

# Organic & Biomolecular Chemistry

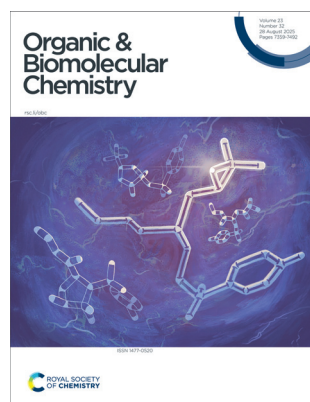
An international journal of synthetic, physical and biomolecular organic chemistry

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## IN THIS ISSUE

ISSN 1477-0520 CODEN OBCRAK 23(32) 7359-7492 (2025)



### Cover

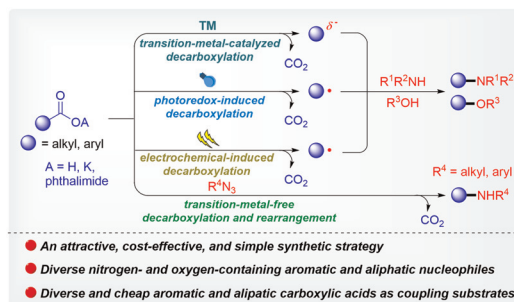
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## REVIEWS

7367

### From carboxylic acids or their derivatives to amines and ethers: modern decarboxylative approaches for sustainable C–N and C–O bond formation

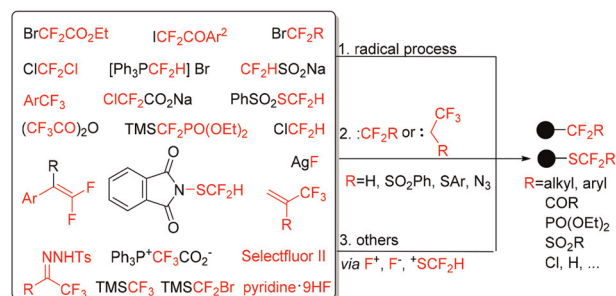
Weidan Yan, Tian Tian and Yasushi Nishihara\*



7383

### Recent advances in the three-component synthesis of difluorinated compounds

Zhan-Yong Wang,\* Ziyang Zhang, Weiyi Chen, Yang Liu, Aili Sun\* and Ran Xia\*



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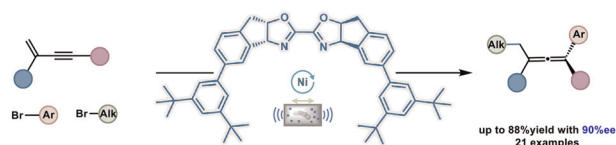
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## COMMUNICATIONS

7401

**Ball-milling-mediated remote asymmetric reductive coupling in air**Hao Lei, Yufang Yang, Jiajia Sun, Shu Fan, Xiaofeng Wei,\*  
Siyuan Wang,\* Hai-Shu Lin\* and Yan Kang\*

7406

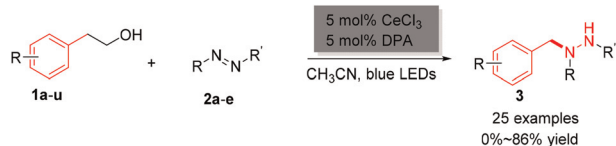
**Visible light-induced cascade cyclization of 2-isocyanoaryl thioethers/selenoethers: access to 2-arylthiobenzothiazoles/2-arylthiobenzoselenazoles**

Dan Liu, Shichao Yang, Huanfeng Jiang and Wanqing Wu\*



▲ Photocatalyst-, oxidant-, additive-free ▲ Mild and redox-neutral conditions  
▲ One-pot construction of two C-S bonds ▲ Good to excellent yields

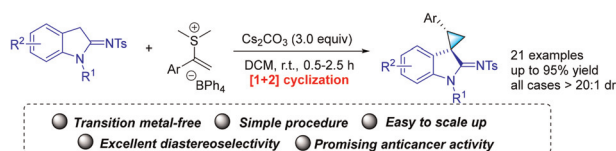
7411

**Efficient photocatalytic synthesis of benzylhydrazine**Yuhui Zhang, Fei Zeng, Yangyang Li, Meiqi Zhou,  
Jiafan Wang and Bingzhen Ma\*

7415

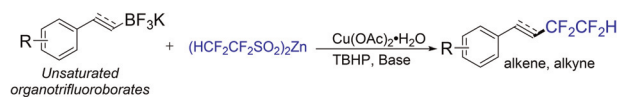
**Diastereoselective synthesis of spiro[cyclopropane-1,3'-indolin]-2'-imines via a sequential [1 + 2] annulation reaction of indolin-2-imines with  $\alpha$ -aryl vinylsulfonium salts**

Yan Gou, Shanling Hou, Qingyi Fu, Zhi Fan and Yuming Li\*



## COMMUNICATIONS

7420

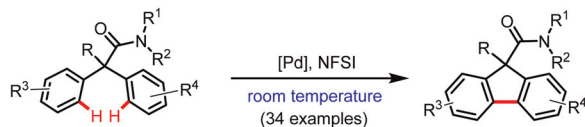


- operationally simple
- easy-to-handle
- high selectivity
- moderate to good yield

### Copper-mediated tetrafluoroethylation of unsaturated organotrifluoroborates via generation of the HCF<sub>2</sub>CF<sub>2</sub>-radical from zinc 1,1,2,2-tetrafluoroethanesulfinate

Md Nirshad Alam, Satyajit Majumder, Teruo Umemoto and William R. Dolbier, Jr.\*

7425



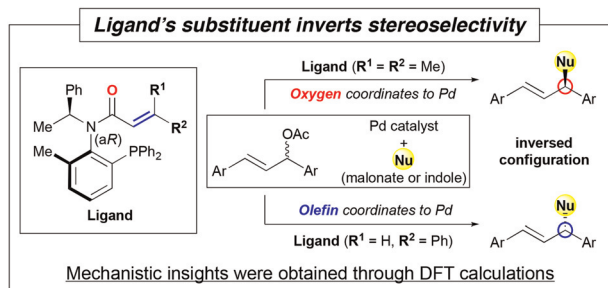
- ✓ De novo ring formation via CDC
- ✓ Mild reaction conditions
- ✓ Broad substrate scope: symmetric & unsymmetric fluorene-9-carboxamides

### Rapid access to fluorene-9-carboxamides through palladium-catalysed cross-dehydrogenative coupling

Xin Yang, Kun Zhou, Yue Wang, Yang-Jie Mao, Kai Liu, Zhen-Yuan Xu, Dan-Qian Xu\* and Shao-Jie Lou\*

## PAPERS

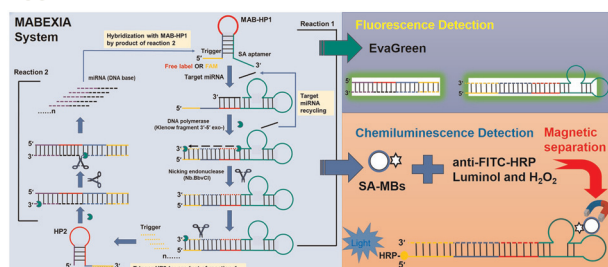
7431



### Stereoinversion in Pd-catalyzed allylic substitution induced by modification of olefinic moiety in chiral phosphine-acrylamide ligands

Kohei Watanabe,\* Yuto Toba, Shimpei Mita, Yusuke Kanda, Toru Yagi, Kento Kanauchi, Manami Kumada, Yasushi Yoshida, Yoshio Kasashima, Ryo Takita, Masami Sakamoto and Takashi Mino\*

7439



### Molecular aptamer beacon-based dual-mode exponential isothermal amplification for microRNA detection

Yu Han, Xuefeng Bian, Xiao Wang, Jiaying Chen, Liu Han\* and Xin Sun\*

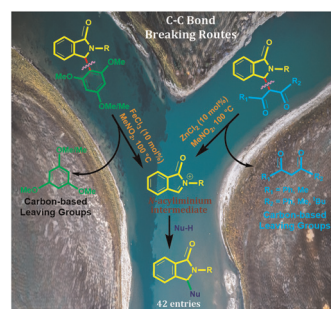


## PAPERS

7448

### Decarbonative routes to generate *N*-acyliminium ion intermediates for the synthesis of 3-substituted isoindolinones via an intermolecular amidoalkylation reaction

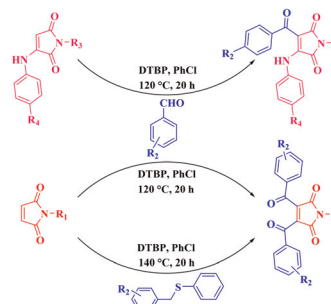
Nazir Uddin, Sudipta Roy, Santanab Giri, Gitish K. Dutta\* and Paresh Nath Chatterjee\*



7456

### Catalyst-free arylation of maleimides through $C_{sp^2}$ -H functionalization with aldehydes and benzyl phenyl sulfides

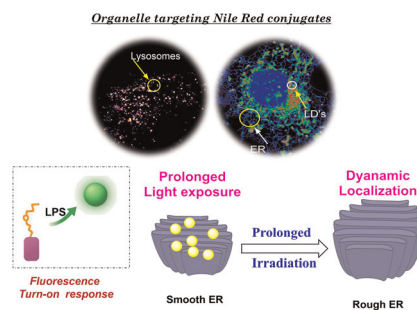
Elmira Taheri and Farnaz Jafarpour\*



7465

### Nile red derivatives for dual-channel organelle imaging and LPS detection

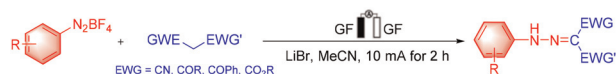
Mohini Ghorpade, Sneha Negi, Paramasivam Mahalingam and Sriram Kanvah\*



7477

### Electrochemical diazenylation of active methylene compounds with aryldiazonium salts: efficient synthesis of $\beta$ -dicarbonyl benzoylhydrazones

Ping Lin, Zezhao Huang, Zeyao Liang, Jiahe Zhang, Li Zhu\* and Xiaoquan Yao\*

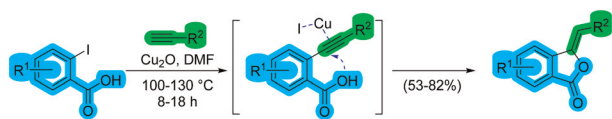


- ✓ No sacrificial metal anode
- ✓ Good functional group compatibility
- ✓ Mild reaction conditions
- ✓ LiBr as the HAT reagent

24 examples  
up to 93% yield



7483



$R^1 = \text{F, Cl, Br, NO}_2, \text{CF}_3, \text{OCH}_3$   
 $R^2 = \text{CO}_2\text{Et, Ph, CH}_2\text{OH, CH}_2\text{CH}_2\text{OH, CH(OH)CH}_3, \text{CH}_2\text{NH-Boc, TIPS, COCH}_3$

- ✓ One-pot tandem C-C coupling and cyclization
- ✓ No palladium needed
- ✓ No ligand needed
- ✓ No base needed
- ✓ Regioselective and stereoselective
- ✓ Compatible with electron-rich and poor substrates/alkynes
- ✓ 55 examples
- ✓ Scalable, gram scale synthesis

## $\text{Cu}_2\text{O}$ -mediated regio- and stereoselective one-pot synthesis of (*Z*)-3-ylidenephthalides from 2-iodobenzoic acids and terminal alkynes

Ahmed R. Ali and Longqin Hu\*

