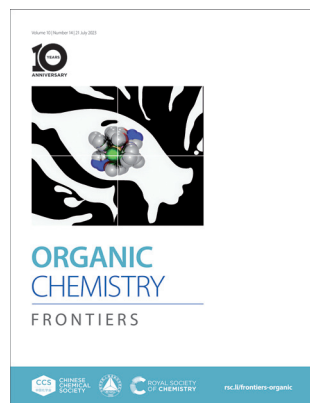


## IN THIS ISSUE

ISSN 2052-4129 CODEN OCFRA8 10(14) 3449–3702 (2023)

**Cover**

See William D. G. Brittain, Benjamin R. Buckley, John S. Fossey *et al.*, pp. 3460–3466.

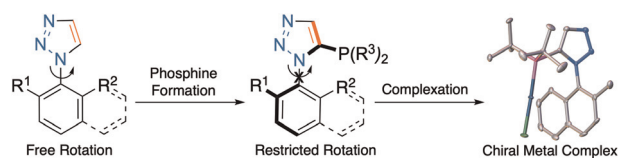
Artwork created by John S. Fossey from *Org. Chem. Front.*, 2023, **10**, 3460.

## RESEARCH ARTICLES

3460

**Synthesis of atropisomeric phosphino-triazoles and their corresponding gold(i) complexes**

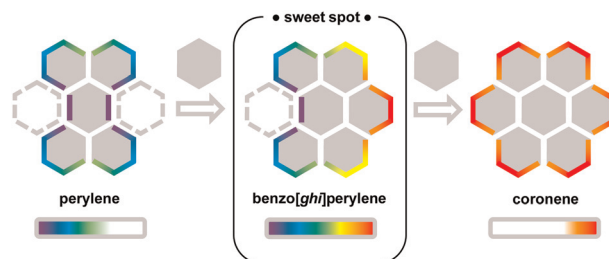
Yiming Zhao, Fernanda Meloni, Louise Male, Cécile S. Le Duff, William D. G. Brittain,\* Benjamin R. Buckley\* and John S. Fossey\*



3467

**Rational assembly of benzenoid rings in benzo[ghi]perylene yields a diversity of edge features with site-selective reactivity**

David T. Hogan, Wen Zhou, Benjamin S. Gelfand and Todd C. Sutherland\*



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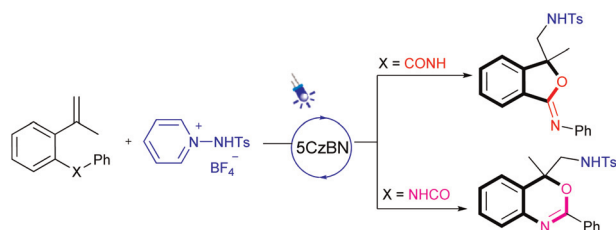


## RESEARCH ARTICLES

3479

### Photo-induced cyclization of olefinic amides towards sulfonamidylated iminoisobenzofurans and benzoxazines

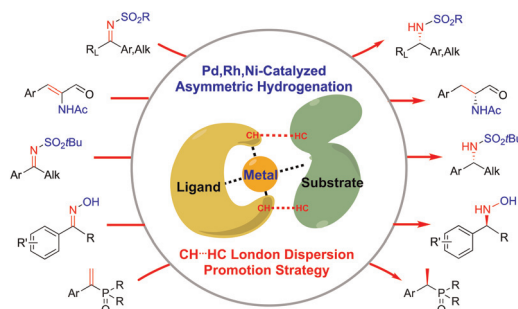
Changduo Pan, Shipeng Luo, Yechun Wu, Jin-Tao Yu\* and Chengjian Zhu\*



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### The role of attractive dispersion interaction in promoting the catalytic activity of asymmetric hydrogenation

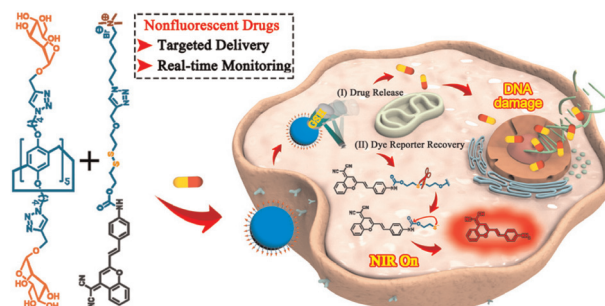
Limin Yang,\* Bo Li and K. N. Houk\*



3491

### A mannose-functionalized pillar[5]arene-based supramolecular fluorescent probe for real-time monitoring of gemcitabine delivery to cancer cells

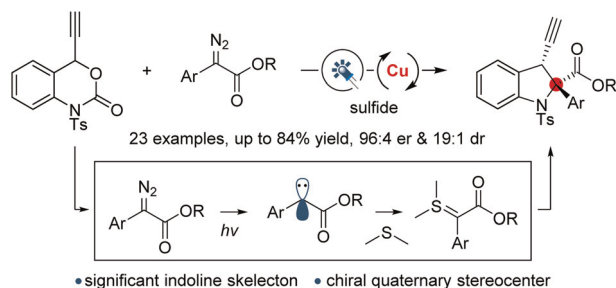
Shuang Chao, Pei Huang, Ziyan Shen, Yuxin Pei, Yinghua Lv,\* Yuchao Lu\* and Zhichao Pei\*



3498

### Photoinduced carbene transfer for copper-catalyzed asymmetric [4 + 1] cycloadditions: an entry to chiral indolines bearing quaternary stereocenters

Bao-Le Qu, Bin Shi, Lin He, Jun-Wei Shi, Wen-Jing Xiao and Liang-Qiu Lu\*

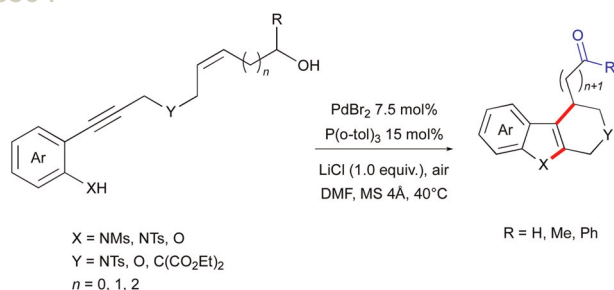


• significant indoline skeleton • chiral quaternary stereocenter



## RESEARCH ARTICLES

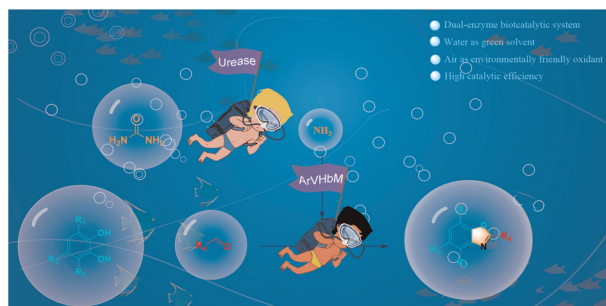
3504



### Palladium-catalyzed cascade cyclization/ intramolecular redox-relay Heck arylation of alkenols: access to tetrahydro- $\beta$ -carbolines from 2-(hydroxyalkenynyl)sulfonanilides

Tao Liu, Tuanli Yao,\* Ruihua Guo\* and Xiangyang Qin\*

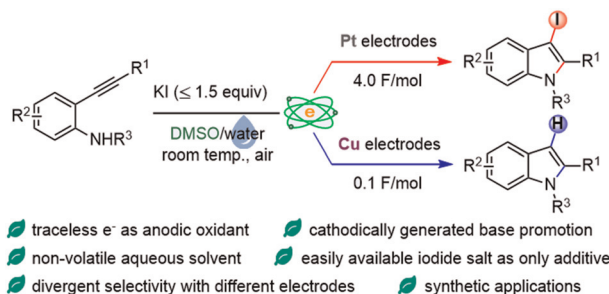
3509



### Novel dual-enzyme system for synthesis of 2-alkyl and 2-arylbenzoxazoles *via* aerobic oxidation

Fengxi Li, Yaning Xu, Yuelin Xu, Jinglin Ma, Hanqing Xie, Hengzheng Yang, Weiwei Han, Chunyu Wang, Zhengqiang Li\* and Lei Wang\*

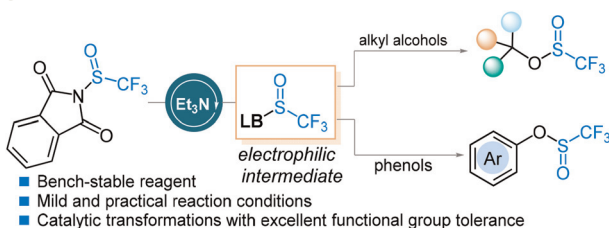
3515



### Divergent electro-synthesis of 3-iodoindoles and indoles from 2-ethynylanilines under ambient and aqueous conditions

Binbin Huang,\* Guiling Chen, Haoxiang Zhang, Xinye Tang, Jiawei Yuan, Caicai Lu and Junlei Wang\*

3522



### Lewis base-catalyzed trifluoromethylsulfinylation of alcohols and phenols: modular synthesis of trifluoromethanesulfinate esters

Wen Liu, Shuya Xing, Shao-Fei Ni, Cheng Ma, Qiujin Fan, Zhiyong Ye, Yanchuang Zhao, Ting Ouyang, Ying Bai\* and Xinxin Shao

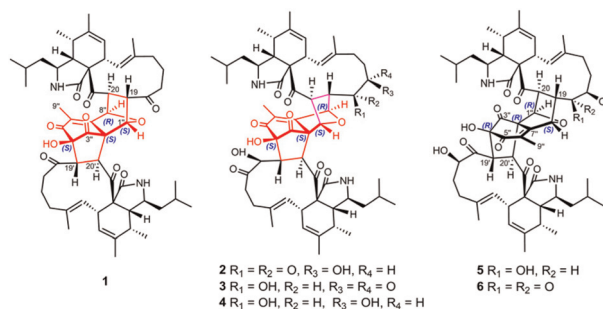


## RESEARCH ARTICLES

3530

**Amichalasin F–J: cytochalasan heterotrimers with mirror-imaged core structures from *Aspergillus micronesiensis***

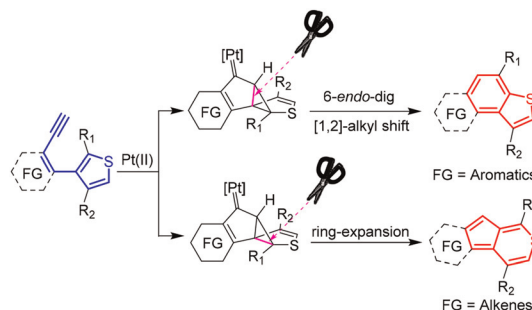
Zhaodi Wu, Xiaotian Zhang, Qin Li, Qingyi Tong, Jing Yang, Chunmei Chen,\* Hucheng Zhu\* and Yonghui Zhang\*



3537

**Selective 6-endo-dig and ring-expansion cycloisomerizations of *ortho*-disubstituted thiophenes bearing 1-en-3-yne moieties**

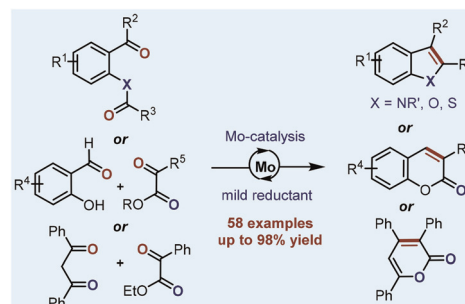
Yingjian Ren, Zhanglang Zhou, Weinan Chen, Si Liu, Min Wang and Gang Zhou\*



3544

**Molybdenum-catalyzed carbonyl–carbonyl olefination reaction for heterocycle syntheses**

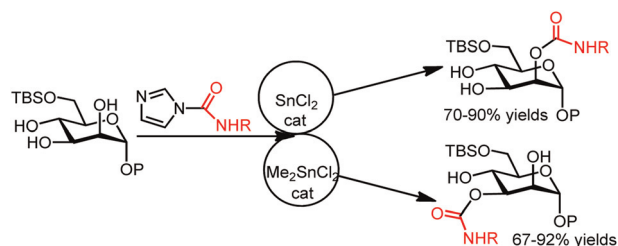
Yuan-Qing Dong, Xiao-Nan Shi, Li-Ya Cao, Jin Bai and Chun-Xiang Zhuo\*



3553

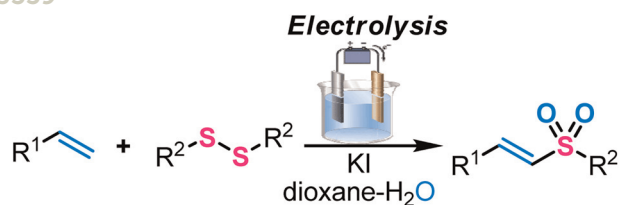
**Site-selective carbamoylation of carbohydrates catalyzed by SnCl<sub>2</sub>/Me<sub>2</sub>SnCl<sub>2</sub> leading to complementary selectivity**

Yang-Fan Guo, Tao Luo and Hai Dong\*



## RESEARCH ARTICLES

3559

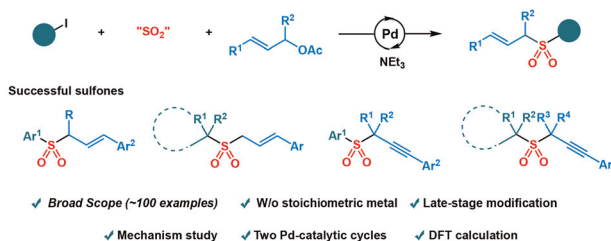


- **electrochemically induced disulfides activation**
- **multistep sulfonylation in one laboratory step**
- **easily reproducible**

### Disulfides as versatile starting reagents: effective sulfonylation of alkenes with disulfides under electrochemical conditions

Olga M. Mulina, Mikhail M. Doronin, Liang-Nian He and Alexander O. Terent'ev\*

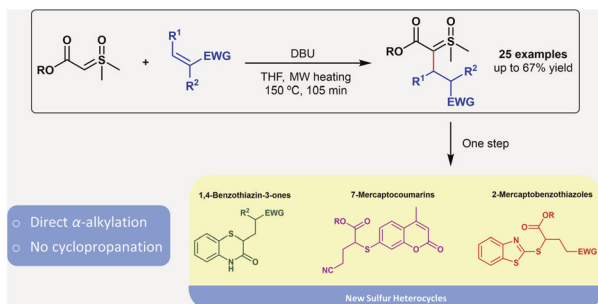
3567



### A palladium-catalyzed cross-electrophile coupling reaction involving sulfur dioxide for the direct synthesis of diversely functionalized sulfones

Baojian Xiong, Jinyu Zhang, Ting Wang, Xuemei Zhang, Gui-juan Cheng\* and Zhong Lian\*

3577



### The $\alpha$ -alkylation of carbonyl sulfoxonium ylides: studies and applications in the synthesis of new sulfur heterocycles

Matheus P. de Jesus, Radell Echemendía and Antonio C. B. Burtoloso\*

3585



### Organophotoredochemical silylation cyclization for the synthesis of silylated 3-CF<sub>3</sub>-2-oxindoles

Qinhui Wan, Chen-Yin Huang, Zhong-Wei Hou,\* Huajiang Jiang and Lei Wang\*



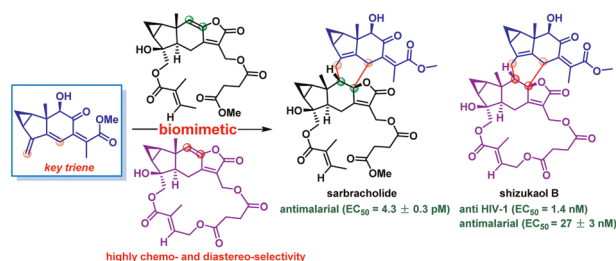


## RESEARCH ARTICLES

3591

## Asymmetric total syntheses of sarbracholide and shizukaol B

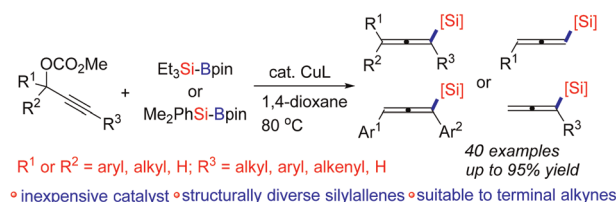
Ganxing Huang, Zhengsong Huang, Xianjian Ma, Zhihu Feng, Fengxia Yuan, Song Qin, Shaomin Fu\* and Bo Liu\*



3598

## Copper-catalyzed silylation of propargyl carbonates: a general entry to allenylsilanes

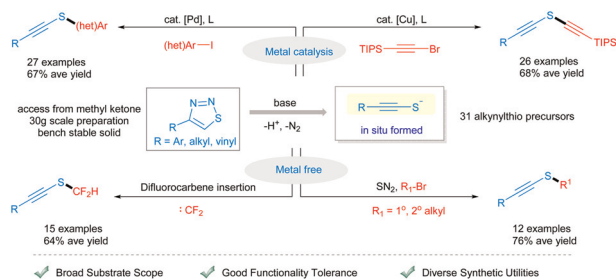
He Zhang, Linjuan Jiang, Mei Yang and Yuanhong Liu\*



3603

Alkyne/thio umpolung tactic replacement: synthesis of alkynyl sulfides via capturing the *in situ* formed alkynylthiolate anion

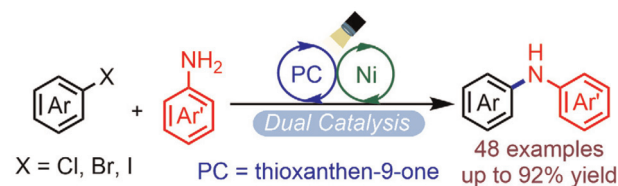
Donghui Xing, Mengxia Feng, Yuzhen Zheng, Bin Huang, Huanfeng Jiang and Liangbin Huang\*



3612

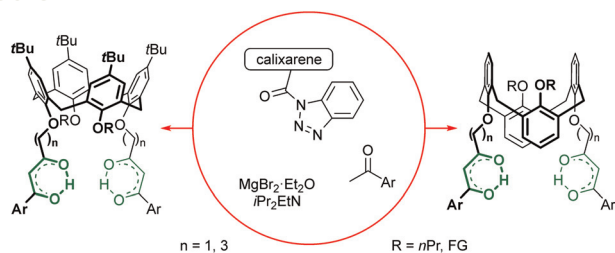
## Visible-light-initiated nickel-catalyzed amination of aryl halides using thioxanthen-9-one as a photocatalyst

Da-Liang Zhu, Jie Li, David James Young, Yanqing Wang\* and Hong-Xi Li\*



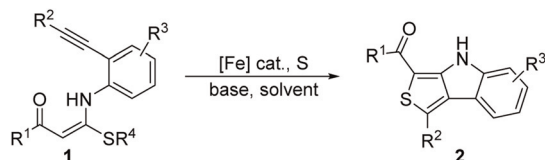
## RESEARCH ARTICLES

3619

**Enriching calixarene functionality with 1,3-diketone groups**

Maria Sakovich, Daria Sokolova, Ivan Alekseev, Ivan Lentin, Alexander Gorbunov, Maria Malakhova, Ivan Ershov, Rustem Zairov, Ilia Korniltsev, Sergey Podyachev, Stanislav Bezzubov, Vladimir Kovalev and Ivan Vatsouro\*

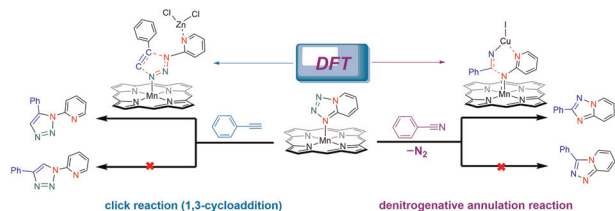
3637

**Fe/S cluster catalyzed cascade cyclization of *N,S*-1,6-enynes for the synthesis of thieno[3,4-*b*]indoles**

Zhuqing Liu, Shaobin Sun and Jiang Lou\*

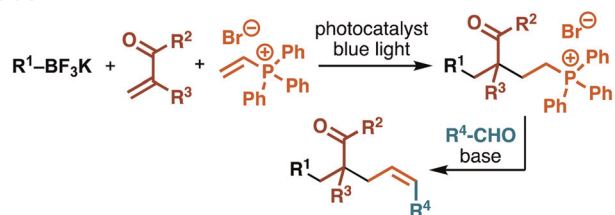
- 1,2-S migration ■ Csp<sup>3</sup>-S bond cleavage and Csp<sup>2</sup>-S bond formation
- a indole ring and a fused thiophene ring formation in one step
- good functional group tolerance and broad substrate scope

3642

**Mechanisms and origin of regioselectivity for manganese-catalyzed denitrogenative annulation and click reactions**

Guanghui Song, Wei Rong, Yongyin Liu and Juan Li\*

3654

**Sequence-selective three-component reactions of alkyltrifluoroborates with  $\alpha,\beta$ -unsaturated carbonyl compounds and vinylphosphonium salts**

Masaki Yoshida, Masaya Sawamura\* and Yusuke Masuda\*

- Radical addition to two electron-deficient alkenes in a specific order
- Z-Selective synthesis of  $\gamma,\delta$ -unsaturated ketones and esters



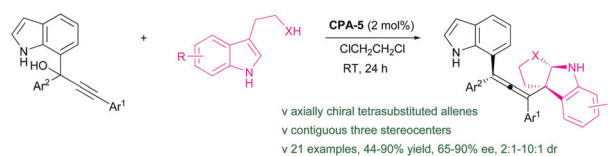


## RESEARCH ARTICLES

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Organocatalytic enantioselective reaction of tertiary  $\alpha$ -(7-indolyl)methanols with tryptamines

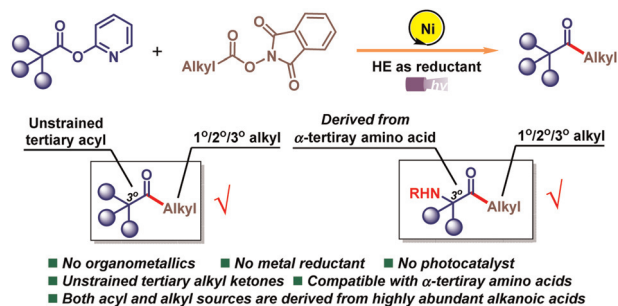
Zhibin Yue, Boming Shen, Jie Cao, Xuling Chen, Fang Fang, Pengfei Li,\* Peiyuan Yu\* and Wenjun Li\*



3669

## Photoinduced nickel-catalyzed reductive acyl cross-coupling: facile access to all carbon quaternary aliphatic ketones

Yukun Chen, Xiaoxiang Xi and Weiming Yuan\*

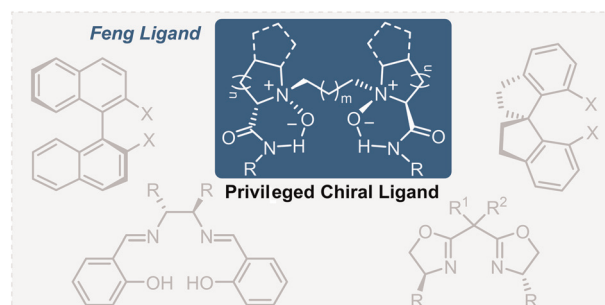


## HIGHLIGHT

3676

Feng chiral  $N,N'$ -dioxide ligands: uniqueness and impacts

Dian-Feng Chen and Liu-Zhu Gong\*



## REVIEW

3684

Recent advances in the chemistry of  $\alpha$ -oxylboronate reagents

Nanquan Jiang, Du Chen and Chao Liu\*

