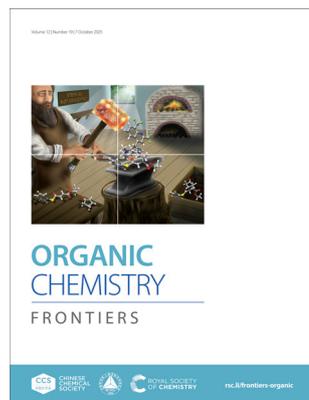


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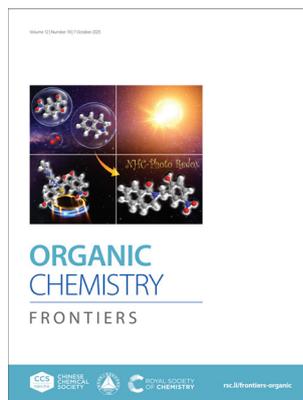
ISSN 2052-4129 CODEN OCFRA8 12(19) 5109–5358 (2025)



#### Cover

See Rafat Szabla, Rafat Kowalczyk *et al.*, pp. 5124–5135.

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#### Inside cover

See C. Uma Maheswari *et al.*, pp. 5136–5145.

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### PROFILE

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#### Contributors to the *Organic Chemistry Frontiers* emerging investigator series 2024

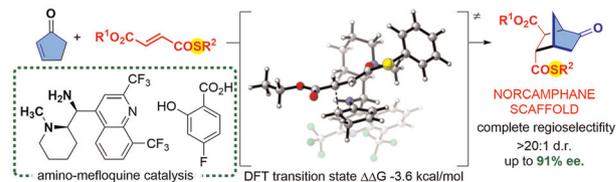


### RESEARCH ARTICLES

5124

#### Tunable thiofumarate stereoselective cycloadditions *via* aminomefloquine catalysis

Radostaw Suchanek, Michał Błauciak, Anna Spyszkiewicz, Błażej Dziuk, Przemysław J. Boratyński, Rafat Szabla\* and Rafat Kowalczyk\*



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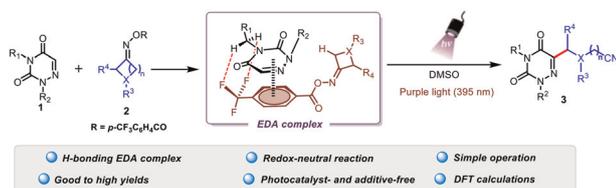
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## RESEARCH ARTICLES

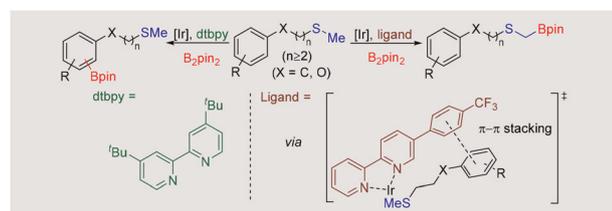
5175



### Photoinduced direct C–H cyanoalkylation of azauracils via electron donor–acceptor complex activation

Zhi-Qiang Zhu,\* Xiao-Long Huang, Xi Yang, Qian-Qian Xu,\* Huo-Yu Rao, Zhen-Zhen Xu, Zong-Bo Xie and Zhang-Gao Le\*

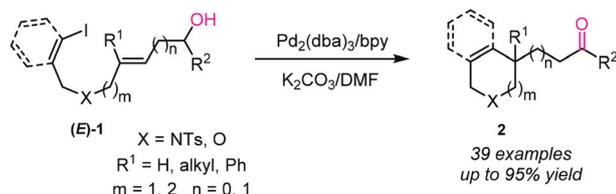
5183



### Selective $\alpha\text{-Me-C}(\text{sp}^3)\text{-H}$ borylation of methyl sulfides controlled by substrate–ligand electrostatic interaction

Rui-Mu Yu, Jin-Ping Li, Sumire Tobe, Shunsuke Yabu, Kanami Sugiyama, Li-Sheng Wang, Hirofumi Sato, Masahiro Higashi,\* Yoichiro Kuninobu\* and Hong-Liang Li\*

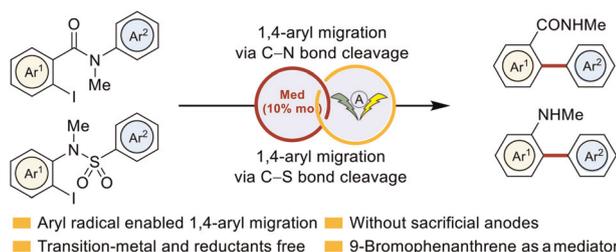
5192



### Palladium-catalyzed intramolecular redox-relay Heck cyclization: access to heterocycles bearing all-carbon quaternary centers

Linjun Qi, Rongjing He, Xiaofeng Tong and Shuling Yu\*

5198



### Organo-mediator enabled electrochemical 1,4-aryl migration of *N*-aryl-2-iodobenzamides/*N*-sulfonyl-2-iodoanilines to access biaryls

Xiao-Qing Xie, Li-Tong Xiao, Wei Zhou, Yanli Wu, Haixin Ding, Ruchun Yang,\* Xian-Rong Song, Mu-Jia Luo\* and Qiang Xiao\*

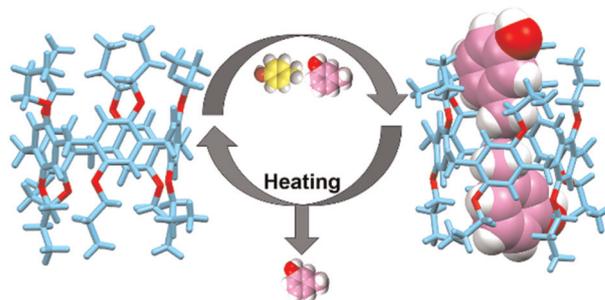


## RESEARCH ARTICLES

5205

### Selective separation of *meta*- and *para*-cresol using nonporous adaptive crystals of perpropoxylated pillar[5]arene

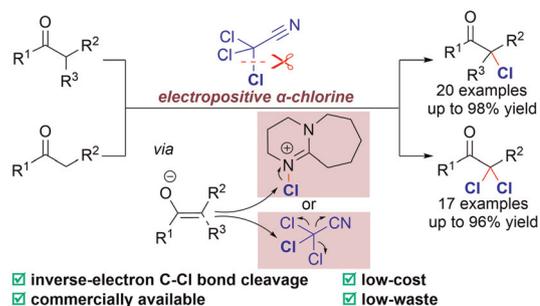
Hongyan Zhang, Ming Li,\* Li Shao, Haozhong Liang, Bin Hua,\* Niveen M. Khashab and Feihe Huang\*



5211

### Active electropositive $\alpha$ -chlorine: trichloroacetonitrile as an electrophilic chlorination reagent

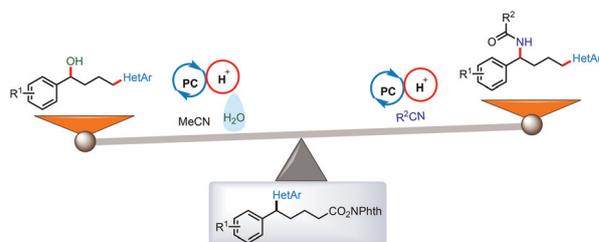
Bingxing Zhou, Lei Bai\* and Changming Xu\*



5218

### Brønsted acid enabled metal-free remote oxygenation and amidation of unstrained C–C bonds via 1,4-heteroaryl migration chaperoned radical-polar crossover

Xiaofei Xie, Yun Shi,\* Yukun Li, Jinge Gui, Yingguang Zhu\* and Kang Chen\*

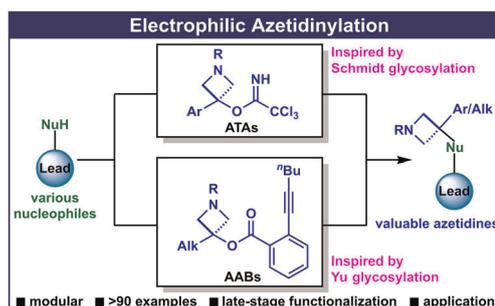


- Tunable Remote C(sp<sup>3</sup>)-O and C(sp<sup>3</sup>)-N Formation
- Chemo- and Regioselectivities
- Broad Substrate Scope
- Metal-Free & External Oxidant-Free
- Mild Conditions
- Low Catalyst Loading in Scale-Up Reaction

5226

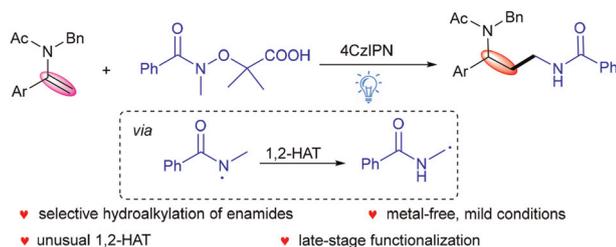
### Modular access to functionalized azetidines via electrophilic azetidinylation

Dayu Tian, Guang Chen, Xian Xiao, Xiaocheng Wang and Hai-Jun Zhang\*



## RESEARCH ARTICLES

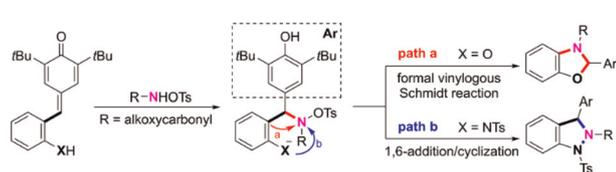
5239



### Photocatalytic anti-Markovnikov hydroalkylation of 2-aryl enamides via 1,2-hydrogen atom transfer of amidyl radicals

Chengli Xiang, Lingli Liu, Changduo Pan\* and Jin-Tao Yu\*

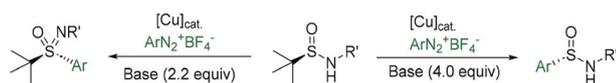
5245



### A formal vinylogous Schmidt reaction: nitrogen insertion of *para*-quinone methides

Bo Wang, Chen Zhu, Yanhao Dong, Chen Kong, Hanxiao Zhu, Tiandi Ding, Guoyue Wei, Yatong Yang, Xin Zhao, Magnus Rueping, Qingqiang Yao,\* Kun Zhao,\* Yan Li\* and Ying Zhi\*

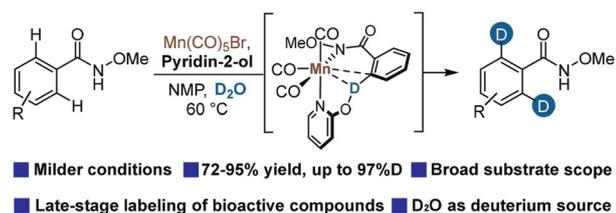
5252



### Reagent-controlled selective synthesis of sulfnamides and sulfoximines from *tert*-butanesulfinamide

Wenbo Zhang, Yanhua Ouyang, Xi Zou\* and Bing Gao\*

5258



### 2-Pyridone-enabled manganese-catalyzed *ortho*-selective deuteration of aromatic amides with D<sub>2</sub>O

Tao Qian, Zhi-Jiang Jiang, Jinfeng Zheng, Jia Chen,\* Zhanghua Gao\* and Jian-Fei Bai\*



## RESEARCH ARTICLES

5265

**Cascade cyclization/fluoromethylthiolation of alkynes, unsaturated  $\alpha$ -bromocarbonyls and  $\text{PhSO}_2\text{SR}_F$** 

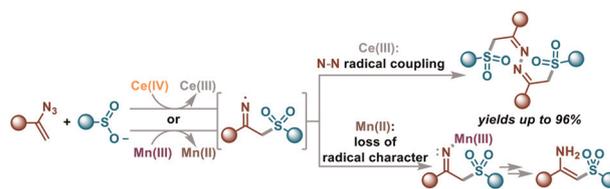
Cui Zhang, Yun-Tao Shen, Ning-Xin Xia, Xin-Song Zhou, Li-Bo Yang, Jia Hu and Ya-Min Li\*



5271

 **$\alpha$ -Sulfonylated ketazine synthesis from vinyl azides and sodium sulfonates using CAN: radical C–S/N–N coupling cascade as a key reaction pathway**

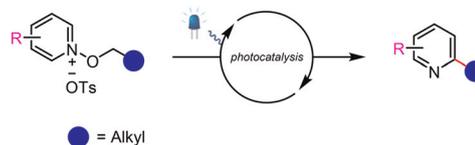
Mikhail M. Doronin, Alexander S. Klikushin, Olga M. Mulina, Michael G. Medvedev, Vera A. Vil', Liang-Nian He and Alexander O. Terent'ev\*



5279

**Photoinduced  $\beta$ -fragmentation for efficient pyridine alkylation via  $N$ -alkoxypyridinium salts**

Heng Liu, Fangrui Wu, Zhidong Wan, Changhai Yue, Changsheng Wang, Chengkou Liu, Yuguang Li, Zheng Fang, Hong Qin\* and Zhao Yang\*

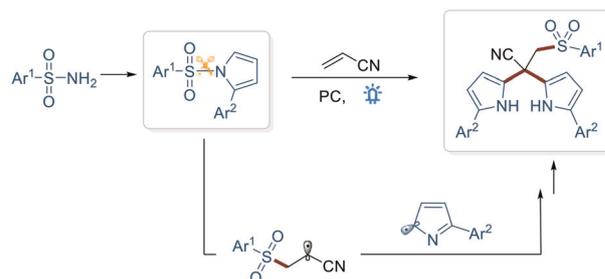


- Atom- and step- economy, mild conditions
- 34 examples, up to 90% yield
- Low catalyst loading (0.5 mol %)
- Excellent C2 selectivity

5285

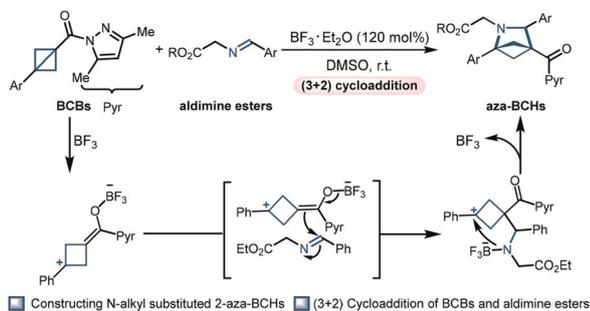
**Pyrrolyl-radical-based di-/tri-functionalization of alkenes using sulfonyl pyrroles via radical/radical cross-coupling**

Jia-Xuan Luo, Ze Zhuang, Yu-Zhang Huang, Xiaohui Kang and Yong Luo\*



## RESEARCH ARTICLES

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### $\text{BF}_3$ -enabled unusual (3 + 2) cycloaddition of bicyclobutanes with aldimine ester: access to 2-azabicyclo[2.1.1]hexanes

Qin Jiang, Jianyang Dong,\* Dejiang Yu, Fang Lei, Ting Li, Tengfei Kang, Juan Fan, Huaming Sun and Dong Xue\*

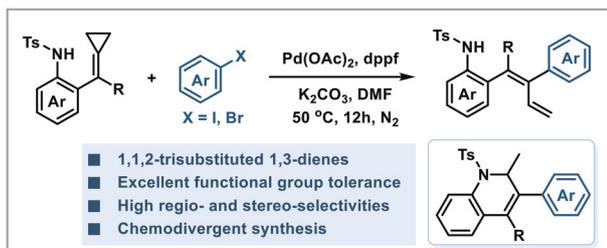
5300



### A photocatalytic electron-rich acceptor-involved EDA complexes for Markovnikov addition of alkynes with N-sulfonyl-azoles

Jinhua Liu, Tang Xiao, Weixiong Chen, Zongjing Hu, Yun Zhao and Shunying Liu\*

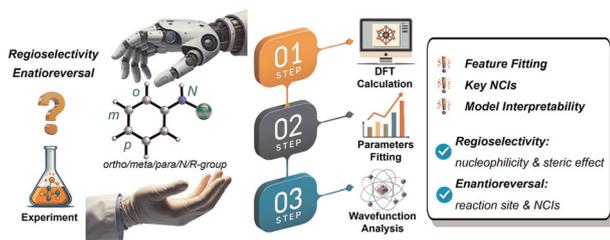
5314



### Chelation-controlled stereospecific ring-opening arylation of $\alpha$ -aminoaryl-tethered alkylidenecyclopropanes: stereoselective synthesis of polysubstituted conjugated dienes

Miao-Miao Ji, Ying Tang, Wen-Mei Luo, Yong-Yu He, Ai-Jun Ma\* and Jin-Bao Peng\*

5321



### NCI-driven regioselectivity and enantioversional in chiral phosphoric acid-catalyzed arylamine functionalization

Zi-Hao Li, Abing Duan\* and Shu-Yu Zhang\*

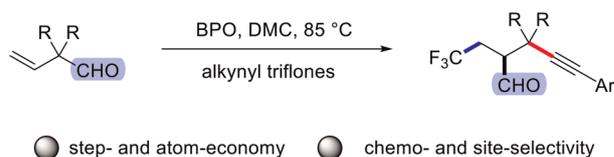


## RESEARCH ARTICLES

5333

**1,2,3-Trifunctionalization of  $\alpha,\alpha$ -disubstituted vinyl aldehydes with concomitant radical 1,2-migration of formyl group**

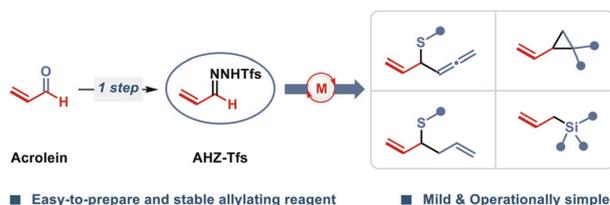
Xiong Yang, Jinmin Luo, Ji Li, Yao Yuan\* and Gangguo Zhu\*



5340

**Acrolein tritrosylhydrazone: a versatile vinylcarbene reagent**

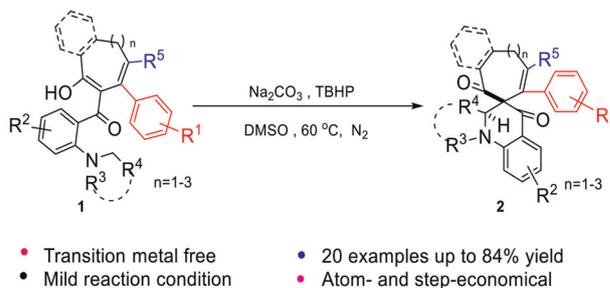
Ying Gan, Jin Zhang, Karunanidhi Murali, Yongquan Ning,\* Yong Wu, Jacek Mlynarski and Zhaohong Liu\*



5346

**Construction of spirotetrahydroquinolines fused with medium-sized rings via TBHP/base-promoted spirocyclization reactions**

Peng He, Yuanyang Mu, Zongkang Wang, Nana Fei, Chengyu Wang\* and Yanzhong Li\*



5351

**Access to (*E*)- $\delta$ -vinyl-homoallylic alcohols/ethers/pyrazoles by ring-opening nucleophilic substitution of cyclopropyl allylic alcohols**

Yulu Zhang, Ying Shao, Jiangtao Sun\* and Shengbiao Tang\*

