

# 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 60(6) 621-768 (2024)



### Cover

See Demyan E. Prokopchuk *et al.*, pp. 674–677. Image reproduced by permission of Demyan Prokopchuk from *Chem. Commun.*, 2024, 60, 674.



### Inside cover

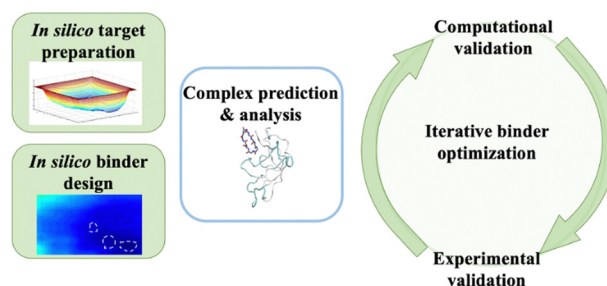
See Takashi Ikawa *et al.*, pp. 678–681. Image reproduced by permission of Takashi Ikawa from *Chem. Commun.*, 2024, 60, 678.

## HIGHLIGHT

632

### Unlocking novel therapies: cyclic peptide design for amyloidogenic targets through synergies of experiments, simulations, and machine learning

Daria de Raffe and Ioana M. Ilie\*

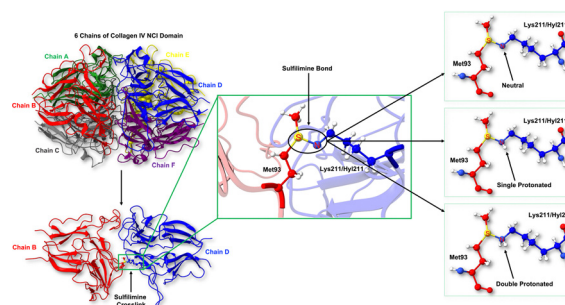


## FEATURE ARTICLES

646

### Sulfilimine bond formation in collagen IV

Anupom Roy and James W. Gauld\*



# Environmental Science journals

One impactful portfolio for  
every exceptional mind

Harnessing the power of interdisciplinary  
science to preserve our environment



[rsc.li/envsci](https://rsc.li/envsci)

Fundamental questions  
Elemental answers



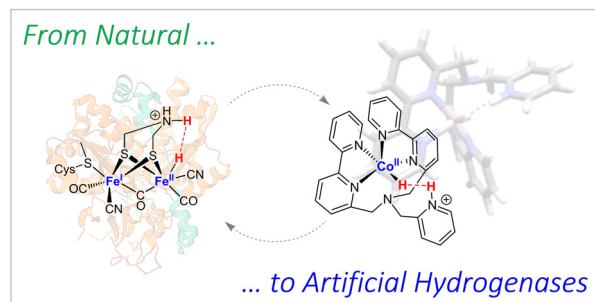


## FEATURE ARTICLES

658

Bioinspired motifs in proton and CO<sub>2</sub> reduction with 3d-metal polypyridine complexes

Federico Droghetti, Agnese Amati, Albert Ruggi\* and Mirco Natali\*

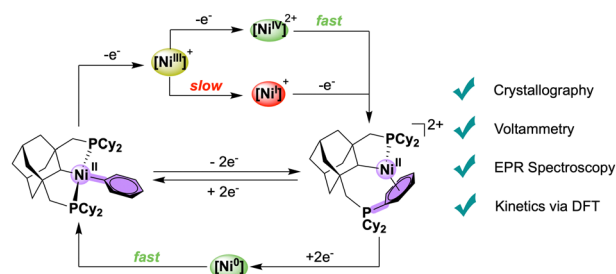


## COMMUNICATIONS

674

## Accessing Ni(0) to Ni(IV) via nickel–carbon–phosphorus bond reorganization

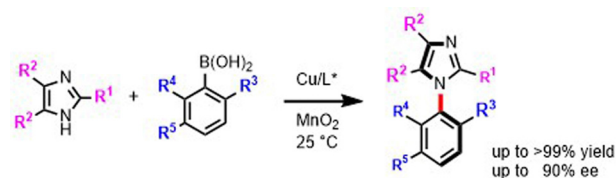
Lirong Lin, David S. Tresp, Denis M. Spasyuk, Roger A. Lalancette and Demyan E. Prokopchuk\*



678

## First atroposelective Chan–Lam coupling for the synthesis of C–N linked biaryls

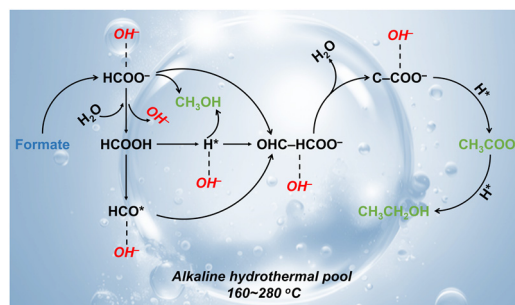
Moeka Ishida, Rina Adachi, Kazuki Kobayashi, Yukiko Yamamoto, Chinatsu Kawahara, Tsuyoshi Yamada, Hiroshi Aoyama, Kyohei Kanomata, Shuji Akai, Patrick Y. S. Lam, Hironao Sajiki and Takashi Ikawa\*



682

## Promoting nonsymmetric C–C coupling to valuable oxygenates without metal catalysts in alkali aqueous medium

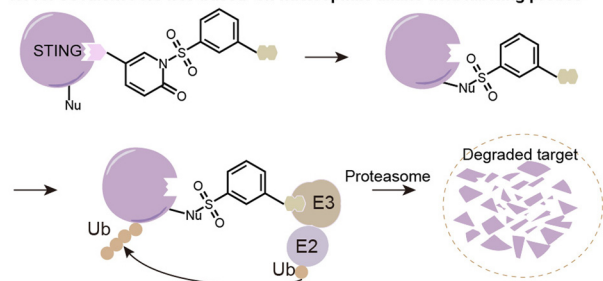
Peidong Zhu, Chunling Wang,\* Heng Zhong, Yang Yang and Fangming Jin\*



## COMMUNICATIONS

686

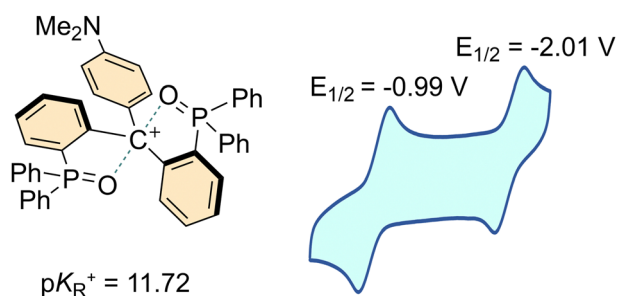
Novel Covalent PROTAC based on nucleophilic amino acid labeling probes



## Covalent PROTAC design method based on a sulfonyl pyridone probe

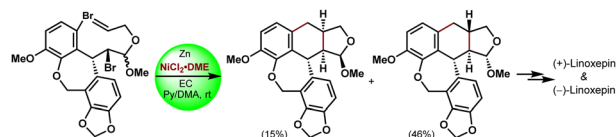
Qinhong Luo, Yaqi Wang, Zhanfeng Hou, Huiting Liang, Licheng Tu, Yun Xing, Chuan Wan, Jianbo Liu, Rui Wang, Lizhi Zhu, Wei Han, Jianlong Wu,\* Fei Lu,\* Feng Yin\* and Zigang Li\*

690

Double axial stabilization of a carbenium ion via convergent P=O → C<sup>+</sup> tetrel bonding

Elishua D. Litle and François P. Gabbaï\*

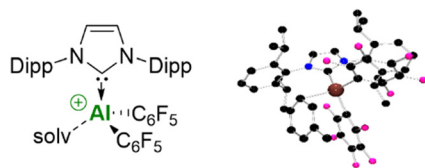
694



## Intramolecular Ni-catalyzed reductive coupling enables enantiodivergent synthesis of linolepin

Zi-Hao Liu, Jian Xiao,\* Qian-Qian Zhai, Xi Tang, Li-Jun Xu, Zhi-Yuan Zhuang, Ya-Wen Wang and Yu Peng\*

698



- ✓ Lewis Superacidity
- ✓ Isolable and Thermostable
- ✓ Versatile Catalyst

The Lewis superacidic aluminium cation: [(NHC)Al(C<sub>6</sub>F<sub>5</sub>)<sub>2</sub>]<sup>+</sup>

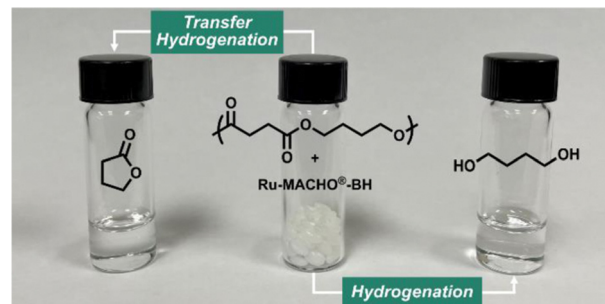
Shaoying Ju, Chi Zhang, Beili Tang, Liu Leo Liu, Douglas W. Stephan\* and Yile Wu\*



702

### Highly selective pressure-dependent (transfer) hydrogenative depolymerization of polybutylene succinate

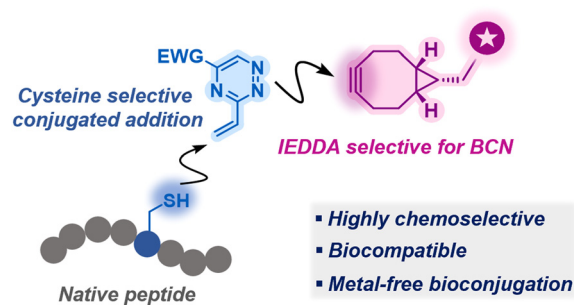
Mary L. Johnson, Rachel L. Fine, Dakota S. Stankowski, Casey A. Koch, Kylie A. Limoges and Nicholas J. Robertson\*



706

### Site-selective peptide functionalisation mediated via vinyl-triazine lincchpins

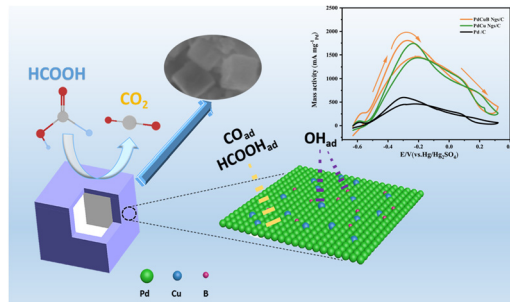
Jack D. Sydenham, Hikaru Seki, Sona Krajcovicova, Linwei Zeng, Tim Schober, Tomas Deingruber and David R. Spring\*



710

### Hollow cubic ternary PdCuB nanocage electrocatalysts with greatly enhanced catalytic performance for formic acid oxidation

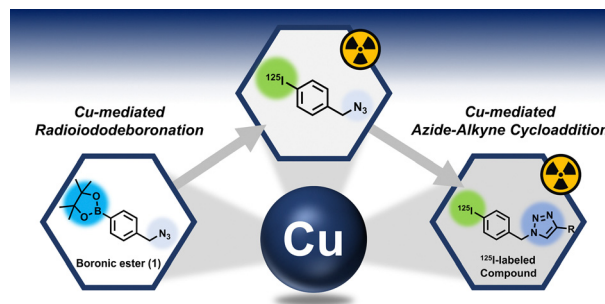
Fu-Kai Yang, Yue Fang, Bing-Tao Gong, Wei-Li Qu,\* Chao Deng and Zhen-Bo Wang



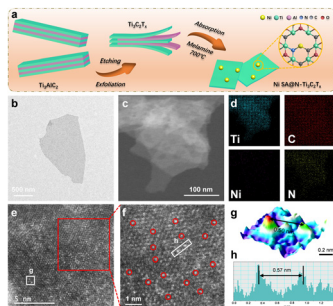
714

### One-pot two-step radioiodination based on copper-mediated iododeboronation and azide-alkyne cycloaddition reaction

Yuto Kondo, Hiroyuki Kimura,\* Ryota Chisaka, Yasunao Hattori, Hidekazu Kawashima and Hiroyuki Yasui



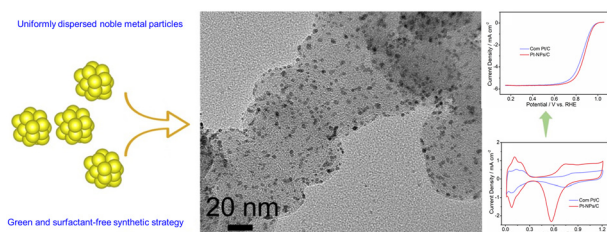
718



### Isolated Ni-atom catalyst supported on $\text{Ti}_3\text{C}_2\text{T}_x$ with an asymmetrical C–Ni–N structure for the hydrogen evolution reaction

Haosen Yang, Pengfei Wu, Jiajing Pei, Bo Peng\* and Qingqing Liu\*

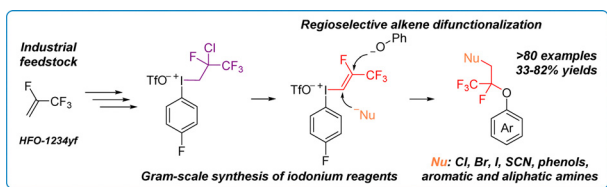
722



### A universal strategy for green and surfactant-free synthesis of noble metal nanoparticles

Xiaohang Ge, Wei Yong Yuan, Qinhe Guan and Lian Ying Zhang\*

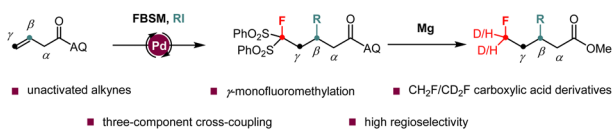
726



### Iodonium based regioselective double nucleophilic alkene functionalization of a hydrofluoroolefin scaffold

János T. Csenki and Zoltán Novák\*

730



### Palladium-catalyzed carbomonofluoromethylation of unactivated alkenes: rapid access to $\gamma$ -monofluoromethyl carboxylic acid derivatives

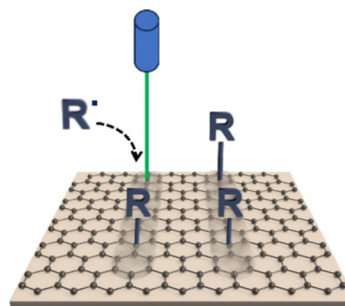
Xiao-Li Liu, Shun-Jun Ji\* and Zhong-Jian Cai\*



734

### Spatially resolved fluoroalkylation and alkylation of graphene by direct laser writing

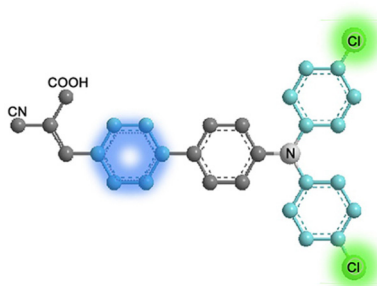
Sabrin Al-Fogra, Sofia Rohde, Marcus Speck, Frank Hauke, Andreas Hirsch and Tao Wei\*



738

### Self-assembled hole-transporting material constructed by chlorination and conjugation strategies toward efficient organic solar cells

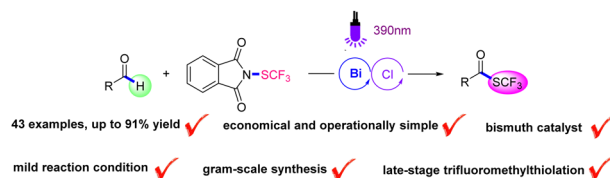
Xinjie Zhou, Renyong Geng,\* Shanlei Xu, Xingting Liu, Yahui Yang, Shengzheng Gao, Hao Xu, Weiguo Zhu and Xin Song\*



742

### Visible light-induced hydrogen atom transfer trifluoromethylthiolation of aldehydes with bismuth catalyst

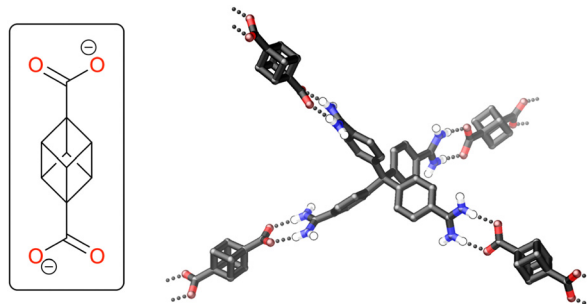
Jun Dong, Zhuang Tang, Luqian Zou, Yongyun Zhou\* and Jingchao Chen\*



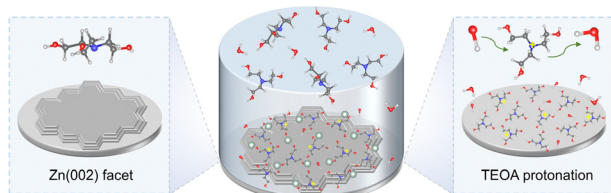
746

### Hydrogen-bonded frameworks containing aliphatic 3D linkers show high-capacity water vapour sorption

Phonlakrit Muang-Non, Carmen Zhou, Lauren K. Macreadie\* and Nicholas G. White\*



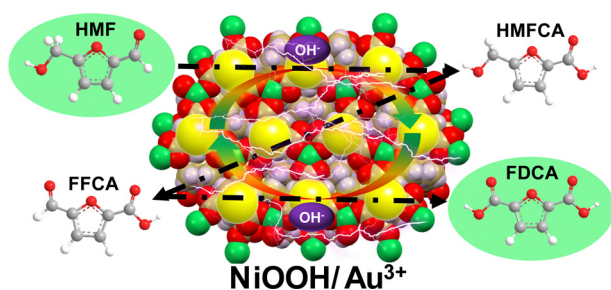
750



### Zn(002)-preferred and pH-buffering triethanolamine as electrolyte additive for dendrite-free Zn anodes

Wenjing Ge, Huili Peng, Jingjing Dong, Gulian Wang, Lifeng Cui, Wei Sun, Xiaojian Ma and Jian Yang\*

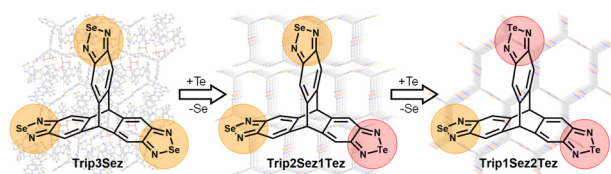
754



### Controllable evolution of NiOOH/Au<sup>3+</sup> active species for the oxidation of 5-hydroxymethylfurfural

Xuliang Pang,\* Yifei Huang, Huaquan Zhao, Weiqiang Fan\* and Hongye Bai\*

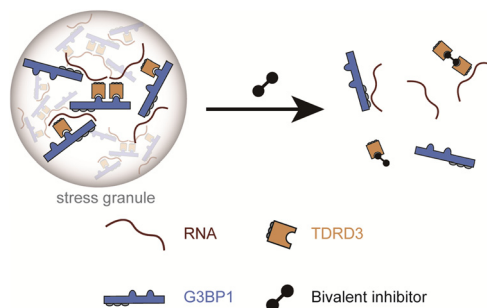
758



### Influence of donor point modifications on the assembly of chalcogen-bonded organic frameworks

Brian J. Eckstein, Hannah R. Martin, Michael P. Moghadasnia, Arijit Halder, Michael J. Melville, Tara N. Buzinski, Gary J. Balaich and C. Michael McGuirk\*

762



### A bivalent inhibitor against TDRD3 to suppress phase separation of methylated G3BP1

Wei-Wei Fan, Tian Xu, Jia Gao, Han-Yu Zhang, Yan Li, Duo-Duo Hu, Shuaixin Gao, Jia-Hai Zhang, Xing Liu, Dan Liu, Pi-Long Li, Catherine C. L. Wong, Xue-Biao Yao, Yun-Yu Shi, Zhen-Ye Yang, Xi-Sheng Wang\* and Ke Ruan\*





## CORRECTION

766

**Correction: Velocity map images from surface-hopping; reactive scattering of OH ( $^2\Sigma^+$ ) + H<sub>2</sub> ( $^1\Sigma_g^+$ )**

Christopher Robertson\* and Martin J. Paterson\*

