

# ChemComm

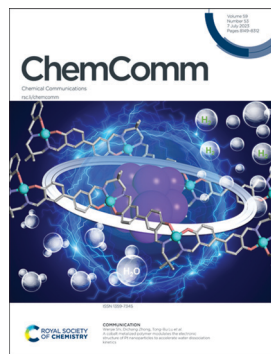
Chemical Communications

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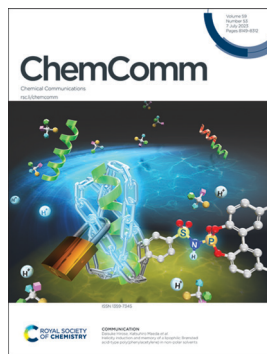
## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(53) 8149-8312 (2023)



### Cover

See Wenjie Shi, Dichang Zhong, Tong-Bu Lu *et al.*, pp. 8222–8225. Image reproduced by permission of Wenjie Shi, Dichang Zhong and Tong-Bu Lu from *Chem. Commun.*, 2023, 59, 8222.



### Inside cover

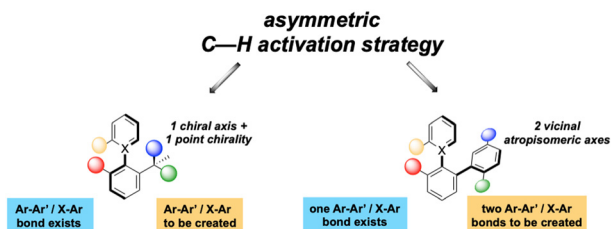
See Daisuke Hirose, Katsuhiro Maeda *et al.*, pp. 8226–8229. Image reproduced by permission of Katsuhiro Maeda from *Chem. Commun.*, 2023, 59, 8226.

## HIGHLIGHT

8159

### One reaction – double stereoreduction: C–H activation as a privileged route towards complex atropisomeric molecules

Amandine Luc and Joanna Wencel-Delord\*

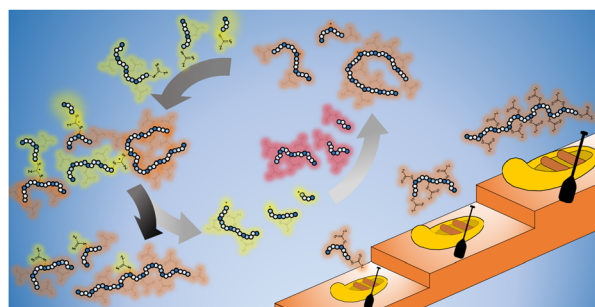


## FEATURE ARTICLES

8168

### Step-growth polymerization by the RAFT process

Joji Tanaka,\* Jiajia Li, Samantha Marie Clouthier and Wei You\*



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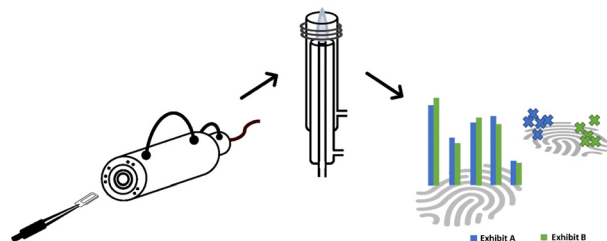


## FEATURE ARTICLES

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## Forensic analysis by solid sampling electrothermal vaporization coupled to inductively coupled plasma optical emission spectrometry

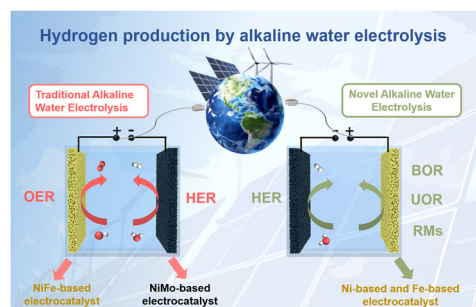
Kate Moghadam and Diane Beauchemin\*



8205

## Hydrogen production by traditional and novel alkaline water electrolysis on nickel or iron based electrocatalysts

Rufei Zhang, Ao Xie, Linting Cheng, Zhiqun Bai, Yang Tang\* and Pingyu Wan\*

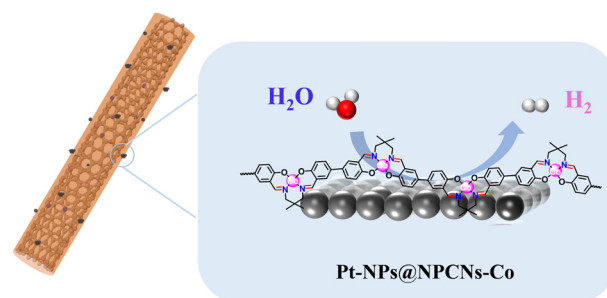


## COMMUNICATIONS

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## A cobalt metalized polymer modulates the electronic structure of Pt nanoparticles to accelerate water dissociation kinetics

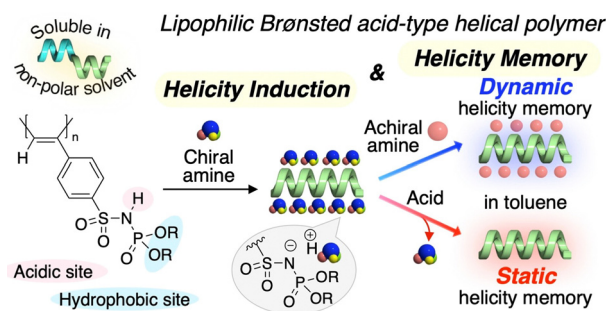
Xiaomei Hu, Weixue Tao, Wenjie Shi,\* Dichang Zhong\* and Tong-Bu Lu\*



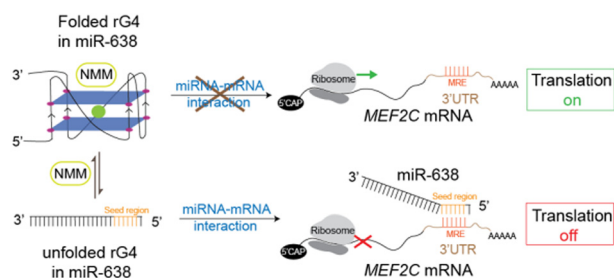
8226

## Helicity induction and memory of a lipophilic Brønsted acid-type poly(phenylacetylene) in non-polar solvents

Yuki Nishikawa, Daisuke Hirose,\* Shota Sona and Katsuhiro Maeda\*



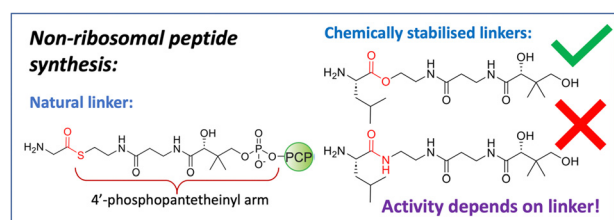
8230



### A G-quadruplex structure in microRNA interferes with messenger RNA recognition and controls gene expression

Kaixin Lyu and Chun Kit Kwok\*

8234

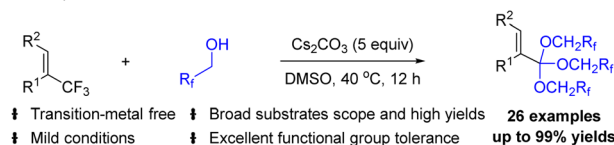


### Not always an innocent bystander: the impact of stabilised phosphopantetheine moieties when studying nonribosomal peptide biosynthesis

Y. T. Candace Ho, Joe A. Kaczmarek, Julien Tailhades, Thierry Izoré, David L. Steer, Ralf B. Schittenhelm, Manuela Tosin, Colin J. Jackson and Max J. Cryle\*

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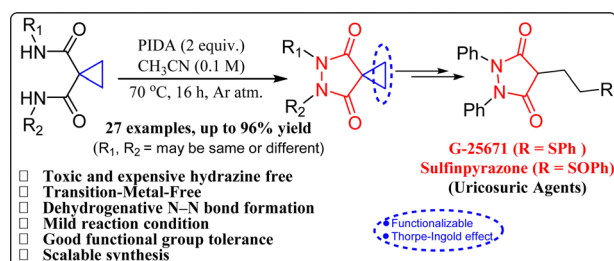
#### Triple ipso-defluorinative functionalization



### Triple ipso-defluoroetherification of (trifluoromethyl)alkenes with fluoroalkylated alcohols: access to fluoroalkylated orthoesters via C(sp<sup>3</sup>)-F bond cleavage

Jia Nie, Huanfeng Jiang and Chuanle Zhu\*

8242



### PIDA-mediated N-N bond formation to access pyrazolidine-3,5-diones: a novel process for uricosuric agents G-25671 and sulfinpyrazone

Priyanka Halder and Santosh B. Mhaske\*

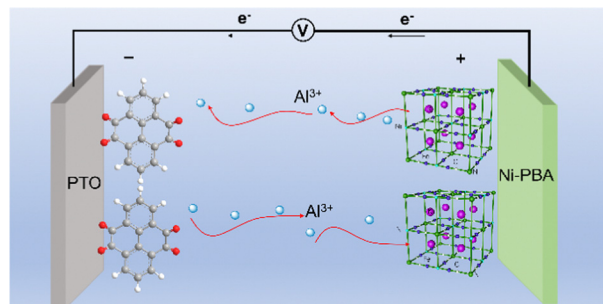


## COMMUNICATIONS

8246

**A rocking-chair aqueous aluminum-ion battery based on an organic/inorganic electrode**

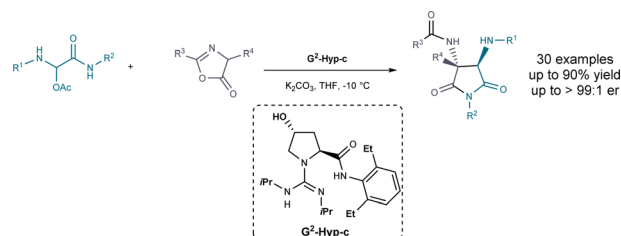
Beibei Yang, Yongkang Wang, Haifeng Bian, Yulin Zhang, Yanyan Du, Hongbin Lu\* and Duan Bin\*



8250

**Asymmetric [3+2]-cyclization of  $\alpha$ -imino amide surrogates to construct 3,4-diaminopyrrolidine-2,5-diones**

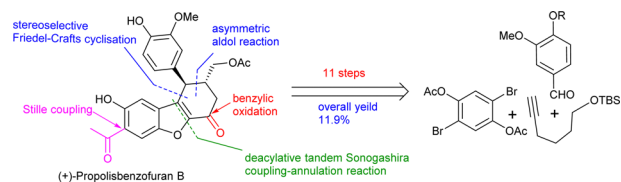
Peiran Ruan, Cefei Zhang, Jin Wu, Fengnan Xiao, Yongyan Zhang, Qingfa Tan, Zhishan Su, Xiaoming Feng and Xiaohua Liu\*



8254

**Asymmetric total synthesis of (+)-propolisbenzofuran B**

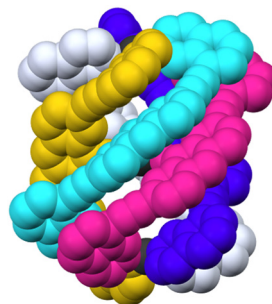
Biswajit Sen, Mainak Bera, Maya Shankar Singh and Saumen Hajra\*



8258

**A five-stranded heterometallic helicate**

Sylvain Sudan, Farzaneh Fadaei-Tirani and Kay Severin\*



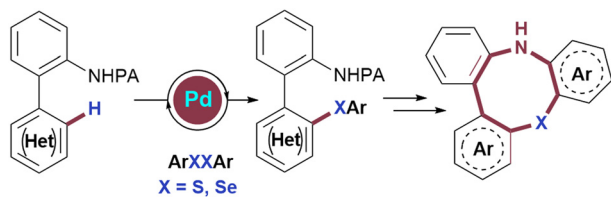
- five-stranded helicate
- 2x Pd<sup>2+</sup>, 1x La<sup>3+</sup>
- low symmetry
- dynamic





## COMMUNICATIONS

8262

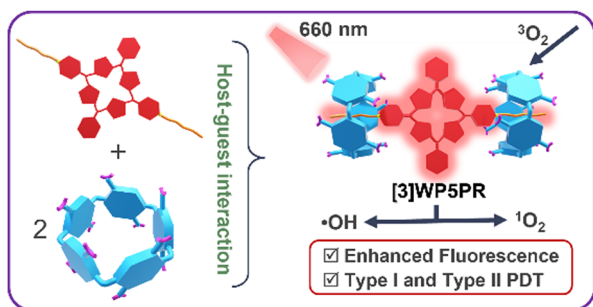


- Distal- and regioselectivity
- Broad substrate scope
- Widely functional group tolerance
- 45 examples, up to 96% yield
- Application to the synthesis of non-planar heterocycles

### Palladium-catalyzed distal selective C–H chalcogenation of biphenyl amines

Yunhao Zhou, Tao Zheng, Yue Xu, Bo Li, Yuchi Wang, Ruhuai Mei, Linghui Gu\* and Wenbo Ma\*

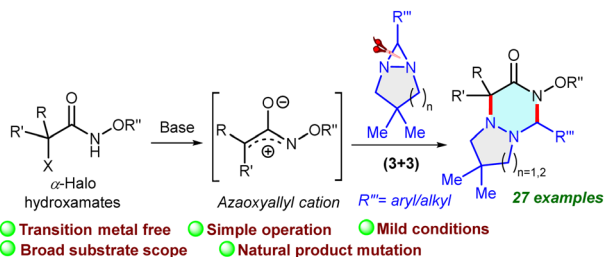
8266



### Pillar[5]arene based water-soluble [3]pseudorotaxane with enhanced fluorescence emission for cell imaging and both type I and II photodynamic cancer therapy

Yue Zhang, Yang Wang,\* Tingting Chen, Ying Han,\* Chaoguo Yan, Jin Wang, Bing Lu, Longtao Ma,\* Yue Ding and Yong Yao\*

8270



- Transition metal free
- Simple operation
- Mild conditions
- Broad substrate scope
- Natural product mutation

### Expedient (3+3)-annulation of *in situ* generated azaoxyallyl cations with diaziridines

Pallab Karjee, Santu Mandal, Bijoy Debnath, Nirali Namdev and Tharmalingam Punniyamurthy\*

8274



### Synthesis of *N*-(acyloxy)-*N*-alkynylamides via generation of "C<sub>2</sub>" from hypervalent alkynyl iodane and a weak base

Kentarō Kagami, Xueying Liang, Nanako Ishibashi, Sayaka Ohruji, Masanori Tayu and Nozomi Saito\*

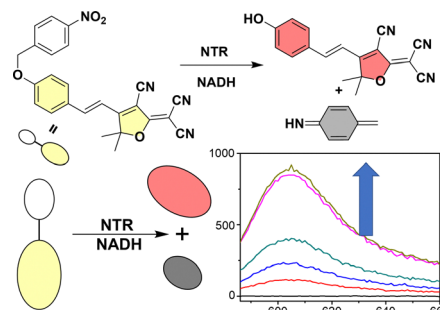


## COMMUNICATIONS

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### A TCF-based fluorescent probe to determine nitroreductase (NTR) activity for a broad-spectrum of bacterial species

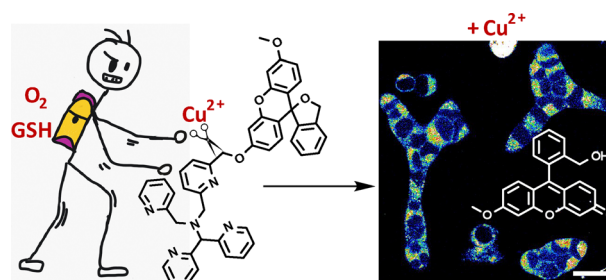
Kai-Cheng Yan, Jordan E. Gardiner, Adam C. Sedgwick, Naing Thet, Rachel A. Heylen, Tony D. James,\* A. Toby A. Jenkins\* and Xiao-Peng He\*



8282

### An activity-based fluorescent sensor with a penta-coordinate N-donor binding site detects Cu ions in living systems

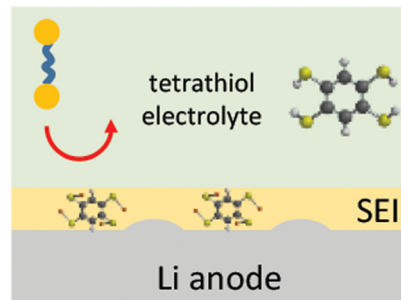
Kunika Gupta and Ankona Datta\*



8286

### Molecular regulation of electrolytes for enhancing anode interfacial stability in lithium–sulfur batteries

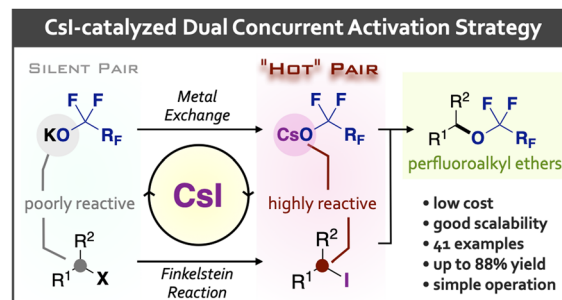
Tianhong Zhou, Yan Zhao, Patrick W. Fritz, Timur Ashirov, Dominika Baster, Mario El Kazzi and Ali Coskun\*



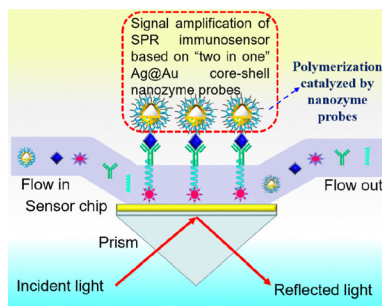
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### Perfluoroalkoxylation reaction via dual concurrent catalysis

Shota Fujioka, Keiichi Hirano,\* Naoyuki Hoshiya, Akiyoshi Yamauchi, Yosuke Kishikawa and Masanobu Uchiyama\*



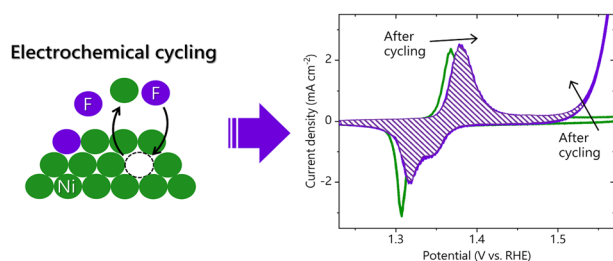
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### “Two-in-one” core-shell nanozyme probes with double signal amplification for high-performing surface plasmon resonance immunosensing

Feng Shi, Fei Yan, Xinyi Zhang, Ruixin Liu, Guomin Jiang, Juan Li,\* Alexander Malinick, Quan Cheng\* and Zhanjun Yang\*

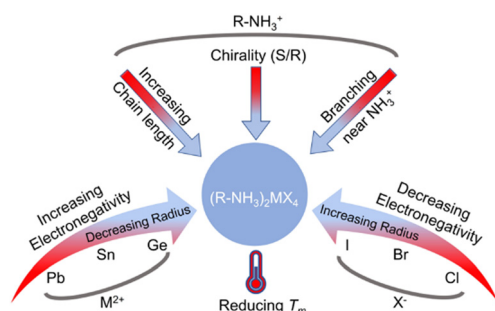
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### Facile route of fluorine incorporation into nickel (oxy)hydroxide for improving the oxygen evolution reaction

Yeongeun Jang, Seungjoon Ha, Hyung-Tae Lim and Seunghwa Lee\*

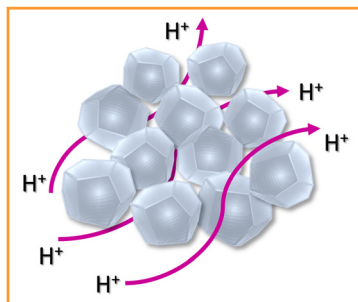
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### A two-dimensional lead-free hybrid perovskite semiconductor with reduced melting temperature

Akash Singh, Ethan Crace, Yi Xie and David B. Mitzi\*

8306



### Thermally stable proton conductivity from nanodiamond oxide

Lutfia Isna Ardhayanti, Md. Saidul Islam, Masahiro Fukuda, Xinyao Liu, Zhongyue Zhang, Yoshihiro Sekine and Shinya Hayami\*

