

Organic & Biomolecular Chemistry

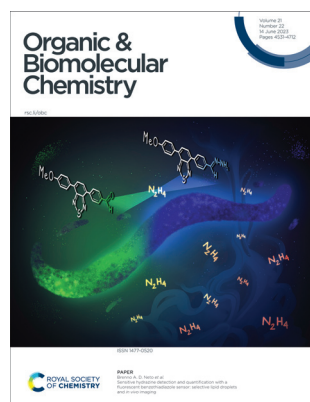
An international journal of synthetic, physical and biomolecular organic chemistry

rsc.li/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 21(22) 4531–4712 (2023)



Cover

See Brenno A. D. Neto *et al.*, pp. 4606–4619.

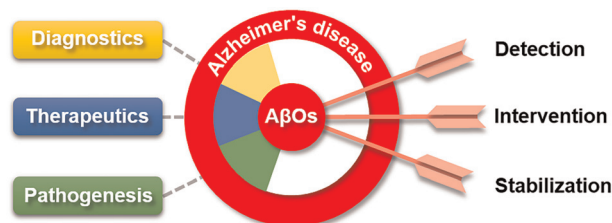
Image reproduced by permission of Brenno A. D. Neto from *Org. Biomol. Chem.*, 2023, **21**, 4606.

REVIEWS

4540

Recent developments in the chemical biology of amyloid- β oligomer targeting

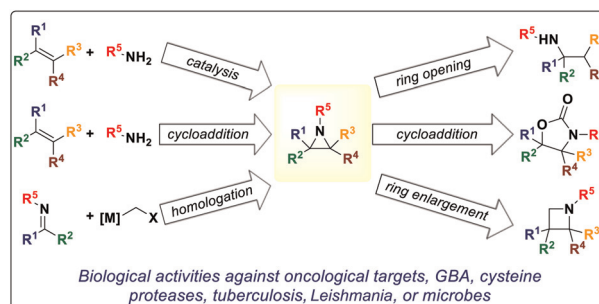
Yalin Wang, Jiefang Chen, Furong Gao, Ming Hu* and Xiaohui Wang*



4553

Recent advances in the accessibility, synthetic utility, and biological applications of aziridines

Christian Dank and Laura Ielo*



Editorial Staff

Executive Editor

Rebecca Garton

Deputy Editor

Jack Washington

Development Editor

Daniel Robertshaw

Editorial Production Manager

Sarah Whitehouse

Publishing Editors

Nicola Burton, Tom Cozens, Katie Fernandez, Ryan Kean, Roxane Owen, Alex Rowles

Editorial Assistant

Amy Cook

Publishing Assistant

Andrea Whiteside

Publisher

Sam Keltie

For queries about submitted papers, please contact Sarah Whitehouse, Editorial Production Manager in the first instance. E-mail: obc@rsc.org

For pre-submission queries please contact Rebecca Garton, Executive Editor. Email: obc-rsc@rsc.org

Organic & Biomolecular Chemistry (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 the Royal Society of Chemistry 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

2023 Annual (electronic) subscription price: £5164; US\$9267.

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.

Whilst this material has been produced with all due care, the Royal Society of Chemistry cannot be held responsible or liable for its accuracy and completeness, nor for any consequences arising from any errors or the use of the information contained in this publication. The publication of advertisements does not constitute any endorsement by the Royal Society of Chemistry or Authors of any products advertised. The views and opinions advanced by contributors do not necessarily reflect those of the Royal Society of Chemistry which shall not be liable for any resulting loss or damage arising as a result of reliance upon this material. The Royal Society of Chemistry is a charity, registered in England and Wales, Number 207890, and a company incorporated in England by Royal Charter (Registered No. RC000524), registered office: Burlington House, Piccadilly, London W1J 0BA, UK, Telephone: +44 (0) 207 4378 6556.

Advertisement sales:

Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017;

E-mail advertising@rsc.org

For marketing opportunities relating to this journal, contact marketing@rsc.org

Organic & Biomolecular Chemistry

Rapid publication of high quality organic chemistry research

rsc.li/obc

Organic & Biomolecular Chemistry is a weekly journal for the publication of highly significant original research and reviews in all areas of organic chemistry, including organic synthesis, physical organic chemistry, and organic aspects of supramolecular chemistry and chemical biology.

Editorial Board

Chair

Anthony Davis, University of Bristol, UK

Associate Editors

Christian Hackenberger, Leibniz-Institut für Molekulare Pharmakologie and Humboldt Universität zu Berlin, Germany

Katrina Jolliffe, University of Sydney, Australia

Motomu Kanai, University of Tokyo, Japan

Lei Liu, Tsinghua University, China

Xiaohua Liu, Sichuan University, China

Santanu Mukherjee, Indian Institute of

Science, Bangalore, India

Scott Silverman, University of Illinois at

Urbana-Champaign, USA

Cristina Trujillo, University of Manchester, UK

Members

Ivan Huc, Ludwig-Maximilian University of Munich, Germany

S.S.V Ramasastry, Indian Institute of Science

Education and Research Mohali, India

Corinna Schindler, University of Michigan,

USA

Judy I-Chia Wu, University of Houston, USA

Advisory Board

Kyo Han Ahn, Pohang University of Science and Technology, Korea

Igor Alabugin, Florida State University, USA

Gonçalo Bernardes, University of Cambridge, UK

Shunsuke Chiba, Nanyang Technological

University, Singapore

Andre Cobb, Kings College London, UK

Steven Cobb, Durham University, UK

Ratmir Derda, University of Alberta, Canada

Antonio Echavarren, Institute of Chemical

Research of Catalonia, Spain

Ben Feringa, University of Groningen, The

Netherlands

Amar Flood, Indiana University Bloomington,

USA

Carmen Galan, University of Bristol, UK

Jason Harper, University of New South Wales,

Australia

Elizabeth Krenske, University of Queensland,

Australia

Maresh Lakshman, The City College of New

York, USA

Shih-Yuan Liu, Boston College, USA

Geraldine Masson, Institut de Chimie des

Substances Naturelles (CNRS), France

Elizabeth New, University of Sydney, Australia

Dhevalapally B. Ramachary, University of

Hyderabad, India

Paolo Scrimin, University of Padova, Italy

Oliver Seitz, Humboldt University of Berlin,

Germany

Jay Siegel, University of Zürich, Switzerland

Corey Stephenson, University of Michigan,

USA

Dean Tantillo, University of California Davis,

USA

Mark Taylor, University of Toronto, Canada

Georgios Vassilikogiannakis, University of

Crete, Greece

Helma Wennemers, ETH Zürich, Switzerland

Peter Wipf, University of Pittsburgh, USA

Shuli You, Shanghai Institute of Organic

Chemistry, China

Jian Zhou, East China Normal University,

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: rsc.li/obc

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of Chemistry, 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 2023.

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.

Registered charity number: 207890

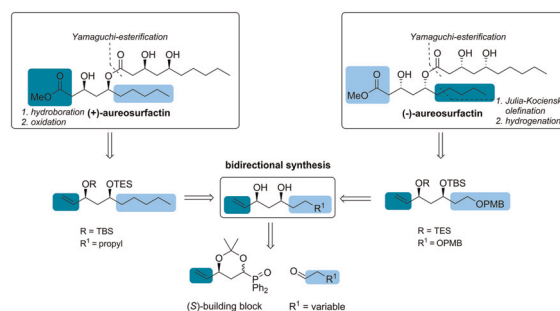


COMMUNICATIONS

4574

Total synthesis of both enantiomers of the biosurfactant aureosurfactin via bidirectional synthesis with a chiral Horner–Wittig building block

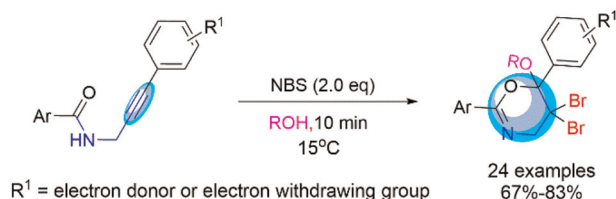
Fabia Mittendorf, Moritz Quambusch and Stefan F. Kirsch*



4578

Synthesis of *gem*-dibromo 1,3-oxazines by NBS-mediated electrophilic cyclization of propargylic amides

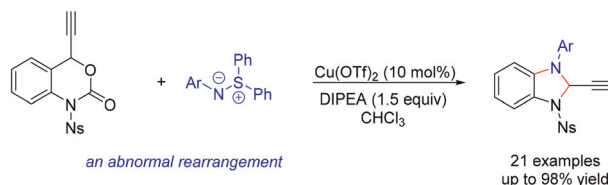
Huaxin Zhang, Yongge Xiong, Jiang Bai, Ruchun Yang,*
Xian-Rong Song and Qiang Xiao*



4583

Copper-catalyzed reaction of benzoxazinones with sulfilimines: access to 2-ethynyl-benzoimidazoles via an abnormal skeletal rearrangement

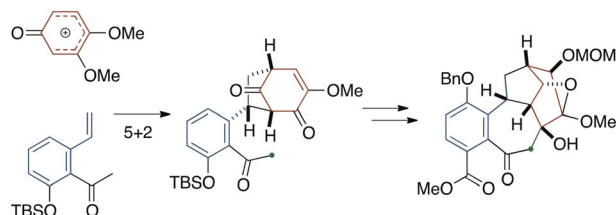
Tao Zhang, Yifeng Ni and Jiangtao Sun*



4587

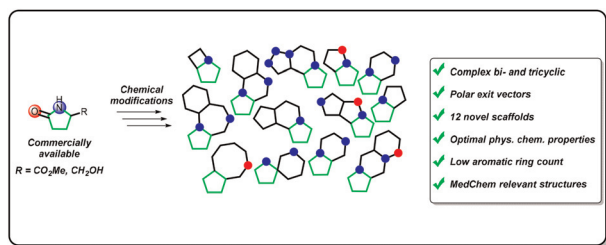
Construction of the tetracyclic ring system of diterpene alkaloids via cationic [5 + 2] cycloaddition

Kosuke Mizuno, Yoshitake Nishiyama and Satoshi Yokoshima*



COMMUNICATIONS

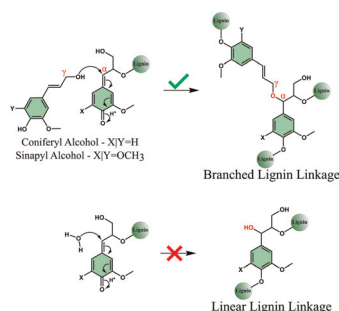
4591



Synthesis of sp³-rich heterocyclic frameworks by a divergent synthesis strategy

Kim T. Mortensen, Denedy S. Y. Wong, Thomas A. King, Hannah F. Sore and David R. Spring*

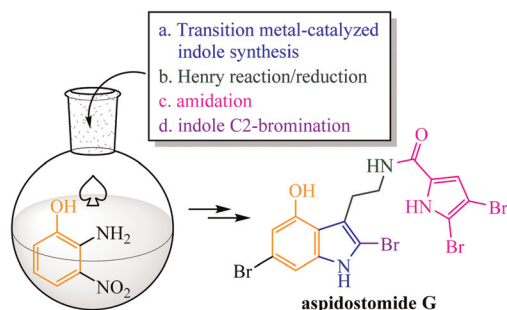
4596



Novel lignin polymerization pathway leading to branching in the structure

Seth Beck and Samir H. Mushrif*

4601

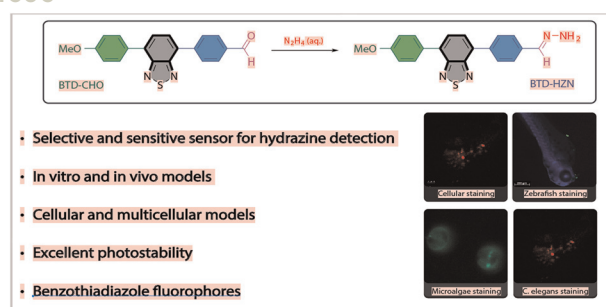


Total synthesis of aspidostomide G from a brominated tryptamine

Bo-You Wu, Fang-Yi Shih, Yu-Tung Tsai, Chia-Yen Chu and Cheng-Kun Lin*

PAPERS

4606



Sensitive hydrazine detection and quantification with a fluorescent benzothiadiazole sensor: selective lipid droplets and *in vivo* imaging

Camila O. Santos, Saulo T. A. Passos, Jenny E. P. Sorto, Daniel F. S. Machado, Jose R. Correa, Eufrânio N. da Silva Júnior, Marcelo O. Rodrigues and Brenno A. D. Neto*

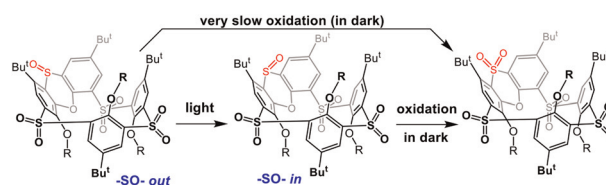


PAPERS

4620

Stereoselective oxidation of phenoxathiin-based thiacalix[4]arenes – stereomutation of sulfoxide groups

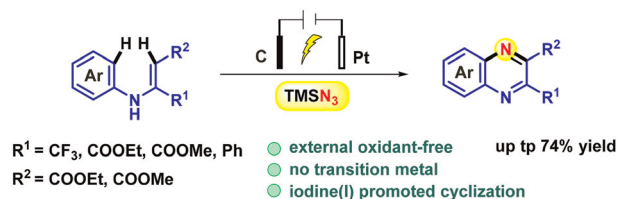
N. Broftová, T. Landovský, H. Dvořáková, V. Eigner, M. Krupička and P. Lhoták*



4631

An electrochemical tandem oxidative azidation and intramolecular cyclization strategy for the synthesis of quinoxaline derivatives

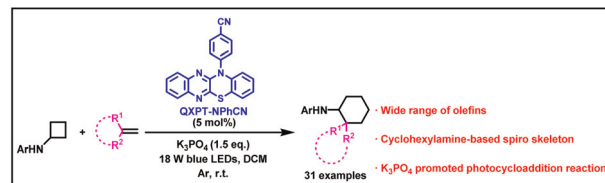
Kai Zhou, Shendan Xia and Zhiwei Chen*



4637

Visible-light organophotoredox-mediated intermolecular formal [4 + 2] cycloadditions of arylcyclobutylamines with olefins

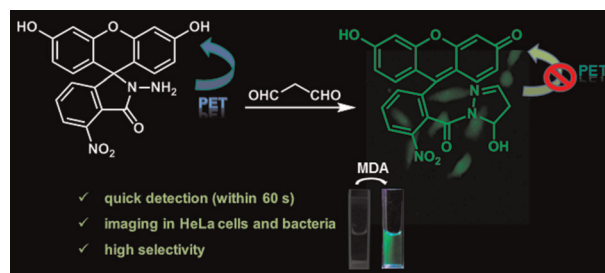
Zhengshan Luo, Zequn Xing, Rui Gao, Yufang Han, Jun Ren and Zhongwen Wang*



4643

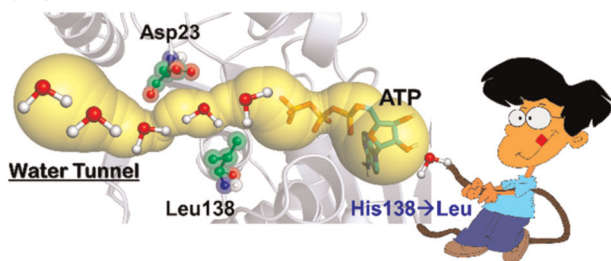
A fluorescein-based fluorescent probe for fast detection of malondialdehyde and its imaging study

Min Peng, Quan-Rong Du, Xue Yao, Chun-Ni Li, Yang Tian, Yu Peng* and Ya-Wen Wang*



PAPERS

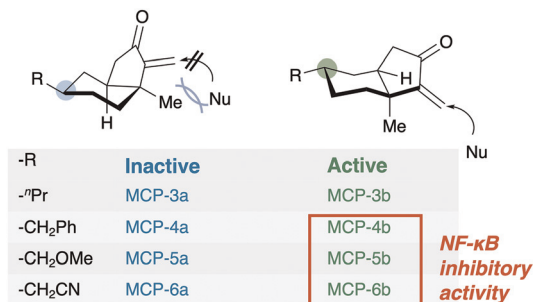
4648



A single site mutation can induce functional promiscuity in homoserine kinase

Ankita Tripathi and Kshatresh Dutta Dubey*

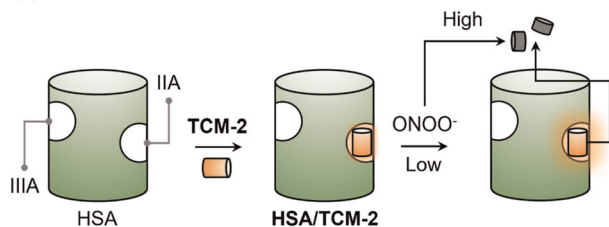
4656



Controllable conformation and reactivity of bicyclic α -methylene cyclopentanones and their NF- κ B pathway inhibitory activity

Aki Kohyama,* Aya Shiuchi, Yue Zhou, Masaru Tanioka, Kenji Sugimoto, Hiroaki Sakurai and Yuji Matsuya*

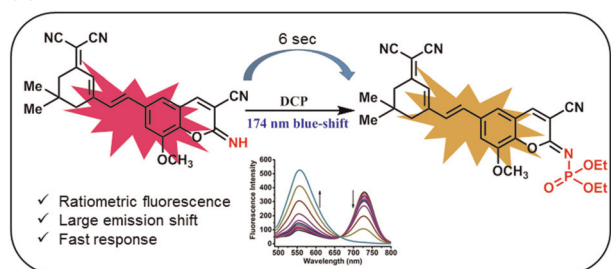
4661



Human serum albumin-based supramolecular host-guest boronate probe for enhanced peroxynitrite sensing

He Tian Jr., Chen Guo, Xi-Le Hu, Jing-Bo Wang, Yi Zang,* Tony D. James,* Jia Li* and Xiao-Peng He*

4667



A ratiometric, colorimetric fluorescent probe with a large emission shift for the rapid detection of diethyl chlorophosphate

Xue-Shuang Yu, Rui Zuo, Ming-Ye Shuai, Xu Feng, Yu Peng* and Ya-Wen Wang*

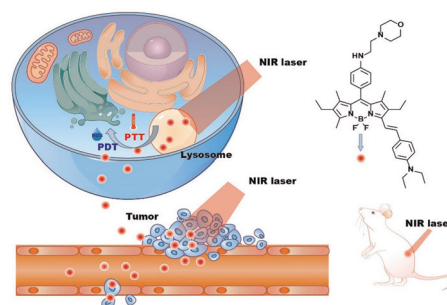


PAPERS

4672

A near-infrared and lysosome-targeted BODIPY photosensitizer for photodynamic and photothermal synergistic therapy

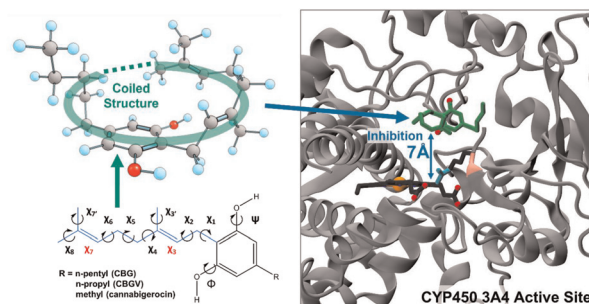
Yan Liu, Jie Gao, Hongyu Li, Mingyan Yang, Jiajia Lv, Yaping Zhou, Zeli Yuan* and Xinmin Li*



4683

Bioactivity of the cannabigerol cannabinoid and its analogues – the role of 3-dimensional conformation

Mohammed Salha, Henry Adenusi, John H. Dupuis, Enrico Bodo, Bruno Botta, Iain McKenzie, Rickey Y. Yada, David H. Farrar, Jakob Magolan, Kun V. Tian* and Gregory A. Chass*



4694

Electrochemically enabled oxidative aromatization of pyrazolines

Silja Hofmann, Martin Linden, Julian Neuner, Felix N. Weber and Siegfried R. Waldvogel*



4702

A kinetic study of thiol addition to N-phenylchloroacetamide

Sarah K. I. Watt, Janique G. Charlebois, Christopher N. Rowley and Jeffrey W. Keillor*

