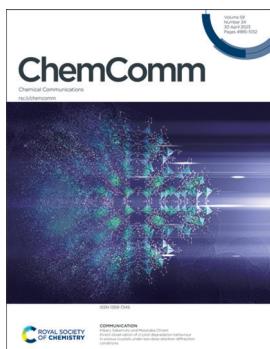


IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(34) 4985–5132 (2023)



Cover

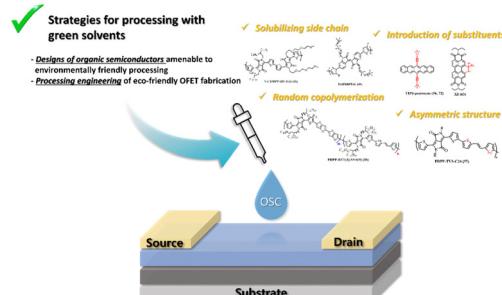
See Hikaru Sakamoto and Masataka Ohtani, pp. 5039–5042.
Image reproduced by permission of Masataka Ohtani from *Chem. Commun.*, 2023, 59, 5039.

HIGHLIGHT

4995

Current developments of eco-friendly organic field-effect transistors: from molecular engineering of organic semiconductors to greener device processing

Gyeong Seok Lee, Hyeok-jin Kwon, Tae Kyu An* and Yun-Hi Kim*

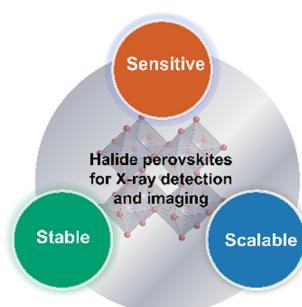


FEATURE ARTICLES

5016

Halide perovskites for sensitive, stable and scalable X-ray detection and imaging

Shujie Tie, Siyin Dong, Ruihan Yuan, Bing Cai, Jianguo Zhu* and Xiaojia Zheng*



Editorial Staff**Executive Editor**

Richard Kelly

Deputy Editor

Harriet Riley

Editorial Production Manager

Helen Saxton

Development Editor

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
Davide Bonifazi, University of Vienna
Rachel Caruso, RMIT University

Fengtao Fan, Chinese Academy of Sciences
Itaru Hamachi, Kyoto University
Michael Hardie, University of Leeds
Kim Jelfs, Imperial College London
Chao-Jun Li, McGill University

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	Rebecca Goss, University of St Andrews	Technology Madras
Polly Arnold, University of Edinburgh	Mike Greaney, University of Manchester	S Ramakrishnan, Indian Institute of Science
Louise Berben, University of California, Davis	Shaojun Guo, Peking University	Erwin Reisner, University of Cambridge
Penny Brothers, Australian National University	Michael Hardie, University of Leeds	Robin Rogers, McGill University
Wesley Browne, University of Groningen	Amanda Hargrove, Duke University	Paolo Samori, University of Strasbourg
Raffaella Buonsanti, EPFL	Craig Hawker, University of California, Santa Barbara	Ellen Sletten, University of California, Los Angeles
Luiz Henrique Catalani, University of São Paulo	Feihe Huang, Zhejiang University	David Smith, University of York
Xiao-Ming Chen, Sun Yat-Sen University	Todd Hudnall, Texas State University	Mizuki Tada, Nagoya University
Lifeng Chi, Soochow University	Illich A. Ibarra Alvarado, National University of Mexico	Christine Thomas, Ohio State University
Arindam Chowdhury, Indian Institute of Technology Bombay	Hiroshi Kageyama, Kyoto University	Zhong-Qun Tian, Xiamen University
Derrick Clive, University of Alberta	Jong Seung Kim, Korea University	Tomas Torres, Autonomous University of Madrid
Seth Cohen, University of California, San Diego	Shu Kobayashi, University of Tokyo	Helma Wennemers, ETH Zurich
Marcetta Darenbourg, Texas A&M University	Mi Hee Lim, Ulsan National Institute of Science and Technology (UNIST)	Judy Wu, University of Houston
Jyotirmayee Dash, Indian Association for the Cultivation of Science	Teck-Peng Loh, Nanyang Technological University	Yi Xie, University of Science and Technology of China
Gautam R. Desiraju, Indian Institute of Science, Bangalore	Tien-Yau Luh, National Taiwan University	Xianran Xing, University of Science and Technology Beijing
Abhishek Dey, Indian Association for the Cultivation of Science (IACS)	Doug MacFarlane, Monash University	Shuli You, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences
Josh Figueroa, University of California, San Diego	Hiromitsu Maeda, Ritsumeikan University	Atsuo Yamada, University of Tokyo
Lutz Gade, University of Heidelberg	Silvia Marchesan, University of Trieste	Qiang Zhang, Tsinghua University
Sujit Ghosh, Indian Institute of Science Education of Research, India	Nazario Martin, Complutense University of Madrid	Xi Zhang, Tsinghua University
Nathan Gianneschi, University of California, San Diego	Keiji Maruoka, Kyoto University	Wenwan Zhong, University of California, Riverside
Robert Gilliard Jr., University of Virginia	Alexander Miller, University of North Carolina at Chapel Hill	Eli Zysman-Colman, University of St. Andrews
David Gonzalez-Rodriguez, Autonomous University of Madrid	Wonwoo Nam, Ewha Womans University	
	Jean-Francois Nierengarten, University of Strasbourg	
	Thalappil Pradeep, Indian Institute of	

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/repubish 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).

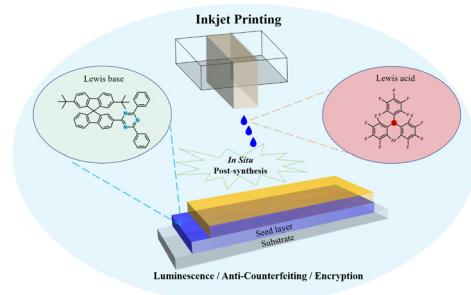
Registered charity number: 207890

FEATURE ARTICLES

5030

***In situ* post-synthesis of luminescent Lewis acid–base adducts**

Sichao Ji, Qin Xue* and Guohua Xie*

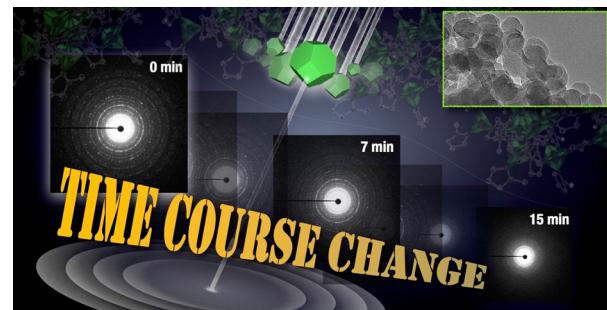


COMMUNICATIONS

5039

Direct observation of crystal degradation behaviour in porous crystals under low-dose electron diffraction conditions

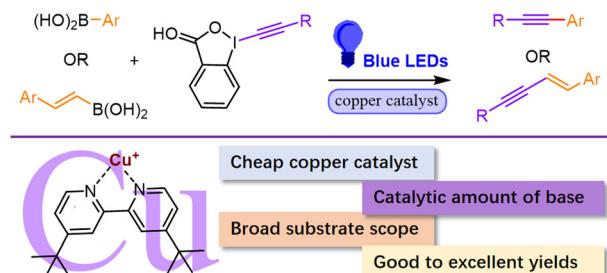
Hikaru Sakamoto and Masataka Ohtani*



5043

Copper-catalyzed umpolung Sonogashira-type coupling of arene boronic acids under visible light

Jingwei Ma, Qian Wang, Yang Sun, Eva Zhu, Xiaobao Li, Haibo Tan,* Guangying Chen* and Chao Zheng*



5047

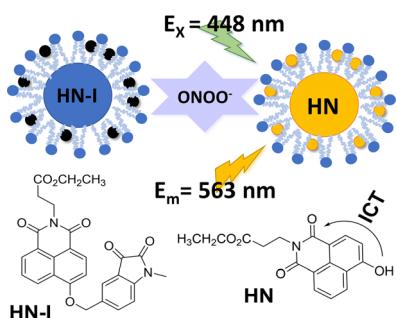
***ortho*-Functionalization of azobenzenes via hypervalent iodine reagents**

Ester Maria Di Tommaso, Melanie Walther, Anne Staubitz* and Berit Olofsson*



COMMUNICATIONS

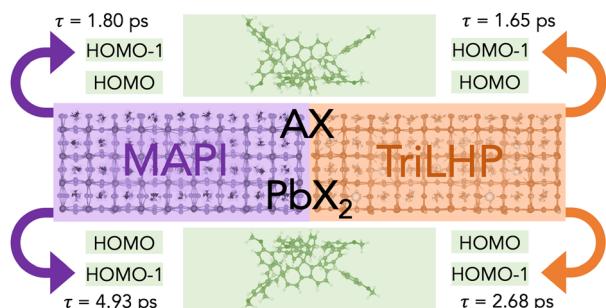
5051



Selective detection of peroxynitrite using an isatin receptor and a naphthalimide fluorophore

Yueci Wu, Hai-Hao Han, Liu He, Li Li, Yi Zang, Jia Li,*
 Xiao-Peng He,* Yaping Ding,* Weiguo Cao* and
 Tony D. James*

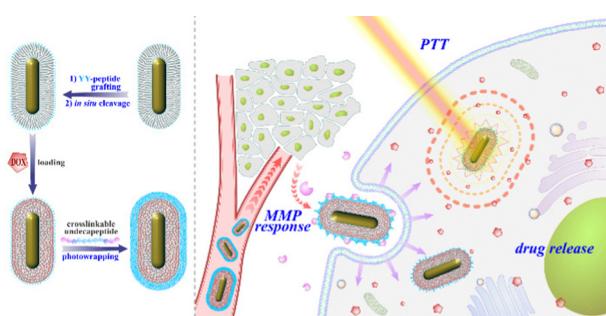
5055



First-principles study of interfacial features and charge dynamics between spiro-MeOTAD and photoactive lead halide perovskites

Adriana Pecoraro, Francesca Fasulo, Michele Pavone and
 Ana B. Muñoz-García*

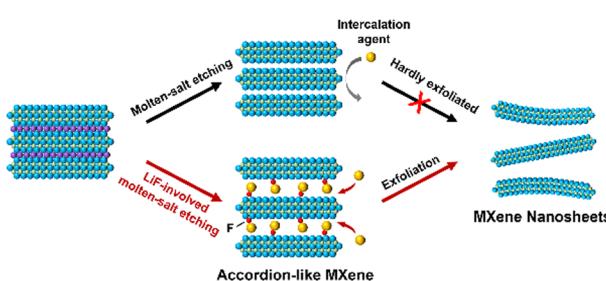
5059



Peptide photowrapping of gold-silica nanocomposites for constructing MMP-responsive drug capsules for chemo-photothermal therapy

Hao Liu, Sijie He, Li-Ya Niu, Xue-Wang Gao, Ke Feng, Shumin Yang, Jianqun Shao, Wenhua Zhao, Nan Xie* and Qing-Zheng Yang

5063



Molten-salt etching synthesis of delaminatable MXenes

Xingyu Wang, Yu Shi, Jieshan Qiu and Zhiyu Wang*

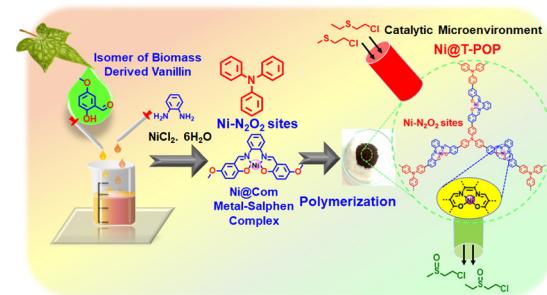


COMMUNICATIONS

5067

Putting forward a Ni-metallocalphen-based porous organic polymer for detoxification of sulfur mustard gas simulant

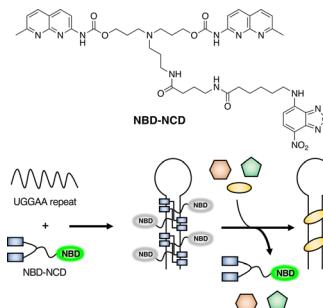
Priyanka Kalita, Ratul Paul, Chih-Wen Pao, Rupak Chatterjee, Asim Bhaumik and John Mondal*



5071

Fluorescent indicator displacement assay for the discovery of UGGAA repeat-targeted small molecules

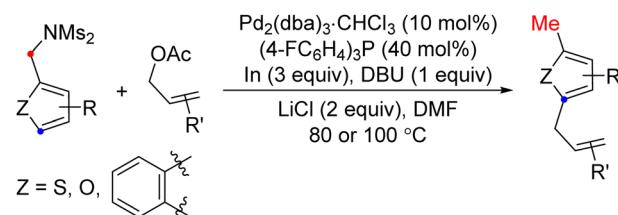
Tomonori Shibata,* Yasumasa Matsumoto, Akiko Iihara, Kazunori Yamada, Hiroshi Ochiai, Ryo Saito, Shinichi Kusaka and Toshiyuki Kume



5075

Palladium-catalyzed indium-mediated reductive aromatic C–H allylation of *N*-benzylsulfonimides with allyl esters

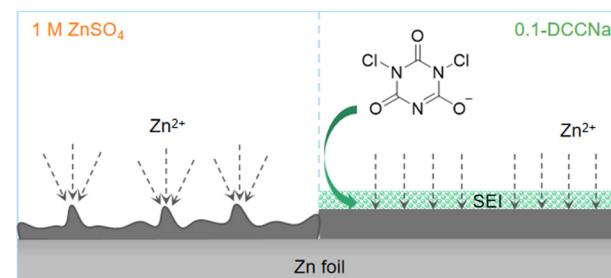
Xue-Ting Zhang and Shi-Kai Tian*



5079

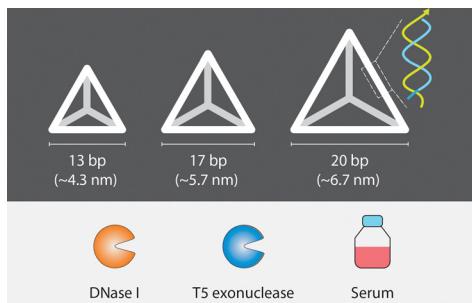
An organic–inorganic solid–electrolyte interface generated from dichloroisocyanurate electrolyte additive for a stable Zn metal anode in aqueous Zn batteries

Fangming Liu, Kuo Wang,* Qianrui Li, Guoli Zhang, Jiaqi Zhu, Xiao-Xia Liu and Xiaoqi Sun*



COMMUNICATIONS

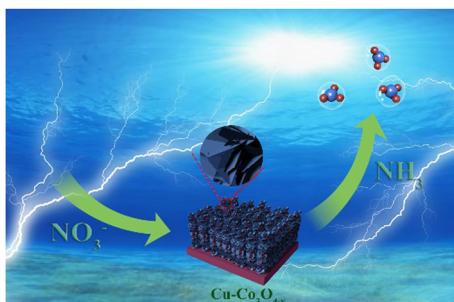
5083



The role of size in biostability of DNA tetrahedra

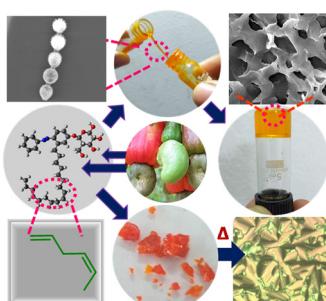
Javier Vilcapoma, Akul Patel, Arun Richard Chandrasekaran* and Ken Halvorsen*

5086

Coupling Cu doping and oxygen vacancies in Co_3O_4 for efficient electrochemical nitrate conversion to ammonia

Bo Li, Pengfei Xue, Yu Bai, Qin Tang, Man Qiao and Dongdong Zhu*

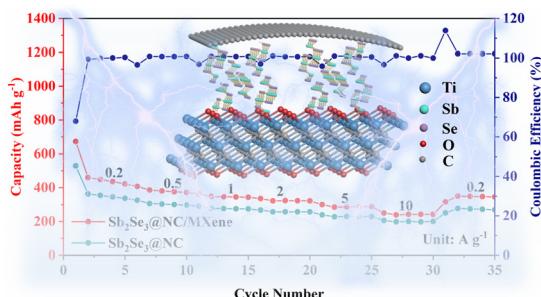
5090



Modulating nanostructure morphology and mesomorphic properties using unsaturation in cardanol-azo benzenes

Anjali Raju, Jyothish Kuthanapillil,* Manoj Mathews, Doddamane S. Shankar Rao, Jijo J. Vallooran and George John

5094

Interfacial covalent bonding of the MXene-stabilized Sb_2Se_3 nanotube hybrid with fast ion transport for enhanced sodium-ion half/full batteries

Chengkui Lv, Linlin Tai, Xiao Li, Xiaowei Miao, Huaixin Wei,* Jun Yang* and Hongbo Geng*

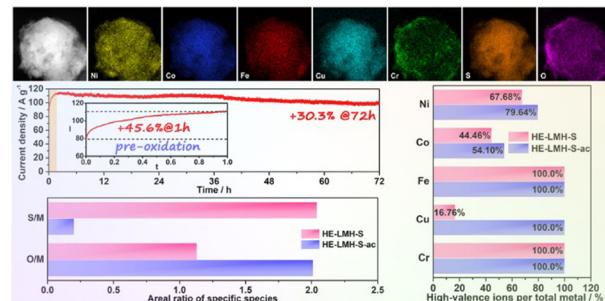


COMMUNICATIONS

5098

Topotactic synthesis of high-entropy sulfide nanosheets as efficient pre-catalysts for water oxidation

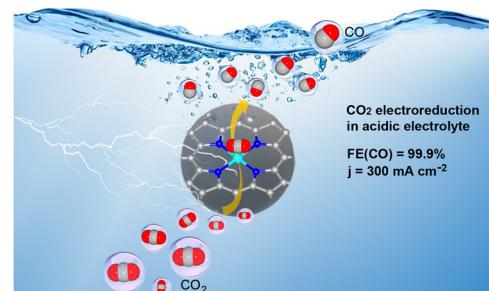
Min Guo, Pengfeng Li, Anran Wang, Jiale Wang, Jinyue Chen, Fengcai Lei, Pin Hao, Xu Sun,* Junfeng Xie* and Bo Tang*



5102

A highly efficient atomic nickel catalyst for CO₂ electroreduction in acidic electrolyte

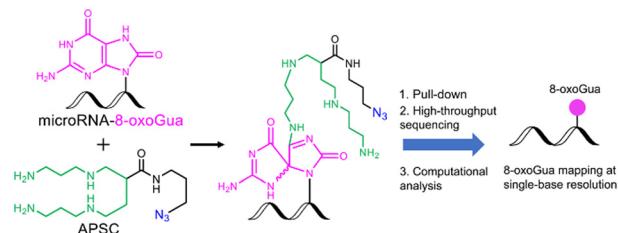
Qiao Wu, Jun Liang, Li-Li Han, Yuan-Biao Huang* and Rong Cao*



5106

Chemical labeling achieves 8-oxo-7,8-dihydroguanine mapping in the microRNA transcriptome

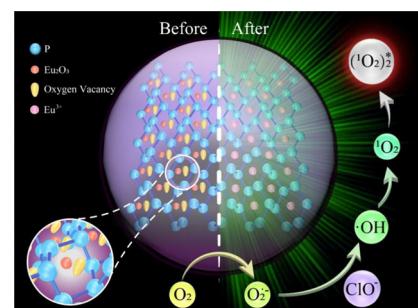
Changjiang Fan,* Xinyue Meng, Wei Yang, Peiyan Wang, Wenguang Chang, Peifeng Li* and Jianxun Wang*



5110

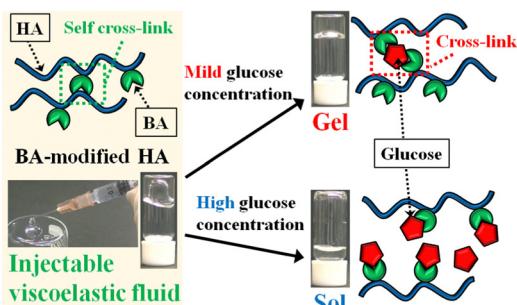
Modulated oxygen vacancies in europia clusters/black phosphorus induced signal amplification for efficient chemiluminescence sensing

Hui Gong, Dayang Zhao, Yu Zhou, Yuxian Zhou, Jing Gou and Houjing Liu*



COMMUNICATIONS

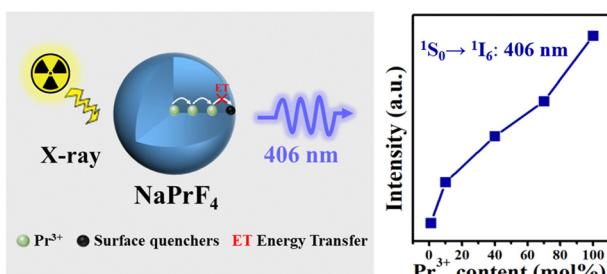
5114



Anomalous glucose-responsive rheological changes in a boronic acid-modified hyaluronan

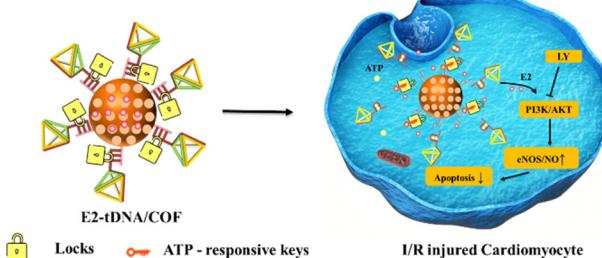
Ryotaro Miki,* Tsutomu Yamaki, Masaki Uchida and Hideshi Natsume

5118

 Pr^{3+} -doped nanoscintillators with concentration-quenching-free properties

Lin Zhang, Yantao Li, Huiru Ye, Lei Zhao, Qingwei Song, Weidong Du, Xukai Chen and Wei Wei*

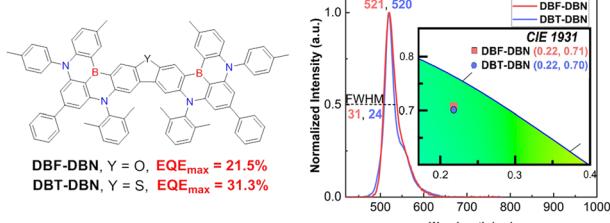
5122



Endogenous stimulus-controlled estradiol@AlEgen-based covalent organic framework for reduction of myocardial ischemia/reperfusion injury

Fang Yuan, Cuiling Zhang,* Xianzhu Luo, Xiaokun Shen and Yuezhong Xian*

5126

Dibenzo[*b,d*]furan/thiophene-fused double boron-based multiresonance emitters with narrowband ultrapure green electroluminescence

Menglei Wang, Zhangyi Fu, Rui Cheng, Jiping Du, Tanping Wu, Zhengyang Bin, Di Wu,* Yudong Yang and Jingbo Lan*

