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Chemical Communications

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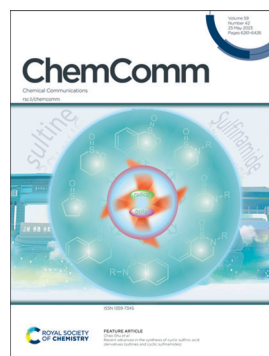
## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(42) 6261-6426 (2023)



### Cover

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### Inside cover

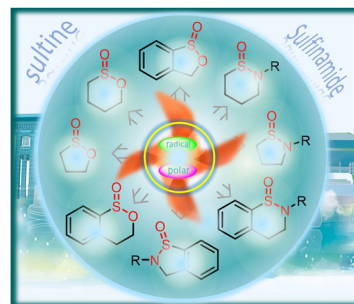
See Chao Shu *et al.*, pp. 6272–6285. Image reproduced by permission of Chao Shu from *Chem. Commun.*, 2023, 59, 6272.

## FEATURE ARTICLES

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### Recent advances in the synthesis of cyclic sulfinic acid derivatives (sultines and cyclic sulfinamides)

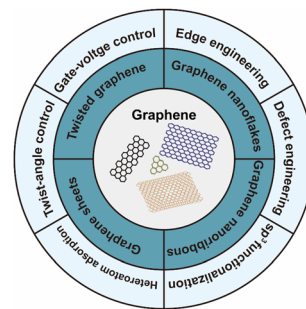
Yongxin Zhang, Helian Li, Xiaoxiao Yang, Pan Zhou and Chao Shu\*



6286

### Recent advances in magnetism of graphene from 0D to 2D

Ziying Li, Shuilin Li, Yongjie Xu\* and Nujiang Tang\*



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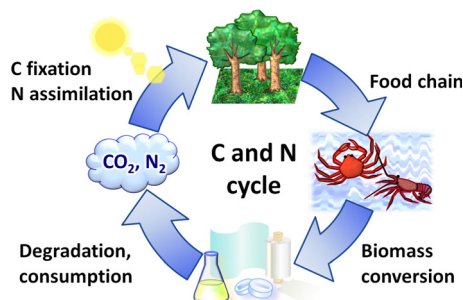


## FEATURE ARTICLES

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**Catalytic conversion of chitin as a nitrogen-containing biomass**

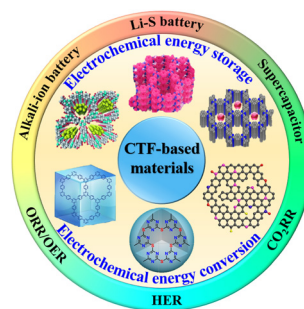
Hirokazu Kobayashi,\* Takuya Sagawa and Atsushi Fukuoka



6314

**Emerging covalent triazine framework-based nanomaterials for electrochemical energy storage and conversion**

Yong Zheng,\* Niaz Ali Khan, Xuepeng Ni, Kai A. I. Zhang,\* Yi Shen, Niu Huang, Xin Ying Kong and Liqun Ye\*

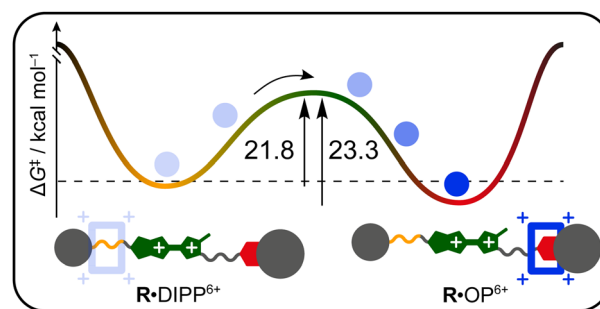


## COMMUNICATIONS

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**Evaluating the energy landscape of an out-of-equilibrium bistable [2]rotaxane containing monopyrrolotetrafulvalene**

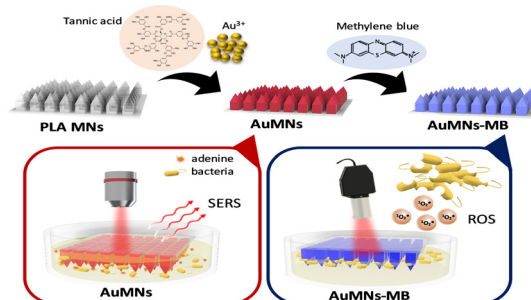
Mathias S. Neumann, Amanda F. Smith, Sofie K. Jensen, Rikke Frederiksen, Mathias L. Skavenborg and Jan O. Jeppesen\*



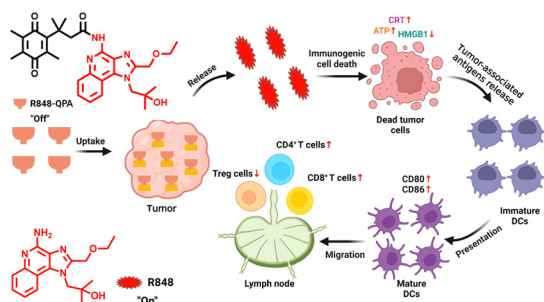
6339

**Polyphenol-assisted assembly of Au-deposited polylactic acid microneedles for SERS sensing and antibacterial photodynamic therapy**

Zi-Chun Chia, Yi-Lun Chen, Cheng-Hsun Chuang, Chou-Hsun Hsieh, Ya-Jyun Chen, Kuan-Hsu Chen, Tzu-Chi Huang, Mei-Chin Chen\* and Chih-Chia Huang\*



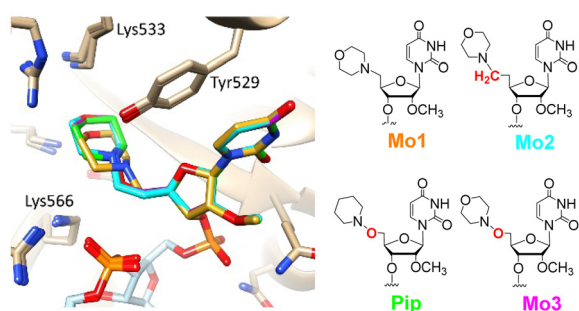
6343



### NAD(P)H: quinone oxidoreductase 1 activatable toll-like receptor 7/8 agonist designed for precise immunotherapy

Guo Li, Yongxiao Xu, Xiaojie Kong, Liuwei Gu, Yuling Qin\* and Li Wu\*

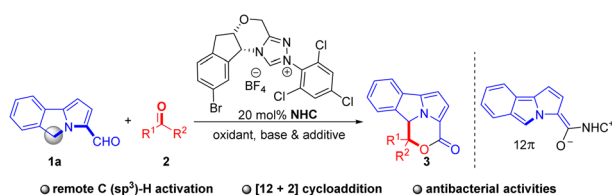
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### Rational optimization of siRNA to ensure strand bias in the interaction with the RNA-induced silencing complex

Dhrubajyoti Datta, Christopher S. Theile, Kelly Wassarman, June Qin, Tim Racie, Karyn Schmidt, Yongfeng Jiang, Rachel Sigel, Maja M. Janas, Martin Egli and Muthiah Manoharan\*

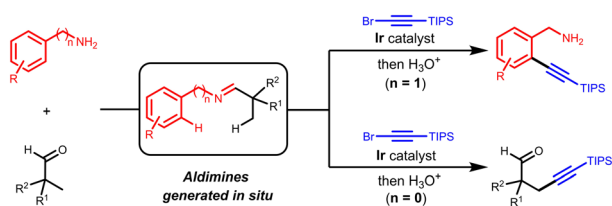
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### NHC-catalyzed [12+2] reaction of polycyclic arylaldehydes for access to indole derivatives

Hong Ji, Juan Zou, Chengli Mou, Yonggui Liu, Shi-Chao Ren\* and Yonggui Robin Chi\*

6355



### Catalytic C–H alkylation of benzylamines and aldehydes with aldimine-directing groups generated *in situ*

Jiao Zhou, Tenggang Jiao, Qiang Fu, Jun Wang, Ji Lu, Lin Yang, Jun Wei, Siping Wei, Xuefeng Cong\* and Na Hao\*

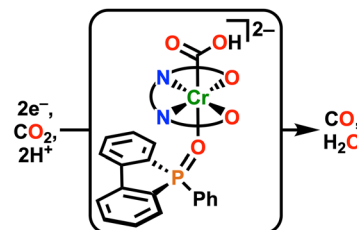


## COMMUNICATIONS

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Co-electrocatalytic CO<sub>2</sub> reduction mediated by a dibenzophosphole oxide and a chromium complex

Connor A. Koellner, Amelia G. Reid and Charles W. Machan\*

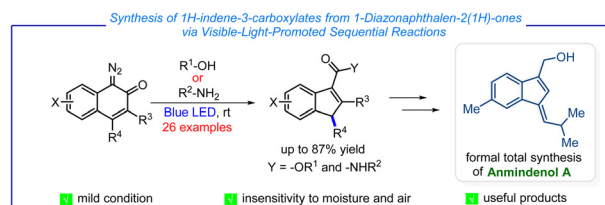


axial coordination of dibenzylphosphole oxide radical anion to a Cr complex co-catalytically enhances CO<sub>2</sub> to CO conversion

6363

Synthesis of a versatile 1*H*-indene-3-carboxylate scaffold enabled by visible-light promoted Wolff rearrangement of 1-diazonaphthalen-2(1*H*)-ones

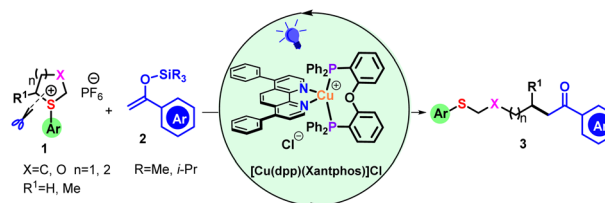
Xin Yue, Ying Zhou, Yan Zhang, Tengfei Meng, Yupei Zhao\* and Wengang Guo\*



6367

## Visible light/copper catalysis enabled alkylation of silyl enol ethers with arylsulfonium salts

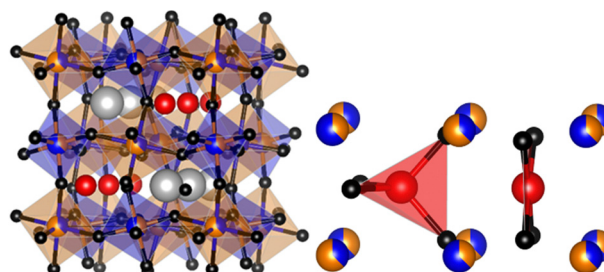
Wenwen Cui, Guoju Guo, Yifei Wang, Xiuyan Song, Jian Lv and Daoshan Yang\*



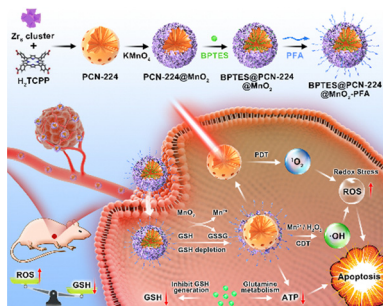
6371

CaFeFeNbO<sub>6</sub> – an iron-based double double perovskite

K. Ji, J. R. Bedward, Q. Li, P. Manuel, C. Ritter and J. Paul Attfield\*



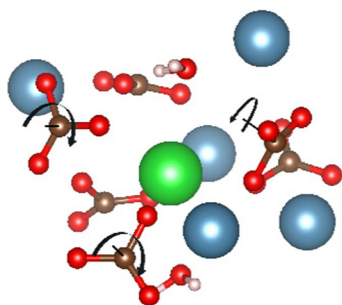
6375



### Tumor-targeted nanoflowers regulate glutamine metabolism and amplify oxidative stress for synergistic therapy

Mengzhen Wang, Kaixian Wang, Xiaohan Liu, Mingwan Shi, Huiwen Zhang, Xia Zhang, Ruyue Wei, Na Li, Wei Pan\* and Bo Tang\*

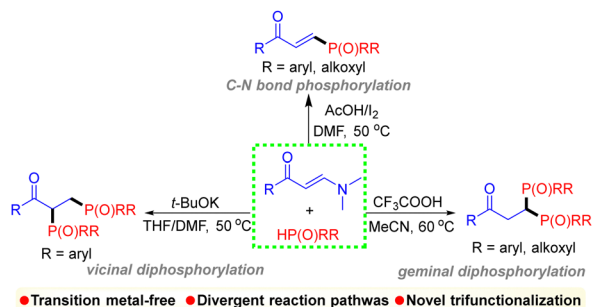
6379



### Local density changes and carbonate rotation enable Ba incorporation in amorphous calcium carbonate

Sebastien N. Kerisit,\* Micah P. Prange and Sebastian T. Mergelsberg

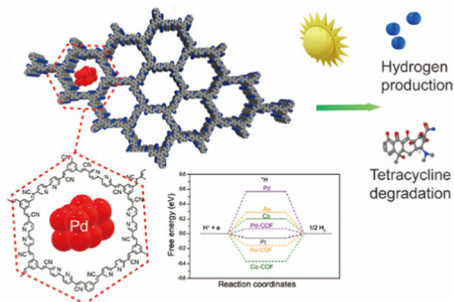
6383



### Tunable vicinal, geminal diphosphorylation and C–N bond phosphorylation of enaminones toward divergent phosphorylated ketone derivatives

Dingsheng Cao, Chaoli Wang, Jie-Ping Wan, Chengping Wen\* and Yunyun Liu\*

6387



### Pd nanoparticle-decorated covalent organic frameworks for enhanced photocatalytic tetracycline hydrochloride degradation and hydrogen evolution

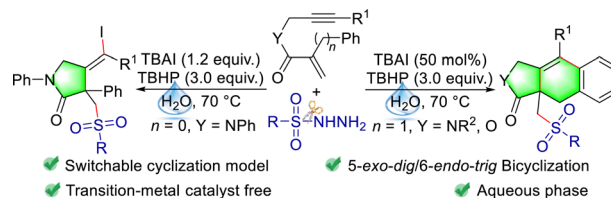
Fenghua Xu, Bo Liang, Luqing Liu, Xiaodong Hu and Baicheng Weng\*



6391

### Radical bicyclization of 1,6-enynes with sulfonyl hydrazides by the use of TBAI/TBHP in the aqueous phase

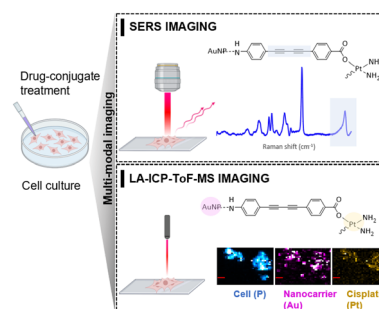
Fa-Liang Liu, Lan Mei, Ling-Tao Wang, Yu Zhou, Keqi Tang,\* Ting Li,\* Rongnan Yi and Wen-Ting Wei\*



6395

### Synthesis, characterisation and multi-modal intracellular mapping of cisplatin nano-conjugates

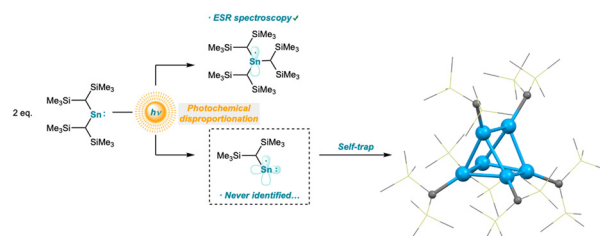
Aristea Anna Leventi, Henry J. Braddick, Kharmen Billimoria, Gregory Q. Wallace, Heidi Goenaga-Infante, Nicholas C.O. Tomkinson,\* Karen Faulds\* and Duncan Graham\*



6399

### Disproportionation of $\text{Sn(II)}\{\text{CH}(\text{SiMe}_3)_2\}_2$ to $\text{*Sn(III)}\{\text{CH}(\text{SiMe}_3)_2\}_3$ and $\text{*Sn(I)}\{\text{CH}(\text{SiMe}_3)_2\}_2$ : characterization of the Sn(I) product

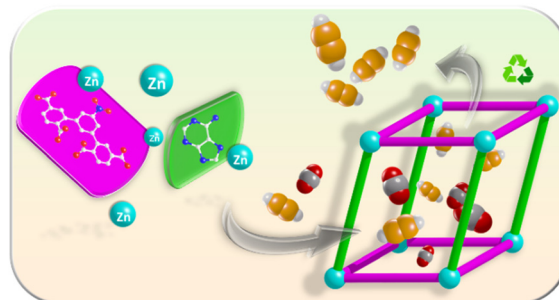
Kristian L. Mears, Bronson Ruiz, Gia-Ann Nguyen, Wenxing Zou, James C. Fettinger and Philip P. Power\*



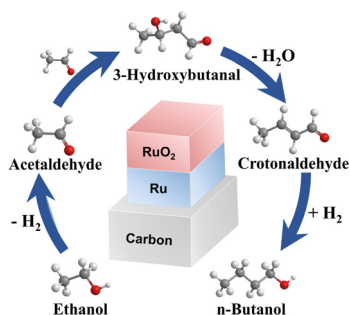
6403

### Efficient $\text{C}_2\text{H}_2$ -selective separation in a microporous Zn(II)-based metal-organic framework via the dual-ligand strategy

Fan Yang, Juan-Juan Xue, Guang-Ping Lei, Wen-Yan Zhang, Guo-Ping Yang\* and Yao-Yu Wang\*



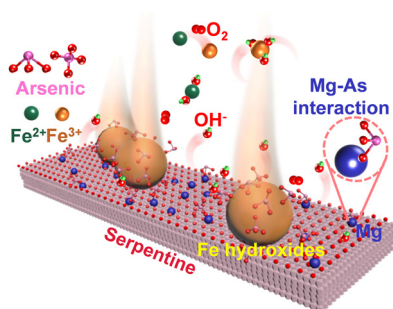
6407



### Homologous RuO<sub>2</sub>-Ru heterostructures for tandem catalytic upgrading of ethanol

Pei Jing, Haiyang Zhao, Wenxiang Zhang and Gang Liu\*

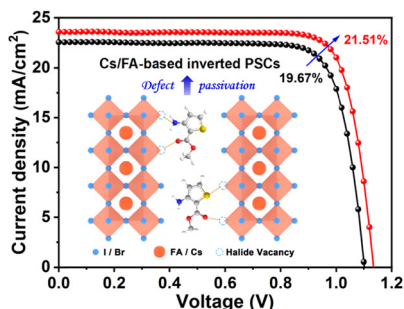
6410



### Efficient arsenic coagulation by serpentine-mediated iron hydroxides

Lei Ouyang, Fangfang Song, Caiyue Yu, Lijin Huang and Qin Shuai\*

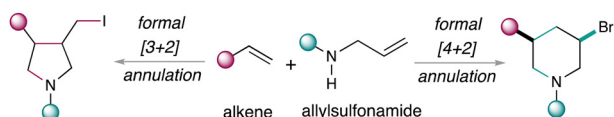
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### Defect passivation *via* a multifunctional organic additive toward efficient and stable inverted perovskite solar cells

Chufeng Qiu, Jiaying Song,\* Yan Wu, Xinxing Yin, Lin Hu, Zhen Su, Yingzhi Jin, Wentao Wang,\* Hao Wang and Zaifang Li\*

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### Tunable [3+2] and [4+2] annulations for pyrrolidine and piperidine synthesis

Jeewani P. Ariyaratna, Prabagar Baskaran, Akanksha Chhikara, Navdeep Kaur, Alex M. Nguyen, Shashini M. Premathilaka, Michelle M. Huynh, Jonathon T. Truong and Wei Li\*



## CORRECTIONS

6422

**Correction: One-step mild preparation of tough and thermo-reversible poly(vinyl alcohol) hydrogels induced by small molecules**

Chuang Dong, Jiahua Zhou, Dongjian Shi, Yufang Song, Xi Yu, Weifu Dong, Mingqing Chen\* and Daisaku Kaneko\*

6423

**Correction: Palladium(II)-catalyzed vinylic geminal double C–H activation and alkyne annulation reaction: synthesis of pentafulvenes**

Jyotshna Phukon and Sanjib Gogoi\*

6424

**Correction: Copper coordination-based conjugated polymer nanoparticles for synergistic photodynamic and chemodynamic therapy**

Qiang Cheng, Yuyan Li, Wei Huang, Ke Li, Minhuan Lan, Benhua Wang,\* Jianxiu Wang\* and Xiangzhi Song

