factor

Hideharu Nagano, Eisuke Kato, Shosuke Yamamura and Minoru Ueda

Novel fluorescent probes based on the structure of *cis-p*-coumaroylagmatine, which was isolated as a leaf-opening substance of *Albizzia julibrissin* Durazz.



3193 3196



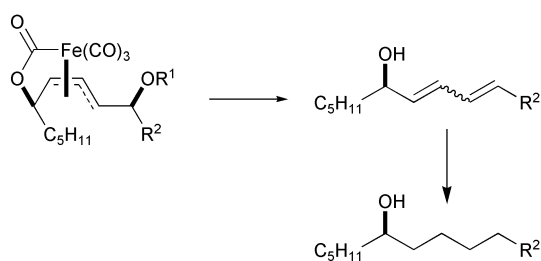
1: Amphotericin B

### An enantioselective synthesis of the C(33)–C(37) fragment of Amphotericin B

Kaisa Karisalmi, Kari Rissanen and Ari M. P. Koskinen

An enantioselective synthesis of the C(33)–C(37) tripropionate fragment of Amphotericin B has been developed in only 6 steps.

3197 3207

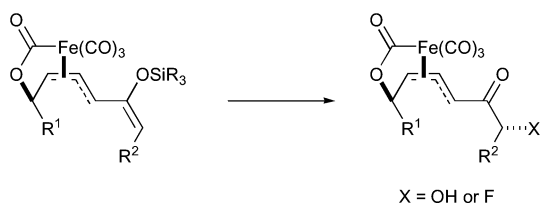


### Reductive decomplexation of $\pi$ -allyltricarbonyliron lactone complexes using sodium naphthalenide as a route to stereodefined 1,7-diols and 2,3-diene-1,7-diols

Christopher J. Hollowood and Steven V. Ley

Reductive demetallation of  $\pi$ -allyltricarbonyliron lactone complexes affords dienols and eventually alcohols.

3208 3216

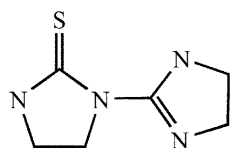


### 1,5-Asymmetric induction of chirality using $\pi$ -allyltricarbonyliron lactone complexes: highly diastereoselective synthesis of $\alpha$ -functionalised carbonyl compounds

Christopher J. Hollowood, Steven V. Ley and Edward A. Wright

Silyl enol ethers derived from ketone functionalised  $\pi$ -allyltricarbonyliron lactone complexes undergo highly diastereoselective carbon–fluorine and carbon–oxygen bond formation reactions with excellent control at the  $\alpha$ -stereogenic centre.

3217 3222



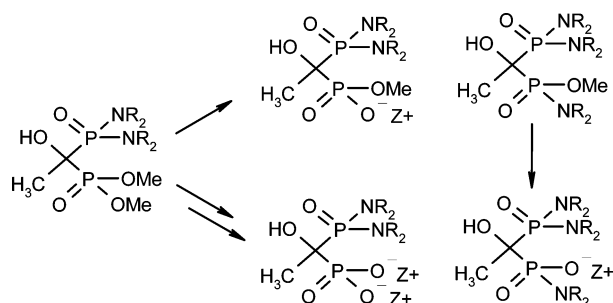
Jaffé's Base

### Reappraising the formation of Jaffé's Base: studies of the treatment of imidazolidine-2-thione with mild oxidising agents

Yupa Thanyasirikul, Chaveng Pakawatchai, Marcus L. Cole, Peter C. Junk, Brian W. Skelton and Allan H. White

This report presents firm evidence for the identity of Jaffé's Base and the nature of an intermediate prior to its formation.

3223 3226

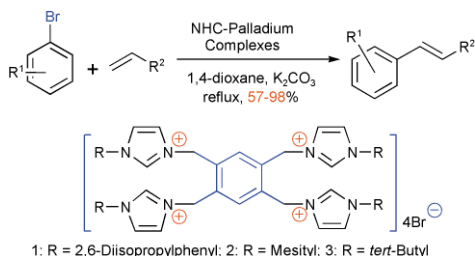


### First synthesis of etidronate partial amides starting from $\text{PCl}_3$

Petri A. Turhanen, Riku Niemi, Mikael Peräkylä, Tomi Järvinen and Jouko J. Vepsäläinen

Methods for the preparation of the first partial amides of etidronate have been developed.

3227 3231

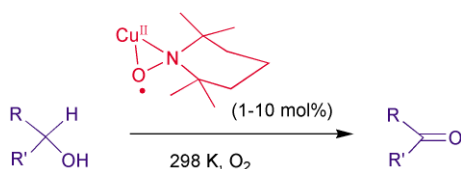


### Imidazolylidene carbene ligated palladium catalysis of the Heck reaction in the presence of air

Jingping Liu, Yuanhong Zhao, Yongyun Zhou, Liang Li, Tony Y. Zhang and Hongbin Zhang

Five 1,3-disubstituted imidazolium salts were synthesized and their Heck activities were evaluated; Heck reactions mediated by Pd-*N*-heterocyclic carbene complexes were conducted under air in the presence of oxidants.

3232 3237

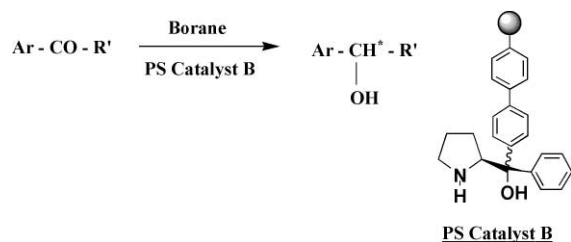


### Cu(II)-nitroxyl radicals as catalytic galactose oxidase mimics

Arné Dijkman, Isabel W. C. E. Arends and Roger A. Sheldon

Analogous to galactose oxidase and mimics thereof, the oxidation of alcohols mediated by CuCl and TEMPO involves copper(II) mediated dehydrogenation.

3238 3243

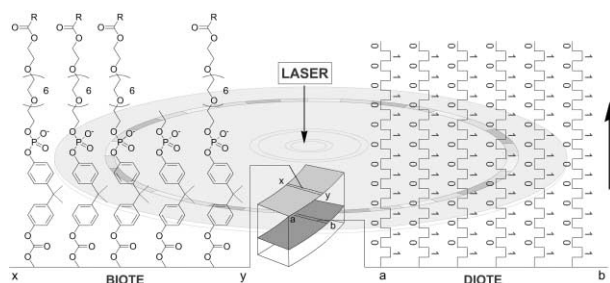


### Towards more chemically robust polymer-supported chiral catalysts: $\alpha, \alpha$ -diphenyl-L-prolinol based catalysts for the reduction of prochiral ketones with borane

Roger J. Kell, Philip Hodge, Peter Snedden and David Watson

PS Catalyst B is easy to prepare. When used to catalyse the reduction shown it generally affords ees of 89–97%. It can be reused at least 8 times with no significant loss of ee. A closely related PS catalyst could be reused successfully at least 14 times.

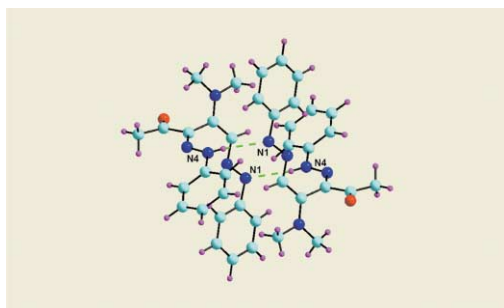
3244 3249

**Molecular screening on a compact disc**

James J. La Clair and Michael D. Burkart

Here is a novel method to screen for biological recognition events using a standard compact disc and CD reader.

3250 3256

**An NMR and X-ray study of the structure of the azo coupling product of 4-dimethylaminopent-3-en-2-one and benzenediazonium-tetrafluoroborate**

Petr Šimůnek, Valerio Bertolasi, Antonín Lyčka and Vladimír Macháček

4-Dimethylaminopent-3-en-2-one reacts with two molecules of benzenediazonium-tetrafluoroborate; the product structure was studied in solution by means of multinuclear magnetic resonance and X-ray analysis.

## CONFERENCE DIARY

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Dates, venues and contact details of forthcoming events.

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