

Organic & Biomolecular Chemistry

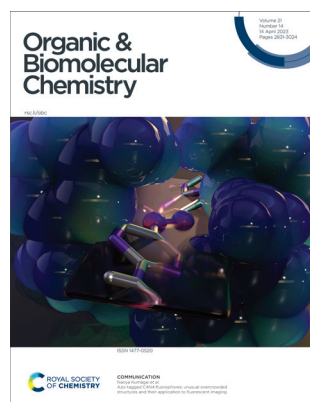
An international journal of synthetic, physical and biomolecular organic chemistry

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(14) 2831–3024 (2023)



Cover

See Naoya Kumagai *et al.*, pp. 2889–2893.

Image reproduced by permission of Naoya Kumagai from *Org. Biomol. Chem.*, 2023, **21**, 2889.



Inside cover

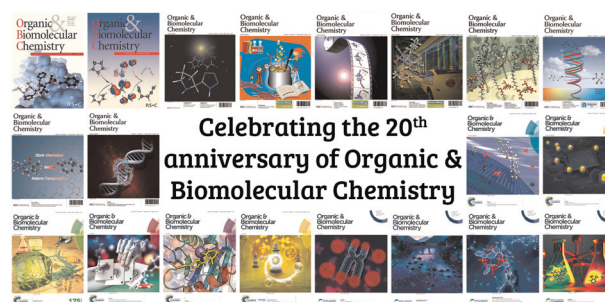
See Mara Di Filippo and Marcus Baumann, pp. 2930–2934.

Cover image designed and reproduced by permission of Mara Di Filippo from *Org. Biomol. Chem.*, 2023, **21**, 2930.

EDITORIAL

2841

Celebrating the 20th anniversary of *Organic & Biomolecular Chemistry*

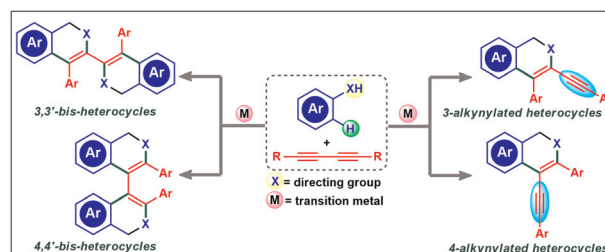


REVIEWS

2842

Transition metal-catalyzed C–H/C–C activation and coupling with 1,3-diyne

Bedadyuti Vedvyas Pati, Nitha Nahan Puthalath, Shyam Kumar Banjare, Tanmayee Nanda and Ponneri C. Ravikumar*



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

Elizabeth Krenske, University of Queensland, Australia

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

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
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 Echavarrén, 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
Mahesh Lakshman, The City College of New York, USA
Shih-Yuan Liu, Boston College, USA
Geraldine Masson, Institut de Chimie des Substances Naturelles (CNRS), France
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

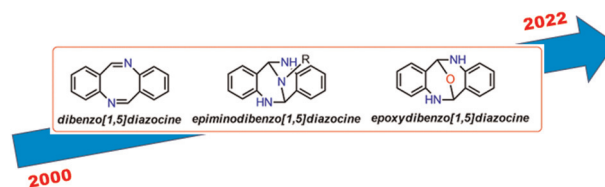


REVIEWS

2870

Synthetic strategies and diversification of dibenzo[1,5]diazocines

Abdul Qaiyum Ramle* and Edward R. T. Tiekink

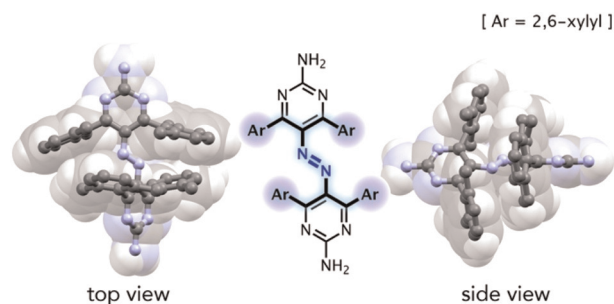


COMMUNICATIONS

2889

Azo-tagged C4N4 fluorophores: unusual overcrowded structures and their application to fluorescent imaging

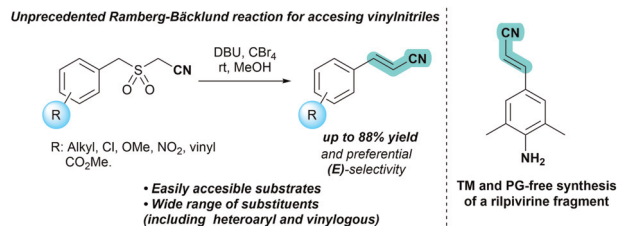
Miki Kohei, Naoki Takizawa, Ryosuke Tsutsumi, Wei Xu and Naoya Kumagai*



2894

Stereoselective synthesis of vinyl nitriles through a Ramberg–Bäcklund approach

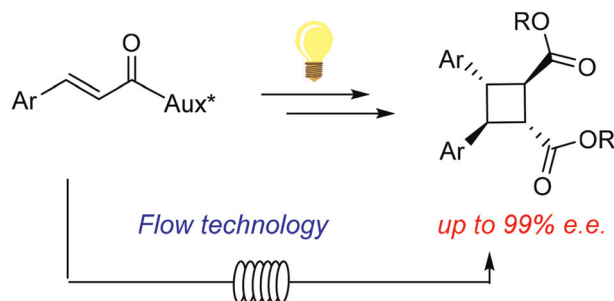
Octavio A. Valle-González, Ángel I. Salazar-Bello and J. Armando Luján-Montelongo*



2899

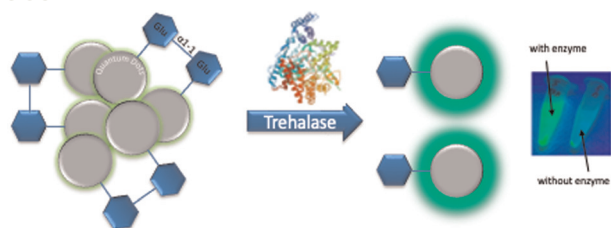
Stereoselective [2 + 2] photodimerization: a viable strategy for the synthesis of enantiopure cyclobutane derivatives

Fabrizio Medici, Alessandra Puglisi, Sergio Rossi, Laura Raimondi and Maurizio Benaglia*



COMMUNICATIONS

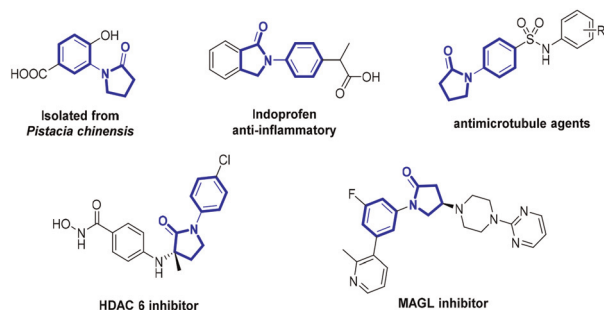
2905



Glycosylated quantum dots as fluorometric nanoprobes for trehalase

Danielle D. Barnes, Vera Kuznetsova, Anastasia Visheeratina, Finn Purcell-Milton, Mikhail A. Baranov, Dylan M. Lynch, Harlei Martin, Yurii K. Gun'ko* and Eoin M. Scanlan*

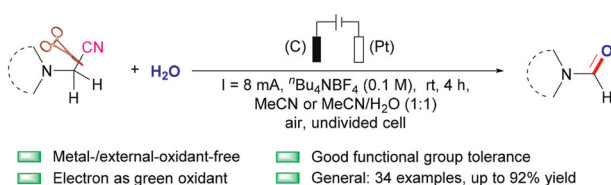
2910



Regioselective C–H chalcogenylation and halogenation of arenes and alkenes under metal-free conditions

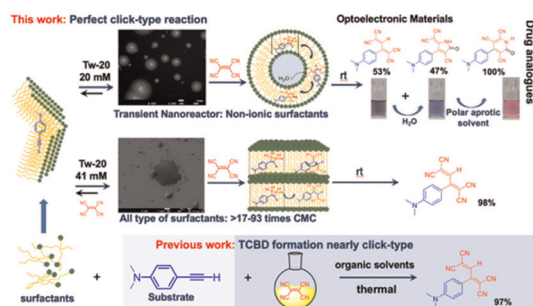
Bin Li, Mingli Hu, Jun Ge, Wei Xu, Jinghan Wu, Yao Tong, Zhengyi Zhao, Xiuxiu Liu* and Ling He*

2917

Electrochemically enabled decyanative C(sp³)–H oxygenation of *N*-cyanomethylamines to formamides

Mu-Jia Luo,* Wei Zhou, Ruchun Yang, Haixin Ding, Xian-Rong Song and Qiang Xiao*

2922



A study of [2 + 2] cycloaddition–retroelectrocyclization in water: observation of substrate-driven transient-nanoreactor-induced new reactivity

K. M. Neethu, Kritika Nag, Arif Hassan Dar, Ashima Bajaj, S. Arya Gopal, Vijayendran Gowri, Mithilesh Nagpure, Shaifali Sartaliya, Raina Sharma, Arun Kumar Solanki, Md. Ehesan Ali, Azhagumuthu Muthukrishnan and Govindasamy Jayamurugan*

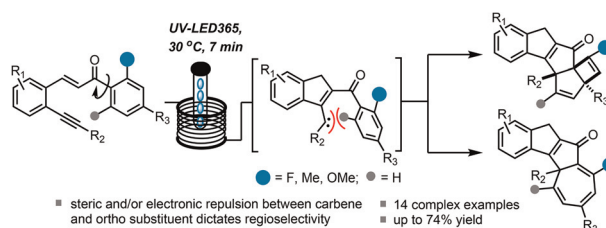


PAPERS

2930

Carbene-controlled regioselectivity in photochemical cascades

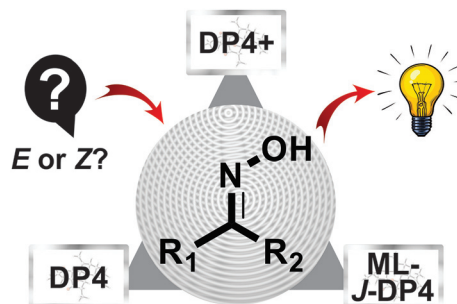
Mara Di Filippo and Marcus Baumann*



2935

E/Z configurational determination of oximes and related derivatives through quantum mechanics NMR calculations: scope and limitations of the leading probabilistic methods

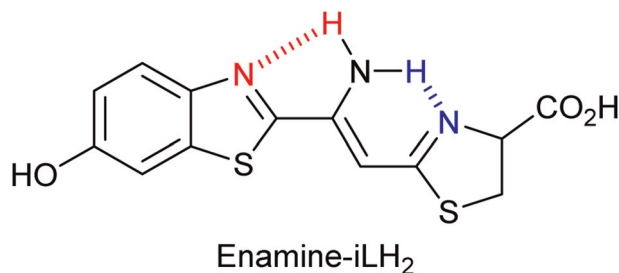
Iván Cortés and Ariel M. Sarotti*



2941

Bioluminescence, photophysical, computational and molecular docking studies of fully conformationally restricted enamine infraluciferin

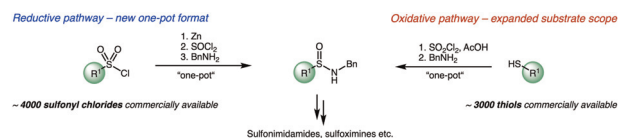
Chia-Hao Chang, Sandra Gómez, Danielle M. Fontaine, Panagiotis Fikas, Bruce R. Branchini and James C. Anderson*



2950

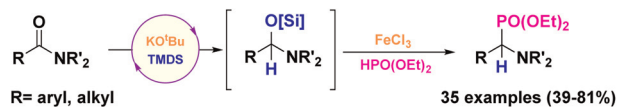
Complementary strategies for synthesis of sulfinamides from sulfur-based feedstock

Miloš Jabczun, Vladimír Nosek and Jiří Míšek*



PAPERS

2955

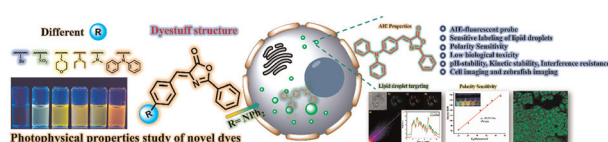


- Cheap and simple catalysts
- Broad substrate scope
- mild reaction conditions
- One pot synthesis

Sequential $KO^tBu/FeCl_3$ -catalyzed reductive phosphonylation of tertiary amides for the synthesis of α -amino phosphonates and phosphines

Yue Wang, Xiaoyu Wu, Liqun Yang, Wei Liu, Zhaoguo Zhang and Xiaomin Xie*

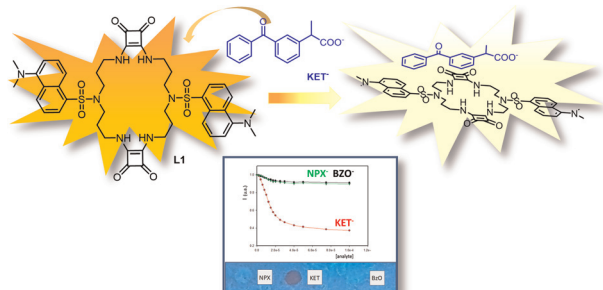
2960



Effect of different substituents on the fluorescence properties of precursors of synthetic GFP analogues and a polarity-sensitive lipid droplet probe with AIE properties for imaging cells and zebrafish

Wei-Long Cui, Mao-Hua Wang, Yun-Hao Yang and Jian-Yong Wang*

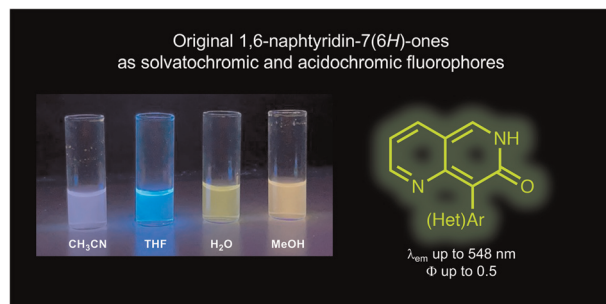
2968



Fluorescent sensing of non-steroidal anti-inflammatory drugs naproxen and ketoprofen by dansylated squaramide-based receptors

Giacomo Picci, M. Carla Aragoni, Massimiliano Arca, Claudia Caltagirone,* Mauro Formica, Vieri Fusi,* Luca Giorgi, Filippo Ingargiola, Vito Lippolis, Eleonora Macedi, Luca Mancini, Liviana Mummolo and Luca Prodi*

2976



1,6-Naphthyridin-7(6H)-ones: synthesis and optical properties

Anissa Beghennou, Geoffrey Gontard, Héloïse Dossmann, Kévin Passador, Serge Thorimbert, Vincent Corcé* and Candice Botuha*

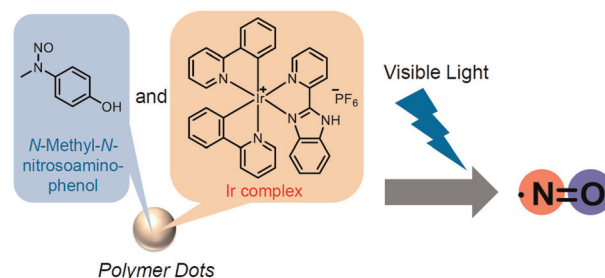


PAPERS

2983

Photoinduced NO-release from polymer dots doped with an Ir(III) complex and *N*-methyl-*N*-nitroso-4-aminophenol

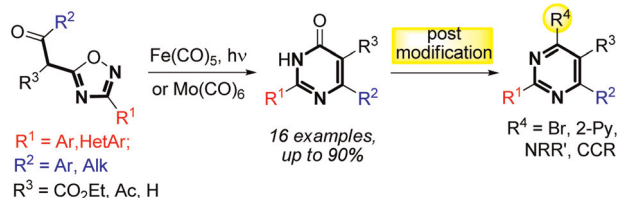
Daisuke Saitoh, Ayumi Suzuki, Naoya Ieda, Zuoyue Liu, Yasuko Osakada, Mamoru Fujitsuka, Mitsuyasu Kawaguchi and Hidehiko Nakagawa*



2990

Metal carbonyl mediated rearrangement of 5-(2-oxoalkyl)-1,2,4-oxadiazoles: synthesis of fully substituted pyrimidines

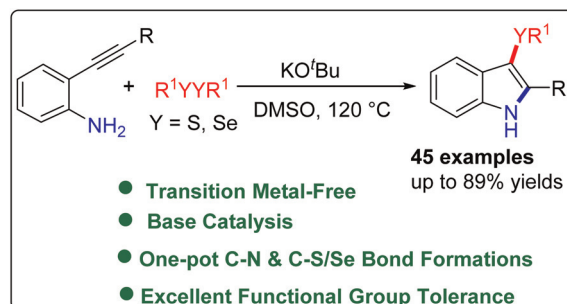
Ekaterina E. Galenko, Timur O. Zanakhov, Mikhail S. Novikov and Alexander F. Khlebnikov*



3002

Base-mediated chalcogenoaminative annulation of 2-alkynylanilines for direct access to 3-sulfenyl/selenenyl-1*H*-indoles

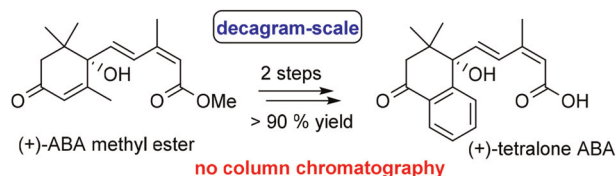
Wei-Ching Chen, Rekha Bai, Wan-Lin Cheng, Chun-Yu Peng, Daggula Mallikarjuna Reddy, Satpal Singh Badsara and Chin-Fa Lee*



3014

An efficient and scalable synthesis of a persistent abscisic acid analog (+)-tetralone ABA

Naveen Diddi, Leon Lai, Christine Ha Nguyen, Dawei Yan, Eiji Nambara and Suzanne Abrams*



CORRECTIONS

3020

Correction: An efficient metal free synthesis of 2-aminobenzothiozoles – a greener approach

Krithika Ganesh, Ganesh Sambasivam,* Govindarajulu Gavara, Ramaraj S, Gaikwad Rajendra and S. Karthikeyan*

3021

Correction: An asymmetric metal-templated route to amino acids with an isoquinolone core via a Rh(III)-catalyzed coupling of aryl hydroxamates with chiral propargylglycine Ni(II) complexes

Mikhail A. Arsenov, Nadezhda V. Stoletova, Tat'yana F. Savel'yeva, Alexander F. Smol'yakov, Victor I. Maleev, Dmitry A. Loginov* and Vladimir A. Larionov*

