

# ChemComm

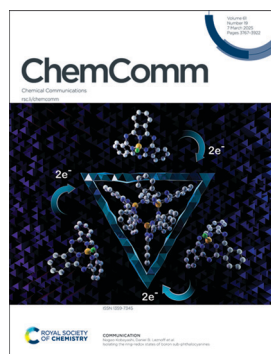
Chemical Communications

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.

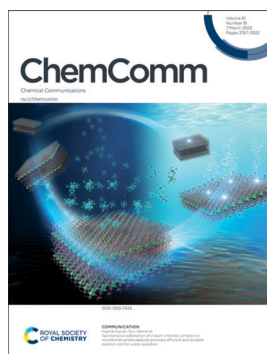
## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 61(19) 3767-3922 (2025)



### Cover

See Nagao Kobayashi, Daniel B. Leznoff *et al.*, pp. 3832–3835. Cover image created by Thomas Karpiuk and image reproduced by permission of Thomas Karpiuk and Daniel B. Leznoff from *Chem. Commun.*, 2025, 61, 3832.



### Inside cover

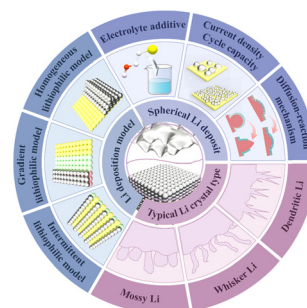
See Hajime Suzuki, Ryu Abe *et al.*, pp. 3836–3839. Image reproduced by permission of Ryu Abe from *Chem. Commun.*, 2025, 61, 3836.

## HIGHLIGHT

3777

### The nucleation and growth mechanism of spherical Li for advanced Li metal anodes – a review

Mengting Wang, Xingtong Guo, Rui Luo, Xiaonuo Jiang, Yongfu Tang\* and Tao Wei\*

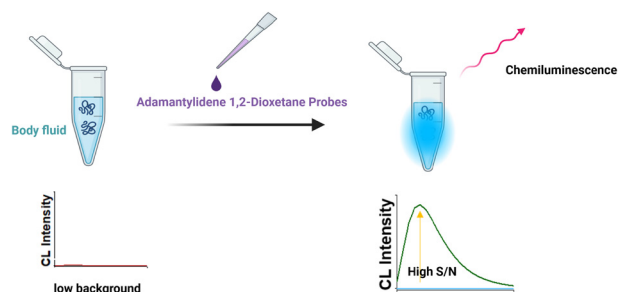


## FEATURE ARTICLES

3794

### Sensitive detection of fluid biomarkers using adamantylidene 1,2-dioxetane based chemiluminescent probes

Wen-Jing Pan, Jialiang Wu and Shuai Xu\*



# Advance your career in science

with professional recognition that showcases  
your **experience, expertise and dedication**

## Stand out from the crowd

Prove your commitment  
to attaining excellence in  
your field

## Gain the recognition you deserve

Achieve a professional  
qualification that inspires  
confidence and trust

## Unlock your career potential

Apply for our professional  
registers (RSci, RSciTech)  
or chartered status  
(CChem, CSci, CEnv)

## Apply now

[rsc.li/professional-development](https://rsc.li/professional-development)

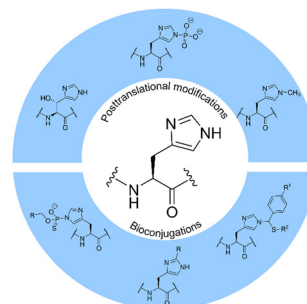


## FEATURE ARTICLES

3805

## Chemical tools for probing histidine modifications

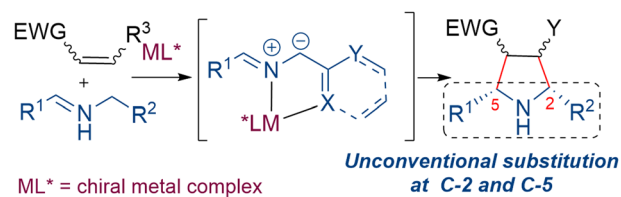
Nurgül Bilgin, Jordi C. J. Hintzen and Jasmin Mecinović\*



3821

## Metal catalyzed asymmetric 1,3-dipolar cycloaddition of azomethine ylides: structural diversity at the dipole partner

Juan Carlos Carretero, Nuria Rodríguez\* and Javier Adrio\*

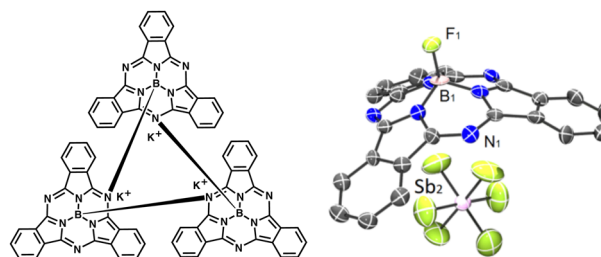


## COMMUNICATIONS

3832

## Isolating the ring-redox states of boron sub-phthalocyanines

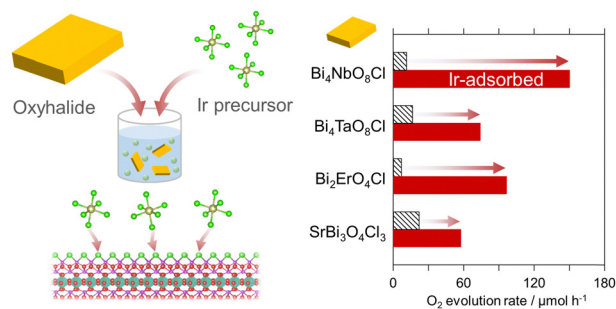
Wen Zhou, Declan McKearney, Yusuke Okada, Nagao Kobayashi\* and Daniel B. Leznoff\*



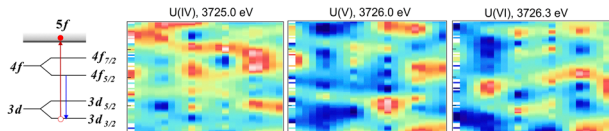
3836

## Spontaneous adsorption of iridium chloride complex on oxychloride photocatalysts provides efficient and durable reaction site for water oxidation

Hajime Suzuki,\* Kengo Minamimoto, Yusuke Ishii, Yudai Furuta, Osamu Tomita, Akinobu Nakada, Shunsuke Nozawa and Ryu Abe\*

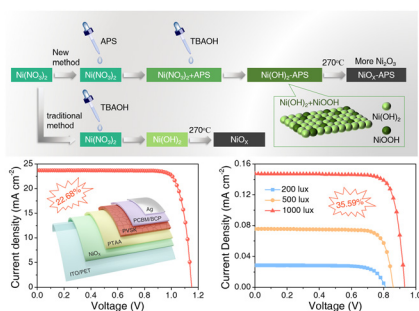


3840

HERFD-XRF at U  $M_4$  edgeAdvanced 2D XRF imaging of uranium oxidation states using HERFD at the U  $M_4$  edge

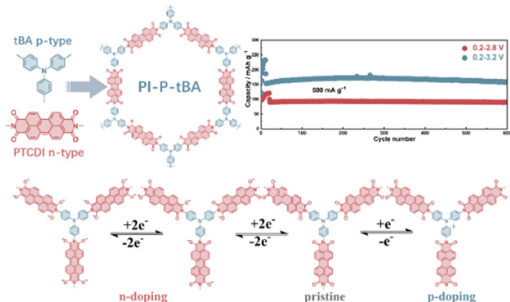
Elena F. Bazarkina, Kimberly V. Lau, Anthony Chappaz, Evgeny Bastrakov, Barbara Etschmann, Joël Brugger, Madeline Marshall, Frances M. Meyer, Christopher J. Boreham, Lucia Amidani and Kristina O. Kvashnina\*

3844

Highly conductive and homogeneous NiO<sub>x</sub> nanoparticles for stable and efficient flexible perovskite solar cells

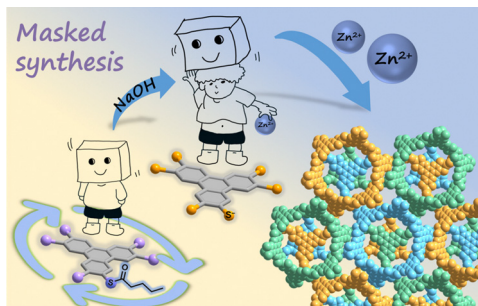
Junjun Jin, Jitao Shang, Zhenkun Zhu, Tonghui Guo, Yanghou Wang, Lijun Chen, Yidong Ming, Jinhua Li, Guanqi Tang\* and Qidong Tai\*

3848

An extended  $\pi$ -conjugated bipolar polymer cathode for rechargeable magnesium batteries: high capacity contributed by n- and p-doping and charge delocalization

Shuai Cui, Zhen Qin, Hongda Gui, Ting Li,\* Daohong Zhang\* and Fei Xu\*

3852



## A single-crystal 3D Zn-tetrathiolate connected metal-organic framework

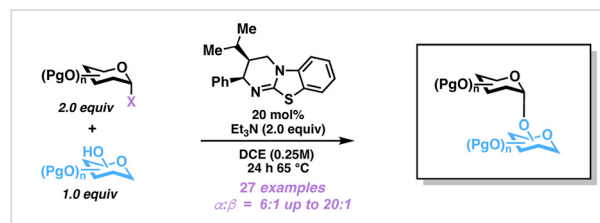
Jian-Rong Li, Jieying Hu, Long Jiang, Yonghe He, Wei-Ming Liao, Xianghua Yang, Lai-Hon Chung\* and Jun He\*



3856

Isothiourea – catalyzed  $\alpha$ -selective glycosylations

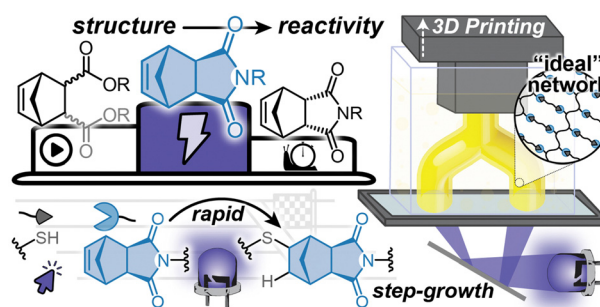
Bhaswati Ghosh, Charles Enlow, Zhichen Ma, Ashley N. Warden and Abram J. Axelrod\*



3860

## Relating norbornene composition-to-reactivity for thiol-ene photopolymerizations and 3D printing

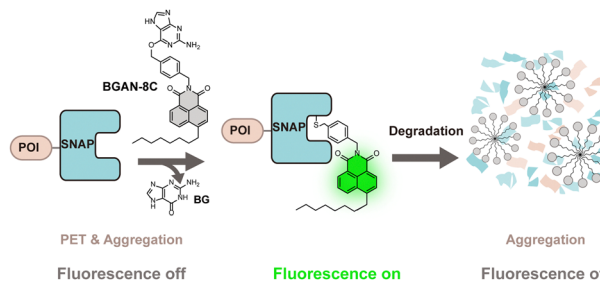
Yutong Liu, Henry L. Cater, Elizabeth A. Recker and Zachariah A. Page\*



3864

## Naphthalimide-derived fluorogenic SNAP probe for real-time monitoring of protein degradation

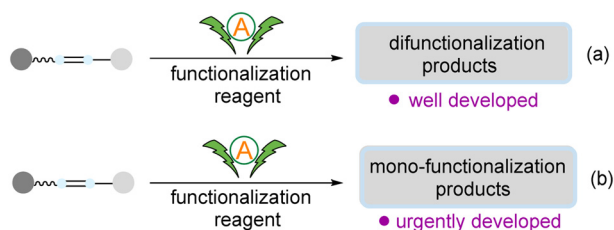
Xuelian Zhou, Lu Miao,\* Yonghui Chen, Jinjing Shi, Qinglong Qiao\* and Zhaochao Xu\*



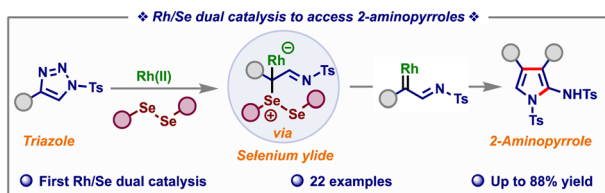
3868

## An electrocatalytic mono-functionalization of alkenes towards alkenyl selenium sulfonates

Zhiheng Zhao, Hongyan Yan and Lijun Gu\*



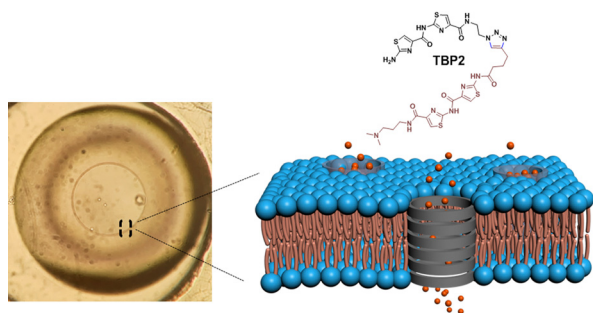
3872



### Rhodium/selenium dual catalysis for accessing 2-aminopyrroles from *N*-sulfonyl-1,2,3-triazoles

Kuntal Pal, Om Prakash Dash and Chandra M. R. Volla\*

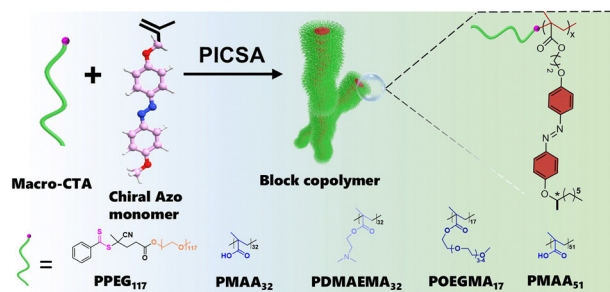
3876



### Ion transport and membrane channel formation using a peptidomimetic in droplet interface bilayers

Raj Paul, Debasish Dutta, Mark I. Wallace\* and Jyotirmayee Dash\*

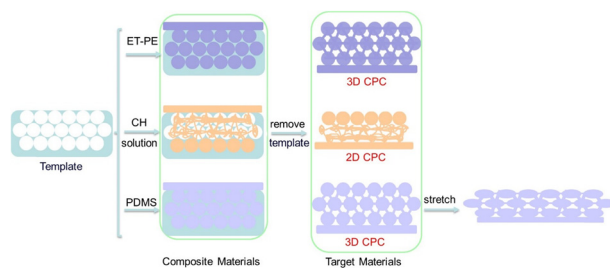
3880



### Construction of liquid-crystalline assemblies with tunable chiroptical properties through tailoring solvophilic chains in polymerization-induced chiral self-assembly

Zhenyang Zhou, Xiaoxiao Cheng,\* Zeyu Tang, Yuqing Wang, Zixiang He and Wei Zhang\*

3884



### Template-based synthesis of novel polymeric colloidal photonic crystals

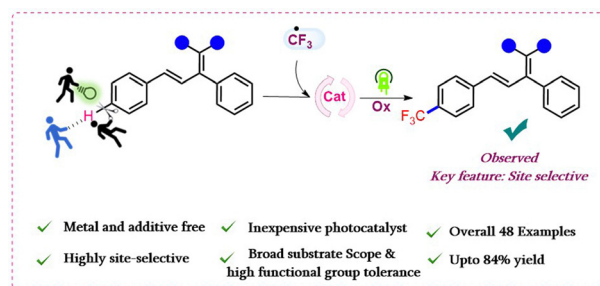
Shunan Xu, Qingyao Liu, Yuanhui Wang, Zhihao Ji, Zhengshuai Lian, Hongzi Tan,\* Jin Zhou\* and Chuan Wang\*



3888

### A radical approach towards polarity-reversed *para*-substitution of electron-deficient arenes

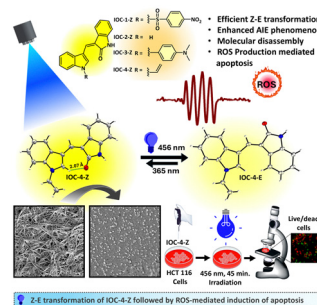
Shashank Singh, Arindam Kundu, Claire Empel, René Michael Koenigs\* and Ravi P. Singh\*



3892

### Visible light-induced photoisomerization of indole–oxindole constructs: molecular disassembly and ROS-mediated apoptosis

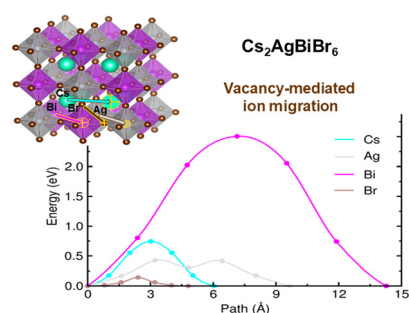
Kartikay Tyagi, Tejal Dixit and V. Venkatesh\*



3896

### Revealing the role of intrinsic point defects in the stability of halide double perovskite $\text{Cs}_2\text{AgBiBr}_6$

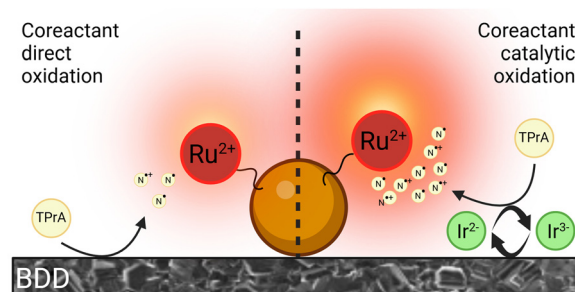
Il-Chol Ri, Chun-Son Ri, Song-Hyon Yu, Son-Hyok Jo, Song-Hyok Choe and Chol-Jun Yu\*



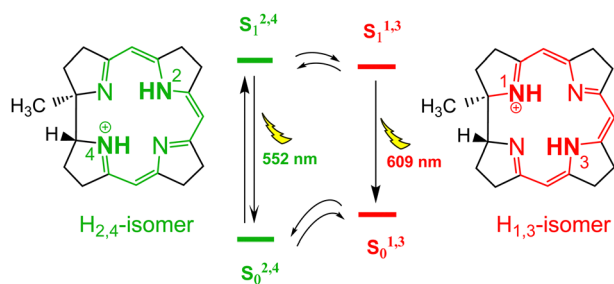
3900

### Overcoming kinetic barriers of remote electrochemiluminescence on boron-doped diamond *via* catalytic coreactant oxidation

Alessandro Fracassa, Chiara Mariani, Andrea Fiorani, Yasuaki Einaga, Conor F. Hogan, Francesco Paolucci, Neso Sojic, Paul S. Francis\* and Giovanni Valentini\*



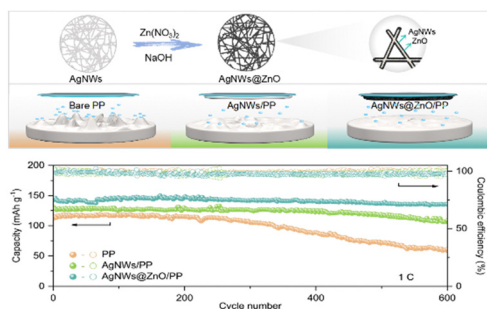
3904



### H/D-Isotope sensitive dual fluorescence of the corrin-ligand of vitamin B<sub>12</sub>

Steffen Jockusch\* and Bernhard Kräutler\*

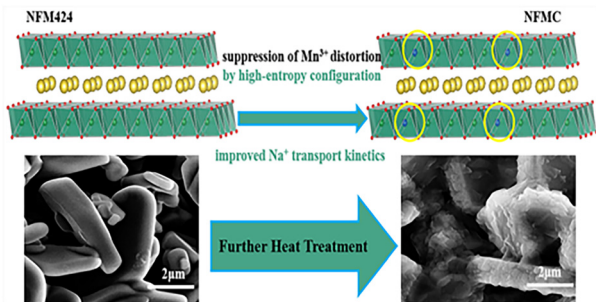
3908



### 3D dual-gradient lithiophilic AgNWs@ZnO modified separator for boosting stable lithium metal batteries

Mengyu Gao, Qi Zhang, Yuan Tian\* and Cheng Wang

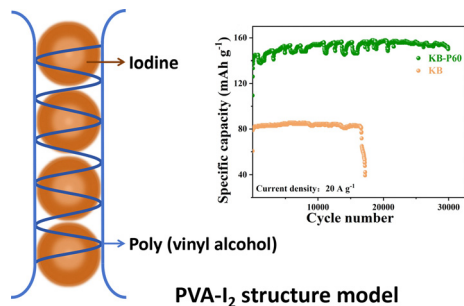
3912



### Preparation of sodium-ion cathode materials with excellent performance using a Co<sub>3</sub>O<sub>4</sub>-modified conformation strategy

Ye Liu, Rui Luo, Jiahao Lu, Rentian Chen, Yuxin Zhung and Tao Wei\*

3916



### Impressive improvement of zinc-iodine battery performance by doping poly(vinyl alcohol) into the cathode

Yang Wang,\* Kaiming Zhou, Zhihan Sun, Shaojie Zhang, Xuan Zhang, Zhou Jiang and Danyang Liu\*

