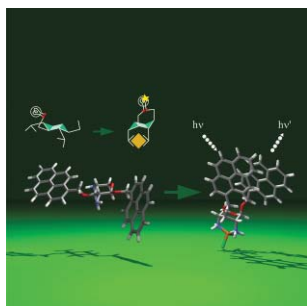


# Organic & Biomolecular Chemistry

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Incorporating Acta Chemica Scandinavica

**Cover**

See Hideya Yuasa, Naofusa Miyagawa, Masatoshi Nakatani, Masayuki Izumi and Hironobu Hashimoto, pp. 3548–3556.

The ring flip of a carbohydrate is used for the hinge part of a tong-like metal ion sensor.

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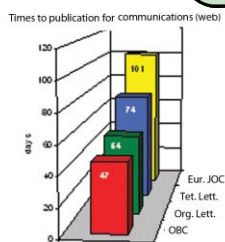
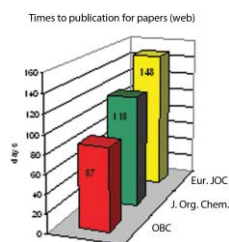


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## COMMENT

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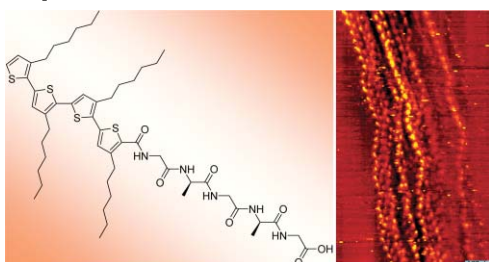
**Comment: 2004's fastest organic and biomolecular chemistry!**

Caroline V. Potter, Janet L. Dean, Adrian P. Kybett, Richard Kidd, Melanie James and Michelle Canning

**Comment:** 2004's fastest organic and biomolecular chemistry!

## COMMUNICATIONS

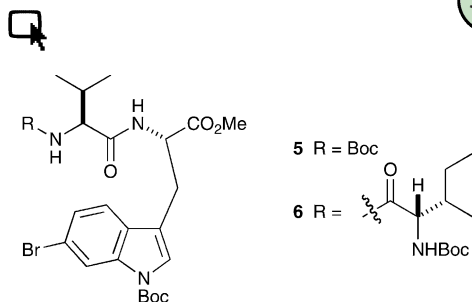
3541 3544

**Synthesis of a silk-inspired peptide–oligothiophene conjugate**

Harm-Anton Klok, Annette Rösler, Günther Götz, Elena Mena-Osteritz and Peter Bäuerle

An oligothiophene–peptide conjugate was obtained by solid-phase acylation of a silk-inspired oligopeptide sequence with a carboxylic acid functionalized regioregular tetra(3-hexylthiophene).

3545 3547



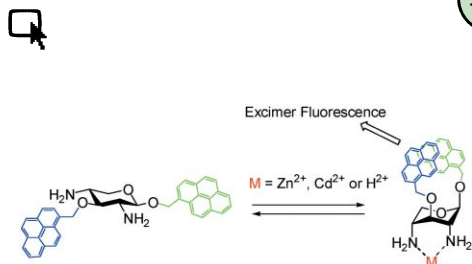
### Asymmetric synthesis of the central tryptophan residue of stephanotic acid

David J. Bentley and Christopher J. Moody

The C-6 substituted tryptophan di- and tri-peptides **5** and **6**, representing the tryptophan core of stephanotic acid, have been synthesized.

## ARTICLES

3548 3556

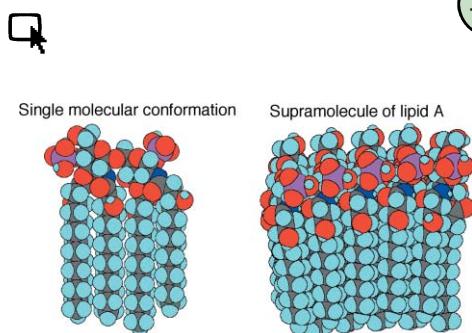


### A tong-like fluorescence sensor for metal ions: perfect conformational switch of hinge sugar by pyrene stacking

Hideya Yuasa, Naofusa Miyagawa, Masatoshi Nakatani, Masayuki Izumi and Hironobu Hashimoto

A hinge sugar-based excimer fluorosensor for metal ions, which traces tong-like motion on chelation to a metal ion or a proton, was synthesized.

3557 3565

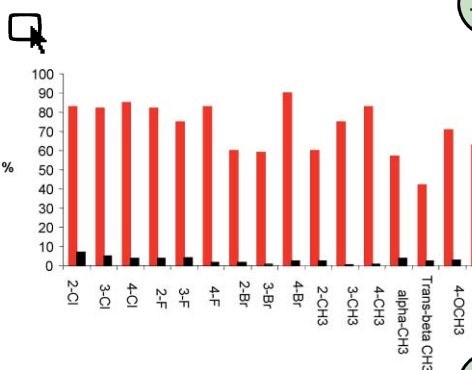


### NMR conformational analysis of biosynthetic precursor-type lipid A: monomolecular state and supramolecular assembly

Masato Oikawa, Tetsuya Shintaku, Naohiro Fukuda, Harald Sekljic, Yoshiyuki Fukase, Hiroaki Yoshizaki, Koichi Fukase and Shoichi Kusumoto

The conformation of the tetraacyl biosynthetic precursor-type lipid A and its supramolecular assembly were studied by NMR.

3566 3572

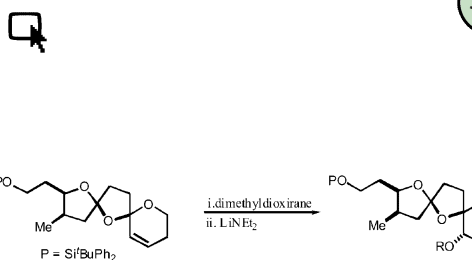


### Catalytic asymmetric heterogeneous aziridination of styrene derivatives using bis(oxazoline)-modified Cu<sup>2+</sup>-exchanged zeolite Y

Darragh Ryan, Paul McMorn, Donald Bethell and Graham Hutchings

Comparison of aziridine yield (red) and amount of Cu leached (black) for the heterogeneously catalysed aziridination of styrene derivatives with PhI=NNs using CuH zeolite Y modified with bis(oxazoline).

3573 3583

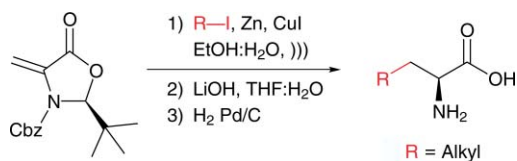


### Synthesis of the 1,6,8-trioxadispiro[4.1.5.2]tetradec-11-ene ring system present in the spirolide family of shellfish toxins and its conversion into a 1,6,8-trioxadispiro[4.1.5.2]-tetradec-9-en-12-ol via base-induced rearrangement of an epoxide

Margaret A. Brimble and Daniel P. Furkert

The synthesis of the 1,6,8-trioxadispiro[4.1.5.2]tetradec-11-ene ring system present in the spirolide family of shellfish toxins is reported together with a study of the base induced rearrangement of the derived epoxide derivative.

3584 3587

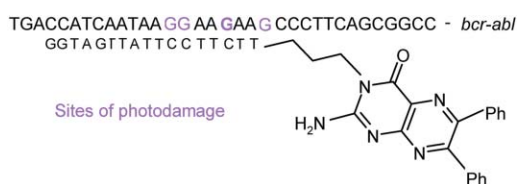


### Practical and efficient enantioselective synthesis of $\alpha$ -amino acids in aqueous media

Rosa M. Suárez, José Pérez Sestelo and Luis A. Sarandeses

Enantiopure  $\alpha$ -amino acids were synthesized from a chiral methylene oxazolidinone by means of a highly stereoselective 1,4-conjugate addition in aqueous media.

3588 3601

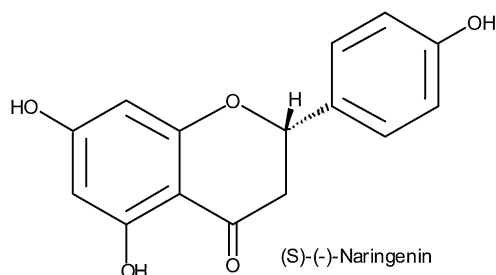


### Synthesis of N3- and 2-NH<sub>2</sub>-substituted 6,7-diphenylpterins and their use as intermediates for the preparation of oligonucleotide conjugates designed to target photooxidative damage on single-stranded DNA representing the *bcr-abl* chimeric gene

C. W. Crean, R. Camier, M. Lawler, C. Stevenson, R. J. H. Davies, P. H. Boyle and J. M. Kelly

DNA-conjugates of pteridines, synthesised *inter alia* via unusual pyrimido-oxazine intermediates, target photo-oxidative damage to particular sites on a complementary DNA strand.

3602 3607

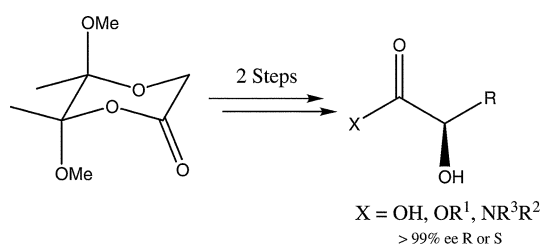


### Non-empirical assignment of the absolute configuration of (-)-naringenin, by coupling the exciton analysis of the circular dichroism spectrum and the *ab initio* calculation of the optical rotatory power

Egidio Giorgio, Nunziatina Parrinello, Salvatore Caccamese and Carlo Rosini

The configurational correlation (-)/(S) has been established for naringenin by exciton analysis of the CD spectrum and the *ab initio* calculation of the optical rotation.

3608 3617



### Preparation of enantiopure butane-2,3-diacetals of glycolic acid and alkylation reactions leading to $\alpha$ -hydroxyacid and amide derivatives

Steven V. Ley, Elena Diez, Darren J. Dixon, Richard T. Guy, Patrick Michel, Gillian L. Natrass and Tom D. Sheppard

Methods for the protection of glycolic acid and related derivatives as their corresponding butaneacetals and their subsequent alkylation reactions are described.

3618 3627



### Studies on the generation of enolate anions from butane-2,3-diacetal protected glycolic acid derivatives and subsequent highly diastereoselective coupling reactions with aldehydes and acid chlorides

Steven V. Ley, Darren J. Dixon, Richard T. Guy, Maria A. Palomero, Alessandra Polara, Félix Rodríguez and Tom D. Sheppard

Aldol reactions of chiral glycolic acid derivatives **1** and **2** and their conversion to *anti*-2,3- and *syn*-2,3-dihydroxy esters is described.

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## New Draft IUPAC Nomenclature of Organic Chemistry

A draft new edition of *Nomenclature of Organic Chemistry* (the IUPAC “Blue Book”) has been issued for public review by the International Union of Pure and Applied Chemistry. The deadline for comment is 31st March 2005.

This new edition, which supersedes both the 1979 Blue Book and the 1993 Guide to IUPAC Nomenclature of Organic Compounds, represents a major new development in IUPAC nomenclature recommendations. Previously IUPAC has provided rules enabling the generation of unambiguous names, by codifying, rationalising and extending existing practice, but in many cases has not expressed a preference between legitimate synonyms (e.g. decahydronaphthalene and bicyclo[4.4.0]decane). However, it has become clear that various communities require a single IUPAC name for a given chemical structure, which can be used for legal and regulatory purposes. Such names are needed in patents, in export-import regulations, and in environmental and health and safety information, etc.

Rather than recommend only a single name for each structure, IUPAC has now developed rules for assigning Preferred IUPAC Names (PINs), while continuing to allow considerable freedom in the use of alternatives according to the diverse needs of the chemical community. This freedom of usage extends, as previously, to a variety of trivial and traditional names; indeed several such names (e.g. acetic acid, benzene and pyridine) are

designated as IUPAC-preferred. Thus the present draft should enable users to derive Preferred IUPAC Names if required, while allowing alternatives in a broader context; it will also provide the protocols for developers of naming software to incorporate into their products for PIN generation.

In preparing this new edition, IUPAC has also taken the opportunity to rationalise, clarify and extend nomenclature systems described in previous editions, and has incorporated new nomenclature (e.g. that of phanes and fullerenes) that has appeared in *Pure Appl. Chem.* since publication of the 1993 Guide.

The IUPAC draft can be downloaded from the following web address:

[www.iupac.org/reports/provisional/abstract04/favre\\_310305.html](http://www.iupac.org/reports/provisional/abstract04/favre_310305.html)

as a single pdf file (~1300 pages) or as smaller files corresponding to designated sections of the book. In case of difficulty, paper copies of specified sections can be obtained from Dr Alan McNaught ([adm@rsc.org](mailto:adm@rsc.org)) at the RSC's Cambridge office. Comments should be addressed to (both) Prof Henri Favre ([halfa@contact.net](mailto:halfa@contact.net)) and Dr Warren Powell ([wpowell2@juno.com](mailto:wpowell2@juno.com)). Users should bear in mind the provisional nature of this material; it would be unwise to regard PIN specifications in this draft as definitive.

RSCAD18110421

**Perspective: Bioorthogonal organic chemistry in living cells: novel strategies for labeling biomolecules**

Paul F. van Swieten, Michiel A. Leeuwenburgh, Benedikt M. Kessler and Herman S. Overkleeft (DOI: 10.1039/b412558d)

**Emerging Area: New chiral anion mediated asymmetric chemistry**

Silvia Anthoine Dietrich, Luca Banfi, Andrea Basso, Gianluca Damonte, Giuseppe Guanti and Renata Riva (DOI: 10.1039/b413554g)

**Communication: Synthesis and hetero-Michael addition reactions of 2-alkynyl oxazoles and oxazolines**

Peter Wipf and Thomas H. Graham (DOI: 10.1039/b413604g)

**Organocatalysis with proline derivatives: improved catalysts for the asymmetric Mannich, nitro-Michael and aldol reactions**

Alexander J. A. Cobb, David M. Shaw, Deborah A. Longbottom, Johan B. Gold and Steven V. Ley (DOI: 10.1039/b414742a)

**Anion mediated structural motifs in silver(I) complexes with corannulene**

Eric L. Elliott, Gerardo A. Hernández, Anthony Linden and Jay S. Siegel (DOI: 10.1039/b411987h)

**Syntheses in enantiopure form of four diastereoisomeric naphthopyranquinones derived from aphid insect pigments**

Rachna Aggarwal, Robin G. F. Giles, Ivan R. Green, Francois J. Oosthuizen and C. Peter Taylor (DOI: 10.1039/b414213f)

**1,3-Alternate calix[4]arenes, selectively functionalized by amino groups**

Crenguta Danila, Michael Bolte and Volker Böhmer (DOI: 10.1039/b414173c)

Citations reported with a DOI instead of page numbers (e.g. A. N. Author, *Org. Biomol. Chem.*, 2004, DOI: 10.1039/b315432g) can be easily located from the article finder at the bottom of each journal homepage (e.g. www.rsc.org/obc) or from <http://xlink.rsc.org/?DOI=xxxxxxx> where xxxxxxxx is replaced by the last eight characters of the DOI (e.g. <http://xlink.rsc.org/?DOI=b315432g>).

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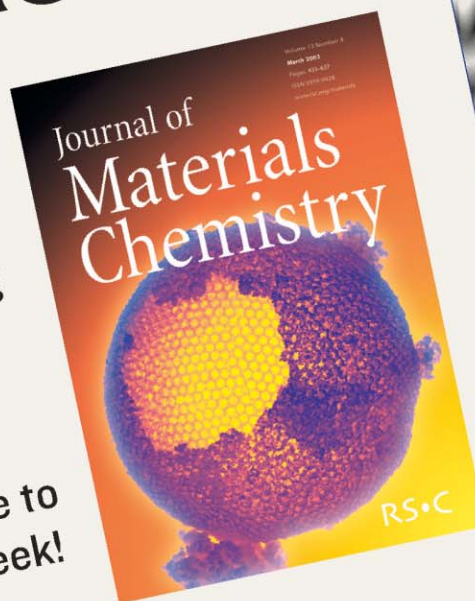
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