CrystEngComm

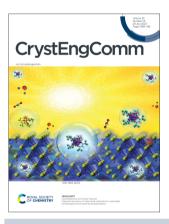
A journal at the forefront of the design and understanding of solid-state and crystalline materials

rsc.li/crystengcomm

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 1466-8033 CODEN CRECF4 25(28) 3961-4112 (2023)



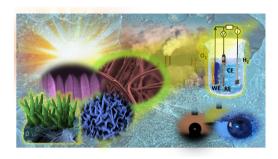
Cover See Davide Barreca and Chiara Maccato. pp. 3968-3987. Image reproduced by permission of Davide Barreca and Chiara Maccato from CrystEngComm, 2023, 25,

HIGHLIGHT

3968

Nanoarchitectonics of metal oxide materials for sustainable technologies and environmental applications

Davide Barreca and Chiara Maccato*

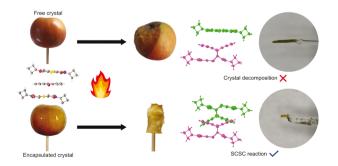


PAPERS

3988

Forced topochemistry of a solid-state Diels-Alder reaction by encapsulation in epoxy glue

T. A. Lau, S. Khorasani and M. A. Fernandes*



Editorial Staff

Executive Editor

Sally Howells

Deputy Editor

Mike Andrews

Development Editors

Samantha Apps, Michelle Canning

Editorial Production Manager

Susannah Davies

Publishing Editors

Debora Giovanelli, Helen Lunn, Samuel Oldknow, Kate Tustain

Editorial Assistant

Daphne Houston

Publishing Assistant

Huw Hedges

Publisher

Jeanne Andres

For queries about submitted articles please contact Susannah Davies, Editorial Production Manager in the first instance. E-mail crystengcomm@rsc.org

For pre-submission queries please contact Sally Howells, Editor.

Email crystengcomm-rsc@rsc.org

CrystEngComm (electronic: ISSN 1466-8033) 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

2022 Annual (electronic) subscription price: £1268; US\$1883. 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

ROYAL SOCIETY **OF CHEMISTRY**

CrystEngComm

A journal at the forefront of the design and understanding of solid-state and crystalline materials

rsc.li/crvstengcomm

CrystEngComm is the forum for the design and understanding of crystalline materials. We welcome studies on the investigation of molecular behaviour within crystals, control of nucleation and crystal growth, engineering of crystal structures, and construction of crystalline materials with tuneable properties and functions.

Editorial Board

Pierangelo Metrangolo, Politecnico di Milano, Italy

Associate Editors

Susan Bourne, University of Cape Town, South Africa Christian Doonan, The University of Adelaide,

Australia Kwangyeol Lee, Korea University, South Korea

C. Malla Reddy, IISER Kolkata, India Dongfeng Xue, Multiscale Crystal Materials Research Center of Shenzhen Institute of Advanced Technology of CAS, China

Elena Boldyreva, Novosibirsk State University, Russia

Aurora Cruz-Cabeza, Durham University, UK Omar Farha, Northwestern University, USA Tong-Bu Lu, Tianiin University of Technology, China

Susan M. Reutzel-Edens, The Cambridge Crystallographic Data Centre, UK

Advisory Board

Christer Aakerov, Kansas State University, USA Georg Garnweitner, TU Braunschweig. Srinivasulu Aitipamula, Institute of Chemical and Engineering Sciences, Singapore Alessia Bacchi, University of Parma, Italy Rahul Banerjee, IISER Kolkata, India Leonard Barbour, University of Stellenbosch, South Africa Andrew Bond, University of Cambridge, UK Paola Ceroni, University of Bologna, Italy Deepak Chopra, IISER Bhopal, India Jack Clegg, University of Queensland, Australia Simon Coles, University of Southampton, UK Richard Cooper, University of Oxford, UK Franziska Emmerling, Federal Institute for Materials Research and Testing in Berlin, Germany Paolo Falcaro, TU Graz, Austria

Sylvie Ferlay, Institut Le Bel, France Antonio Frontera, University of the Balearic Islands, Spain

Germany David Harding, Walailak University, Thailand Chris Hawes, University of Keele, UK Delia Haynes, University of Stellenbosch, South Africa Kristin Hutchins, Texas Tech University, USA Christoph Janiak, University of Dusseldorf, Germany Franca Jones, Curtin University, Australia Bart Kahr, New York University, USA

Andrzej Katrusiak, Adam Mickiewicz University, Poland Niveen Khashab, KAUST, Saudi Arabia Jing Li, Rutgers University, USA Chiara Maccato, Padova University, Italy Leonard MacGillivray, University of Iowa, USA Yuji Matsumoto, Tohoku University, Japan Sharmarke Mohamed, Khalifa University, UAE Abel Moreno, National Autonomous University Hongjie Zhang, Changchun Institute of of Mexico, Mexico

Anja-Verena Mudring, Aarhus University, Denmark Parthapratim Munshi, Shiv Nadar University,

Ashwini Nangia, University of Hyderabad

Lars Öhrström, Chalmers University of Technology, Sweden Simon Parsons, University of Edinburgh, UK Cynthia Pereira, Universidade Federal de Minas Gerais- UFMG, Brazil Concepcio Rovira, Institut de Ciència de Materials de Barcelona, Spain Calvin Sun, University of Minnesota, USA Wei-Yin Sun, Nanjing University, China Jennifer Swift, Georgetown University, USA

Ali Trabolsi, NYU Abu Dhabi, UAE Applied Chemistry, China

Edward R T Tiekink, Sunway University,

Information for Authors

Full details on how to submit material for publication in CrystEngComm 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/crystengcomm. Submissions: The journal welcomes submissions of manuscripts for publication as Full Papers, Communications and Highlights. Full Papers and Communications should describe original work of high quality and impact on the design and understanding of crystalline materials. We welcome studies that highlight the novel properties or applications (or potential properties/ applications) of the materials studied.

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 2022. 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.

Malaysia

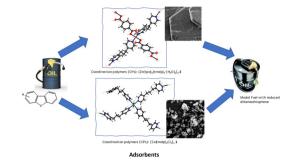
Registered charity number: 207890

PAPERS

3998

Synthesis, crystal structures and DFT studies of Co(II) and Zn(II) coordination polymers of terephthalate and 4,4'-trimethylenedipyridyl ligands for removal of dibenzothiophene from a model fuel oil

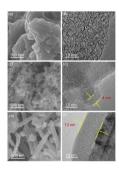
Adedibu C. Tella,* Samson O. Owalude, Olanrewaju A. Ameen, Hadley S. Clayton, Quadrat Yusuph, Tendai O. Dembaremba, Eric C. Hosten and Adeniyi S. Ogunlaja*



4011

Micropore-induced high-performance Fe-N_x/C electrocatalysts towards the oxygen reduction reaction

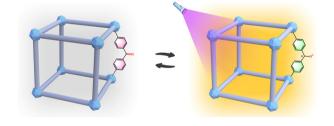
Yeshen Qin, Feng Wang, De Cheng, Chen Wen,* Jiaqiang Zhang, Sizhen Li and Jingying Bai*



4019

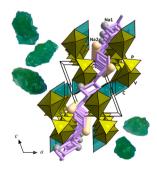
UV and X-ray dual-induced photochromism in a benzophenone-based metal-organic framework for inkless erasable printing

Le-Tian Zhang, Zi-Xuan Fu, Jia-Cheng Yin, Ming Liu, Yin-Qiang Zhang, Lan Lan, Na Li* and Xian-He Bu



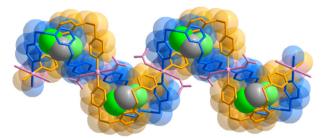
 $Na_3(VO)(PO_4)(CO_3)$: a synthetic member of the bradleyite phosphate carbonate family with a new type of crystal structure

Olga Yakubovich,* Galina Kiriukhina, Sergey Simonov, Anatoly Volkov and Olga Dimitrova



PAPERS

4033

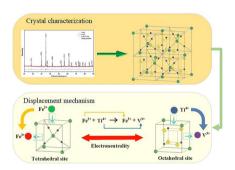


A loop chain with $Cu^{||}$ nodes, {[$Cu(L)_2(NO_3)_2$]· CH_2CI_2 }_n

Preparation of one-dimensional coordination polymers of a flexible tripyridyl disulfide with diverse topologies

Hyeong-Hwan Lee, Jihye Oh, Shim Sung Lee and In-Hyeok Park*

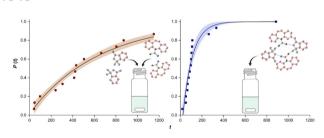
4039



Crystallization behavior and crystal characterization of V-spinel in vanadium slag via in situ separation: displacement mechanism of V and Ti

Guoliang Feng, Jintao Gao,* Xi Lan, Yu Li and Zhancheng Guo*

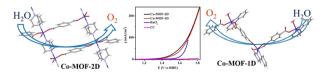
4048



Mesoscale clusters in multicomponent systems: the effect of solution preparation and pre-treatment on primary nucleation of a carbamazepine-saccharin cocrystal

Jordan Crutzen, Lai Zeng and Michael Svärd*

4058



Water coordinated Co-MOFs with 1D/2D network structure and highly enhanced electrocatalytic OER activity

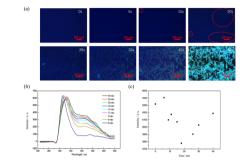
Pandi Muthukumar, Gunasekaran Arunkumar, Mehboobali Pannipara, Abdullah G. Al-Sehemi, Dohyun Moon* and Savarimuthu Philip Anthony*

PAPERS

4064

Real-time fluorescence visualization of the evaporation crystallization process based on the **AIEE** mechanism

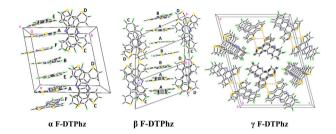
Lijie Gao, Meng Wang, Shuyu Li, Kui Chen, Lina Zhou, Xin Li, Na Wang,* Xin Huang, Hongxun Hao and Ting Wang*



4076

Additive controlled packing polymorphism in a series of halogen-substituted dithieno[3,2-a:2',3'-c] phenazine derivatives

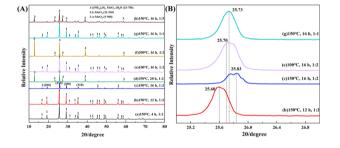
Boris B. Averkiev, Raúl Castañeda, Marina S. Fonari, Evgheni V. Jucov and Tatiana V. Timofeeva*



4089

Controllable synthesis and formation mechanism of pure and Fe-doped h-MoO₃ microrods under hydrothermal reaction conditions

Hong-Xiao Li, Lu Wang* and Feng-Jiao Du



Controlled long-term sustained release of poly(lactic acid) composite microspheres with dualresponsive cellulose nanocrystals

Mingxin Wang, Somia Yassin Hussain Abdalkarim, Ruixin Gong, Haibin Ji, Zhiming Chen, Yunfei Shen, Ying Zhou, Jiayuan Shen and Hou-Yong Yu*

