

# Organic & Biomolecular Chemistry

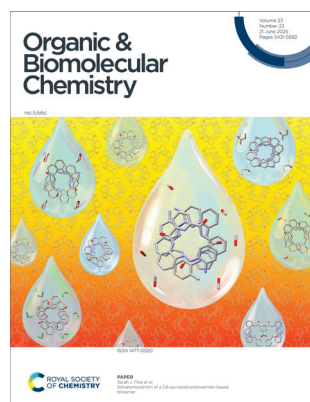
An international journal of synthetic, physical and biomolecular organic chemistry

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## IN THIS ISSUE

ISSN 1477-0520 CODEN OBCRAK 23(23) 5431-5692 (2025)



### Cover

See Sarah J. Pike *et al.*, pp. 5590–5599.

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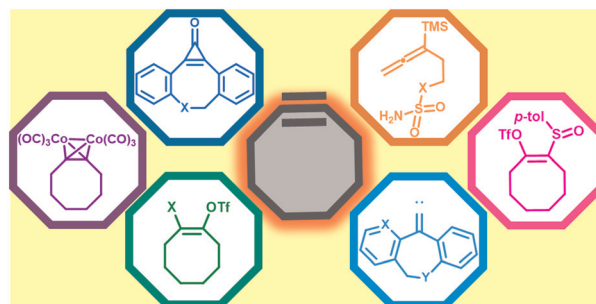
Cover image designed by Sena Ozturk.

## REVIEWS

5441

### Expanding the bioorthogonal chemistry toolbox: innovative synthetic strategies for cyclooctynes

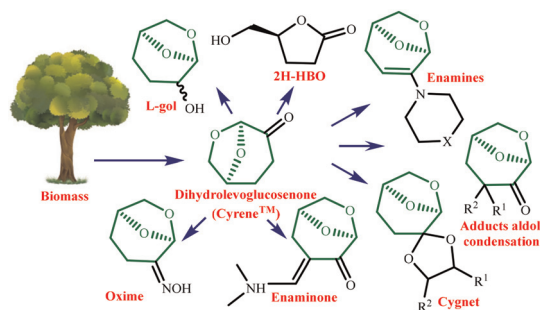
Andrea Diana, Giuseppina I. Truglio, Elena Petricci and Daniela Lanari\*



5457

### Recent applications of Cyrene as a chiral synthon

Yu. A. Khalilova\* and L. Kh. Faizullina



# Environmental Science: Atmospheres

GOLD  
OPEN  
ACCESS

Connecting communities  
and inspiring new ideas

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Fundamental questions  
Elemental answers

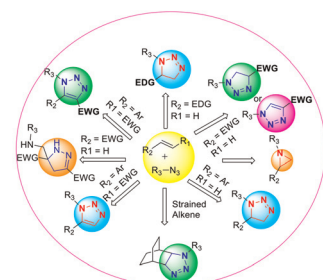


## REVIEWS

5483

### Ene–azide chemistry in the synthesis of 1,2,3-triazoline/triazole and the corresponding mechanistic aspects

Kunj B. Mishra

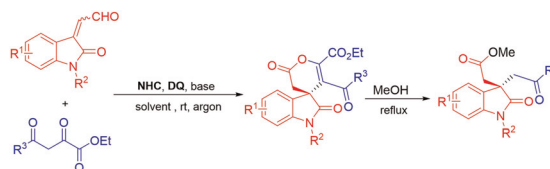
Alkene + Azide  $\rightleftharpoons$  1,2,3-Triazoline or 1,2,3-Triazole or N-Heterocycles

## COMMUNICATIONS

5527

### Enantioselective access to 3,3'-disubstituted oxindole derivatives by N-heterocyclic carbene catalysis

Xiaomei Wang, Weixing Zeng, Shi-Wu Li,\* Jixin Pian and Zhifei Zhao\*

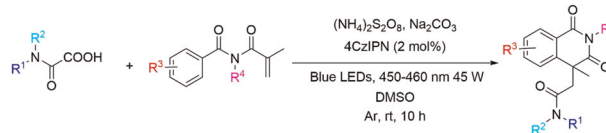


- ✓ Two types of important products, 39 examples in total
- ✓ Highly enantioselective, most products are over 90% ee
- ✓ Gram synthesis and derivatization
- ✓ Mild reaction condition, broad scope and operational simplicity

5533

### Synthesis of amide-functionalized isoquinoline derivatives by photo-induced carbamoyl radical cascade amidation/cyclization

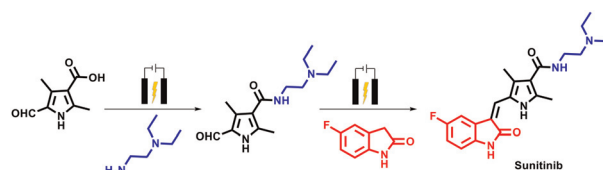
Wei Niu, Yantong Liu, Erling Dai, Jiarui Sun, Yuyu Dai\* and Xiangsheng Xu\*



5542

### Two-step electrochemically driven synthesis of sunitinib

Anita Alni,\* Robby Gus Mahardika, Ade Danova and Elvira Hermawati

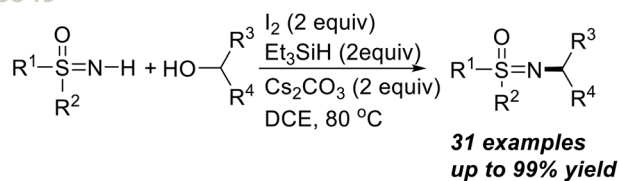


- ✓ Iodide mediator
- ✓ Green and mild reaction conditions
- ✓ Room temperature reactions
- ✓ Graphite electrodes
- ✓ Metal- and oxidant-free



## COMMUNICATIONS

5549

**Iodine-mediated *N*-benzylation of *NH*-sulfoximines with alcohols**

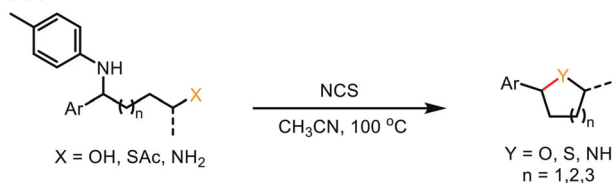
Yuanfang Zhong\* and Linjie Yang

5554

**A protocol for selective synthesis of thiol-functionalized allylic sulfonyl fluorides**

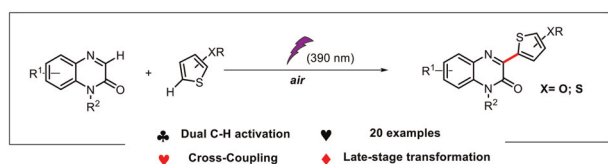
Monday Peter Ajisafe, Heba H. Mohamedy, Eman Fayad, Hanadi A. Katouah and Hua-Li Qin\*

5559

**Halogenation-enabled intramolecular deaminative cyclization**

Wenbo Wang and Gang He\*

5564

**Photo-induced aerobic cross-coupling of quinoxalin-2(1*H*)-ones with electron-rich thiophenes**

Wei Huang, Tong Wang, Shu-Ying Chen, Quan Zhou\* and Lei Wang

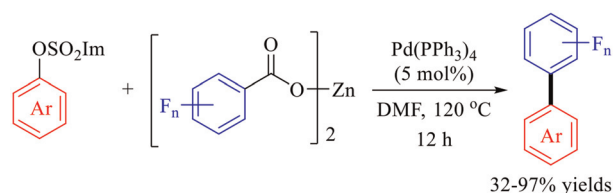


## COMMUNICATIONS

5569

**Pd-catalyzed decarboxylative coupling of zinc polyfluorobenzoate with aryl imidazolyisulfonate for polyfluorinated biaryl synthesis**

Chao Gui, Yun Zhou, Hong-Fei Tian, Xue-Qiang Chu, Hao Xu,\* Chengping Miao,\* Weidong Rao and Zhi-Liang Shen\*

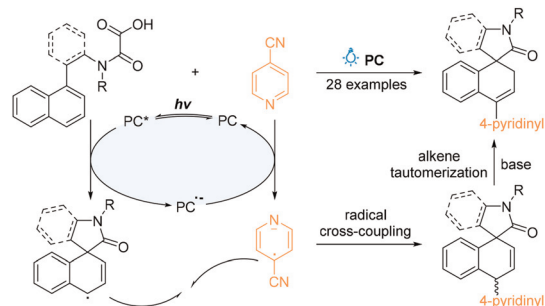


- using readily available aryl imidazolyisulfonate as arylating agent
- late-stage functionalization of bioactive molecules
- C-O bond functionalization
- good functional group compatibility
- scalability

5576

**Visible-light-induced dearomative 1,4-carbamoylpyridinylation of nonactivated naphthalenes**

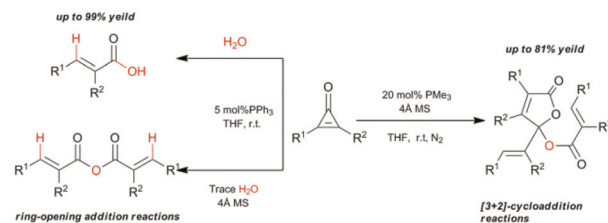
Cheng-An Jin, Hao Liu, Bo-Wen Xie, Ren-Xiao Liang\* and Yi-Xia Jia\*



5582

**Phosphine-catalyzed reaction of cyclopropanones with water: divergent synthesis of highly functionalized  $\gamma$ -butenolides, trisubstituted  $\alpha,\beta$ -unsaturated acids and anhydride**

Fujuan Li, Danna Yang, Hongyan Qu, Mingqi Zhu and Suqing Zheng\*

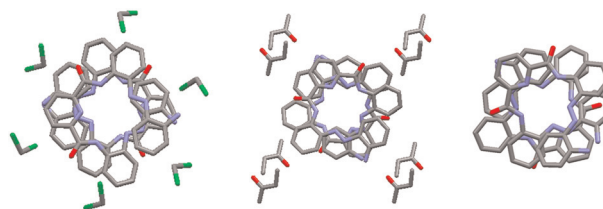


## PAPERS

5590

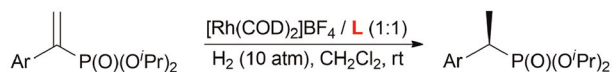
**Solvatomorphism of a 2,6-pyridyldicarboxamide-based foldamer**

Sena Ozturk, Alexander R. Davis, Colin C. Seaton, Louise Male and Sarah J. Pike\*

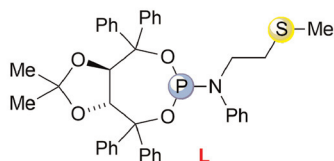


## PAPERS

5600



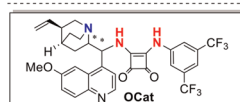
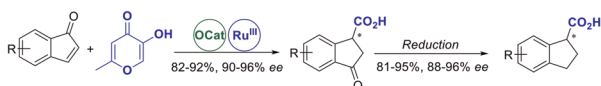
- readily available ligand
- mild reaction conditions
- up to 500 S/C
- up to 100% yield
- up to 99% ee
- 20 examples



### Rhodium-catalyzed enantioselective hydrogenation of (1-arylvinyl)phosphonates with TADDOL-based phosphoramidite P,S ligands

Vladislav S. Zimarev, Ilya D. Firsin, Alexander V. Larin, Victor A. Tafenko, Grigoriy N. Bondarenko, Ilya V. Chuchelkin, Vladislav K. Gavrilov, Konstantin N. Gavrilov, Nataliya S. Goulioukina\* and Irina P. Beletskaya

5611



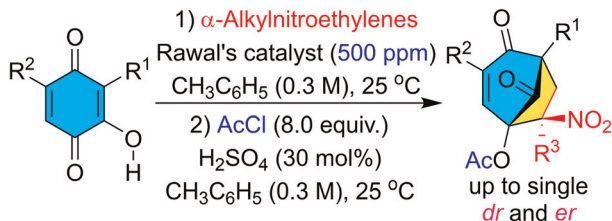
- The first asymmetric synthesis
- Short way to indane chiral drugs
- Gram-scale protocols
- Enantiodivergent approach

**Analgetics**  
(R = 6-F) (2-3 steps)  
**Camonagrel**  
(R = 5-(1m-(CH<sub>2</sub>)<sub>2</sub>-O) (6 steps)

### Tandem process of asymmetric organocatalysis and selective post-functionalization: enantiodivergent synthesis of bioactive indane-1-carboxylic acid derivatives

Madina Zhanabaeva, Ruslan A. Kovalevsky, Alexander S. Kucherenko,\* Alexander A. Korlyukov and Sergei G. Zlotin\*

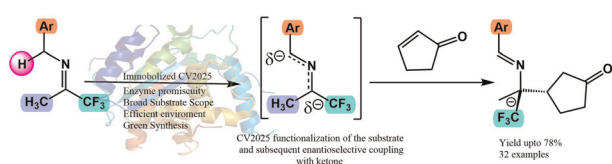
5616



### Constructing chiral bicyclo[3.2.1]octanes via low-loading organocatalysis

Etikala Ashok, Pandhiti R. Lakshmi, Revoju Sravanthi and Dhevalapally B. Ramachary\*

5629



### An enzyme catalyzed umpolung strategy for the green synthesis of Schiff bases and their derivatives

Taimur Khan, Daixi Wang, Khan Bahadar, Muhammad Shahab, Qaim Ali, Tausif Ahmad Khan and Guojun Zheng\*

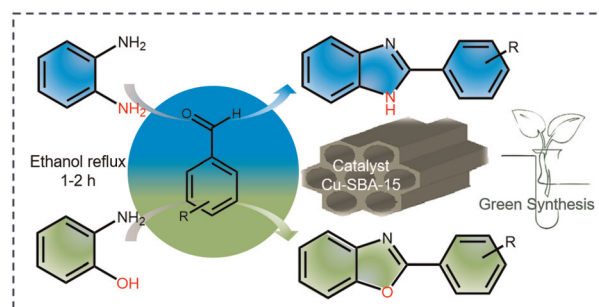


## PAPERS

5635

**Cu(II)-SBA-15 mediated synthesis of 2-aryl benzimidazoles and benzoxazoles: a sustainable approach**

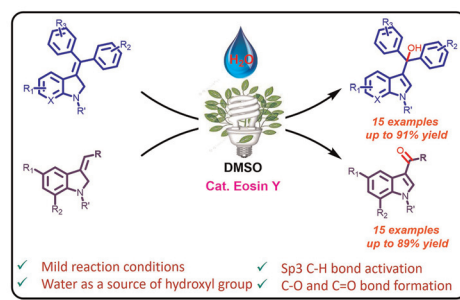
Athira M P, Arun R and Suja Haridas\*



5643

**Visible-light-triggered organophotoredox-catalyzed oxidation of 3-(benzylidene)indoline to indole-3-carbinols and 3-acyl indoles**

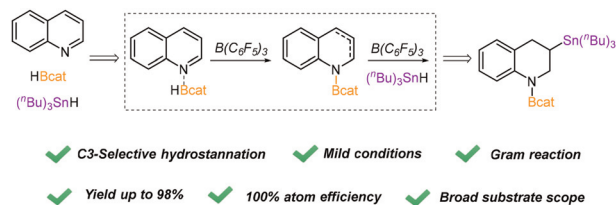
Sourav Ghosh, Gopal Rana, Abhishek Kar, Rajkamal Sahoo and Umasish Jana\*



5657

**An efficient method for constructing C3-stannyl-tetrahydroquinoline: cascade hydroboration and hydrostannation of quinoline**

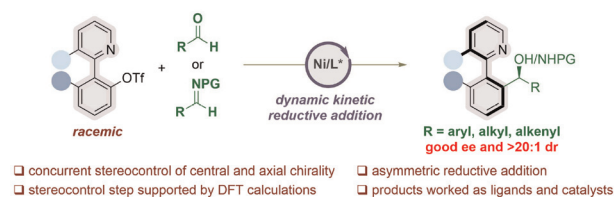
Tianwei Liu,\* Jianghua He\* and Yuetao Zhang



5666

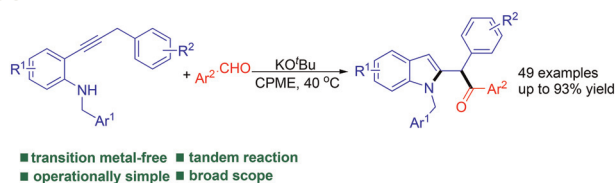
**Catalytic dynamic kinetic reductive addition of simple aldehydes and aldimines with heterobiaryl triflates: harnessing both central and axial chirality**

Hui Ni, Anyao Liu, Xiaoying Fu, Xinyi Zhang, Xiaowen Xue,\* Xiang Lyu,\* Aijun Lin\* and Yuli He\*



## PAPERS

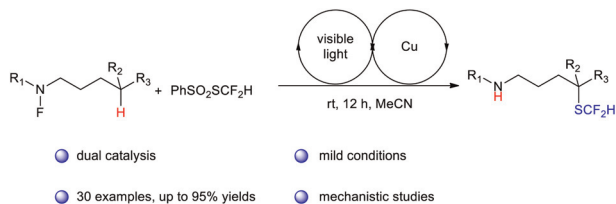
5672



### Regioselective synthesis of $\alpha$ -(2-indolyl) ketones with arylaldehydes via a tandem reaction of 2-alkynylanilines

Jianwei Wang,\* Qingxia Zhao, Hangxiao Fu and Jie Li\*

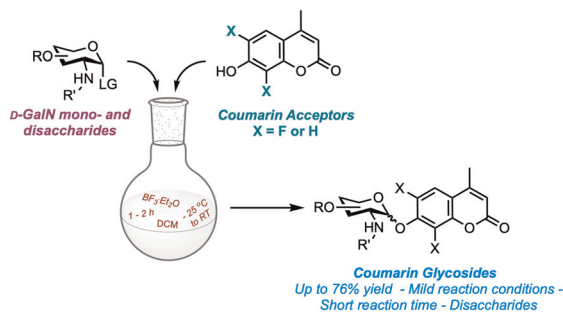
5677



### Dual photoredox/copper-catalyzed selective difluoromethylthiolation of remote unactivated C(sp<sup>3</sup>)-H bonds at room temperature

Shengwen Li, Guanfeng Ji, Wengui Wang\* and Shoufeng Wang\*

5682



### Systematic studies toward the synthesis of D-galactosamine-containing coumarin glycosides

Hannah S. Wootton and Gavin J. Miller\*

## CORRECTION

5689

### Correction: TBAI-mediated electrochemical oxidative synthesis of quinazolin-4(3H)-ones from 2-aminobenzamides and isothiocyanates

Jingbin Huang, Yafeng Liu, Yu Huang, Xiuli Wu, Xiao-Bing Lan, Jian-Qiang Yu, Wenxue Li, Ping Zheng,\* Jian Zhang\* and Zhenyu An\*

