

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.

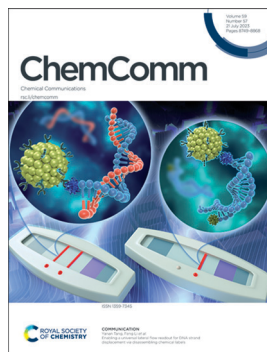
IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(57) 8749–8868 (2023)



Cover

See Krzysztof Woźniak, Mihails Arhangelis et al., pp. 8799–8802. Image reproduced by permission of Damian Trzybiński from *Chem. Commun.*, 2023, 59, 8799.



Inside cover

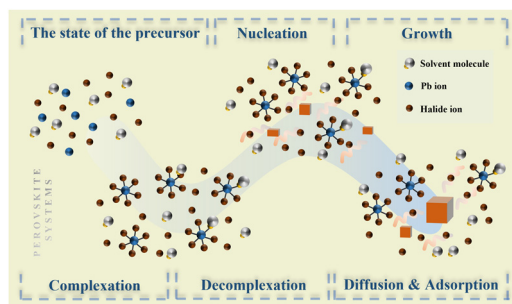
See Yanan Tang, Feng Li et al., pp. 8803–8805. Image reproduced by permission of Feng Li from *Chem. Commun.*, 2023, 59, 8803.

HIGHLIGHT

8758

Growth mechanism of metal halide perovskite single crystals in solution

Mingquan Liao, Mengling Xia,* Yinsheng Xu, Ping Lu and Guangda Niu*

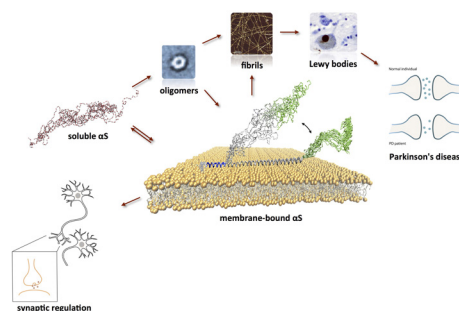


FEATURE ARTICLES

8769

α -Synuclein and biological membranes: the danger of loving too much

Silvia Mansueto, Giuliana Fusco* and Alfonso De Simone*



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 Rothwell, 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 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: £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

Michaele 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

Michaele 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

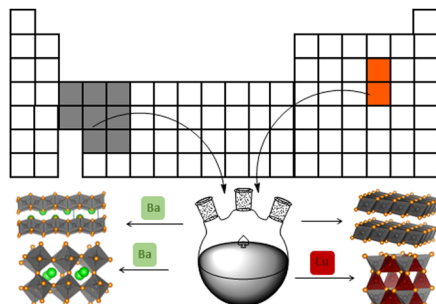


FEATURE ARTICLES

8779

Solution-phase synthesis of group 3–5 transition metal chalcogenide inorganic nanomaterials

Daniel Zilevu and Sidney E. Creutz*

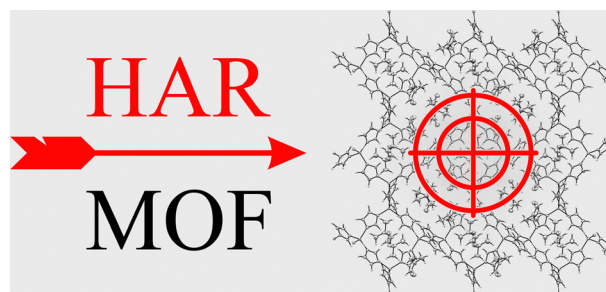


COMMUNICATIONS

8799

Hirshfeld atom refinement of metal–organic frameworks for accurate positioning of hydrogen atoms and disorder analysis

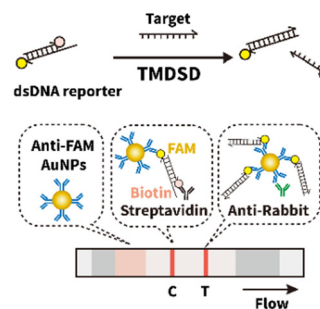
Yizhi Xu, Michał L. Chodkiewicz, Magdalena Woińska, Damian Trzybiński, Ivana Brekalo, Filip Topić, Krzysztof Woźniak* and Mihails Arhangelis*



8803

Enabling a universal lateral flow readout for DNA strand displacement *via* disassembling chemical labels

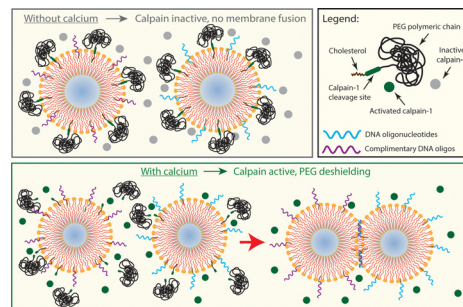
Wanting Peng, Yun Tan, Chenlan Shen, Yanan Tang* and Feng Li*



8806

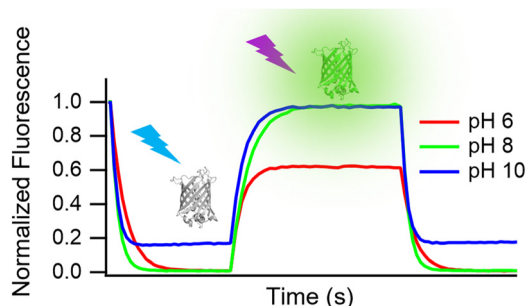
Calcium-triggered DNA-mediated membrane fusion in synthetic cells

Yen-Yu Hsu, Samuel J. Chen, Julio Bernal-Chanchavac, Bineet Sharma, Hossein Moghimianavval, Nicholas Stephanopoulos and Allen P. Liu*



COMMUNICATIONS

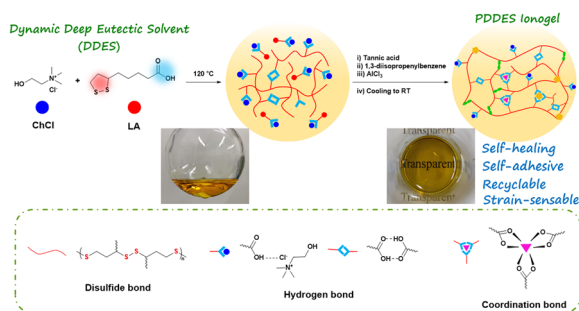
8810



Quantitative determination of the full switching cycle of photochromic fluorescent proteins

Anaïs C. Bourges, Benjamin Moeyaert, Thi Yen Hang Bui, Franziska Bierbuesse, Wim Vandenberg and Peter Dedecker*

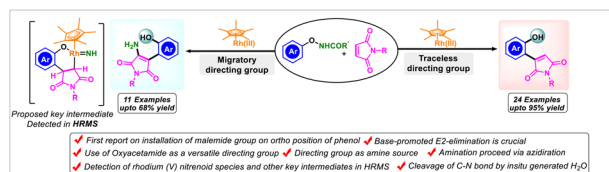
8814



Development of multifunctional ionogels derived from a dynamic deep eutectic solvent

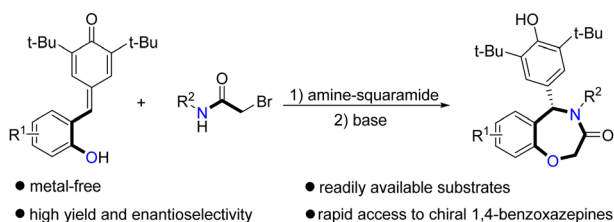
Jintao Li, Mingzu Zhang, Jinlin He* and Peihong Ni

8818

Carboamination and olefination: *ortho* C–H functionalization of phenoxyacetamide

Tanmayee Nanda, Shubham Kumar Dhal, Gopal Krushna Das Adhikari, Namrata Prusty and Ponneri C. Ravikumar*

8822

Metal-free and enantioselective synthesis of 1,4-benzoxazepines from *para*-quinone methide derivatives and α -bromohydroxamates

Suo-Suo Qi, Xin Luo, Xiao-Ping Sun, Jing-Jing Zhai, Ming-Ming Chu,* Jin Chen,* Yi-Feng Wang* and Dan-Qian Xu*

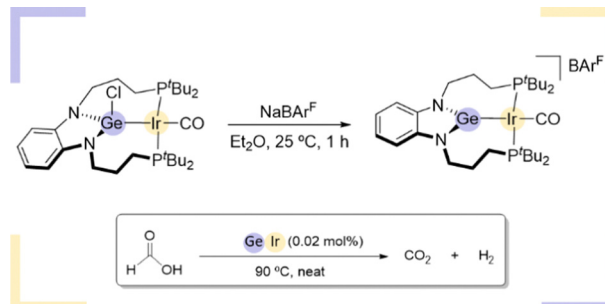


COMMUNICATIONS

8826

A genuine germylene PGeP pincer ligand for formic acid dehydrogenation with iridium

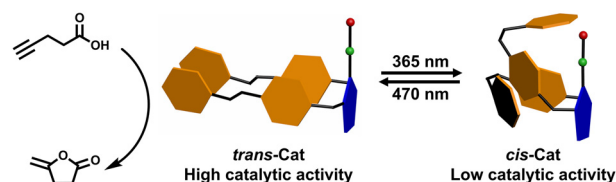
Marta Fernández-Buenestado, Rosie J. Somerville, Joaquín López-Serrano* and Jesús Campos*



8830

A photoresponsive gold catalyst based on azobenzene-functionalized NHC ligands

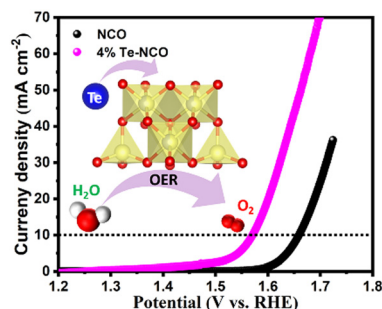
Jianghua Liu, Eduard O. Bobylev, Bas de Bruin and Joost N. H. Reek*



8834

Tellurium-induced defect engineering for boosting the oxygen evolution reaction of spinel oxide

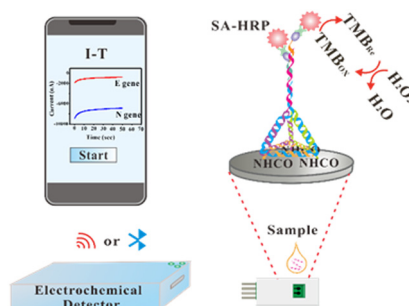
Shu-Fang Li,* Xin Li and Dong Yan*



8838

A DNA framework-based dual signal amplification biosensor for portable detection of SARS-CoV-2 and its mutations

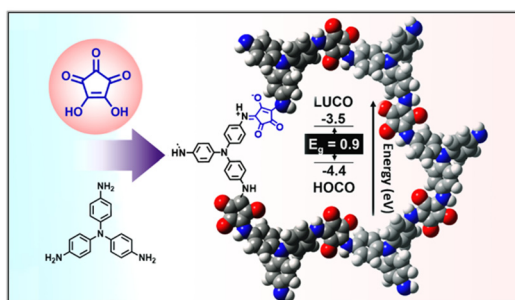
Yanzhi Dou, ZiYue Huang, Tie Li, Nokuzola Maboyi, Xianting Ding, Shiping Song* and Jing Su*





Qiang Zhang, Pengfei Zhou, Yaokun Zhao, Yeran Liu,
Taoyuan Liang, Jun Jiang* and Zhuan Zhang*

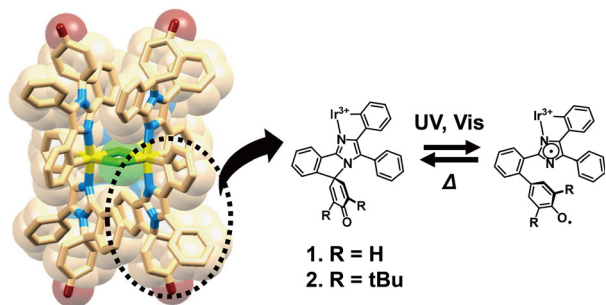
8846



A croconic acid-derived narrow band gap conjugated microporous polymer

S. Enoch, Atul B. Nipate, Vellanki Lakshmi* and
Rajeswara Rao Malakalapalli*

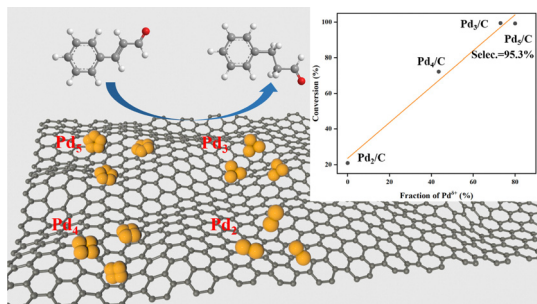
8850



Photochromic dinuclear iridium(III) complexes having phenoxyl-imidazolyl radical complex derivatives

Yoshinori Okayasu, Takuya Miyahara, Rintaro Shimada,
Yuki Nagai, Akira Sakamoto, Jiro Abe* and
Yoichi Kobayashi*

8854



Electronic structure modulation of Pd_{*n*} (*n* = 2–5) nanoclusters in the hydrogenation of cinnamaldehyde

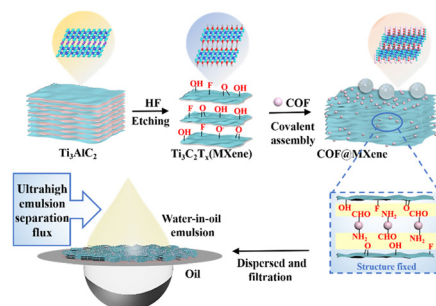
Jie Tang, Tingting Ge, Wenxuan Wang, Chao Liu* and
Jiahui Huang*

COMMUNICATIONS

8858

A robust COF@MXene membrane for ultra-high flux of water-in-oil emulsion separation

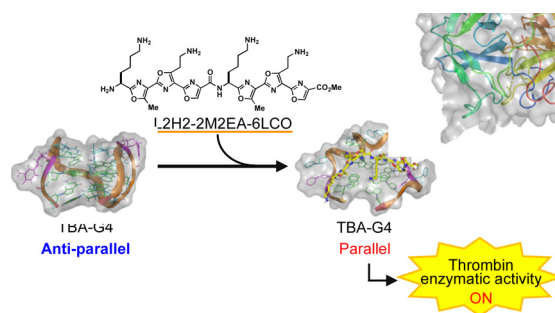
Jing Wang, Xiangqian Xu, Yujian Zhou, Wen Ma, Fushan Wang, Yongjun Zhou and Xuehu Men*



8862

Regulation of thrombin activity by ligand-induced topological alteration in a thrombin-binding aptamer

Shogo Sasaki, Yue Ma, Takatsugu Hirokawa, Kazunori Ikebukuro, Masayuki Tera* and Kazuo Nagasawa*



CORRECTION

8866

Correction: Pyrrolopyrrole aza-BODIPY near-infrared photosensitizer for dual-mode imaging-guided photothermal cancer therapy

Chaolong Wu, Xiaoyu Huang, Yunyun Tang, Wanyue Xiao, Liguang Sun,* Jinjun Shao* and Xiaochen Dong*

