

# ChemComm

Chemical Communications

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## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(62) 9415-9546 (2023)



### Cover

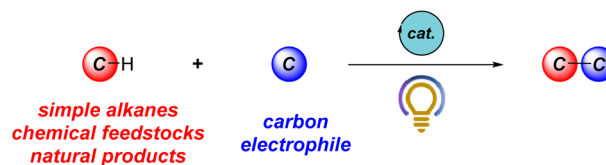
See Manuel Ferrer *et al.*, pp. 9469–9472. Image reproduced by permission of Manuel Ferrer and Design Cells from *Chem. Commun.*, 2023, 59, 9469.

## HIGHLIGHT

9424

### C–C bond formation *via* photocatalytic direct functionalization of simple alkanes

Álvaro Velasco-Rubio, Pol Martínez-Balart, Andrés M. Álvarez-Constantino and Martín Fañanás-Mastral\*

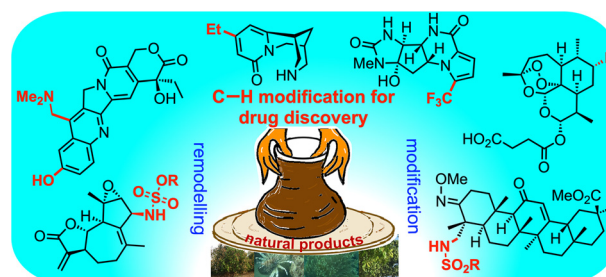


## FEATURE ARTICLES

9445

### C–H modification of natural products: a minimalist enabling tactic for drug discovery, API processing and bioconjugation

Saumitra Sengupta,\* Srihari Pabbaraja\* and Goverdhan Mehta\*



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## FEATURE ARTICLES

9457

## Overcoming the challenges of infrared photosensitizers in photodynamic therapy: the making of redaporfin

Luis G. Arnaut\* and Mariette M. Pereira\*

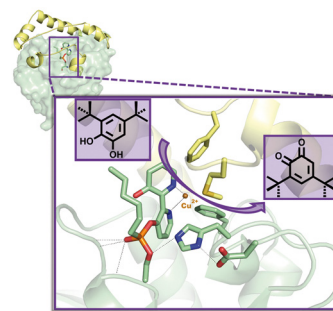


## COMMUNICATIONS

9469

## Transforming an esterase into an enantioselective catecholase through bioconjugation of a versatile metal-chelating inhibitor

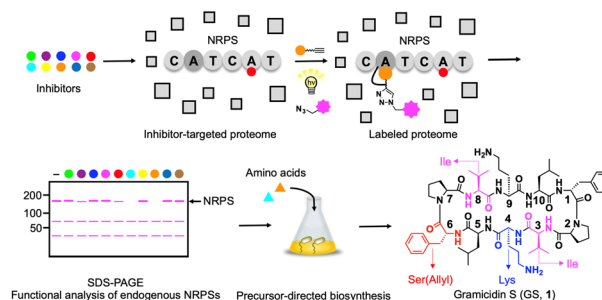
Laura Fernandez-Lopez, Isabel Cea-Rama, Julia Alvarez-Malmagro, Anna K. Ressmann, Jose L. Gonzalez-Alfonso, Cristina Coscolin, Patrick Shahgaldian, Francisco J. Plou, Jan Modregger, Marcos Pita, Julia Sanz-Aparicio and Manuel Ferrer\*



9473

## Biosynthetic diversification of non-ribosomal peptides through activity-based protein profiling of adenylation domains

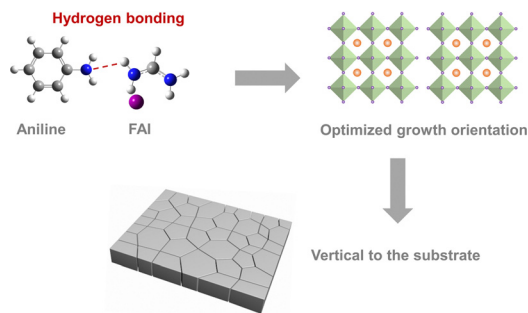
Fumihiro Ishikawa,\* Natsumi Tsukumo, Erika Morishita, Shumpei Asamizu, Saaya Kusuhara, Shinsuke Marumoto, Katsuki Takashima, Hiroyasu Onaka and Genzoh Tanabe\*



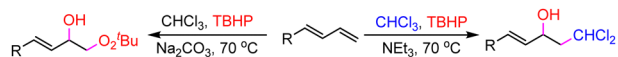
9477

## Regulating the crystallization dynamics through hydrogen bonding for high efficiency tin halide perovskite solar cells

Zhiyue Tang, Cheng Wu, Shurong Wang, Yu Xiao, Liming Ding and Feng Hao\*



9481



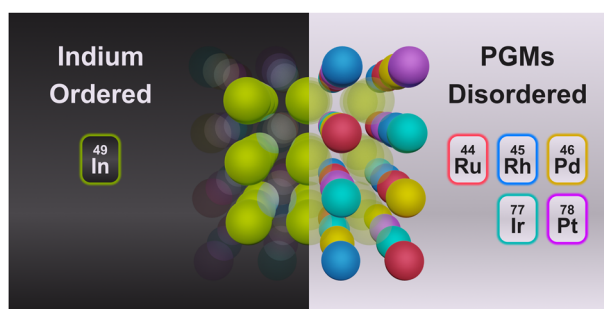
★ Selective 1,2-difunctionalization    ★ Exactly with (*E*)-configuration

★ Selective incorporation of two distinct functional group

### Base-tuned selective 1,2-dichloromethyl-hydroxylation and 1,2-peroxyhydroxylation of 1,3-dienes *via* a tandem radical process

Jiantao Zhang, Weiming Zhu, Peng Zhou,\* Cui Chen and Weibing Liu\*

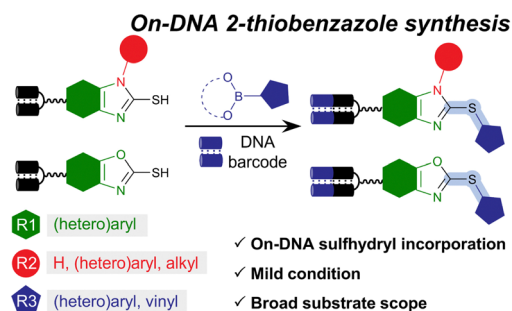
9485



### B2-structured indium–platinum group metal high-entropy intermetallic nanoparticles

Masashi Nakamura, Dongshuang Wu,\* Megumi Mukoyoshi, Kohei Kusada, Takaaki Toriyama, Tomokazu Yamamoto, Syo Matsumura, Yasukazu Murakami, Shogo Kawaguchi, Yoshiki Kubota and Hiroshi Kitagawa\*

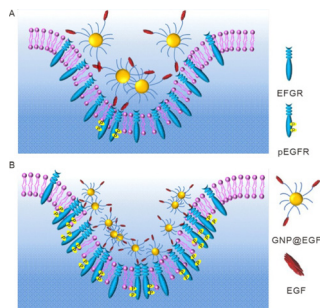
9489



### DNA-compatible combinatorial synthesis of functionalized 2-thiobenzazole scaffolds

Xianfeng Li, Changyang Liu, Yuting Gao, Gong Zhang,\* Yangfeng Li\* and Yizhou Li\*

9493



### *In situ* decrypting plasmonic nanoparticle size-controlled phosphorylation of epidermal growth factor receptor in living cells

Hongyan Wang, Yan Ding, Yu Zhang, Xiaoqi Shi and Honglin Liu\*

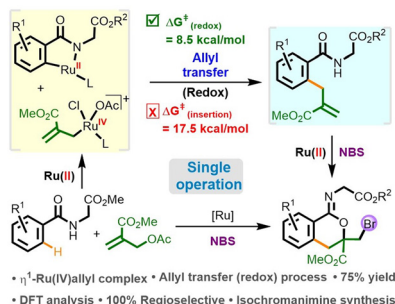


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9497

### Ru(II)/Ru(IV)-catalyzed C(sp<sup>2</sup>)-H allylation with alkene difunctionalization to access isochroman-1-imines

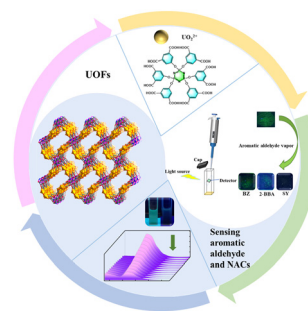
Ashish Joshi, Shruti Moorthy, Lilesh Rambhai Chavada, Saurabh Kumar Singh\* and Ashok Kumar Pandey\*



9501

### A UOF based on a cyclotriphosphazene skeleton: fluorescence sensing of different substituted aldehydes and NACs

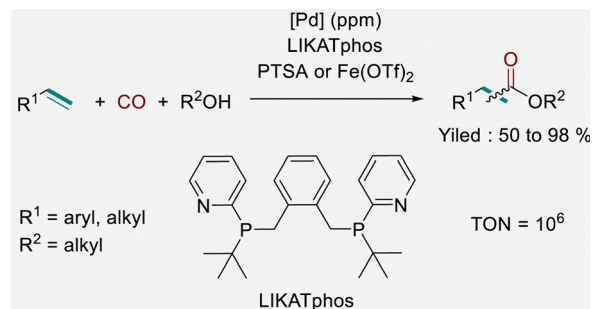
Yao Xiao, Zi-Xin You, Qing-lin Guan, Li-Xian Sun, Yong-Heng Xing\* and Feng-Ying Bai\*



9505

### Towards "homeopathic" palladium-catalysed alkoxycarbonylation of aliphatic and aromatic olefins

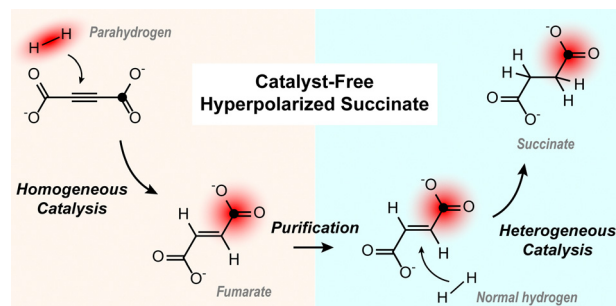
Weiheng Huang, Ralf Jackstell,\* Robert Franke\* and Matthias Beller\*



9509

### Combined homogeneous and heterogeneous hydrogenation to yield catalyst-free solutions of parahydrogen-hyperpolarized [1-<sup>13</sup>C]succinate

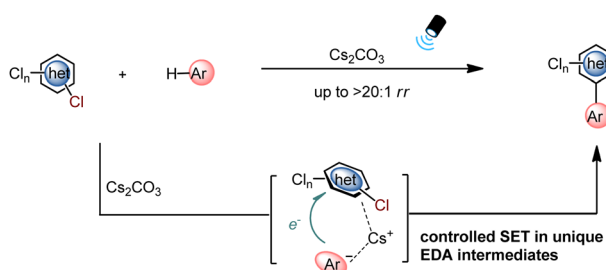
James Eills,\* Román Picazo-Frutos, Dudari B. Burueva, Larisa M. Kovtunova, Marc Azagra, Irene Marco-Rius, Dmitry Budker and Igor V. Koptyug\*





## COMMUNICATIONS

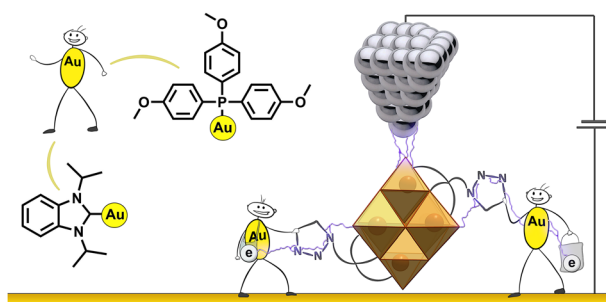
9513



### A transition metal- and photosensitizer-free approach for site-selective (hetero)arylation of polychlorinated heteroarenes

Xiuliang Cheng, Yuhang He, Silin Song, Yu-Mei Lin\* and Lei Gong\*

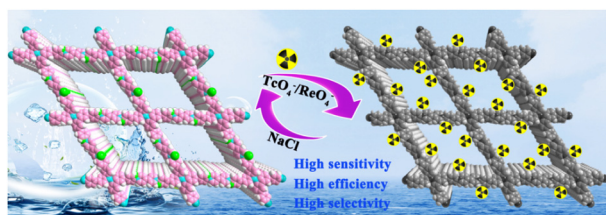
9517



### Increasing the redox switching capacity of Lindqvist-type hexavanadates by organogold post-functionalisation

Stanislav K. Petrovskii, Marco Moors, Sebastian Schmitz, Elena V. Grachova\* and Kirill Yu. Monakhov\*

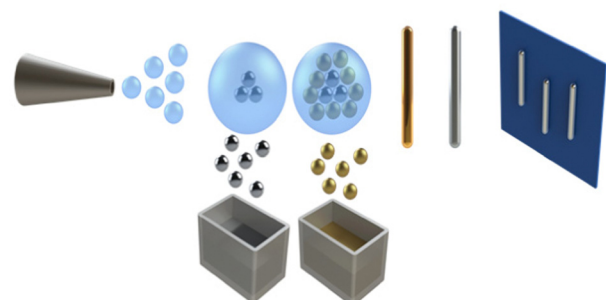
9521



### Ionic covalent organic framework for selective detection and adsorption of $\text{TcO}_4^-/\text{ReO}_4^-$

Xiao-Rong Chen, Cheng-Rong Zhang, Xin Liu, Ru-Ping Liang\* and Jian-Ding Qiu\*

9525



### Strong metal-support bonding enhanced thermal stability in Au-Al<sub>2</sub>O<sub>3</sub> core-shell nanowires characterized by *in situ* transmission electron microscopy

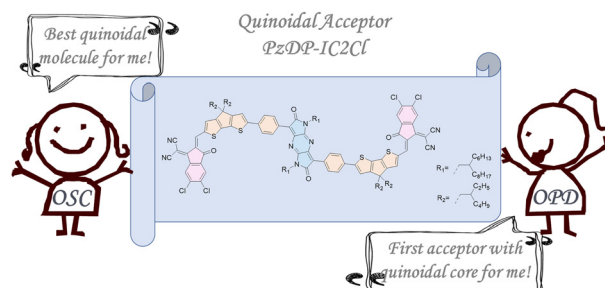
Haotian Yang, Claron J. Ridge, Kyle Overdeep, C. Michael Lindsay, Xiao Tong and Alexander Orlov\*



9529

### An electron acceptor with an intrinsic quinoidal core for bulk-heterojunction organic solar cells and photodetectors

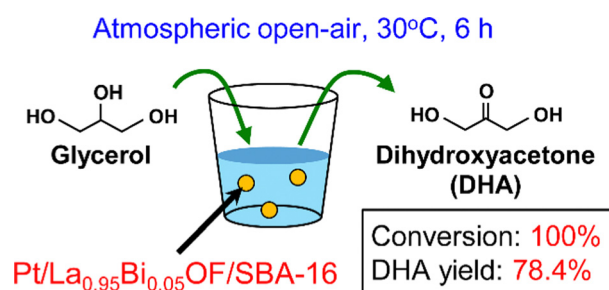
Haozhe Feng, Bingyan Yin, Langheng Pan, Xinyuan Liu, Seoyoung Kim, Yanfei Zhao,\* Xuelong Huang,\* Changduk Yang and Chunhui Duan\*



9533

### Dihydroxyacetone production by glycerol oxidation under moderate condition using Pt loaded on La<sub>1-x</sub>Bi<sub>x</sub>OF solids

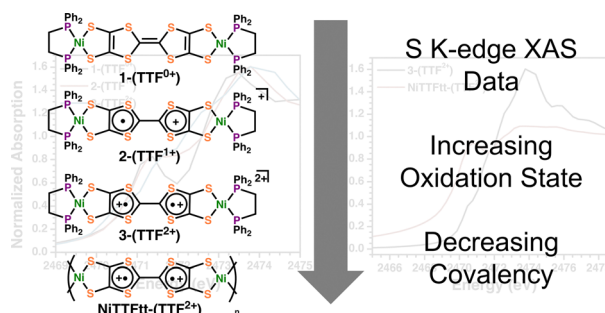
Naoyoshi Nunotani, Masanari Takashima, Yeon-Bin Choi, Yuta Uetake, Hidehiro Sakurai and Nobuhito Imanaka\*



9537

### Tetrathiafulvalene-2,3,6,7-tetrathiolate linker redox-state elucidation via S K-edge X-ray absorption spectroscopy

Ningxin Jiang, Jan-Niklas Boyn, Arun Ramanathan, Henry S. La Pierre\* and John S. Anderson\*



9541

### Selective synthesis of boron-substituted enynes via a one-pot diboration/protodeboration sequence

Jakub Szyling,\* Aleksandra Szymańska and Jędrzej Walkowiak\*

