

ChemComm

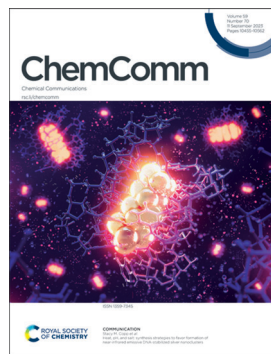
Chemical Communications

rsc.li/chemcomm

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 1359-7345 CODEN CHCOFS 59(70) 10455-10562 (2023)



Cover

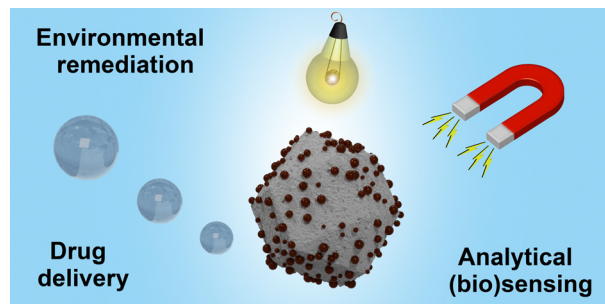
See Stacy M. Copp, pp. 10488-10491. Image reproduced by permission of Stacy M. Copp from *Chem. Commun.*, 2023, 59, 10488.

HIGHLIGHT

10464

The rise of metal-organic framework based micromotors

Javier Bujalance-Fernández, Beatriz Jurado-Sánchez* and Alberto Escarpa*

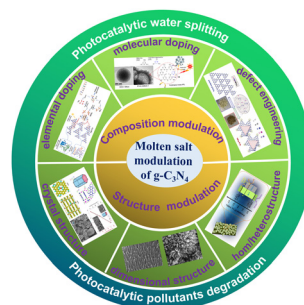


FEATURE ARTICLE

10476

Effect of molten-salt modulation on the composition and structure of g-C₃N₄-based photocatalysts

Fang He,* Yan Hu, Hong Zhong, Zhenxing Wang, Shaoqin Peng and Yuexiang Li*



Editorial Staff

Executive Editor

Richard Kelly

Deputy Editor

Harriet Riley

Editorial Production Manager

Helen Saxton

Development Editors

Danny Andrews, Ershad Abubacker

Senior Publishing Editor

Becky Webb

Publishing Editors

Kirstine Anderson, Matthew Bown, Laura Cooper, Hannah Fielding, Clare Fitzgerald, Anoushka Handa, Claire Harding, Alan Holder, Charlie Palmer, Rosie Reilly, Donna Smith, Laura Smith

Editorial Assistant

Jade Holliday

Publishing Assistant

Natalie Ford

Publisher

Jeanne Andres

For queries about submitted papers, please contact Helen Saxton, Editorial Production Manager in the first instance. E-mail chemcomm@rsc.org

For pre-submission queries please contact

Richard Kelly, Executive Editor.

Email chemcomm-rsc@rsc.org

Chemical Communications (print: ISSN 1359-7345; electronic: ISSN 1364-548X) is published 100 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WE.

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 0WE, UK
Tel +44 (0)1223 432398; E-mail orders@rsc.org

2023 Annual (electronic) subscription price: £3,553 / US\$6,258. 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 Royal Society of Chemistry 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

ChemComm

Chemical Communications

rsc.li/chemcomm

Editorial Board

Chair

Douglas Stephan, University of Toronto

Associate Editors

Lutz Ackermann, University of Göttingen

Daive Bonifazi, University of Vienna

Rachel Caruso, RMIT University

Fengtao Fan, Chinese Academy of Sciences

Itaru Hamachi, Kyoto University

Micheale Hardie, University of Leeds

Kim Jelfs, Imperial College London

Chao-Jun Li, McGill University

David Lou, City University of Hong Kong

Connie Lu, University of Minnesota, US

Marinella Mazzanti, EPFL, Switzerland

Amy Prieto, Colorado State University

Yang Tian, East China Normal University

Sandeep Verma, Indian Institute of

Technology Kanpur

Advisory Board

Brendan Abrahams, University of Melbourne

Polly Arnold, University of Edinburgh

Louise Berben, University of California, Davis

Penny Brothers, Australian National University

Wesley Browne, University of Groningen

Raffaella Buonsanti, EPFL

Luiz Henrique Catalani, University of São Paulo

Xiao-Ming Chen, Sun Yat-Sen University

Lifeng Chi, Soochow University

Arindam Chowdhury, Indian Institute of

Technology Bombay

Derrick Clive, University of Alberta

Seth Cohen, University of California, San Diego

Marcetta Darensbourg, Texas A&M University

Jyotirmayee Dash, Indian Association for the

Cultivation of Science

Gautam R. Desiraju, Indian Institute of

Science, Bangalore

Abhishek Dey, Indian Association for the

Cultivation of Science (IACS)

Josh Figueroa, University of California, San

Diego

Lutz Gade, University of Heidelberg

Sujit Ghosh, Indian Institute of Science

Education of Research, India

Nathan Gianneschi, University of California,

San Diego

Robert Gilliard Jr., University of Virginia

David Gonzalez-Rodriguez, Autonomous

University of Madrid

Rebecca Goss, University of

St Andrews

Mike Greaney, University of Manchester

Shaojun Guo, Peking University

Micheale Hardie, University of Leeds

Amanda Hargrove, Duke University

Craig Hawker, University of California, Santa

Barbara

Feihe Huang, Zhejiang University

Todd Hudnall, Texas State University

Ilich A. Ibarra Alvarado, National University

of Mexico

Hiroshi Kageyama, Kyoto University

Jong Seung Kim, Korea University

Shu Kobayashi, University of Tokyo

Mi Hee Lim, Ulsan National Institute of

Science and Technology (UNIST)

Teck-Peng Loh, Nanyang

Technological University

Tien-Yau Luh, National Taiwan University

Doug MacFarlane, Monash University

Hiromitsu Maeda, Ritsumeikan University

Silvia Marchesan, University of Trieste

Nazario Martin, Complutense University of

Madrid

Keiji Maruoka, Kyoto University

Alexander Miller, University of North Carolina

at Chapel Hill

Wonwoo Nam, Ewha Womans University

Jean-Francois Nierengarten, University of

Strasbourg

Thalappil Pradeep, Indian Institute of

Technology Madras

S Ramakrishnan, Indian Institute of Science

Erwin Reisner, University of Cambridge

Robin Rogers, McGill University

Paolo Samori, University of Strasbourg

Ellen Sletten, University of California, Los

Angeles

David Smith, University of York

Mizuki Tada, Nagoya University

Christine Thomas, Ohio State University

Zhong-Qun Tian, Xiamen University

Tomas Torres, Autonomous University of

Madrid

Helma Wennemers, ETH Zurich

Judy Wu, University of Houston

Yi Xie, University of Science and Technology

of China

Xianran Xing, University of Science and

Technology Beijing

Shuli You, Shanghai Institute of Organic

Chemistry, Chinese Academy of Sciences

Atsuo Yamada, University of Tokyo

Qiang Zhang, Tsinghua University

Xi Zhang, Tsinghua University

Wenwan Zhong, University of California,

Riverside

Eli Zysman-Colman, University of St. Andrews

Information for Authors

Full details on how to submit material for publication in Chemical Communications 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/chemcomm

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.

© The paper used in this publication meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

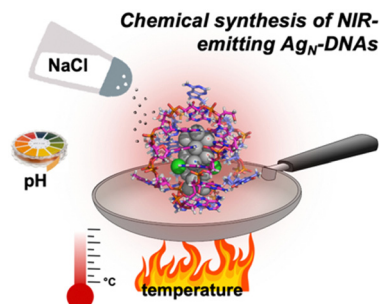
Registered charity number: 207890



10488

Heat, pH, and salt: synthesis strategies to favor formation of near-infrared emissive DNA-stabilized silver nanoclusters

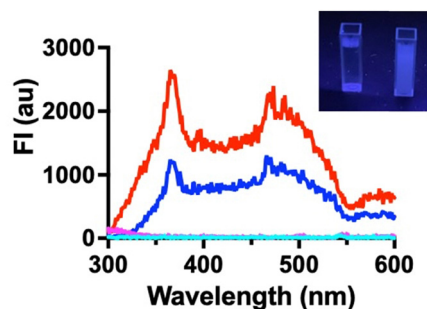
Rweetuparna Guha, Malak Rafik, Anna González-Rosell and Stacy M. Copp*



10492

Unusual photophysics of geranic acid deep eutectic solvents

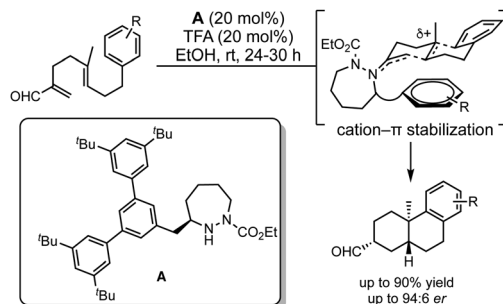
Samuel Abidemi Oluwole, Nathalia V. Verissimo, Amina A. Denis, Nicole Tatiana Garcia, Samuel Fura, Keerthana Jayaraman, Jose David Valles, Daniela Hernandez Del Rosario, Parth Nilesh Patel, Alejandro Duran, Queen Assala Hakim, Aline Andrea Quintana and Christian Agatemor*



10496

Mimicking enzymatic cation- π interactions in hydrazide catalyst design: access to *trans*-decalin frameworks

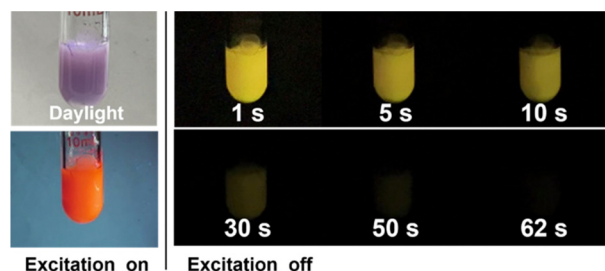
Josephine M. Warnica and James L. Gleason*



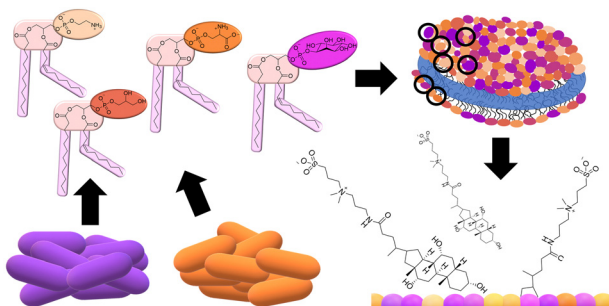
10500

Visible-light-excitable aqueous afterglow exhibiting long emission wavelength and ultralong afterglow lifetime of 7.64 s

Xiangxiang Zhai, Ying Zeng, Xinjian Deng, Qianqian Lou, Aizhi Cao, Limin Ji, Qianqian Yan,* Biaobing Wang* and Kaka Zhang*



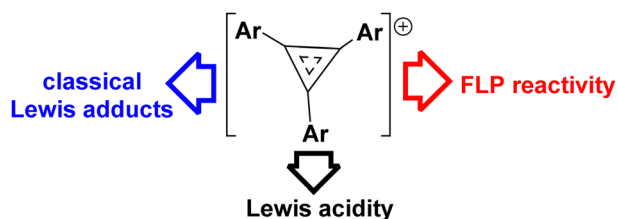
10504



Phospholipid headgroup composition modulates the molecular interactions and antimicrobial effects of sulfobetaine zwitterionic detergents against the "ESKAPE" pathogen *Pseudomonas aeruginosa*

Kira L. F. Hilton, Howard Tolley, Jose L. Ortega-Roldan, Gary S. Thompson, J. Mark Sutton, Charlotte K. Hind* and Jennifer R. Hiscock*

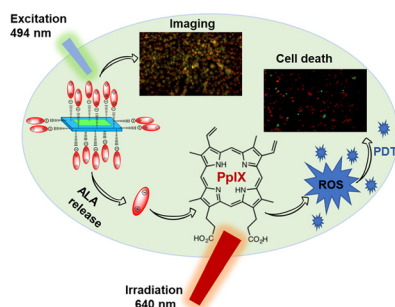
10508



Electron-deficient cyclopropenium cations as Lewis acids in FLP chemistry

Dipendu Mandal, Zheng-Wang Qu,* Stefan Grimme and Douglas W. Stephan*

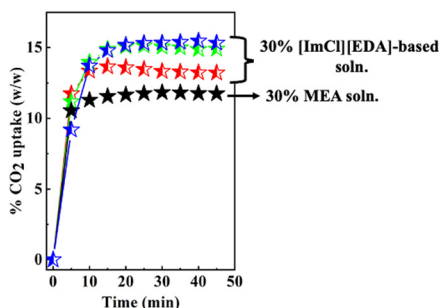
10512



Aqueous colloidal nanoplatforms for imaging and improved ALA-based photodynamic therapy of prostate cancer cells

Kubra Onbasli, Gozde Demirci, Furkan Isik, Emek Goksu Durmusoglu, Hilmi Volkan Demir* and Havva Yagci Acar*

10516

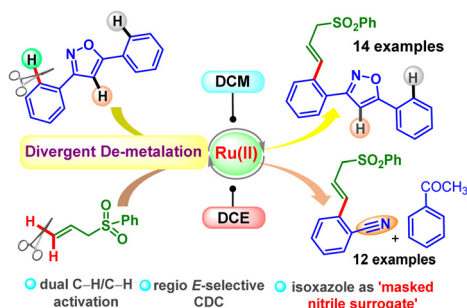


Superior gravimetric CO₂ uptake of aqueous deep-eutectic solvent solutions

Shashi Kant Shukla,* Yong-Lei Wang, Aatto Laaksonen and Xiaoyan Ji*



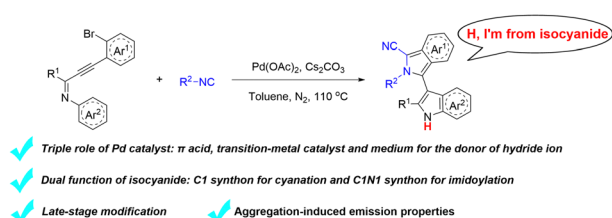
10536



Isoxazole as a nitrile synthon: *en route* to the *ortho*-alkenylated isoxazole and benzonitrile with allyl sulfone catalyzed by Ru(II)

Pritishree Panigrahi, Subhendu Ghosh, Tamanna Khandelia, Raju Mandal and Bhisma K. Patel*

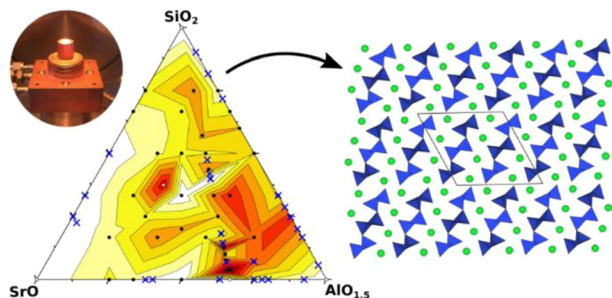
10540



Accessing indole–isoindole derivatives *via* palladium-catalyzed [3+2] cyclization of isocyanides with alkynyl imines

Dianpeng Chen,* Jianming Li, Gongle Liu, Xiuhua Zhang, Xin Wang, Yongwei Liu, Xuan Liu, Xinghai Liu, Yongqin Li and Yingying Shan*

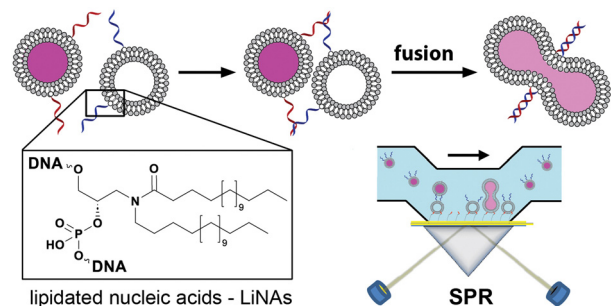
10544



A computationally-guided non-equilibrium synthesis approach to materials discovery in the SrO–Al₂O₃–SiO₂ phase field

Euan M. Duncan, Amandine Ridouard, Franck Fayon, Emmanuel Veron, Cécile Genevois, Mathieu Allix, Christopher M. Collins* and Michael J. Pitcher*

10548



Label-free observation of DNA-encoded liposome fusion by surface plasmon resonance

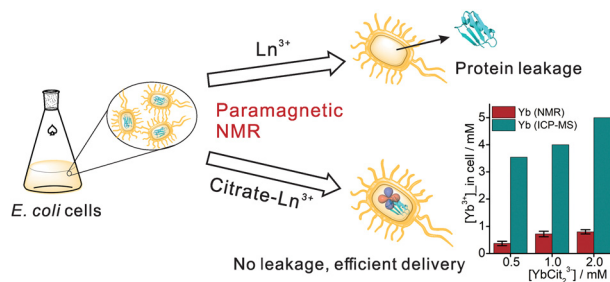
Philipp M. G. Löffler, Nikolaj A. Risgaard, Bettina L. Svendsen, Katrine A. Jepsen, Alexander Rabe and Stefan Vogel*



10552

Effective assessment of lanthanide ion delivery into live cells by paramagnetic NMR spectroscopy

Jia-Liang Chen,* Yin Yang, Tiesheng Shi and
Xun-Cheng Su*



10556

Ferromagnetism induced by in-plane strain in a bulk VS_2 -based superlattice: $(\text{LiOH})_{0.1}\text{VS}_2$

Ruijin Sun,* Jun Deng, Yuxin Ma, Munan Hao, Xu Chen,
Dezhong Meng, Changchun Zhao, Shixuan Du,
Shifeng Jin* and Xiaolong Chen*

