

# Organic & Biomolecular Chemistry

An international journal of synthetic, physical and biomolecular organic chemistry

rsc.li/obc

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 1477-0520 CODEN OBCRAK 23(26) 6233–6458 (2025)



### Cover

See Hyun-Suk Lim,  
Min Hyeon Shin et al.,  
pp. 6366–6372.

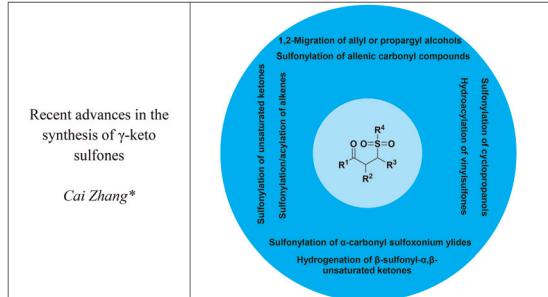
Image reproduced  
by permission of  
Hyun-Suk Lim from  
*Org. Biomol. Chem.*,  
2025, **23**, 6366.

## REVIEWS

6242

### Recent advances in the synthesis of $\gamma$ -keto sulfones

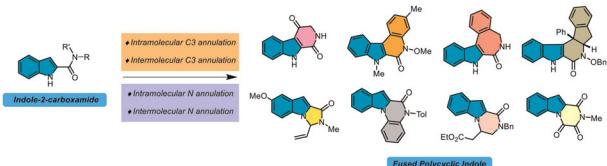
Cai Zhang



6256

### Indole-2-carboxamide: a versatile synthetic handle for the synthesis of diversely substituted polycyclic indole structures

Akshay Kamble, Priyanka Deore, Vanshika Agrawal,  
Adesh Chauhan, Haneesha Gulipelli and  
Satyasheel Sharma\*



# EES Batteries

Exceptional research on  
batteries and energy storage

Part of the EES family

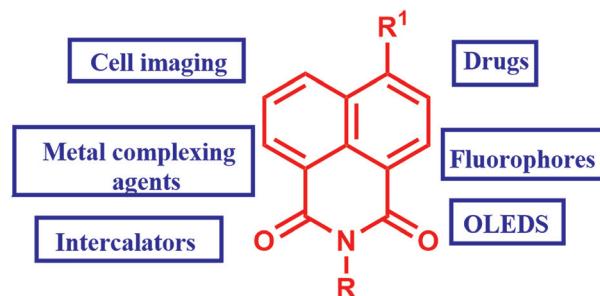
Join  
in | Publish with us  
[rsc.li/EESBatteries](http://rsc.li/EESBatteries)

## REVIEWS

6287

**1,8-Naphthalimide derivatives as small molecules with multi-applications in chemistry and biology**

Sanaullah and Krzysztof Walczak\*

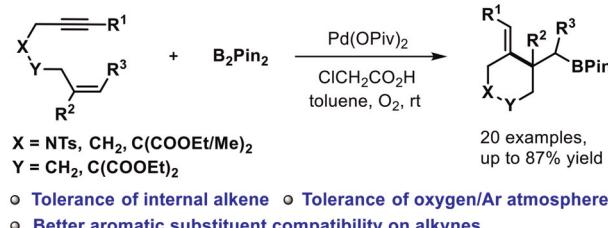


## COMMUNICATIONS

6320

**A palladium-catalyzed borylative cyclization cascade reaction of 1,7-enynes: access to functionalized cyclohexanes**

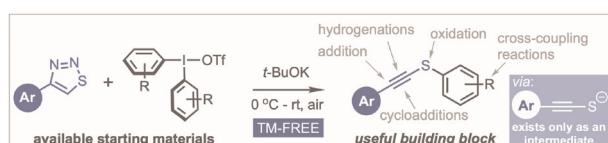
Weitian Qin, Chengying Zhou, Shaomin Fu\* and Bo Liu\*



6325

**4-Aryl-1,2,3-thiadiazoles as alkynyl thiolate surrogates in the reactions with diaryliodonium salts: a transition-metal-free route to alkynyl aryl sulfides**

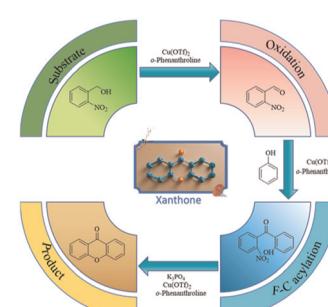
Polina Zaikina, Dmitry Bugaenko\* and Alexander Karchava\*



6331

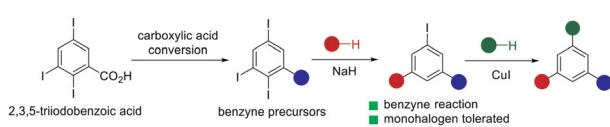
**One-pot synthesis of xanthones from 2-nitrobenzyl alcohol and phenol catalyzed by Cu(OTf)<sub>2</sub>-1,10-phenanthroline**

Zheng Zhang, Bing-Bing Pan, Long Wei, Xiao-Ning Feng, Yan Zhou, Qing-Dong Liu, Ling-Feng Gao,\* Xu Sun\* and Geng-Xiu Zheng



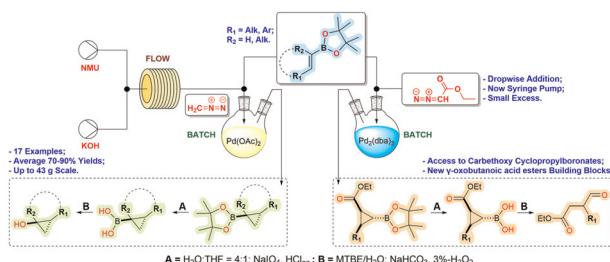
## COMMUNICATIONS

6337

**Divergent synthesis of 1,3,5-trisubstituted benzenes from 2,3,5-triiodobenzoic acid**

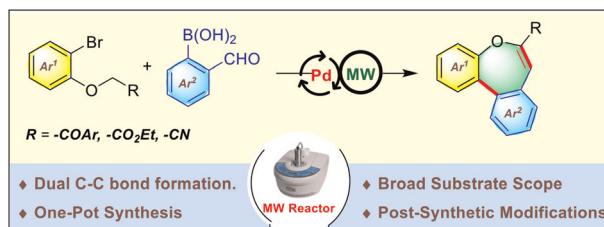
Huiling Lin, Jiayi Qi, Fan Luo,\* Zimei Zhu, Haojie Zhu, Yan Ge, Yiou Hu, Wei Wang, Shilei Zhang\* and Xiaobei Chen\*

6343

**Substituted cyclopropanols via sequential cyclopropanation and oxidative hydrolysis of vinylboronates**

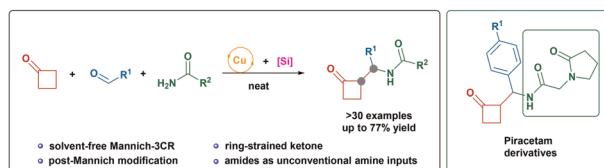
Serhii I. Shuvakin, Oleksii M. Serhieiev, Maksym O. Dashko, Viacheslav V. Pendiukh, Sergey P. Ivonin, Svitlana V. Shishkina, Alexander B. Rozhenko, Olexandr Ye. Pashenko, Dmytro M. Volochnyuk\* and Serhiy V. Ryabukhin\*

6349

**Microwave-assisted one-pot synthesis of dibenzodioxepines via domino C–C coupling and a cyclo-condensation pathway**

Pradip S. Waghmare and Gedu Satyanarayana\*

6355

**Direct catalytic synthesis of  $\beta$ -acylamino cyclobutanones via three-component Mannich reactions**

Bence S. Nagy, Fegyverneki Dániel, Péter Szalai, András Kotschy and Márió Gyuris\*

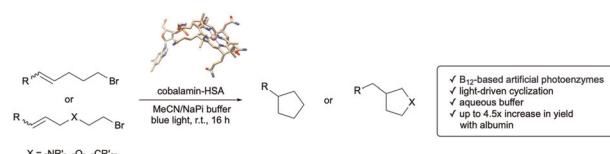


## COMMUNICATIONS

6360

**Light-driven reductive cyclization catalyzed by vitamin B<sub>12</sub>-based artificial photoenzymes**

Takumi Ogawa Ho, Yi Ling Goh, Wisely Chua, Elaine Tiong, Fong Tian Wong and Zhennan Liu\*

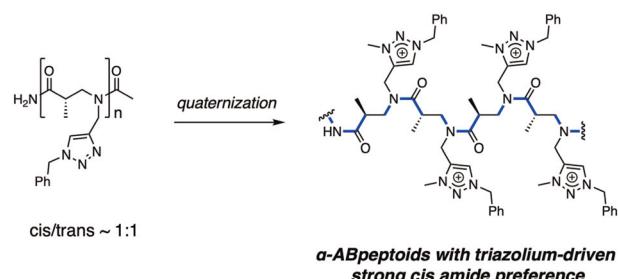


## PAPERS

6366

**cis-Amide promotion in  $\alpha$ -ABpeptoid foldamers via triazolium side chains**

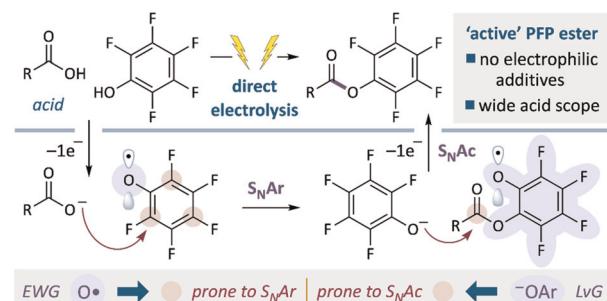
Jungyeon Kim, Ganesh A. Sable, Kang Ju Lee, Hyun-Suk Lim\* and Min Hyeon Shin\*



6373

**Direct electrochemical synthesis of pentafluorophenyl esters via oxyl-radical-promoted nucleophilic aromatic substitution**

Edward G. V. Hilvano, Min-Chieh Liang, Jacob J. Piane and Eric D. Nacs\*



6386

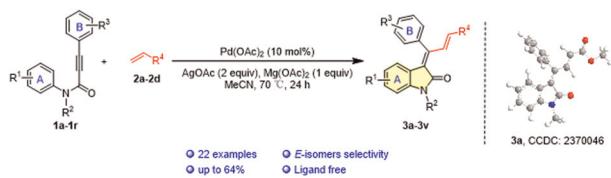
**Photo-induced iron-catalyzed [2 + 2 + n] radical cascade for the synthesis of alkylated/spirocyclic polycyclic quinolinones**

Zhuoheng Song, Jiawen Yin, Jinrui Bai, Dan Qi, Lin Guo, Chao Yang\* and Wujiong Xia\*



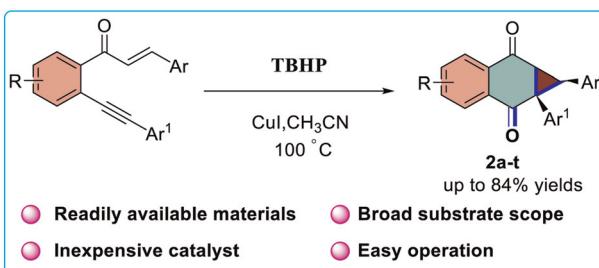
## PAPERS

6391

**Pd(II)-catalyzed domino C–H addition/Heck reaction for stereoselective 3-alkylideneoxindole synthesis**

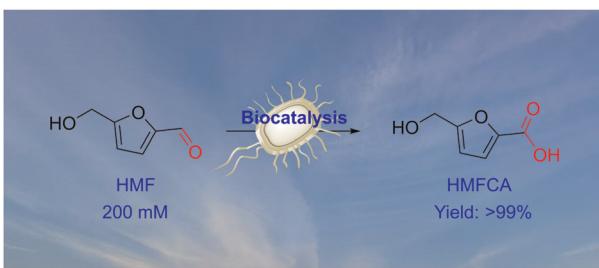
Kai Hong, Tengfei Zhang, Qing Li, Xue Li, Zhonghui Sun, Gongyuan Zhao, Jinsong Peng\* and Chunxia Chen\*

6400

**Radical cascade cyclization of 1,6-enynes to access tricyclic compounds using a Cu/TBHP system**

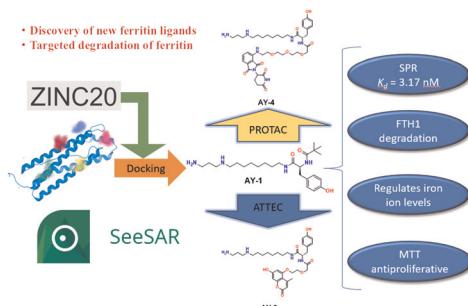
Elmira Jamshidi, Saideh Rajai-Daryasarei, Hamid Reza Bijanzadeh, Alireza Ariaftard\* and Saeed Balalaie\*

6406

**Biosynthesis of 5-hydroxymethyl-2-furancarboxylic acid from 5-hydroxymethylfurfural via new whole-cell biocatalysts**

Shi-Kai Jiang, Heng Lei, Ji-Hang Shen, Xi Shen, Xiao-Jun Ji and Zhi-Gang Zhang\*

6417

**Design, synthesis and evaluation of antiproliferative effects of ferritin-targeted degraders**

Yi Ai, Changqi Wang, Jiayi Zhu and Hang Zhong\*

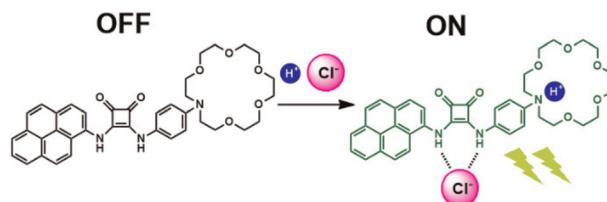


## PAPERS

6425

**Multifunctional supramolecular receptors: aqueous ion recognition, HCl sensing and cytotoxic potential**

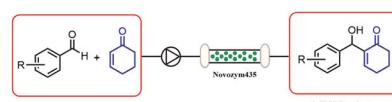
Damian Jagleniec, Katarzyna Sęktas, Łukasz Dobrzycki, Miłosz Ludwinek, Anna Nasulewicz-Golderman, Joanna Wietrzyk and Jan Romański\*



6434

**An enzymatic process of the Morita–Baylis–Hillman (MBH) reaction in a microflow system**

Shuzhan Wang, Rui Zhang, Qianxi Zhou, Chengkou Liu, Yuguang Li, Yujing Hu, Hong Qin, Zheng Fang\* and Zhao Yang\*



- Enzyme-catalyzed MBH reaction
- recyclable with potential for industrial applications.

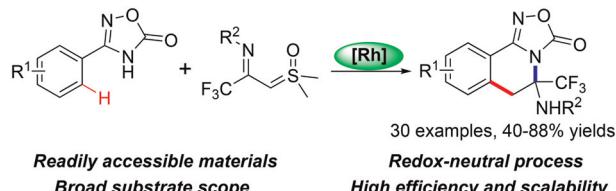
● broader substrate scope and higher reaction efficiency

● 20 examples, up to 67% yield

6441

**Rh(III)-catalyzed annulation of oxadiazolones with CF<sub>3</sub>-imidoyl sulfoxonium ylides: access to trifluoromethyl-substituted fused-dihydroisoquinolines**

Sihao Ling, Qihua Chen and Zhengkai Chen\*



6446

**Efficient synthesis of fluorogenic substrates for mucopolysaccharidosis (MPS) IIIA and IIIB via aromatic  $\alpha$ -glycosylation with thioglycosyl donors**

Yuchen Pan, Gareth G. Doherty, Abdullah Al Nahain, Norbert Wimmer, Adeline A. Lau, Kim M. Hemsley and Vito Ferro\*

