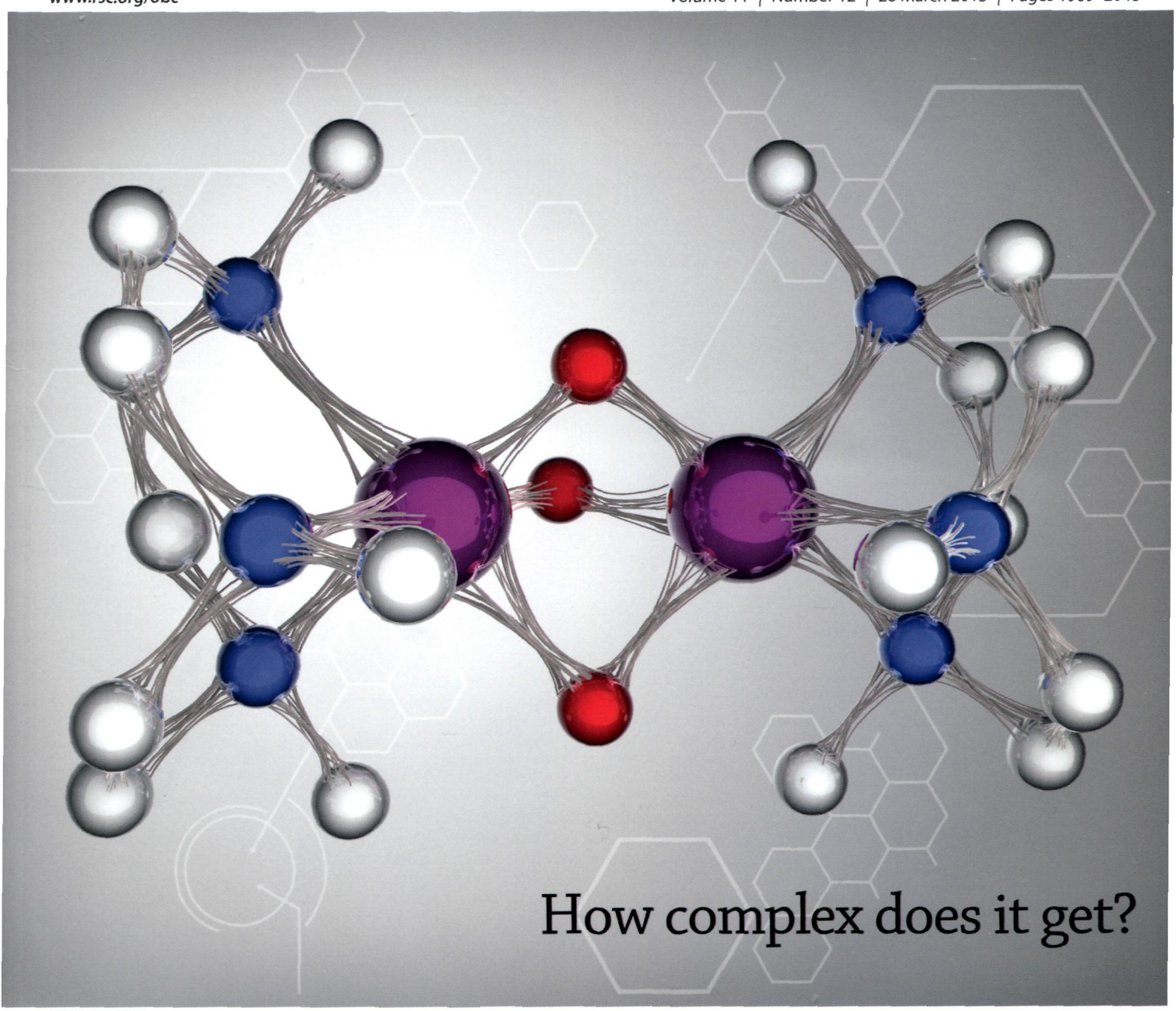
Organic & Biomolecular Chemistry

www.rsc.org/obc

Volume 11 | Number 12 | 28 March 2013 | Pages 1909–2048



ISSN 1477-0520

RSC Publishing

PAPER

Michael Watkinson *et al.*

Initial rate kinetic studies show an unexpected influence of *para*-substituents on the catalytic behaviour of manganese complexes of TMTACN in the epoxidation of styrenes with H_2O_2

1477-0520(2013)11:12;1-E

Organic & Biomolecular Chemistry

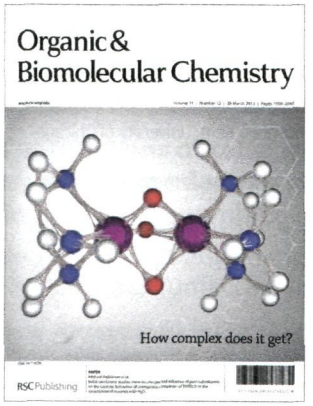
An international journal of synthetic, physical and biomolecular organic chemistry

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

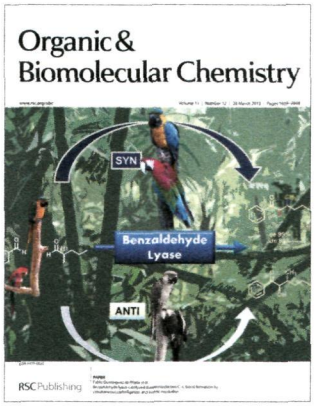
ISSN 1477-0520 CODEN OBCRAK 11(12) 1909–2048 (2013)



Cover

See Michael Watkinson *et al.*, pp. 1942–1951.

The authors acknowledge Titans Design Pte. Ltd. (www.titansdesign.com) for the design of the cover image. Image reproduced by permission of Michael Watkinson from *Org. Biomol. Chem.*, 2013, **11**, 1942.

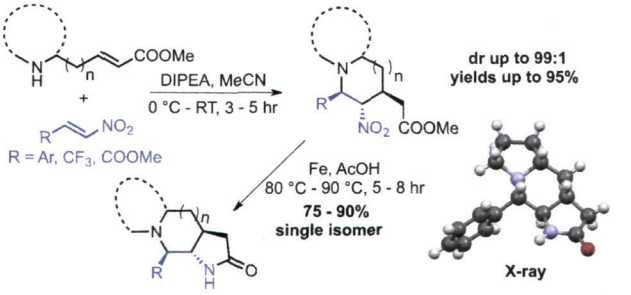


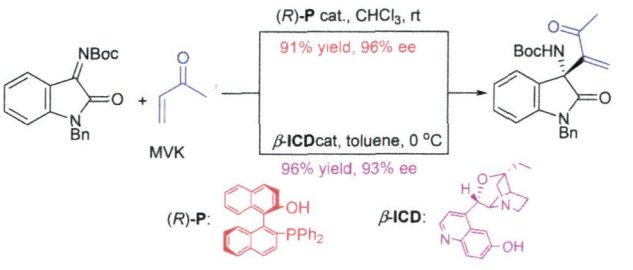
Inside cover

See Pablo Domínguez de María *et al.*, pp. 2000–2004.

Image reproduced by permission of Pablo Domínguez de María from *Org. Biomol. Chem.*, 2013, **11**, 2000.

COMMUNICATIONS



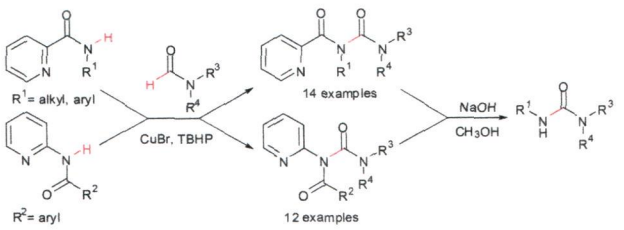


1925

Copper-catalysed oxidative C–H/N–H cross-coupling between formamides and amides through chelation-assisted N–H activation

Xiaoyu Li, Bijin Li, Jingsong You and Jingbo Lan*

A copper-catalysed oxidative C–H/N–H cross-coupling between formamides and amides through chelation-assisted N–H activation has been developed for the preparation of multi-substituted ureas.

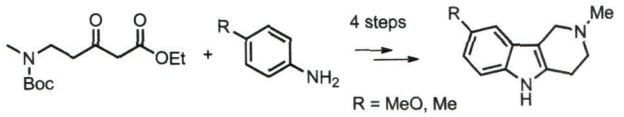


1929

Constructions of tetrahydro-γ-carboline skeletons *via* intramolecular oxidative carbon–carbon bond formation of enamines

Jinglei Lv, Ji Li, Daisy Zhang-Negrerie, Siyun Shang, Qingzhi Gao, Yunfei Du* and Kang Zhao*

Two synthetically and biologically important tetrahydro-γ-carboline compounds were synthesized from an aryl amine and a 5-amino-3-oxopentanoate derivative through a series of reactions of enamination, oxidative annulation, deprotection/lactamization and reduction.

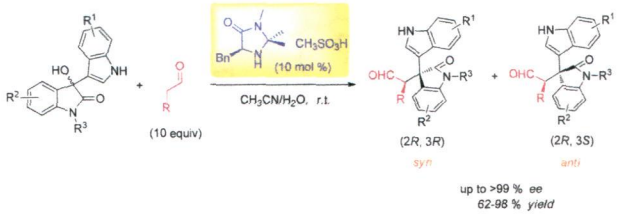


1933

Asymmetric α-alkylation of aldehydes with 3-hydroxy-3-indolylox-indoles in aqueous media

Ying Zhang, Shun-Yi Wang,* Xiao-Ping Xu, Ran Jiang and Shun-Jun Ji*

Organocatalyzed asymmetric α-alkylation of aldehydes with 3-hydroxy-3-indolylox-indoles in aqueous media has been developed.



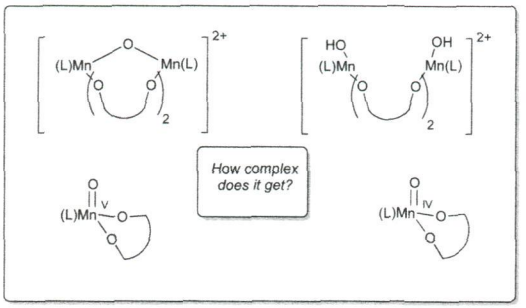
1938

Construction of a near-infrared fluorescence turn-on and ratiometric probe for imaging palladium in living cells

Hua Chen, Weiying Lin* and Lin Yuan

A new near-infrared fluorescence turn-on and ratiometric palladium probe was constructed for fluorescence imaging in living cells.

1942

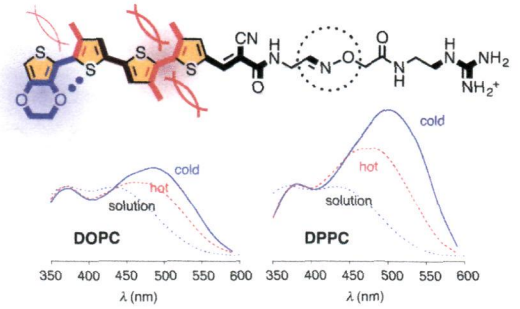


Initial rate kinetic studies show an unexpected influence of *para*-substituents on the catalytic behaviour of manganese complexes of TMTACN in the epoxidation of styrenes with H_2O_2

Gennadiy Ilyashenko, Giorgio De Faveri, Shirin Masoudi, Rawan Al-Safadi and Michael Watkinson*

Initial rate kinetic studies of the epoxidation of styrenes by manganese complexes of TMTACN indicate that different catalytically active species may be present.

1952

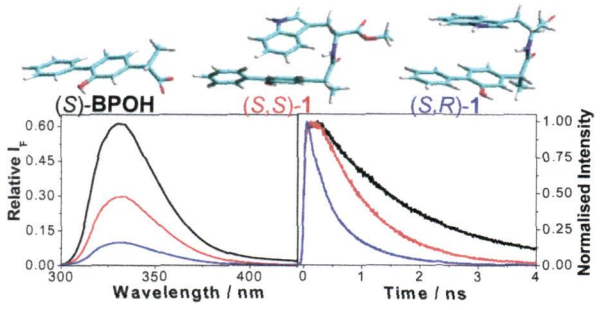


3,4-Ethylenedioxythiophene in planarizable push–pull oligothiophenes

Marta Dal Molin and Stefan Matile*

Conceptually innovative membrane probes: amphiphilic push–pull quaterthiophenes with one 3,4-ethylenedioxythiophene as a thermochromic donor in a highly twisted scaffold are reported.

1958

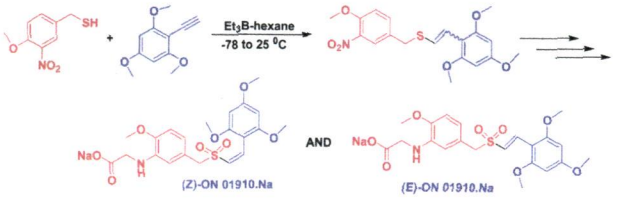


Stereodifferentiation in the intramolecular singlet excited state quenching of hydroxybiphenyl–tryptophan dyads

Paula Bonancía, Ignacio Vayá, Dimitra Markovitsi, Thomas Gustavsson, M. Consuelo Jiménez* and Miguel A. Miranda*

The BPOH chromophore dominates the fluorescence behaviour of (*S*,*S*)-**1** and (*S*,*R*)-**1**, which reveals intramolecular charge transfer with remarkable stereodifferentiation.

1964



Hydrothiolation of benzyl mercaptan to arylacetylene: application to the synthesis of (*E*) and (*Z*)-isomers of ON 01910·Na (Rigosertib®), a phase III clinical stage anti-cancer agent

Venkat R. Pallela, Muralidhar R. Mallireddigari, Stephen C. Cosenza, Balaiah Akula, D. R. C. Venkata Subbaiah, E. Premkumar Reddy and M. V. Ramana Reddy*

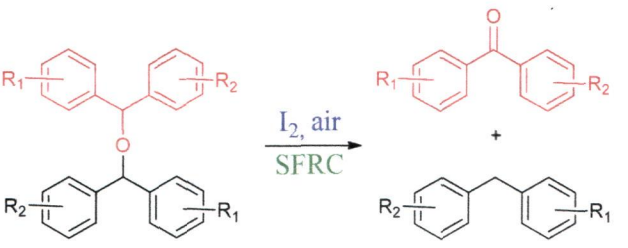
An efficient method for the synthesis of (*Z*) and (*E*)-isomers of ON 01910·Na has been described and all the *E*-isomers exhibited superior biological activity compared to the *Z*-isomers.

1978

Iodine-catalyzed disproportionation of aryl-substituted ethers under solvent-free reaction conditions

Marjan Jereb* and Dejan Vražič

Highly efficient, I_2-catalyzed disproportionation of aryl-substituted ethers into the corresponding carbonyl and alkane derivatives under solvent-free reaction conditions is described.



2000

Benzaldehyde lyase-catalyzed diastereoselective C–C bond formation by simultaneous carboligation and kinetic resolution

Christoph R. Müller, María Pérez-Sánchez and Pablo Domínguez de María*

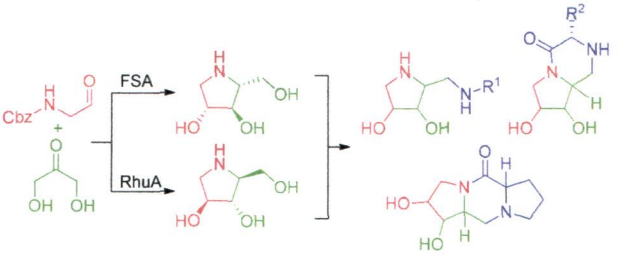
Enzymes create chiral microenvironments that may simultaneously generate several stereogenic centers in the same catalytic cycle, broadening the possibilities of biocatalysis.

2005

Chemo-enzymatic synthesis and glycosidase inhibitory properties of DAB and LAB derivatives

Alda Lisa Concia, Livia Gómez, Jordi Bujons, Teodor Parella, Cristina Vilaplana, Pere Joan Cardona, Jesús Joglar and Pere Clapés*

A chemo-enzymatic strategy for the preparation of aromatic, aminoalcohol and 2-oxopiperazine DAB and LAB derivatives and their glycosidase and *M. tuberculosis* growth inhibitory properties.

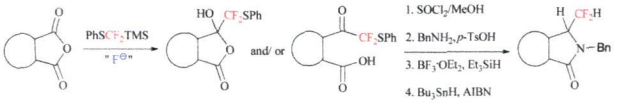


2022

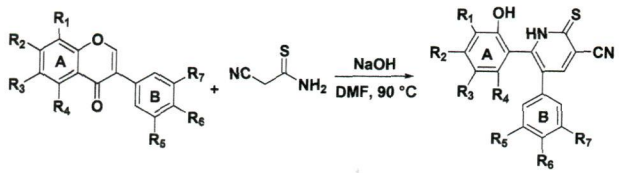
Fluoride-catalyzed nucleophilic addition of $PhSCF_2SiMe_3$ to anhydrides: synthesis of γ-difluoromethylated γ-lactams

Vannapha Pharikronburee, Teerachai Punirun, Darunee Soorukram, Chutima Kuhakarn, Patoomratana Tuchinda, Vichai Reutrakul and Manat Pohmakotr*

Fluoride-catalyzed nucleophilic addition of $PhSCF_2SiMe_3$ to anhydrides provided γ-lactols, which were used for the synthesis of γ-difluoromethylated γ-lactams.



2034

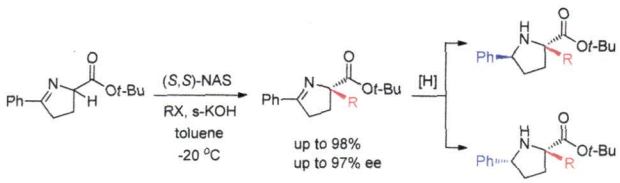


One-step synthesis of 5,6-diaryl pyridine-2(1*H*)-thiones from isoflavones

Juanjuan Wang, Zunting Zhang,* Wenli Wang and Fangfang Liu

The one-step cyclocondensation of substituted isoflavones with cyanothioacetamide in the presence of sodium hydroxide gave an array of 3-cyano-5,6-diaryl pyridine-2(1*H*)-thiones in good yields.

2039



Highly enantioselective synthesis of 5-phenyl-2-alkylprolines using phase-transfer catalytic alkylation

Myungmo Lee, Young-Ju Lee, Eunyoung Park, Yohan Park, Min Woo Ha, Suckchang Hong, Yeon-Ju Lee, Taek-Soo Kim, Mi-hyun Kim and Hyeung-geun Park*

An efficient enantioselective synthetic method for the synthesis of (2*R*)-5-phenyl-2-alkylproline *tert*-butyl esters was reported.