# ChemComm

# Chemical Communications

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# IN THIS ISSUE

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### Cover

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#### Inside cover

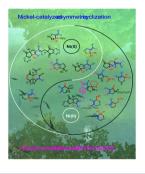
See Ronald T. Raines et al., pp. 4451-4454. Image reproduced by permission of Ronald T. Raines from Chem. Commun., 2023, 59, 4451.

# HIGHLIGHT

### 4405

Recent developments in nickel-catalyzed asymmetric cyclization and cycloaddition of carbonyl-alkynes, cyano-alkynes, and enynes

Jun Yan, Min Shi\* and Yin Wei\*



### **FEATURE ARTICLES**

# 4423

# Colorectal cancer therapy mediated by nanomedicines

Shaopeng Zhang, Hao Zhang, Peizhe Song, Daguang Wang\* and Yinghui Wang\*



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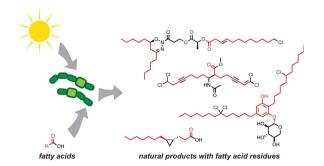


### FEATURE ARTICLES

#### 4436

# Incorporation and modification of fatty acids in cyanobacterial natural products biosynthesis

Pedro N. Leão.\* Teresa P. Martins, Kathleen Abt. João P. A. Reis, Sandra Figueiredo, Raquel Castelo-Branco and Sara Freitas

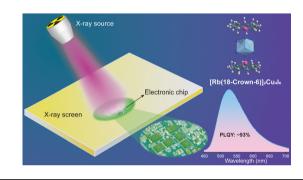


# COMMUNICATIONS

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# Zero-dimensional Cu(ı)-based organometallic halide with green cluster-centred emission for high resolution X-ray imaging screens

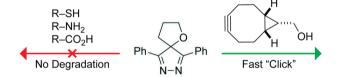
Alaa M. Almushaikeh, Hong Wang, Luis Gutiérrez-Arzaluz, Jun Yin, Ren-Wu Huang, Osman M. Bakr and Omar F. Mohammed\*



### 4451

# Bioorthogonal 4H-pyrazole "click" reagents

Nile S. Abularrage, Brian J. Levandowski, JoLynn B. Giancola, Brian J. Graham and Ronald T. Raines\*

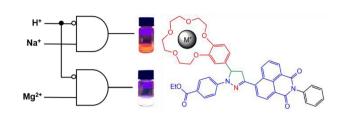


### 4455

# Regioselective synthesis of phenanthridine-fused quinazolinones using a 9-mesityl-10-methylacridinium perchlorate photocatalyst

Rosalin Bhanja, Shyamal Kanti Bera and Prasenjit Mal\*

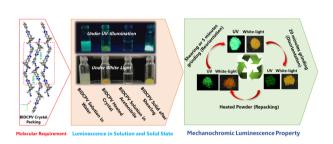
### 4459



A white light emitting reconfigurable pyrazoline-naphthalimide logic gate with magnesium, sodium and proton inputs

David C. Magri\* and Anthony A. Camilleri

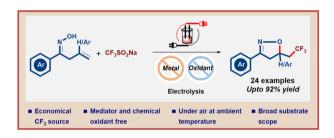
#### 4463



# A convenient route to a vinylogous dicyano aryl based AIEgen with switchable mechanochromic luminescence properties

Sauraiit Ghosh, Himanshi Bhambri, Aieet Kumar Singh, Sanjay K. Mandal, Lisa Roy and Partha Sarathi Addy\*

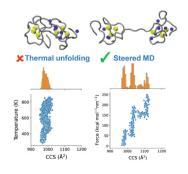
#### 4467



# Mediator-free electrochemical trifluoromethylation: a cascade approach for the synthesis of trifluoromethylated isoxazolines

Kingshuk Mahanty, Suman Kumar Saha, Atreyee Halder and Suman De Sarkar\*

### 4471



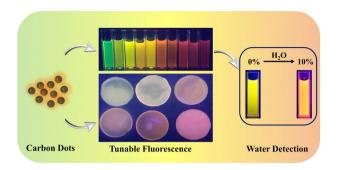
# Ion mobility mass spectrometry and molecular dynamics simulations unravel the conformational stability of zinc metallothionein-2 species

Manuel David Peris-Díaz,\* Alexey Barkhanskiy, Ellen Liggett, Perdita Barran\* and Artur Krężel\*

#### 4475

# Liquid and solid-state tunable fluorescent carbon dots for trace water detection

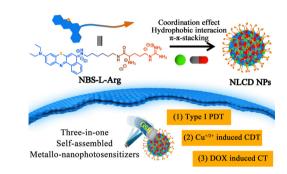
Nan Li, Xuezhe Dong, Xugui Lv, Yunfei Li, Qingvu Ma,\* Ruifang Guan\* and Zheng Xie\*



#### 4479

Three-in-one self-assembled metallo-nanophotosensitizers for photodynamic/chemodynamic/chemo multimodal synergistic cancer therapy

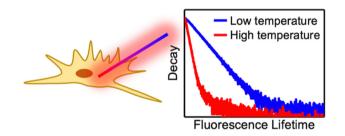
Shuang Chao, Ziyan Shen, Jiaming Ren, Zhilin Zhang, Xiaolin Chen, Yuxin Pei and Zhichao Pei\*



### 4483

Single nanowire-based fluorescence lifetime thermometer for simultaneous measurement of intra- and extra-cellular temperatures

Yuan Wang, Qiaowen Zhao, Sen Liang, Mingliang Mei, Guangwei She, Wensheng Shi\* and Lixuan Mu\*



### 4487

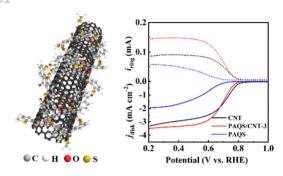
# Diastereo- and enantioselective synthesis of biaryl aldehydes bearing both axial and central chirality

Fen Huang, Ling-Fei Tao, Jiyong Liu, Linghui Qian\* and Jia-Yu Liao\*

#### Key features:

- simultaneous construction of both axial and central chirality wide substrate scope

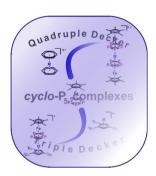
4491



Highly active quinone site-enriched carbon nanotube composites for efficient electrocatalytic hydrogen peroxide generation

Yuwen Tian, Qianqian Wang, Yanyan Song, Jifa Yang, Jinzheng Liu, Xuejun Liu\* and Lixue Zhang\*

4495



Teaching old tricks to new dogs - rational synthesis of multi-decker complexes featuring cyclo-P5 decks

Christoph Riesinger, David Röhner, Ingo Krossing and Manfred Scheer\*

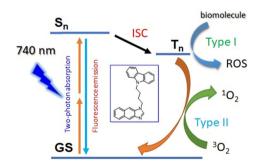
4499



# Radical-mediated remote migration of quinoxalinones

Chenyang Chang, Qi Zhang, Xinxin Wu and Chen Zhu\*

4503



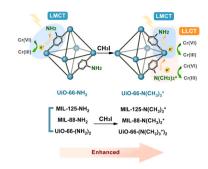
Imidazole-carbazole conjugate for two-photon-excited photodynamic therapy and fluorescence bioimaging

Thanh Chung Pham, Dong Joon Lee, Do Hun Kim, Juyoung Yoon, Tran Dai Lam, Hwan Myung Kim\* and Songyi Lee\*

#### 4507

# Partial quaternization promoted metal-organic frameworks for efficient photocatalytic removal of chromium(vi)

Xiaocong Tang, Xu Wu, Hao Wu, Xinyu Zhang, Mingbao Feng, Tong Ouyang, Huanting Wang and Ranwen Ou\*



#### 4511

# Polyethyleneimine-functionalized PdOs bimetallene for enhanced oxygen reduction

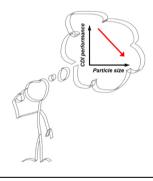
Ziqiang Wang, Shan Xu, Min Li, Kai Deng, Hongjie Yu, You Xu, Xiaonian Li, Hongjing Wang\* and Liang Wang\*



# 4515

# Particle size optimization of metal-organic frameworks for superior capacitive deionization in oxygenated saline water

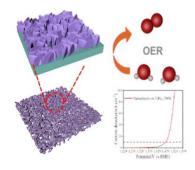
Zhiyuan Xing, Xiaoxu Xuan, Haiyan Hu,\* Mohua Li,\* Huimin Gao, Azhar Alowasheeir, Dong Jiang, Liyang Zhu, Zhengtong Li, Yunqing Kang, Jing Zhang, Xibin Yi, Yusuke Yamauchi\* and Xingtao Xu\*



### 4519

# Hierarchical iron-nickel oxyhydroxide nanosheets directly grown on porous TiFe2-based intermetallics for robust oxygen evolution

Qian Zhao, Zhenli He, Yuehui He, Yue Qiu, Zhonghe Wang and Yao Jiang\*



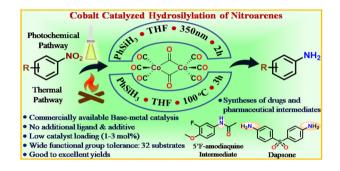
4523

Brønsted acid Lewis acid 30 examples, up to 82% yield

- High atom economy and chemoselectivity
- Good functional group compatibility Sequential construction of C-C and C-N bonds
  Simple and readily available reagents
- Lewis/Brønsted acid-mediated cyclization/ amidation of 1,6-enynes with nitriles: access to 3-enamide substituted dihydrobenzofurans

Zan Chen, Wenting Huang, Yu Su, Huanfeng Jiang and Wanqing Wu\*

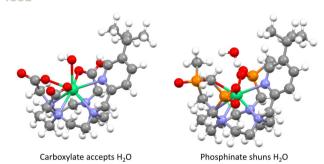
4527



Cobalt catalyzed chemoselective reduction of nitroarenes: hydrosilylation under thermal and photochemical reaction conditions

Surajit Panda, Amareshwar Nanda, Rakesh R. Behera, Rahul Ghosh and Bidraha Bagh\*

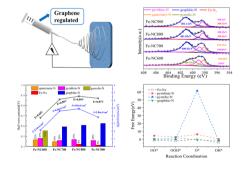
4531



# Determination of molecular hydration in solution via changes in magnetic anisotropy

Marcus J. Giansiracusa, Michele Vonci, Yasmin L. Whyatt, Carys Williams, Kevin Mason, David Parker,\* Eric J. L. McInnes\* and Nicholas F. Chilton\*

4535



An attempt to confirm the contribution to ORR activity of different N-species in M-NC (M = Fe, Co, Ni) catalysts with XPS analysis

Zhuxin Li, Hongquan Yu, Yong Zhang, Danyang Wu, Yunxiang Bai, Shuhong Liu and Hong Zhao\*