Organic & Biomolecular Chemistry

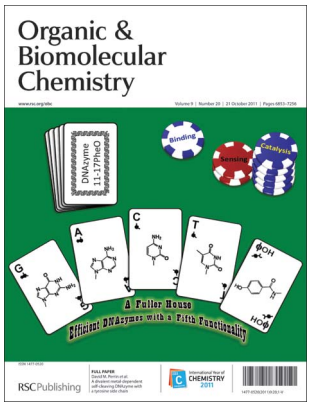
An international journal of synthetic, physical and biomolecular organic chemistry

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 9(20) 6853–7256 (2011)

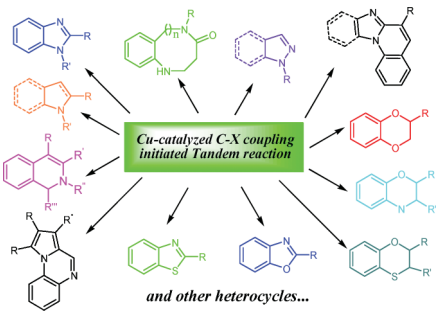


Cover

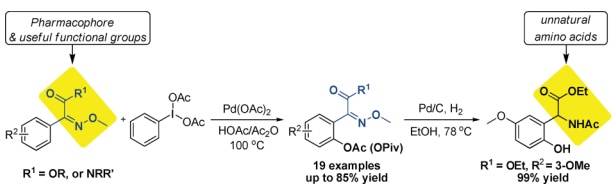
See David M. Perrin *et al.*, pp. 6949–6954.

Image reproduced by permission of David M. Perrin from *Org. Biomol. Chem.*, 2011, **9**, 6949.

PERSPECTIVE



COMMUNICATIONS



Organic & 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.org

2011 Annual (print+electronic) subscription price: £3726; US$6955. 2011 Annual (electronic) subscription price: £3353; US$6260 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.

Organic & Biomolecular Chemistry

An international journal of synthetic, physical and biomolecular organic chemistry

www.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.

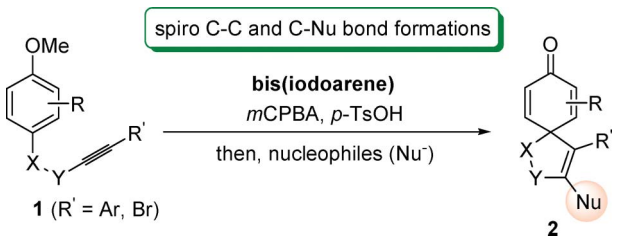
EDITORIAL BOARD

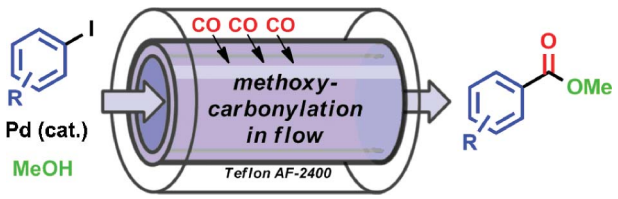
ADVISORY BOARD

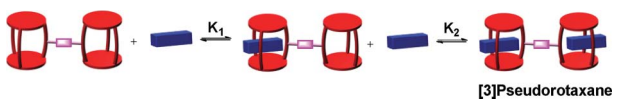
INFORMATION FOR AUTHORS

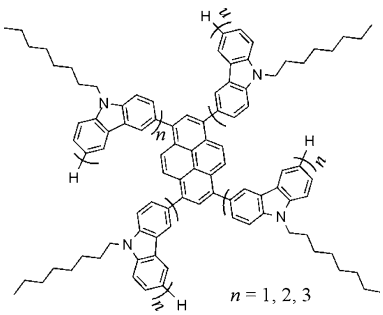
Full details on how to submit material for publication in Organic & Biomolecular Chemistry are given in the Instructions for Authors (available from http://www.rsc.org/authors). Submissions should be made *via* the journal's homepage: http://www.rsc.org/obc.

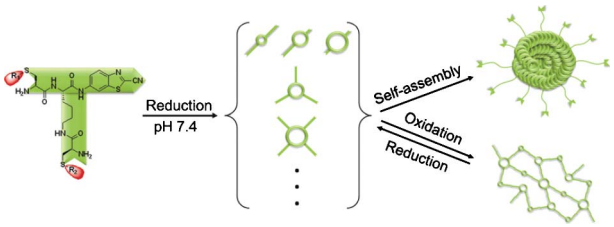
Authors may reproduce/republish portions of their published contribution without seeking permission from the RSC, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)–Reproduced by permission of The Royal Society of Chemistry.







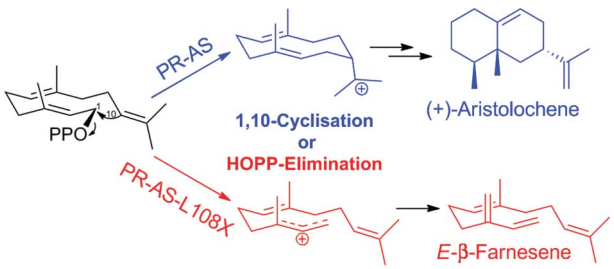




Multifunctional small molecule for controlled assembly of oligomeric nanoparticles and crosslinked polymers

Yun Deng, Shuang Liu, Kun Mei, An-ming Tang, Chun-yan Cao and Gao-lin Liang*

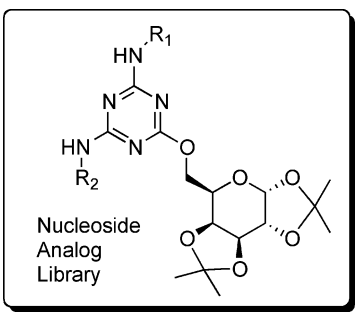
One multifunctional small molecule can fulfil all the transformations between monomers, oligomers, nanoparticles, and polymers when applied to a condensation reaction.



Templating effects in aristolochene synthase catalysis: elimination *versus* cyclisation

Juan A. Faraldos, Verónica González, Michael Senske and Rudolf K. Allemann*

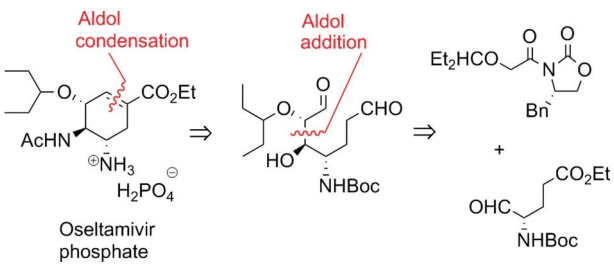
Leucine108 of aristolochene synthase plays an essential structural role in maintaining the quasi-cyclic catalytic conformation of FDP.



Combinatorial synthesis of galactosyl-1,3,5-triazines as novel nucleoside analogues

Shenliang Wang, Woo Sirl Lee, Hyung-Ho Ha and Young-Tae Chang*

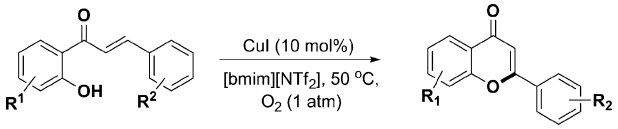
Fast parallel synthesis of novel nucleoside analogues in high purity without extensive reaction conditions or tedious purification.



An aldol approach to the enantioselective synthesis of (–)-oseltamivir phosphate

Milos Trajkovic, Zorana Ferjancic* and Radomir N. Saicic*

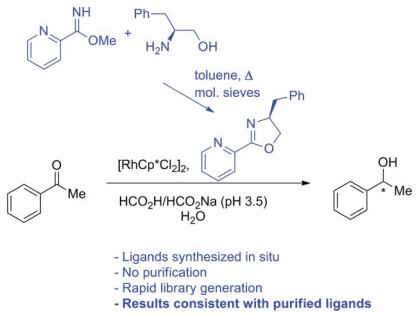
A formal asymmetric synthesis of the antiviral agent (–)-oseltamivir phosphate is achieved using two aldol reactions as key steps.



Ionic liquid mediated Cu-catalyzed cascade *oxa*-Michael-oxidation: efficient synthesis of flavones under mild reaction conditions

Zhiyun Du, Huifen Ng, Kun Zhang, Huaqiang Zeng and Jian Wang*

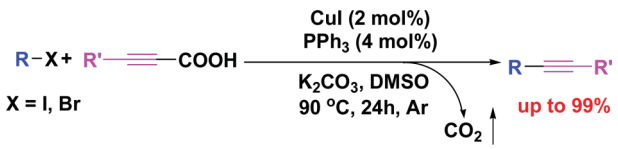
A highly efficient synthetic method of CuI-catalyzed cascade oxa-Michael-oxidation using chalcones as substrates and mediated by the ionic liquid [bmim][NTf_2] at a low temperature was disclosed.



Rapid, *in situ* synthesis of bidentate ligands: chromatography-free generation of catalyst libraries

Robin Frauenlob, Martha M. McCormack, Carolyn M. Walsh and Enda Bergin*

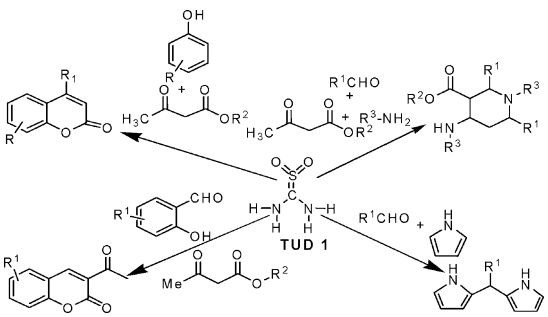
Ligand libraries have been rapidly formed by combining aldehydes/imidates with amino compounds, and then screened directly in catalytic reactions without purification. This proved a convenient method of evaluating catalyst performance.



Highly effective copper-catalyzed decarboxylative coupling of aryl halides with alkynyl carboxylic acids

Xiaoming Qu, Tingyi Li, Peng Sun, Yan Zhu, Hailong Yang and Jincheng Mao*

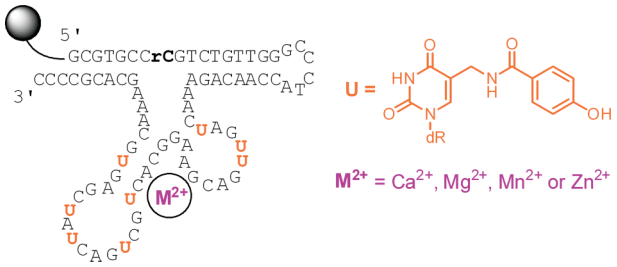
A highly effective copper-catalyzed decarboxylative coupling of alkynylcarboxylic acids with various aryl and alkyl halides at 2 mol% loading of copper is described.

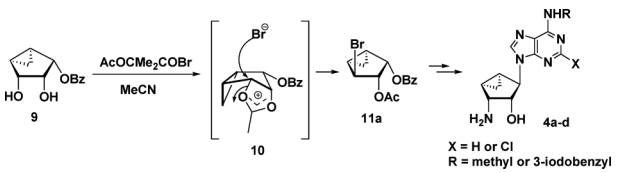


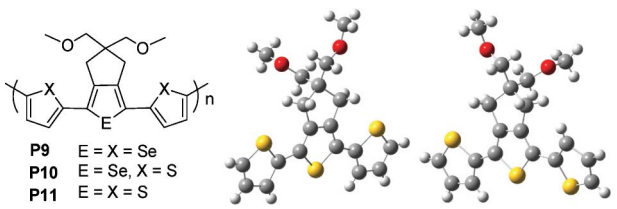
Thiourea dioxide promoted efficient organocatalytic one-pot synthesis of a library of novel heterocyclic compounds

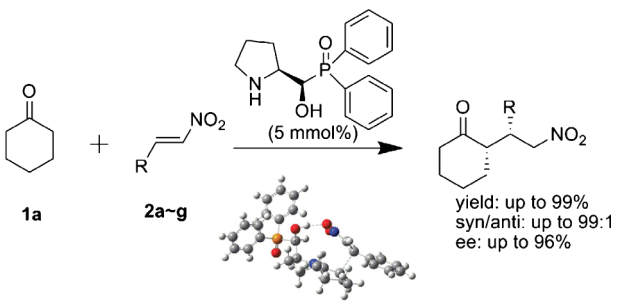
Sanny Verma, Subodh Kumar, Suman L. Jain and Bir Sain*

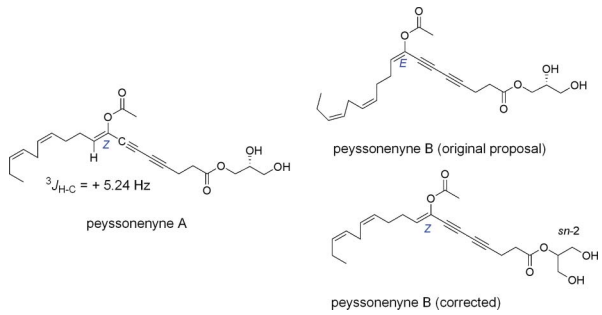
A simple, highly efficient organocatalytic approach using thiourea dioxide (TUD) as catalyst for the selective synthesis of a library of heterocyclic compounds in excellent yields is described.







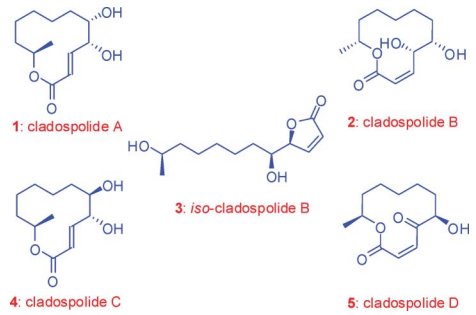




Total synthesis of the proposed structures of the DNA methyl transferase inhibitors peyssonenynes, and structural revision of peyssonenyne B

Patricia García-Domínguez, Ilaria Lepore, Cathie Erb, Hinrich Gronemeyer, Lucia Altucci, Rosana Álvarez* and Ángel R. de Lera*

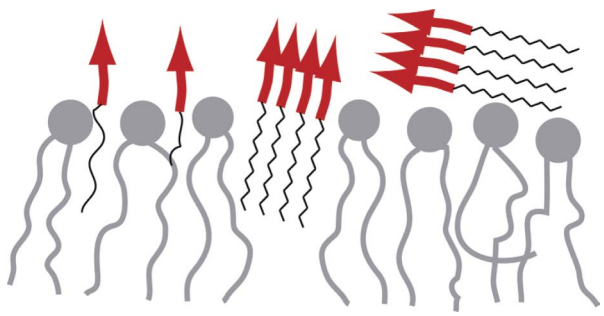
Not a geometric isomer of peyssonenyne A, but a positional isomer, was determined to be the correct structure of peyssonenyne B.



A flexible and unified strategy for syntheses of cladospolides A, B, C, and *iso*-cladospolide B

Debjani Si, Narayana M. Sekar and Krishna P. Kaliappan*

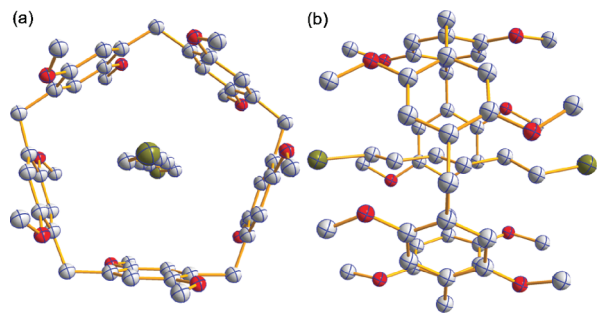
A general and straightforward approach towards the cladospolide family of natural products utilising Julia–Kocienski olefination and Yamaguchi lactonization is delineated.



The interaction of lipid modified pseudopeptides with lipid membranes

Holger A. Scheidt, Annemarie Sickert, Thomas Meier, Nicola Castellucci, Claudia Tomasini* and Daniel Huster*

The conformational preferences of two lipopeptides $C_n{}^2H_{(2n+1)}CO$-L-Phe-D-Oxd-OBn or $C_n{}^2H_{(2n+1)}CO$-D-Phe-L-Oxd-OBn with $n = 5$ or 11 have been analyzed with solid-state ^2H and ^{13}C NMR techniques.



Efficient synthesis of copillar[5]arenes and their host–guest properties with dibromoalkanes

Luzhi Liu, Derong Cao,* Yi Jin, Hongqi Tao, Yuhui Kou and Herbert Meier*

Pillar[5]arenes show strong host–guest interactions with dibromoalkanes.

Click through to a great career

@ ChemCareers 2011

THE CAREERS FAIR WITH A DIFFERENCE

31 October – 4 November 2011

Hosted on MyRSC, the online professional network for the chemical sciences

ChemCareers is the careers fair with a difference. An online event, featuring employees from over 30 top firms, ChemCareers will allow you to:

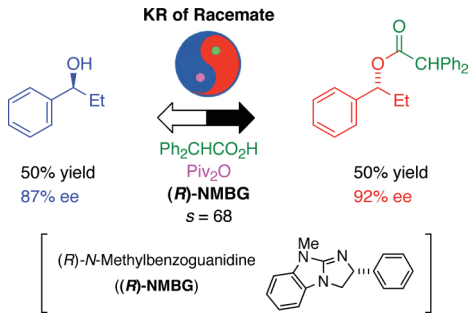
- **Discover** the huge range of career opportunities available to chemical scientists
- **Learn** how to market yourself to employers in job applications and interviews
- **Seek** expert advice on career planning and making your next career move
- **Investigate** further study options
- **Network** globally with both employers and other chemical scientists

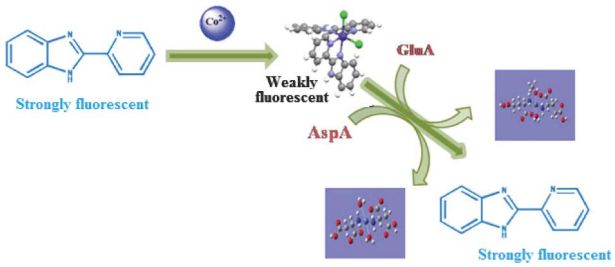
Register now at **http://my.rsc.org/chemcareers** and sign up to the 'ChemCareers' group to be kept up-to-date with the programme of events.

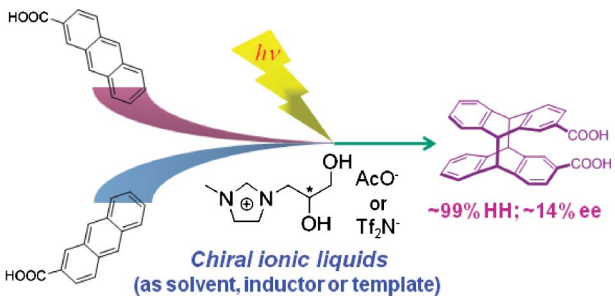
RSC | Advancing the Chemical Sciences

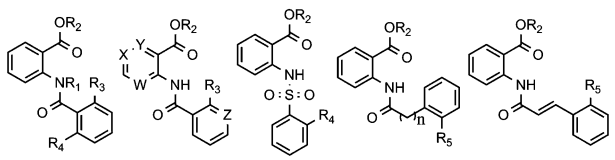
http://my.rsc.org/chemcareers org

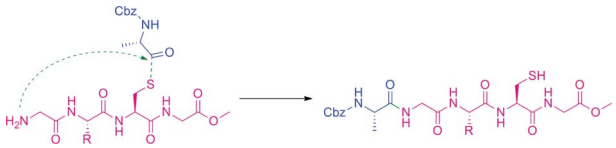
Registered Charity Number 207890

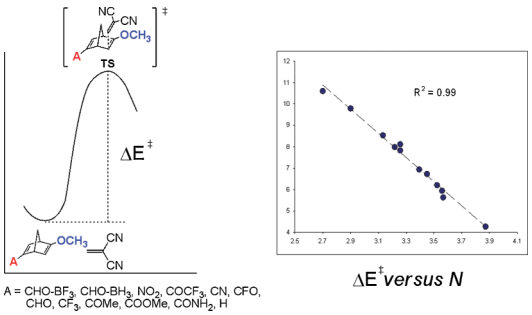


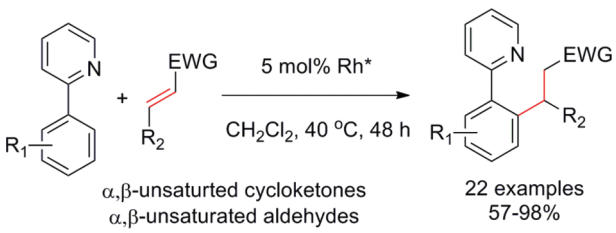


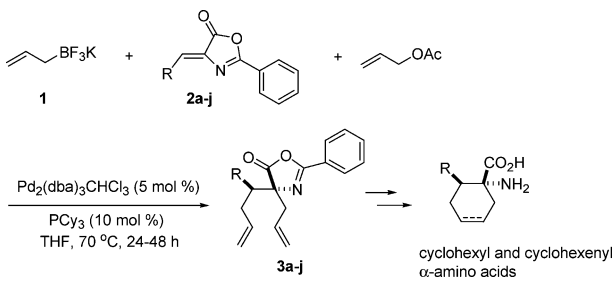


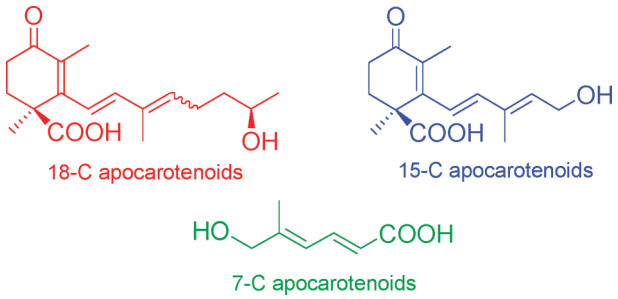








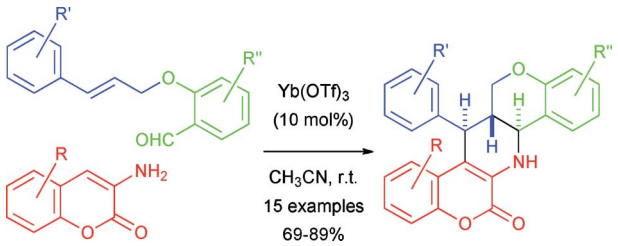




New apocarotenoids and β-carotene cleavage in *Blakeslea trispora*

Alejandro F. Barrero,* M. Mar Herrador, Pilar Arteaga, Jesús Gil, Jose-Antonio González, Eugenio Alcalde and Enrique Cerdá-Olmedo*

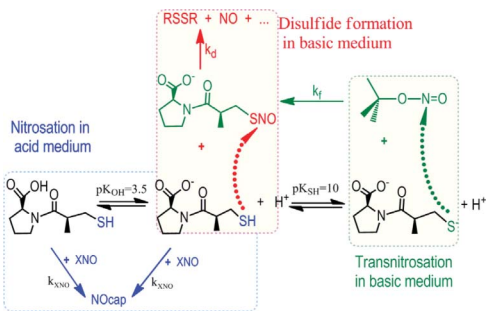
Three families of apocarotenoids in *Blakeslea trispora* are originated from the double oxidative cleavage of β-carotene during sexual interaction.



Intramolecular Povarov reactions involving 3-aminocoumarins

Amit A. Kudale, David O. Miller, Louise N. Dawe and Graham J. Bodwell*

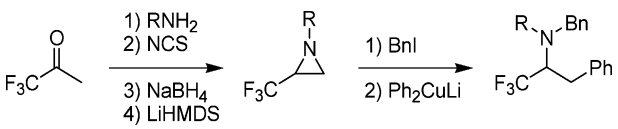
3-Aminocoumarins react with benzaldehydes bearing a pendant electron rich dienophile in an intramolecular Povarov reaction to afford pentacyclic heterocycles in good yield and high diastereoselectivity.



S-Nitrosocaptopril formation in aqueous acid and basic medium. A vasodilator and angiotensin converting enzyme inhibitor

Alexia Sexto and Emilia Iglesias*

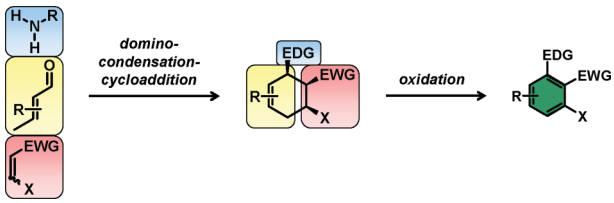
S-Nitrosocaptopril forms in acid solutions of nitrite, and in basic solutions of *t*-butylnitrite; its decomposition mechanism explains NOcap vasodilator and ACE inhibitor actions.

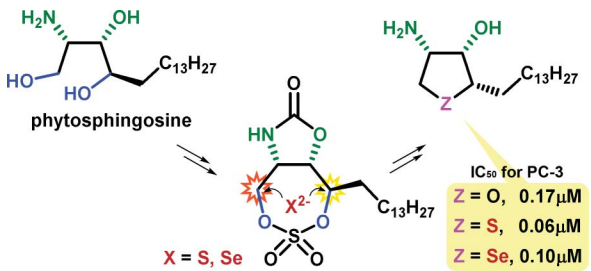


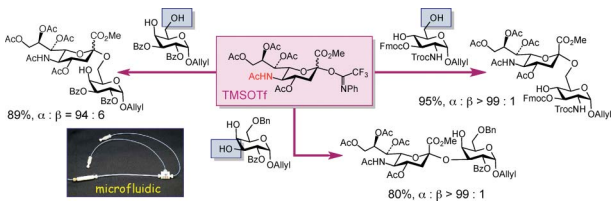
Straightforward synthesis of 1-alkyl-2-(trifluoromethyl)aziridines starting from 1,1,1-trifluoroacetone

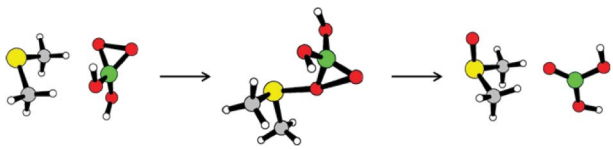
Sara Kenis, Matthias D'hooghe,* Guido Verniest, Vinh Duc Nguyen, Tuyet Anh Dang Thi, Tuyen Van Nguyen and Norbert De Kimpe*

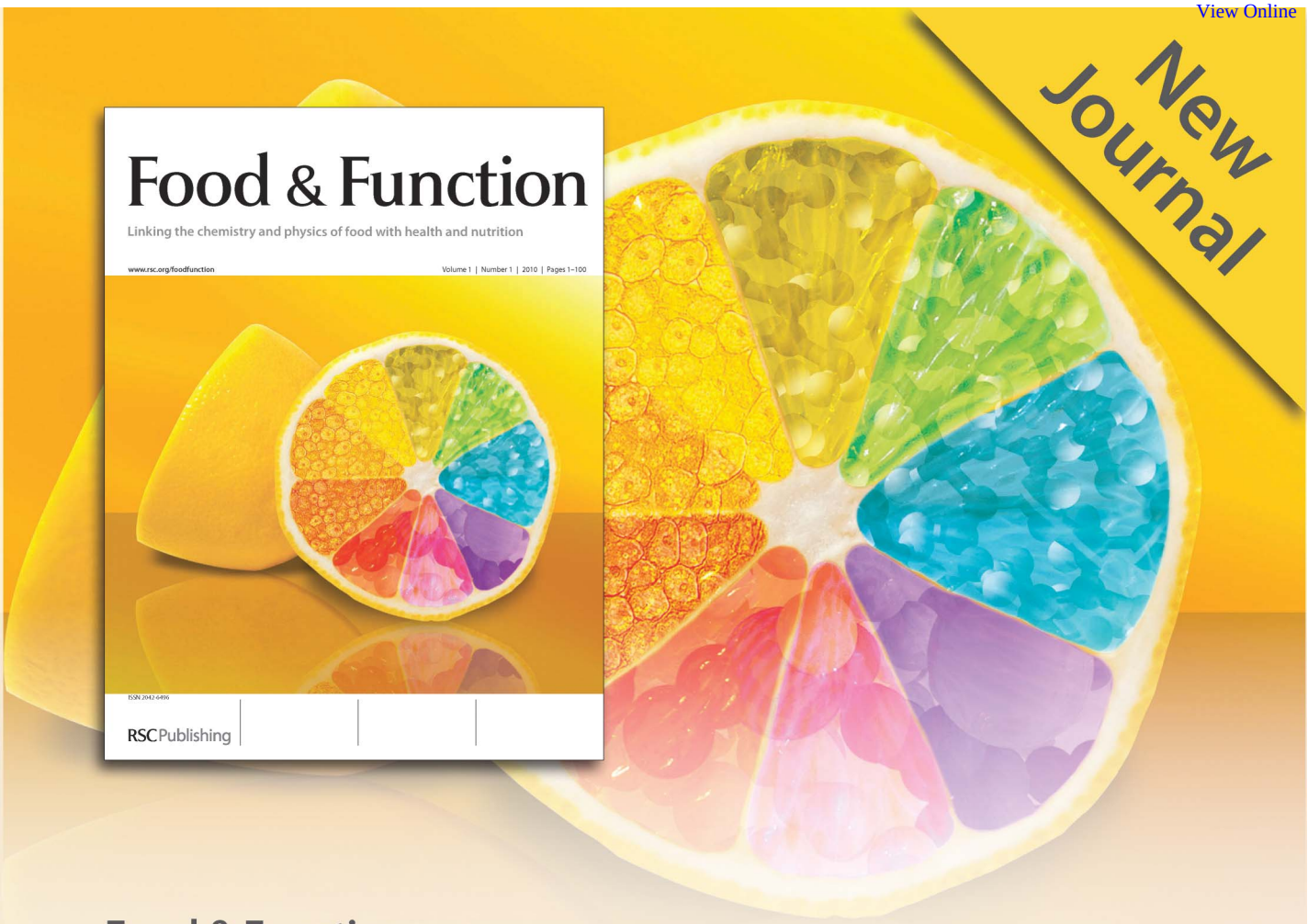
1-Alkyl-2-(trifluoromethyl)aziridines were prepared starting from 1,1,1-trifluoroacetone *via* imination, α-chlorination, hydride reduction and ring closure, followed by regioselective aziridine ring opening to provide primary β-iodo amines.











Food & Function

Linking the chemistry and physics of food with health and nutrition

Food science and nutrition is a highly multidisciplinary area. We know it can be difficult to keep abreast of each other's work, especially when there is not enough time in the day and the pile of work keeps growing.

Wouldn't it be great if there was a journal which pulled together high impact chemical and physical research linking to human health and nutrition? Just one platform to find what you need in the field, and reach exactly the right audience when you publish your work.

Food & Function provides a dedicated venue for physicists, chemists, biochemists, nutritionists and other health scientists focusing on work related to the interaction of food components with the human body.

Go to the website now to submit your research and register for free access!

RSC Publishing

www.rsc.org/foodfunction

Registered Charity Number 207890