## ChemComm

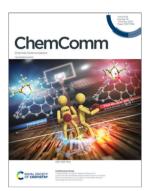
## Chemical Communications

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## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(78) 11597-11742 (2023)



#### Cover

See Yutaka Maeda, Pei Zhao, Masahiro Ehara et al., pp. 11648-11651. Image reproduced by permission of Yutaka Maeda from Chem. Commun., 2023, 59, 11648.



#### Inside cover

See Wei Lu et al., pp. 11652-11655. Image reproduced by permission of Wei Lu from Chem. Commun., 2023, 59, 11652.

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## 11608

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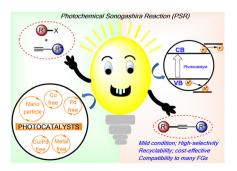


## **HIGHLIGHTS**

## 11615

Photochemical Sonogashira coupling reactions: beyond traditional palladium-copper catalysis

Puja Singh and Aslam C. Shaikh\*



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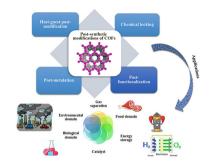


## **HIGHLIGHTS**

#### 11631

## Post-synthetic modifications of covalent organic frameworks (COFs) for diverse applications

Narges Abdolhossein Rejali, Mohammad Dinari\* and Yong Wang\*

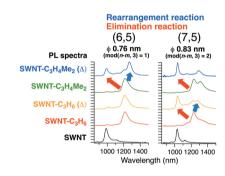


## COMMUNICATIONS

#### 11648

Control of functionalized single-walled carbon nanotube photoluminescence via competition between thermal rearrangement and elimination

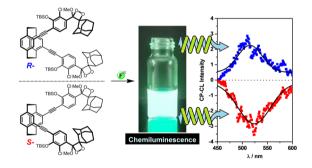
Yutaka Maeda,\* Rina Morooka, Pei Zhao,\* Michio Yamada and Masahiro Ehara\*



## 11652

Circularly polarized chemiluminescence from planar chiral bis(adamantylidene-1,2-dioxetane)s

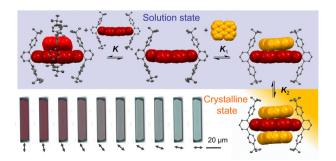
Minglin Shi, Mo Xie, Shigang Wan, Chao Zou, Yuliang Liu, Xinyan Zhou, Peng Yang, Xiaoyong Chang and Wei Lu\*



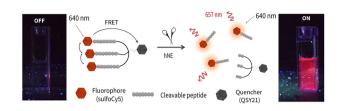
## 11656

Donor-acceptor complex formation by social self-sorting of polycyclic aromatic hydrocarbons and perylene bisimides

Simon Soldner, Olga Anhalt, Menyhárt B. Sárosi, Matthias Stolte and Frank Würthner\*



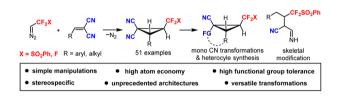
#### 11660



Moving into the red - a near infra-red optical probe for analysis of human neutrophil elastase in activated neutrophils and neutrophil extracellular traps

M. Rodriguez-Rios, G. Rinaldi, A. Megia-Fernandez, A. Lilienkampf, C. T. Robb, A. G. Rossi and M. Bradley\*

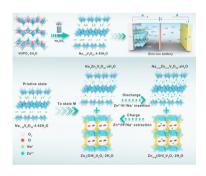
#### 11664



Synthesis of di/trifluoromethyl cyclopropanedicarbonitriles via [2+1] annulation of fluoro-based diazoethanes with (alkylidene)malononitriles

Cheng-Feng Gao, Yue-Ji Chen, Jing Nie, Fa-Guang Zhang,\* Chi Wai Cheung\* and Jun-An Ma\*

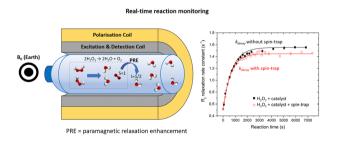
#### 11668



## Oxygen vacancy enriched Na<sub>1.19</sub>V<sub>8</sub>O<sub>20</sub>·4.42H<sub>2</sub>O nanosheets for fast and stable Zn-ion batteries

Mengcheng Wu, Jie Bai, Mengda Xue, Xun Zhao, Lei Mao and Lingyun Chen\*

#### 11672



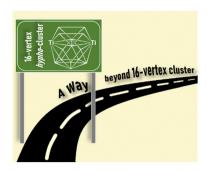
## Earth's field NMR relaxation of pre-polarised water protons for real-time detection of free-radical formation

Alexandru Topor, Mihai A. Voda and Paul R. Vasos\*

#### 11676

## 16-Vertex oblato-hypho-titanaborane $[(Cp*Ti)_2B_{14}H_{18}]$

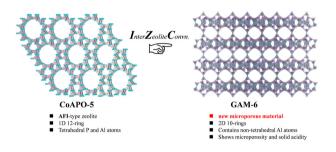
Sourav Kar, Subhash Bairagi, Jean-François Halet\* and Sundargopal Ghosh\*



#### 11680

## Two-dimensional microporous GAM-6 formed by the interzeolite conversion of CoAPO-5

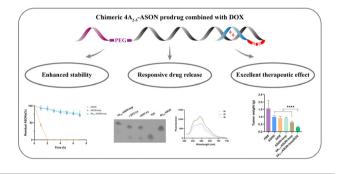
Kenichi Komura,\* Edo Imai,\* Kazuma Oka and Takuji Ikeda\*



## 11684

## Design, characterization and biological evaluation of a new chimeric 4A2-5-antisense prodrug combined with chemotherapy

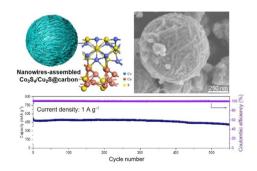
Zuyi Chen, Zhe Zhang, Shuangshuang Liu, Zhenyu Xiao, Yuan Luo, Liang Xu\* and Xuesong Feng\*



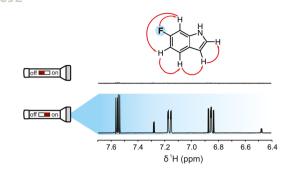
#### 11688

A nanowire-assembled Co<sub>3</sub>S<sub>4</sub>/Cu<sub>2</sub>S@carbon binary metal sulfide hybrid as a sodium-ion battery anode displaying high capacity and recoverable rate-performance

Jinyun Liu,\* Xiaofei Huang, Rui Wang, Tianli Han and Huigang Zhang



#### 11692



## Lighting up spin systems: enhancing characteristic <sup>1</sup>H signal patterns of fluorinated molecules

Marshall J. Smith, Jack E. Bramham, Mathias Nilsson, Gareth A. Morris, Laura Castañar\* and Alexander P. Golovanov\*

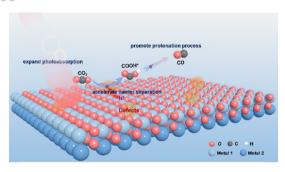
#### 11696



## Unexpected rapid P-stereomutation of phosphine oxides catalysed by chlorophosphonium salts

Sulaiman Al-Sulaimi, Kamalraj Rajendran, Kirill Nikitin\* and Declan G. Gilheany\*

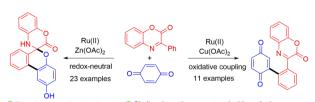
#### 11700



## Optimized full CO<sub>2</sub> photoreduction process by defective spinel atomic layers

Yang Wu, Dongpo He, Lei Li, Zhigiang Wang, Wensheng Yan, Junfa Zhu, Yang Pan, Qingxia Chen,\* Xingchen Jiao\* and Yi Xie

## 11704



- Oiversity-oriented synthesis
- Inexpensive Ru(II) catalyst
- Unprecedented Ru(II) complex
- Challenging spiropyrans & valuable arylquinones
- Excellent chemo- and regio-selectivity
- Scalability & broad scope

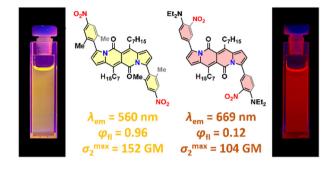
## Synthesis of spiropyrans and arylquinones via Ru(II)-catalyzed condition-controlled coupling of 3-aryl-2H-benzoxazinones with benzoquinones

Mengying Zhang, Yuhao He, Song Li, Yuehua Geng, Xiangyang Liu and Xifa Yang\*

#### 11708

## Realization of nitroaromatic chromophores with intense two-photon brightness

Bartłomiei Sadowski.\* Marzena Kaliszewska. Guillaume Clermont, Yevgen M. Poronik. Mireille Blanchard-Desce,\* Piotr Piątkowski\* and Daniel T. Gryko\*



## 11712

Phosphine-catalyzed [5+1] annulation of β'-acetoxy allenoates: straightforward access to tetrahydroquinoline derivatives

Yannan Zhu, Zhili Xu and Yi-Ning Wang\*

$$R^{1}CC COR^{1} + OAC CO_{2}R^{4} \frac{PPh_{3} (30 \text{ mol}\%)}{K_{3}PO_{4} (1.05 \text{ eq}) CHCl_{3}, 0 °C} R^{2} \frac{PPh_{3} (30 \text{ mol}\%)}{R^{3}}$$

$$\bullet \text{ new reaction mode of } \beta \text{-acetoxy allenoates}$$

$$\bullet C1 \text{ synthons}$$

$$\bullet \text{ mild and efficient}$$

$$COR^{1} CO_{2}R^{4}$$

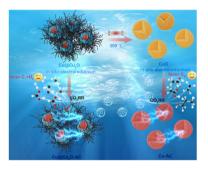
$$22 \text{ examples}$$

$$57-82\% \text{ yields}$$

## 11716

Correlating the valence state of a Cu-based electrocatalyst for CO<sub>2</sub> reduction to C<sub>2+</sub>

Yifan Li, Wanqing Hong, Shiyi Chen, Rui Duan, Sini Chai, Wenping Du, Jian Yang\* and Junjie Mao\*



#### 11720

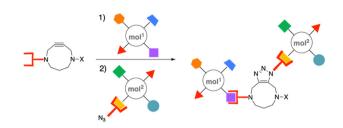
Phosphine-catalyzed Rauhut-Currier reaction of γ-alkyl allenoate and subsequent trapping using the Diels-Alder reaction

Juan Zhang, Wei Hao, Ying Chen, Zhen Wang,\* Jinzhong Yao and Weijun Yao\*



- ♣ 1 pot 2 steps 3 C–C bonds
- A high yield, up to quantitative yield
- stereospecificity
- ♣ 26 examples

#### 11724



## Development of DACN-NHS-ester and DACN-maleimide, and their application for the synthesis of artificial hybrid biomolecules

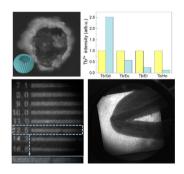
Yuuya Kawasaki, Tomoya Hayashibara, Yuki Seto, Yutaro Taniguchi, Kazunobu Igawa and Katsuhiko Tomooka\*

# 11728 High crystallinity and stability Tunable optoelectronic properties Enhanced photocatalytic activity

## Fabricating s-collidine-derived vinylene-linked covalent organic frameworks for photocatalysis

Zuyi Li, Wengjing Wang, Feng Tao, Wenwen Zhou, Lianke Wang, Zhipeng Yu, Kaixuan Wang,\* Jie Zhang\* and Hongping Zhou\*

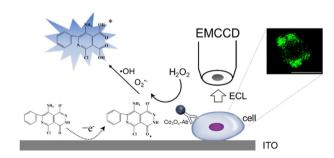
11732



## A hollow NaBiF4:Tb nanoscintillator with ultra-weak afterglow for high-resolution X-ray imaging

Huirong Zou, Minghao Yi, Shiging Xu and Lei Lei\*

11736



## Enhanced electrochemiluminescence imaging of single cell membrane proteins based on Co<sub>3</sub>O<sub>4</sub> nanozyme catalysis

Jingjing Zhang, Lin Hao,\* Jie Chao, Lianhui Wang and Shao Su\*

## CORRECTION

11740

## Correction: Synthesis of vertically aligned carbon nanotube arrays on polyhedral Fe/Al<sub>2</sub>O<sub>3</sub> catalysts

Jun Liu, Lixiang Yuan,\* Xiaoshuang Yang, Anthony Ebert and Andrew T. Harris\*