

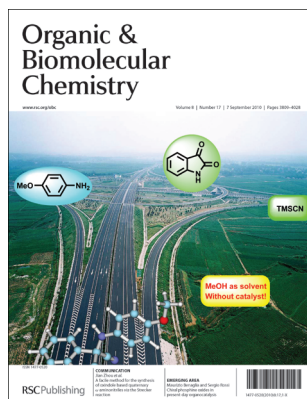
Organic & Biomolecular Chemistry

An international journal of synthetic, physical and biomolecular organic chemistry
www.rsc.org/obc

RSC Publishing is a not-for-profit publisher and a division of the Royal Society of Chemistry. Any surplus made is used to support charitable activities aimed at advancing the chemical sciences. Full details are available from www.rsc.org

IN THIS ISSUE

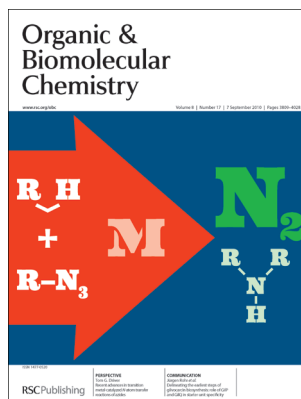
ISSN 1477-0520 CODEN OBCRAK 8(17) 3809–4028 (2010)



Cover

See Jian Zhou *et al.*, pp. 3847–3850.
 The direct α -cyanoamination of isatins using TMS-CN was accomplished in methanol without any catalyst.

Image reproduced by permission of Yun-Lin Liu, Feng Zhou, Jun-Jie Cao, Cong-Bin Ji, Miao Ding and Jian Zhou from *Org. Biomol. Chem.*, 2010, **8**, 3847.



Inside cover

See Tom G. Driver, pp. 3831–3846.
 Azides are useful progenitors of metal nitrene species that transform simple starting materials into complex, functionalized products. Cover art designed and prepared by Benjamin Kiel of House Industries.

Image reproduced by permission of Tom G. Driver from *Org. Biomol. Chem.*, 2010, **8**, 3831.

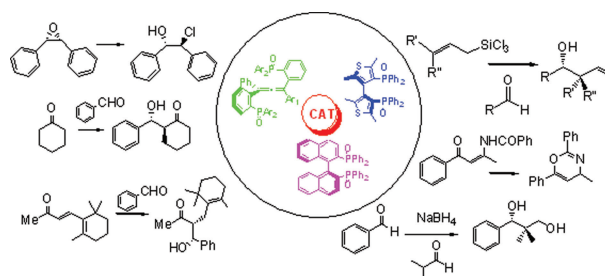
EMERGING AREA

3824

Chiral phosphine oxides in present-day organocatalysis

Maurizio Benaglia* and Sergio Rossi

This contribution highlights the relatively few examples of stereoselective transformations organocatalyzed by chiral phosphine oxides, discussing the different mechanisms and identifying topics for future investigation in what can be defined as an “Emerging Area”.



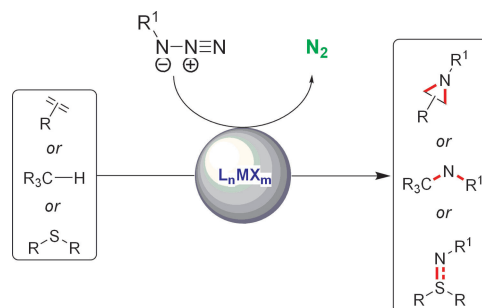
PERSPECTIVE

3831

Recent advances in transition metal-catalyzed *N*-atom transfer reactions of azides

Tom G. Driver

Transition metal-catalyzed *N*-atom transfer reactions from azides represents a potential efficient and environmentally benign method for the construction of carbon–nitrogen and sulfur–nitrogen bonds. This perspective examines the progress toward achieving green *N*-atom transfer processes from azides.



EDITORIAL STAFF

Editor

Richard Kelly

Deputy editor

Lorena Tomás Laudo

Senior publishing editor

Helen Saxton

Publishing editorsNicola Burton, Bailey Fallon, Scott Gallifent-Holmes,
Frances Galvin, Jonathan Gammon, Ben Merison,
Roxane Owen**Publishing assistants**

Anna Anderson, Jackie Cockrill

Publisher

Emma Wilson

For queries about submitted papers, please contact
Helen Saxton, Senior publishing editor in the first
instance. E-mail: obc@rsc.orgFor pre-submission queries please contact Richard Kelly,
Editor. Email: obc-rsc@rsc.orgOrganic & Biomolecular Chemistry (print: ISSN
1477-0520; electronic: ISSN 1477-0539) is published 24 times
a year by the Royal Society of Chemistry, Thomas Graham
House, Science Park, Milton Road, Cambridge, UK CB4 0WF.
All orders, with cheques made payable to the
Royal Society of Chemistry, should be sent to RSC
Distribution Services, c/o Portland Customer Services,
Commerce Way, Colchester, Essex, UK CO2 8HP.
Tel +44 (0)1206 226050; E-mail sales@rscdistribution.org2010 Annual (print+electronic) subscription price: £3105;
US\$5796. 2010 Annual (electronic) subscription price:
£2794; US\$5216. Customers in Canada will be subject to a
surcharge to cover GST. Customers in the EU subscribing to
the electronic version only will be charged VAT. If you take an
institutional subscription to any RSC journal you are entitled
to free, site-wide web access to that journal. You can arrange
access via Internet Protocol (IP) address at www.rsc.org/ip.
Customers should make payments by cheque in sterling
payable on a UK clearing bank or in US dollars payable on
a US clearing bank. Periodicals postage paid at Rahway, NJ,
USA and at additional mailing offices. Airfreight and mailing
in the USA by Mercury Airfreight International Ltd., 365 Blair
Road, Avenel, NJ 07001, USA.US Postmaster: send address changes to Organic &
Biomolecular Chemistry (OBC) c/o Mercury Airfreight
International Ltd., 365 Blair Road, Avenel, NJ 07001. All
despatches outside the UK by Consolidated Airfreight.The Royal Society of Chemistry takes reasonable care in the
preparation of this publication but does not accept liability
for the consequences of any errors or omissions. Inclusion of
an item in this publication does not imply endorsement by
The Royal Society of Chemistry of the content of the original
documents to which that item refers.Advertisement sales: Tel +44 (0) 1223 432246;
Fax +44 (0) 1223 426017; E-mail advertising@rsc.orgFor marketing opportunities relating to this journal,
contact marketing@rsc.org

Organic & Biomolecular Chemistry

An international journal of synthetic, physical and
biomolecular organic chemistrywww.rsc.org/obc*Organic & Biomolecular Chemistry* brings together molecular design, synthesis, structure, function and
reactivity in one journal. It publishes fundamental work on synthetic, physical and biomolecular organic
chemistry as well as all organic aspects of: chemical biology, medicinal chemistry, natural product chemistry,
supramolecular chemistry, macromolecular chemistry, theoretical chemistry, and catalysis.

EDITORIAL BOARD

ChairProfessor Jay Siegel, Zürich,
SwitzerlandProfessor Jeffrey Bode, Philadelphia,
USAProfessor Margaret Brimble,
Auckland, New Zealand

Professor Ben Davis, Oxford, UK

Dr Veronique Gouverneur, Oxford, UK

Professor Stefan Matile, Geneva,
Switzerland

Professor Paolo Scrimin, Padova, Italy

Professor Brian Stoltz, Pasadena, USA

Professor Keisuke Suzuki, Tokyo, Japan

ADVISORY BOARD

Roger Alder, Bristol, UK
Helen Blackwell, Madison, USA
John S Carey, Tonbridge, UK
Barry Carpenter, Cardiff, UK
Michael Crimmins, Chapel Hill, USA
Antonio Echavarren, Tarragona,
Spain
Jonathan Ellman, New Haven, USA
Kurt Faber, Graz, Austria
Ben Feringa, Groningen,
The Netherlands
Nobutaki Fujii, Kyoto, Japan
Jan Kihlberg, Umea, SwedenPhilip Kocienski, Leeds, UK
Steven V Ley, Cambridge, UK
Stephen Loeb, Ontario, Canada
Ilan Marek, Haifa, Israel
Manuel Martín Lomas,
San Sebastián, Spain
Keiji Maruoka, Kyoto, Japan
Heather Maynard, Los Angeles,
USA
E W 'Bert' Meijer, Eindhoven,
The Netherlands
Eichi Nakamura, Tokyo, JapanRyoji Noyori, Nagoya, Japan
Mark Rizzacasa, Melbourne,
Australia
Oliver Seitz, Berlin, Germany
Bruce Turnbull, Leeds, UK
Chris Welch, Rahway, USA
Peter Wipf, Pittsburg, USA
Henry N C Wong, Hong Kong,
China
Sam Zard, Ecole Polytechnique,
France
Zhang Li-He, Beijing, China

INFORMATION FOR AUTHORS

Full details on how to submit material for publication
in *Organic & Biomolecular Chemistry* are given in the
Instructions for Authors (available from <http://www.rsc.org/authors>). Submissions should be made via the journal's
homepage: <http://www.rsc.org/obc>.Authors may reproduce/republish portions of their
published contribution without seeking permission
from the RSC, provided that any such republication is
accompanied by an acknowledgement in the form:
(Original Citation)—Reproduced by permission of
The Royal Society of Chemistry.This journal is © The Royal Society of Chemistry 2010.
Apart from fair dealing for the purposes of research or
private study for non-commercial purposes, or criticism
or review, as permitted under the Copyright, Designs and
Patents Act 1988 and the Copyright and Related Rights
Regulation 2003, this publication may only be reproduced,
stored or transmitted, in any form or by any means, with the
prior permission in writing of the Publishers or in the case
of reprographic reproduction in accordance with the terms
of licences issued by the Copyright Licensing Agency in the
UK. US copyright law is applicable to users in the USA.The Royal Society of Chemistry takes reasonable care in the
preparation of this publication but does not accept liability
for the consequences of any errors or omissions.© The paper used in this publication meets the
requirements of ANSI/NISO Z39.48-1992
(Permanence of Paper).

Royal Society of Chemistry: Registered Charity No. 207890.

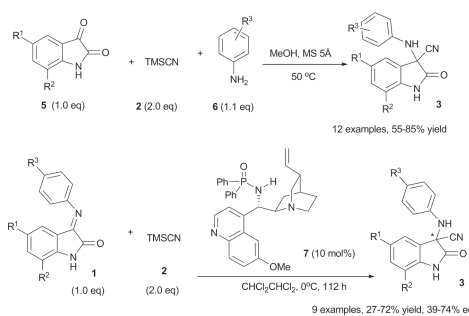
COMMUNICATIONS

3847

A facile method for the synthesis of oxindole based quaternary α -aminonitriles via the Strecker reaction

Yun-Lin Liu, Feng Zhou, Jun-Jie Cao, Cong-Bin Ji, Miao Ding and Jian Zhou*

The direct α -cyanoamination of isatins using TMSCN has been developed, which is carried out in methanol without any catalyst. A new bifunctional cinchona alkaloid-based phosphinamide catalyst **7** could promote the Strecker reaction of isatins derived ketimine with TMSCN in up to 74% ee.

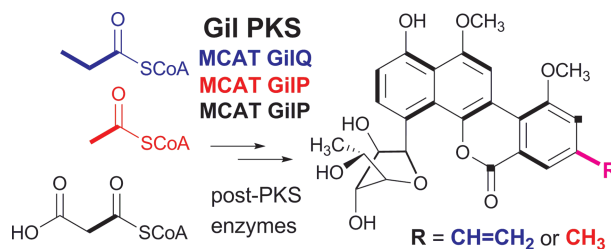


3851

Delineating the earliest steps of gilvocarcin biosynthesis: role of GilP and GilQ in starter unit specificity

Micah D. Shepherd, Madan K. Kharel, Lili L. Zhu, Steven G. van Lanen and Jürgen Rohr*

Unusual MCAT-type activities, not a distinct KASIII analogue, steer gilvocarcin biosynthesis toward preferentially priming with propionate over acetate starter units.

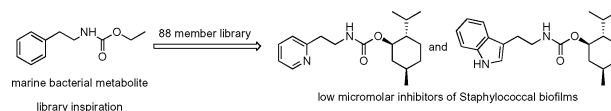


3857

Synthesis and bacterial biofilm inhibition studies of ethyl *N*-(2-phenethyl) carbamate derivatives

Steven A. Rogers, Daniel C. Whitehead, Trey Mullikin and Christian Melander*

An 88 member library based upon the marine bacterial metabolite ethyl *N*-(2-phenethyl) carbamate was evaluated for bacterial biofilm inhibition against a panel of medically relevant strains.

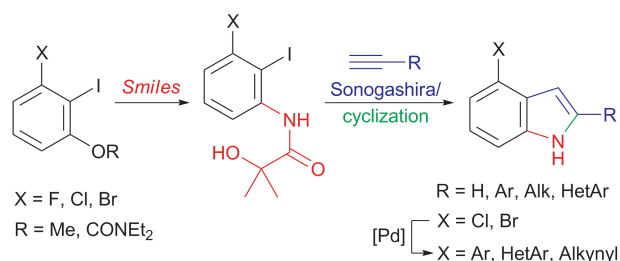


3860

Synthesis of 4-functionalized-1*H*-indoles from 2,3-dihalophenols

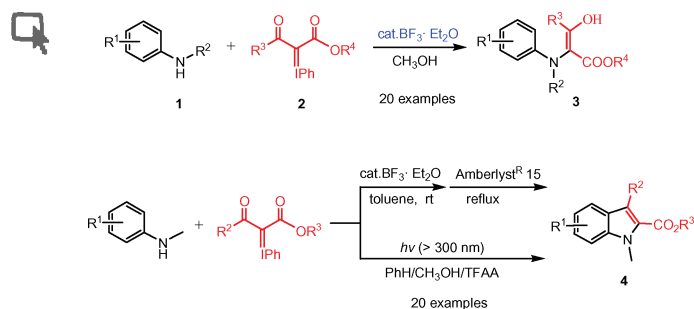
Roberto Sanz,* Verónica Guilarte and Nuria García

A new synthesis of 4-halo-1*H*-indoles has been developed from easily available 2,3-dihalophenol derivatives. The key steps are Smiles rearrangement and a one-pot or stepwise Sonogashira coupling/NaOH-mediated cyclization. Subsequent functionalization allows access to a wide variety of 2,4- or 2,3,4-regioselectively functionalized indoles.



COMMUNICATIONS

3865



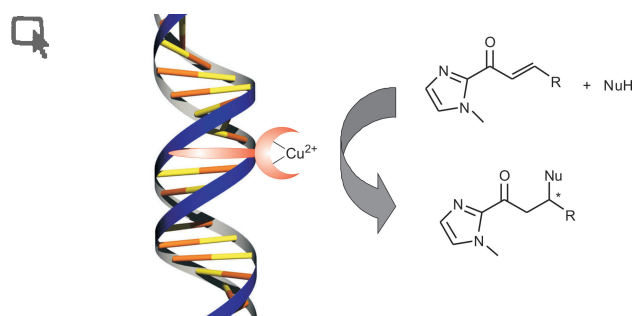
The acid-promoted reactions of phenyliodonium ylides with substituted anilines and their applications to the synthesis of indoles

Xianpei Wang, Bing Han, Junyan Wang and Wei Yu*

The reactions of phenyliodonium ylides with substituted anilines constitute a new protocol for the synthesis of indoles.

PAPERS

3868

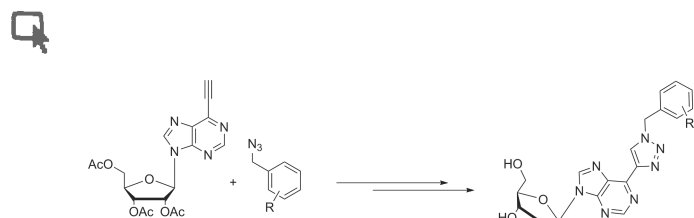


On the Role of DNA in DNA-based Catalytic Enantioselective Conjugate Addition Reactions

Ewold W. Dijk, Arnold J. Boersma, Ben L. Feringa* and Gerard Roelfes*

DNA significantly affects the reaction rates of DNA-based catalytic enantioselective Friedel–Crafts alkylation and Michael addition reactions.

3874

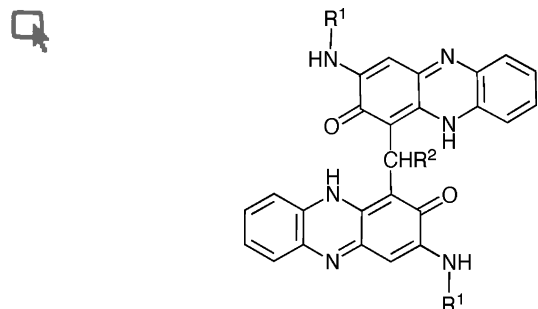


Expeditious synthesis and biological evaluation of new C-6 1,2,3-triazole adenosine derivatives A1 receptor antagonists or agonists

S. C. Mathew, Y. By, A. Berthault, M.-A. Virolleaud, L. Carrega, G. Chouraqui, L. Commeiras, J. Condo, M. Attolini, A. Gaudel-Siri, J. Ruf, J. Rodriguez,* J.-L. Parrain* and R. Guieu*

An expeditious synthesis and biological evaluation of new C-6 1,2,3-triazole adenosine derivatives A1 receptor antagonists or agonists are described.

3882

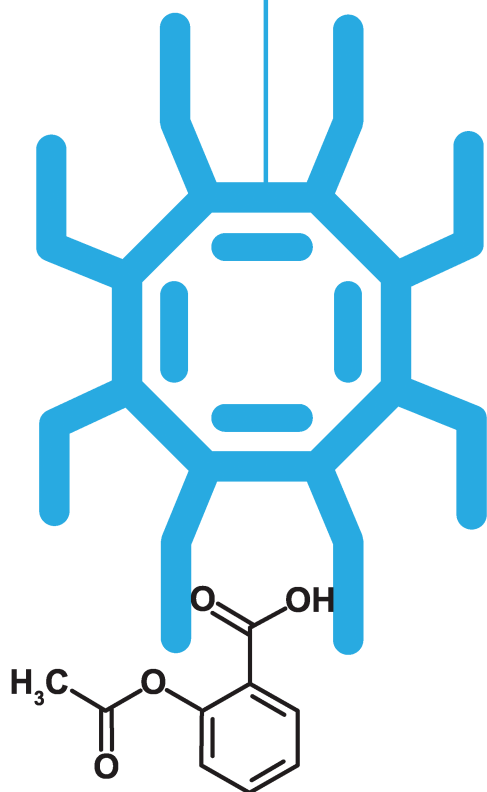


New class of highly stable nonaromatic tautomers

Claire Seillan, Philippe Marsal and Olivier Siri*

A new and efficient one-pot synthesis of unprecedented dimers which sacrifice by prototropic rearrangement their aromatic character (OH form) in favor of a new class of highly stable nonaromatic NH tautomers is described (either in solution or in solid-state).

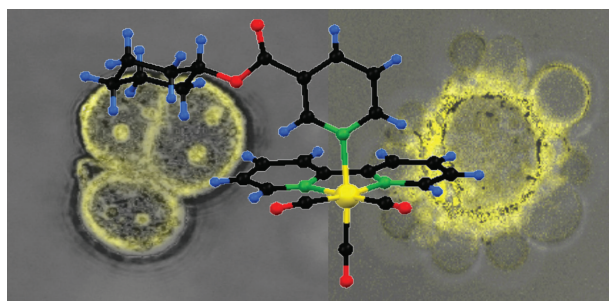
New adventures on the web



ChemSpider is a free online, structure centric community for chemists, providing fast access to millions of unique chemical entities, resources and information and the opportunity to collaborate with a world wide community of scientists. Rapidly becoming the richest single source of structure based chemistry information online, ChemSpider is a ground breaking initiative now supported by the RSC, the most innovative of chemical societies.

www.chemspider.com

3888

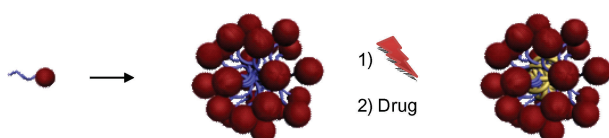


Uptake and localisation of rhenium *fac*-tricarbonyl polypyridyls in fluorescent cell imaging experiments

V. Fernández-Moreira, F. L. Thorp-Greenwood, A. J. Amoroso, J. Cable, J. B. Court, V. Gray, A. J. Hayes, R. L. Jenkins, B. M. Kariuki, D. Lloyd, C. O. Millet, C. Ff. Williams and M. P. Coogan*

A series of rhenium *fac*-tricarbonyl polypyridyl complexes of varying charge, lipophilicity and chemical reactivity are described along with their application in fluorescence cell imaging.

3902

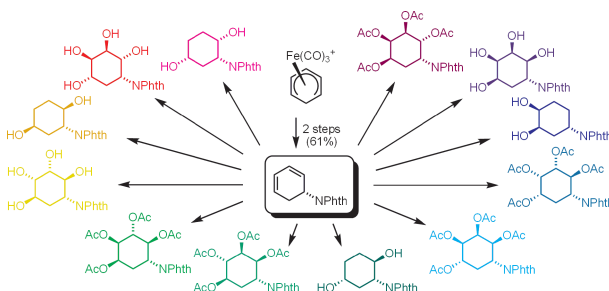


Enhanced drug loading in polymerized micellar cargo

Julien Ogier, Thomas Arnaud,* Géraldine Carrot, Antoine Lhumeau, Jean-Marie Delbos, Claire Boursier, Olivier Loreau, Francois Lefoulon and Eric Doris*

Self-assembly and polymerization of polydiacetylenic amphiphiles afforded a micellar cargo which permitted high loading and aqueous solubilization of lipophilic drugs.

3908

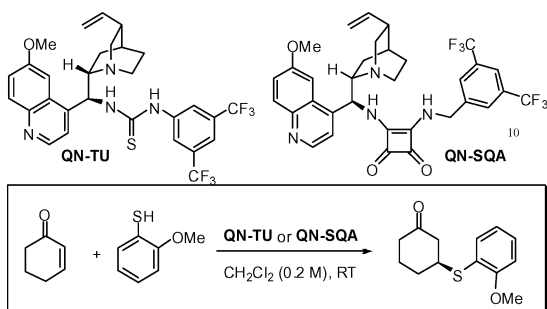


De novo synthesis of polyhydroxyl aminocyclohexanes

Anobick Sar, Sergey Lindeman and William A. Donaldson*

The syntheses of 12 stereochemically diverse polyhydroxyl aminocyclohexanes derivatives are described. These short syntheses require 2–5 steps from *N*-(2,4-cyclohexadien-1-yl)phthalimide, which is prepared in two steps from tricarbonyl(cyclohexadienyl)iron(1+).

3918



DOSY NMR for monitoring self aggregation of bifunctional organocatalysts: increasing enantioselectivity with decreasing catalyst concentration

Hyeong Bin Jang, Ho Sik Rho, Joong Suk Oh, Eun Hye Nam, Sang Eun Park, Han Yong Bae and Choong Eui Song*

In this report, we demonstrate that self-aggregation is an intrinsic problem of bifunctional organocatalysts.

Recognition starts here



Chemical Science

A new global impact journal for exceptional research from across the chemical sciences

What's different about *Chemical Science*, you might ask?

Firstly, we know that current approaches to selecting and publishing articles aren't always as effective as they might be. Secondly, we appreciate the challenges you face in getting your work published, noticed and recognised.

We want to change this. So *Chemical Science* will make it easier for you to get the recognition that your work deserves.

A hand-picked team of dynamic Associate Editors, led by Editor-in-Chief David MacMillan, will ensure that every article has a fair review. And as active researchers, they will guarantee that the journal represents the best new thinking in the chemical sciences.

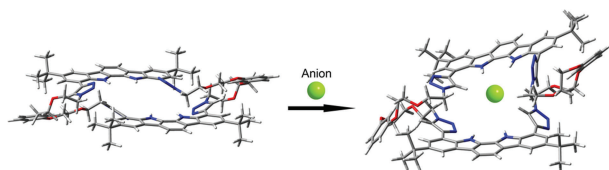
Submit your next article to *Chemical Science* – and step into the spotlight.

RSC Publishing

www.rsc.org/chemicalscience

Registered Charity Number 207890

3923

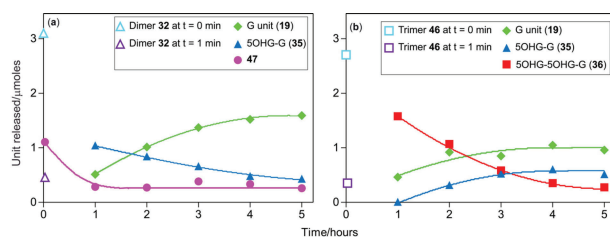


Self-assembly of indolocarbazole-containing macrocyclic molecules

Yingjie Zhao, Yuliang Li,* Yongjun Li,* Changshui Huang, Huibiao Liu, Siu-Wai Lai, Chi-Ming Che and Daoben Zhu

A successful approach for the synthesis of indolocarbazole-containing based upon π - π stacking preorganization of indolocarbazole planes and click-chemistry reactions has been developed.

3928

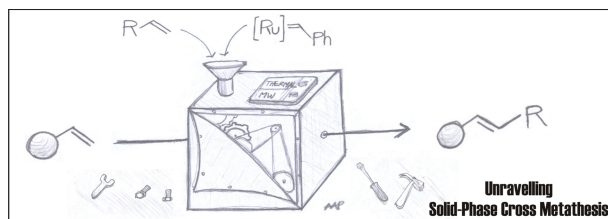


Insights into lignin primary structure and deconstruction from *Arabidopsis thaliana* COMT (caffeic acid *O*-methyltransferase) mutant *Atomt1*

Syed G. A. Moinuddin, Michaël Jourdes, Dhrubojyoti D. Laskar, Chanyoung Ki, Claudia L. Cardenas, Kye-Won Kim, Dianzhong Zhang, Laurence B. Davin and Norman G. Lewis*

Partial sequencing of native and mutant (*Atomt1*) lignins established a coherent conservation of 8-*O*-4' modified 8-*O*-4' inter-unit linkages during ligand primary structure macromolecular assembly.

3947

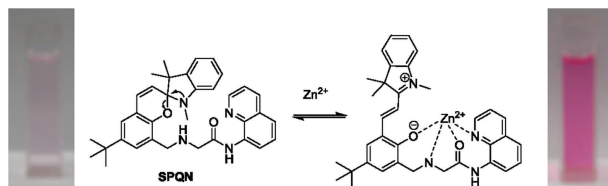


Unravelling the olefin cross metathesis on solid support. Factors affecting the reaction outcome

Andrés A. Poeylout-Palena and Ernesto G. Mata*

Several factors which modulate the fate of cross metathesis in solid phase organic synthesis were examined including the effect of microwave irradiation.

3957



A colorimetric and fluorescent turn-on chemosensor operative in aqueous media for Zn²⁺ based on a multifunctionalized spirobenzopyran derivative

Jian-Fa Zhu, Han Yuan, Wing-Hong Chan* and Albert W. M. Lee

Multifunctional spirobenzopyran derivative SPQN was synthesized as a Zn²⁺ chromogenic and fluorescent sensor. In 50% aqueous ethanol solution, upon binding with Zn²⁺, SPQN displays color change, chelation-enhanced fluorescence and ratiometric fluorescence output.

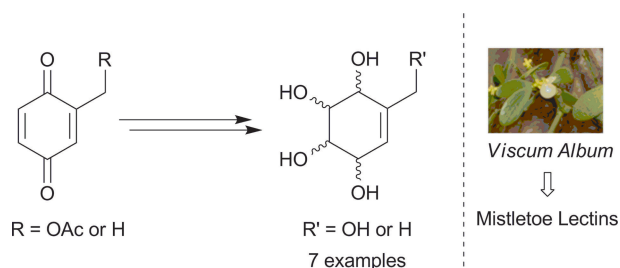
PAPERS

3965

De novo synthesis and lectin binding studies of unsaturated carba-pyranoses

Timo Leermann,* Oliver Block, Michael A. L. Podeschwa, Uwe Pfüller and Hans-Josef Altenbach

Galactose analogues were synthesized from branched *para*-benzoquinones and their potential to act as competitive inhibitors in lectin-carbohydrate interactions was investigated by means of Surface Plasmon Resonance (SPR) Spectroscopy.

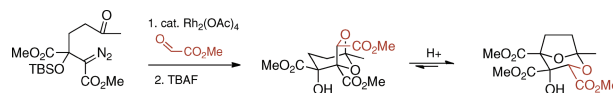


3975

Synthetic and computational studies on the tricarboxylate core of 6,7-dideoxysqualestatin H5 involving a carbonyl ylide cycloaddition–rearrangement

David M. Hodgson,* Carolina Villalonga-Barber, Jonathan M. Goodman and Silvina C. Pellegrinet

Using diazodiketoesters, rhodium(II) acetate catalysed tandem carbonyl ylide formation and dipolar cycloaddition with methyl glyoxylate generates 6,8-dioxabicyclo[3.2.1]octanes. Subsequent acid-catalysed rearrangement favours, at equilibrium, the 2,8-dioxabicyclo[3.2.1]octane skeleton of the squalostatins–zaragozic acids.

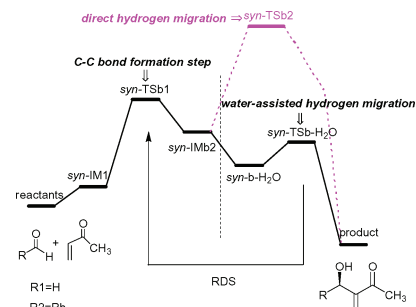


3985

Computational investigation on the mechanism and the stereoselectivity of Morita–Baylis–Hillman reaction and the effect of the bifunctional catalyst *N*-methylprolinol

Liang Dong, Song Qin, Zhishan Su, Huaqing Yang and Changwei Hu*

When water participates in the reaction, the energy barrier of the hydrogen migration step decreases dramatically, and the RDS turns to be the C–C bond formation step.

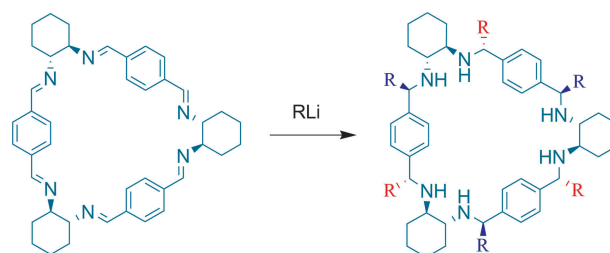


3992

Stereoselective synthesis of ring C-hexasubstituted trianglamines

Diego Savoia,* Andrea Gualandi and Helen Stoeckli-Evans

The addition of organolithium reagents to the trianglimine derived from (*R,R*)-1,2-diaminocyclohexane and terephthalaldehyde gave the corresponding trianglamines with complete stereocontrol and the *R* configuration of all six newly formed stereocenters



A new journal from RSC Publishing Launching mid 2010

Rapid communication of research
in medicinal chemistry

MedChemComm



A new, peer-reviewed journal publishing medicinal chemistry research, including new studies related to biologically-active chemical or biochemical entities that can act as pharmacological agents with therapeutic potential or relevance.

The journal will publish monthly issues from mid 2010 and will contain a mix of vibrant and concise research and review articles. *MedChemComm* will complement the existing RSC Publishing portfolio of bioscience journals, providing authors in the field with a dedicated subject-specific publication.

From launch, the current issue of *MedChemComm* will be freely available to all readers via the website. Free institutional online access to all 2010/2011 content will be available following a simple registration process at www.rsc.org/medchemcomm_registration

Co-Editor-in-Chief: Dr Anthony Wood, Pfizer, UK

Co-Editor-in-Chief: Professor Gregory Verdine, Harvard University, USA

Official journal of:



EFMC
European Federation
for Medicinal Chemistry

Sign up for free access today!

RSC Publishing

www.rsc.org/medchemcomm

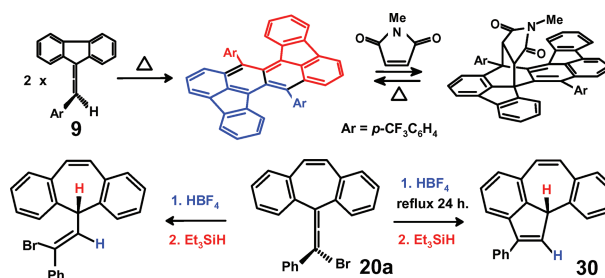
Registered Charity Number 207890

3997

Syntheses, X-ray crystal structures and reactivity of fluorenylidene- and dibenzosuberonylidene-allenes: convenient precursors to dispirotetracenes, di-indenotetracenes and 2-phenyl-11*bH*-dibenz[*cd,h*]azulene

E. V. Banide, C. O'Connor, N. Fortune, Y. Ortin, S. Milosevic, H. Müller-Bunz and M. J. McGlinchey*

3,3-(Biphenyl-2,2'-diyl)-1- α,α,α -trifluoro-*p*-tolyl-allene, **9**, sequentially forms a series of 1,2-dialkylidene-cyclobutane dimers and, ultimately, a dispirotetracene and a di-indenotetracene; the latter compound forms a Diels–Alder adduct with *N*-methylmaleimide.

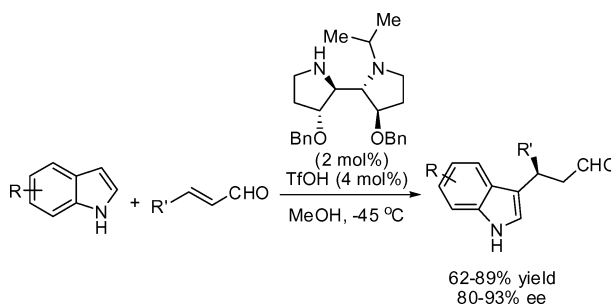


4011

Highly efficient asymmetric organocatalytic Friedel–Crafts alkylation of indoles with α,β -unsaturated aldehydes

Shangbin Jin, Chenguang Li, Yuanhui Ma, Yuhe Kan, Yong Jian Zhang* and Wanbin Zhang*

The development of an improved organocatalyst, *N*-isopropylated bipyrrrolidine, for highly efficient asymmetric Friedel–Crafts alkylation of indoles with α,β -unsaturated aldehydes is presented.

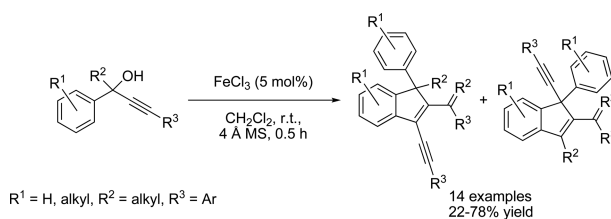


4016

Unexpected iron(III) chloride-catalysed dimerisation of 1,1,3-trisubstituted-prop-2-yn-1-ols as an expedient route to highly conjugated indenenes

Weidong Rao and Philip Wai Hong Chan*

A method to prepare highly conjugated indenenes efficiently by iron(III) chloride-catalysed dimerisation of trisubstituted propargylic alcohols under very mild conditions at room temperature is described. The reactions are rapid and operationally straightforward, giving the indene products in good yields and regioselectivity.



Top science ...free institutional access



New for 2010

Chemical Science - a new journal presenting findings of exceptional significance from across the chemical sciences. www.rsc.org/chemicalscience

MedChemComm - focusing on medicinal chemistry research, including new studies related to biologically-active chemical or biochemical entities that can act as pharmacological agents with therapeutic potential or relevance. www.rsc.org/medchemcomm

Polymer Chemistry - publishing advances in polymer chemistry covering all aspects of synthetic and biological macromolecules, and related emerging areas. www.rsc.org/polymers

New for 2009

Analytical Methods - highlights new and improved methods for the practical application of analytical science. This monthly journal will communicate research in the advancement of analytical techniques for use by the wider scientific community. www.rsc.org/methods

Integrative Biology - focusing on quantitative multi-scale biology using enabling technologies and tools to exploit the convergence of biology with physics, chemistry, engineering, imaging and informatics. www.rsc.org/ibiology

Metallomics - covering the research fields related to metals in biological, environmental and clinical systems. www.rsc.org/metallomics

Nanoscale - publishing experimental and theoretical work across the breadth of nanoscience and nanotechnology. www.rsc.org/nanoscale

Free institutional access, managed by IP address, is available on all these titles. For more details, and to register, visit www.rsc.org/free_access_registration

AUTHOR INDEX

- Altenbach, Hans-Josef, 3965
 Amoroso, Angelo J., 3888
 Arnauld, Thomas, 3902
 Attolini, M., 3874
 Bae, Han Yong, 3918
 Banide, Emilie V., 3997
 Benaglia, Maurizio, 3824
 Berthault, A., 3874
 Block, Oliver, 3965
 Boersma, Arnold J., 3868
 Boursier, Claire, 3902
 By, Y., 3874
 Cable, Joanne, 3888
 Cao, Jun-Jie, 3847
 Cardenas, Claudia L., 3928
 Carrega, L., 3874
 Carrot, Géraldine, 3902
 Chan, Philip Wai Hong, 4016
 Chan, Wing-Hong, 3957
 Che, Chi-Ming, 3923
 Chouraqui, G., 3874
 Commeiras, L., 3874
 Condo, J., 3874
 Coogan, Michael P., 3888
 Court, Jonathan B., 3888
 Davin, Laurence B., 3928
 Delbos, Jean-Marie, 3902
 Dijk, Ewold W., 3868
 Ding, Miao, 3847
 Donaldson, William A., 3908
 Dong, Liang, 3985
 Doris, Eric, 3902
 Driver, Tom G., 3831
 Feringa, Ben L., 3868
- Fernández-Moreira, Vanesa, 3888
 Fortune, Natasha, 3997
 Garcia, Nuria, 3860
 Gaudel-Siri, A., 3874
 Goodman, Jonathan M., 3975
 Gray, Victoria, 3888
 Gualandi, Andrea, 3992
 Guieu, R., 3874
 Guilarte, Verónica, 3860
 Han, Bing, 3865
 Hayes, Anthony J., 3888
 Hodgson, David M., 3975
 Hu, Changwei, 3985
 Huang, Changshui, 3923
 Jang, Hyeong Bin, 3918
 Jenkins, Robert L., 3888
 Ji, Cong-Bin, 3847
 Jin, Shangbin, 4011
 Jourdes, Michaël, 3928
 Kan, Yuhe, 4011
 Kariuki, Benson M., 3888
 Kharel, Madan K., 3851
 Ki, Chanyoung, 3928
 Kim, Kye-Won, 3928
 Lai, Siu-Wai, 3923
 Laskar, Dhrubojyoti D., 3928
 Lee, Albert W. M., 3957
 Leermann, Timo, 3965
 Lefoulon, Francois, 3902
 Lewis, Norman G., 3928
 Lhumeau, Antoine, 3902
 Li, Chenguang, 4011
 Li, Yongjun, 3923
 Li, Yuliang, 3923
- Lindeman, Sergey, 3908
 Liu, Huibiao, 3923
 Liu, Yun-Lin, 3847
 Lloyd, David, 3888
 Loreau, Olivier, 3902
 Ma, Yuanhui, 4011
 Marsal, Philippe, 3882
 Mata, Ernesto G., 3947
 Mathew, S. C., 3874
 McGlinchey, Michael J., 3997
 Melander, Christian, 3857
 Millet, Coralie O., 3888
 Milosevic, Sandra, 3997
 Moinuddin, Syed G. A., 3928
 Müller-Bunz, Helge, 3997
 Mullikin, Trey, 3857
 Nam, Eun Hye, 3918
 O'Connor, Crystal, 3997
 Ogier, Julien, 3902
 Oh, Joong Suk, 3918
 Ortin, Yannick, 3997
 Park, Sang Eun, 3918
 Parrain, J.-L., 3874
 Pellegrinet, Silvina C., 3975
 Pfüller, Uwe, 3965
 Podeschwa, Michael A. L., 3965
 Poeylaut-Palena, Andrés A., 3947
 Qin, Song, 3985
 Rao, Weidong, 4016
 Rho, Ho Sik, 3918
 Rodriguez, J., 3874
 Roelfes, Gerard, 3868
 Rogers, Steven A., 3857
 Rohr, Jürgen, 3851
- Rossi, Sergio, 3824
 Ruf, J., 3874
 Sanz, Roberto, 3860
 Sar, Anobick, 3908
 Savoia, Diego, 3992
 Seillan, Claire, 3882
 Shepherd, Micah D., 3851
 Siri, Olivier, 3882
 Song, Choong Eui, 3918
 Stoekli-Evans, Helen, 3992
 Su, Zhishan, 3985
 Thorp-Greenwood, Flora L., 3888
 van Lanen, Steven G., 3851
 Villalonga-Barber, Carolina, 3975
 Virolleaud, M.-A., 3874
 Wang, Junyan, 3865
 Wang, Xianpei, 3865
 Whitehead, Daniel C., 3857
 Williams, Catrin Ff., 3888
 Yang, Huaqing, 3985
 Yu, Wei, 3865
 Yuan, Han, 3957
 Zhang, Dianzhong, 3928
 Zhang, Wanbin, 4011
 Zhang, Yong Jian, 4011
 Zhao, Yingjie, 3923
 Zhou, Feng, 3847
 Zhou, Jian, 3847
 Zhu, Daoben, 3923
 Zhu, Jian-Fa, 3957
 Zhu, Lili L., 3851

FREE E-MAIL ALERTS AND RSS FEEDS

Contents lists in advance of publication are available on the web *via* www.rsc.org/obc – or take advantage of our free e-mail alerting service (www.rsc.org/ej_alert) to receive notification each time a new list becomes available.



Try our RSS feeds for up-to-the-minute news of the latest research. By setting up RSS feeds, preferably using feed reader software, you can be alerted to the latest Advance Articles published on the RSC web site. Visit www.rsc.org/publishing/technology/rss.asp for details.

ADVANCE ARTICLES AND ELECTRONIC JOURNAL

Free site-wide access to Advance Articles and the electronic form of this journal is provided with a full-rate institutional subscription. See www.rsc.org/ejs for more information.

* Indicates the author for correspondence: see article for details.



Electronic supplementary information (ESI) is available *via* the online article (see <http://www.rsc.org/esi> for general information about ESI).