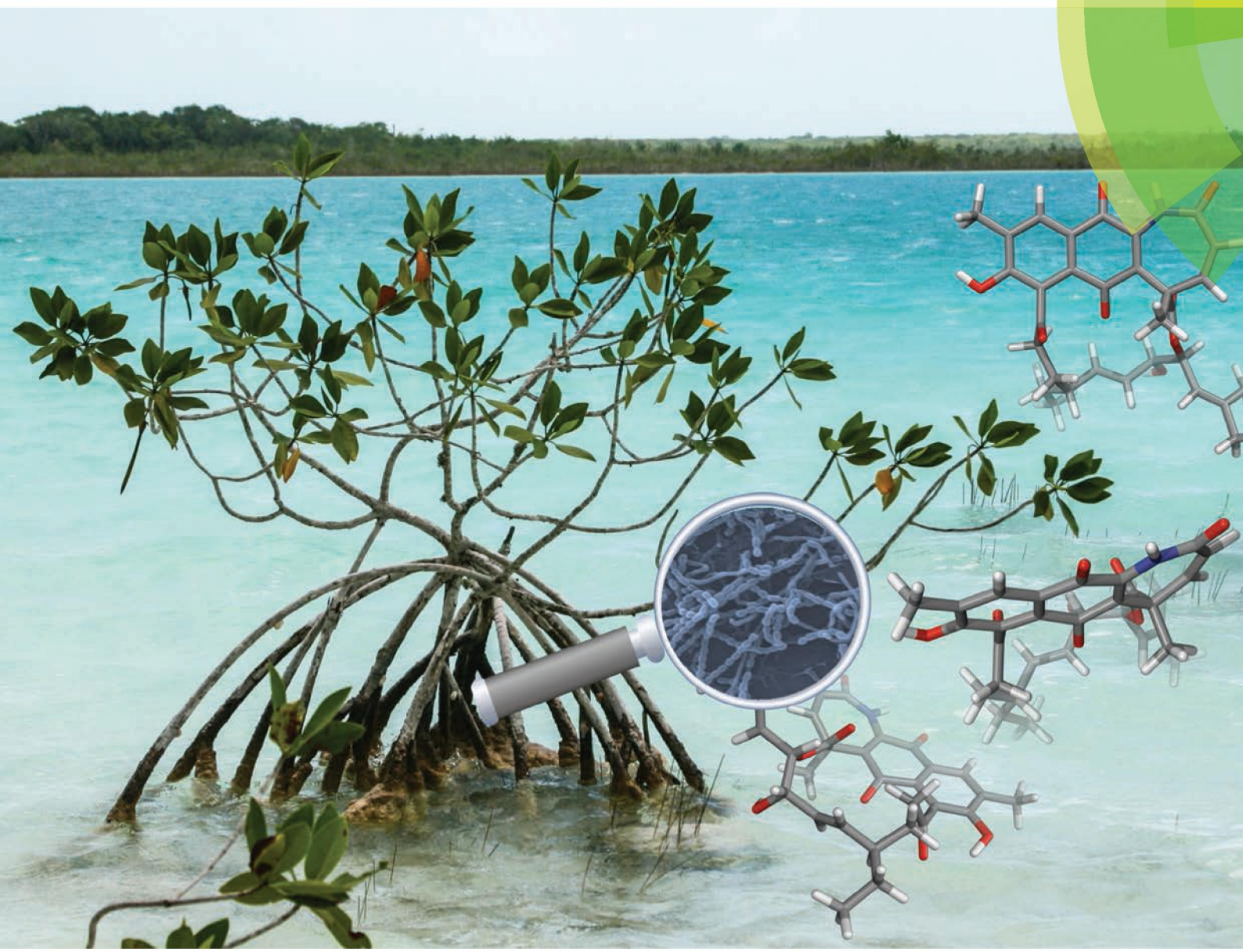
Volume 13 | Number 6 | 14 February 2015 | Pages 1579–1916

Organic & Biomolecular Chemistry

www.rsc.org/obc



ISSN 1477-0520

ROYAL SOCIETY OF CHEMISTRY

COMMUNICATION

Christian Hertweck *et al.*

Divergolide congeners illuminate alternative reaction channels for ansamycin diversification

Organic & Biomolecular Chemistry

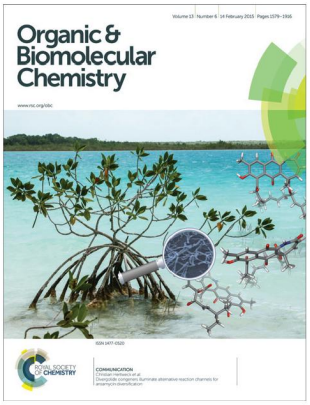
An international journal of synthetic, physical and biomolecular organic chemistry

www.rsc.org/obc

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

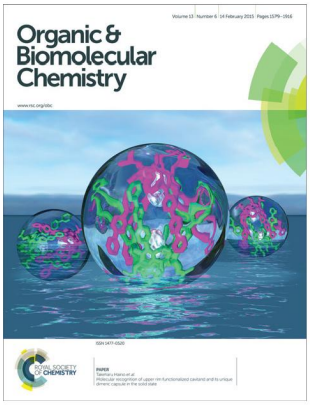
ISSN 1477-0520 CODEN OBCRAK 13(6) 1579–1916 (2015)



Cover
See Christian Hertweck *et al.*, pp. 1618–1623.

Karolina Kiewel and Dreamstime.com are acknowledged for the background image.

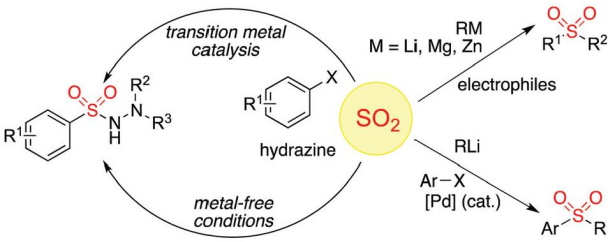
Image reproduced by permission of Christian Hertweck from *Org. Biomol. Chem.*, 2015, **13**, 1618.

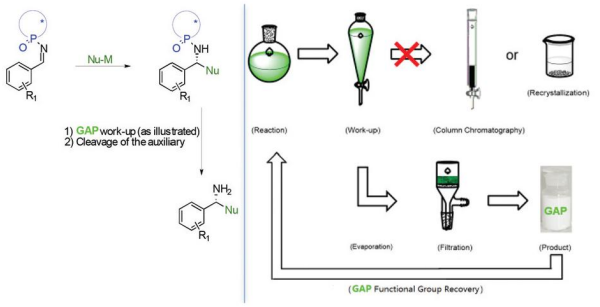


Inside cover
See Takeharu Haino *et al.*, pp. 1647–1653.

Image reproduced by permission of Takeharu Haino from *Org. Biomol. Chem.*, 2015, **13**, 1647.

REVIEWS





Organic & Biomolecular Chemistry (print: ISSN 1477-0520; electronic: ISSN 1477-0539) is published 48 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 Order Department, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK
Tel +44 (0)1223 432398; E-mail orders@rsc.org

2015 Annual (print+electronic) subscription price: £4572; US$8534. 2015 Annual (electronic) subscription price: £4343; US$8107 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.

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. Broad in scope, it publishes research and reviews on topics across organic synthesis, physical organic chemistry, supramolecular chemistry and chemical biology.

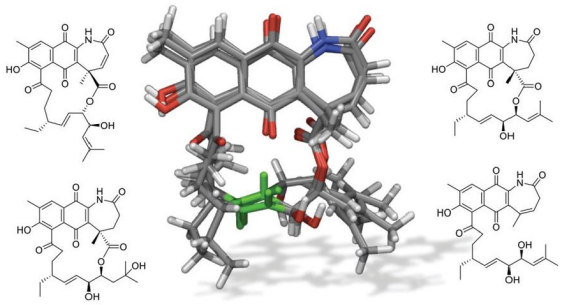
Editorial board

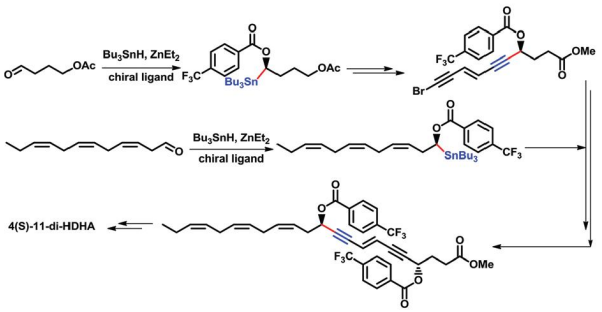
Advisory board

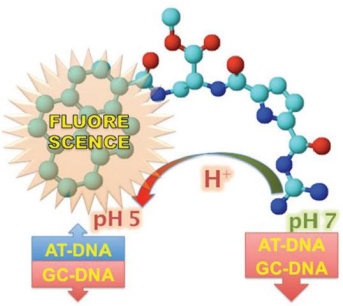
Information for authors

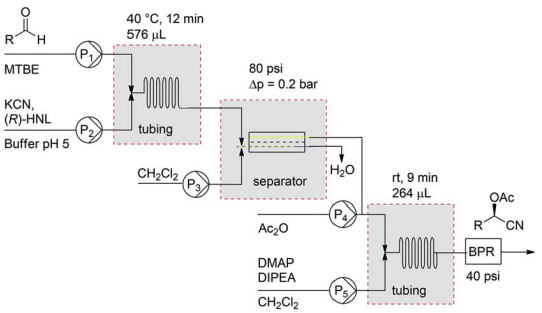
Full details on how to submit material for publication in Organic & Biomolecular Chemistry are given in the Instructions for Authors (available from http://www.rsc.org/authors). Submissions should be made via the journal's homepage: http://www.rsc.org/obc.

COMMUNICATIONS





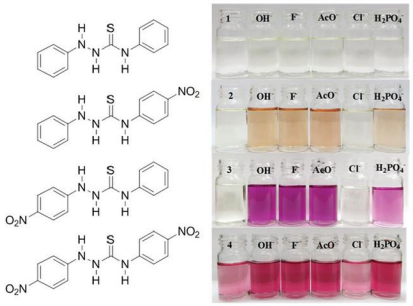


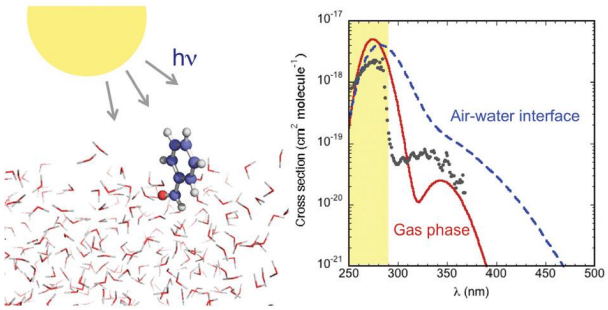


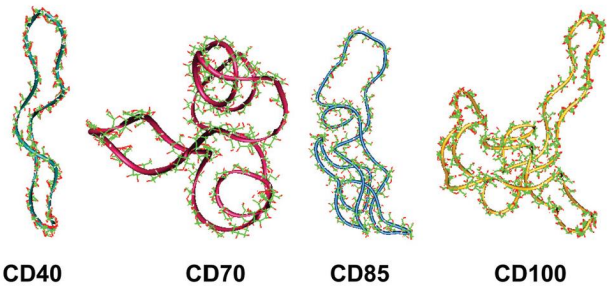
COMMUNICATIONS

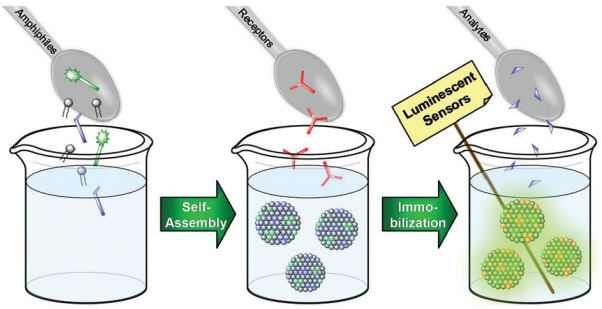
PAPERS

PAPERS



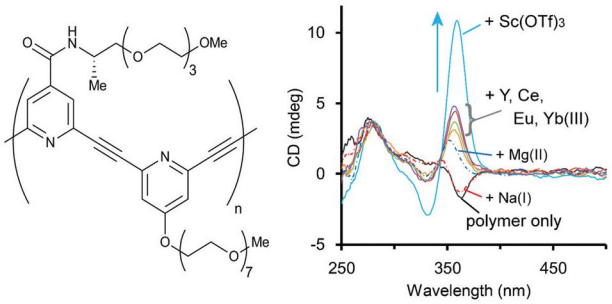






PAPERS

1700

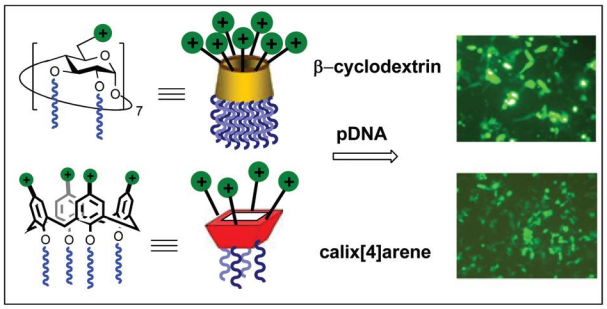


Highly efficient stabilisation of *meta*-ethynylpyridine polymers with amide side chains in water by coordination of rare-earth metals

Hiroki Makida, Hajime Abe* and Masahiko Inouye*

An amphiphilic *meta*-ethynylpyridine polymer with chiral amide side chains coordinated with rare-earth metal salts, especially strongly with Sc(III), to stabilise its helical structure with CD enhancement.

1708

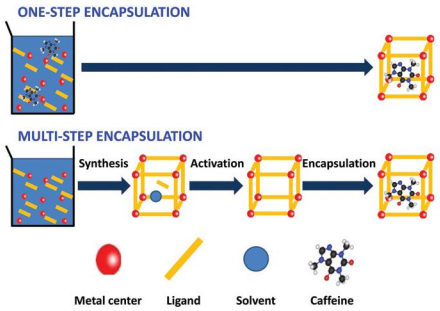


Cyclodextrin- and calixarene-based polycationic amphiphiles as gene delivery systems: a structure–activity relationship study

Laura Gallego-Yerga, Michela Lomazzi, Valentina Franceschi, Francesco Sansone,* Carmen Ortiz Mellet,* Gaetano Donofrio,* Alessandro Casnati and José M. García Fernández*

Multi-head/multi-tail facial amphiphiles built on cyclodextrin (CD) and calixarene (CA) scaffolds are paradigmatic examples of monodisperse gene delivery systems.

1724

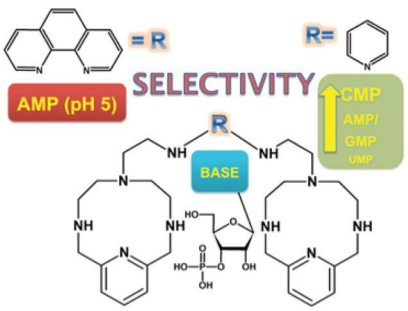


Using Hansen solubility parameters to study the encapsulation of caffeine in MOFs

Lorena Paseta, Grégory Potier, Steven Abbott and Joaquín Coronas*

In this work the application of Hansen solubility parameters in the study of caffeine encapsulation in metal organic frameworks (MOFs) has been initiated.

1732

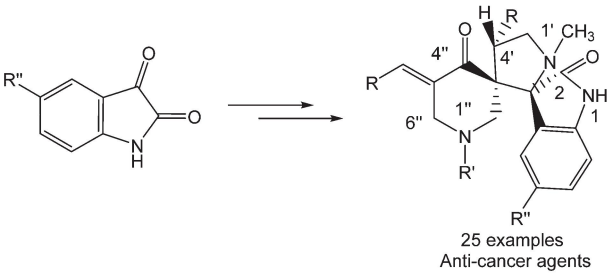


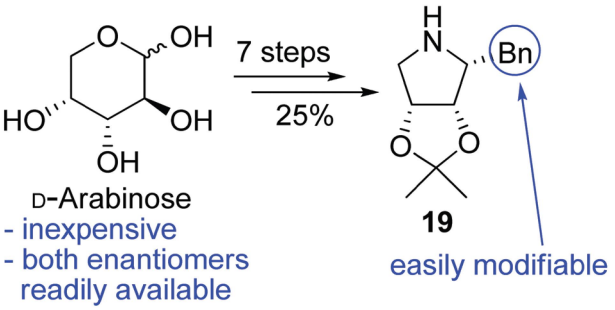
Aryl-bis-(scorpiand)-aza receptors differentiate between nucleotide monophosphates by a combination of aromatic, hydrogen bond and electrostatic interactions

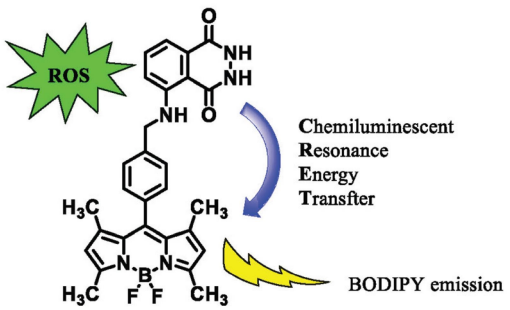
Jorge González-García, Sanja Tomić, Alberto Lopera, Lluís Guijarro, Ivo Piantanida* and Enrique García-España*

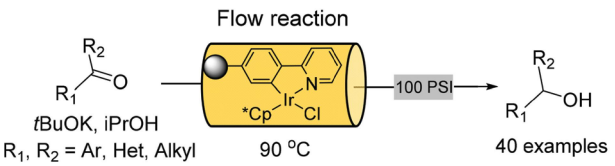
Bis-scorpiands bind nucleotides in water with 10–100 μM affinity, with selectivity: at pH 7 pyridine-scorpiand toward CMP; at pH 5 phenanthroline-scorpiand toward AMP.

PAPERS

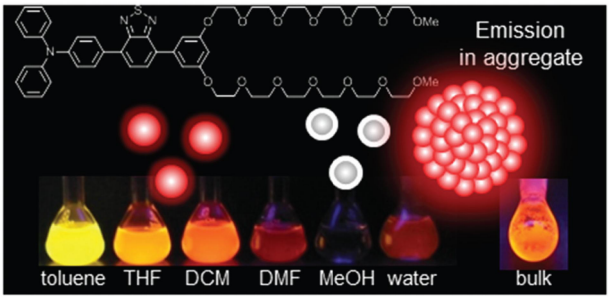


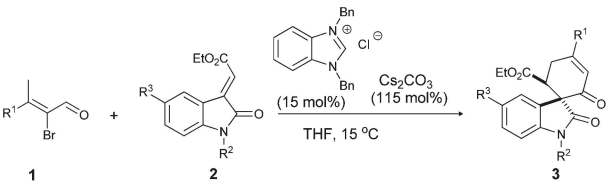


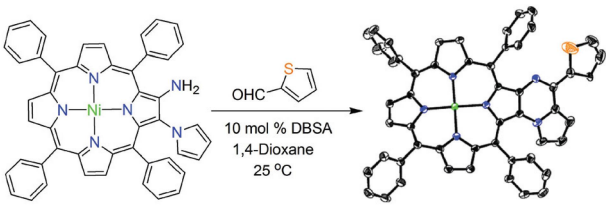


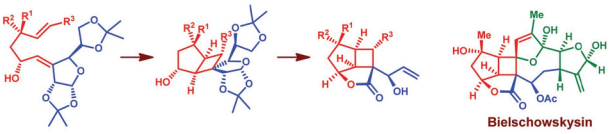


PAPERS









PAPERS

1904

Studies on the diastereoselective oxidation of 1-thio-β-D-glucopyranosides: synthesis of the usually less favoured R_S sulfoxide as a single diastereoisomer

Juan Francisco Moya-López, Eleonora Elhalem, Rocío Recio, Eleuterio Álvarez, Inmaculada Fernández* and Noureddine Khiar*

The *exo*-anomeric effect paves the way for the synthesis of the usually less favored R_S-β-sulfinyl glycoside as a single diastereoisomer.