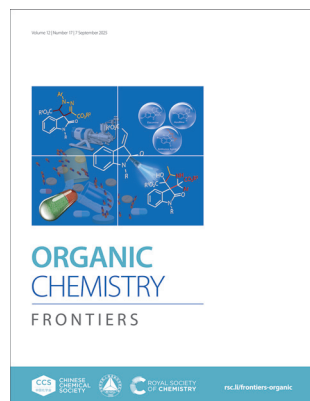


## IN THIS ISSUE

ISSN 2052-4129 CODEN OCFRA8 12(17) 4689–4898 (2025)



## Cover

See Subhabrata Sen *et al.*,  
pp. 4698–4707.

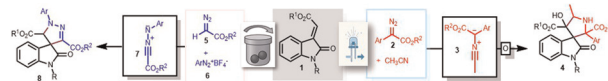
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Subhabrata Sen  
from *Org. Chem. Front.*,  
2025, **12**, 4698.

## RESEARCH ARTICLES

4698

### Metal- and base-free spirocyclization of alkylidene oxindoles *via* photo- and mechanochemically-generated nitrile ylides and nitrile imines as 1,3-dipoles

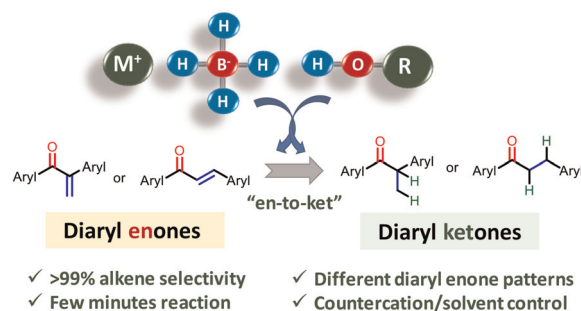
Shweta Singh, Roopam Pandey, Varun Christopher, Mahesh Kumar Ravva, Rakesh Ganguly and Subhabrata Sen\*



4708

### Counteranion- and solvent-controlled selective borohydride hydrogenation of alkenes in diaryl enones

Miguel Espinosa, Miquel Molina-García, Daniel Ciscareles-Velázquez and Antonio Leyva-Pérez\*



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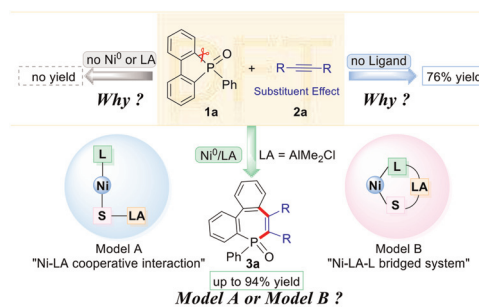
**[rsc.li/icm](https://rsc.li/icm)**

## RESEARCH ARTICLES

4722

### Mechanistic insights into Ni–Al co-catalyzed alkyne carbophosphination enabled by C–P bond activation

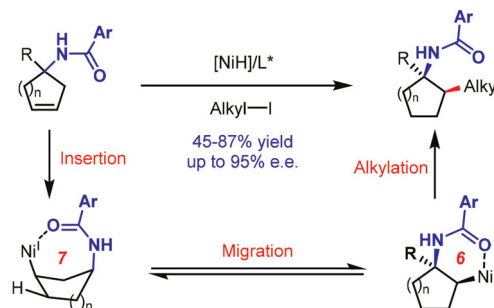
Congcong Huang, Yishi Li and Juan Li\*



4743

### Enantioselective construction of cycloalkyl amines via nickel-catalysed alkene desymmetrization

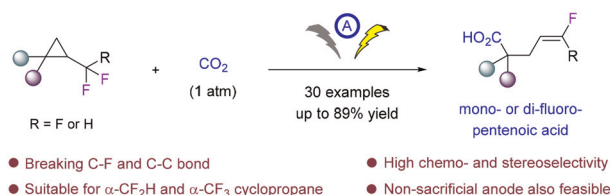
Ludi Li, Bo Chen, Wenxu Cao, G. V. Surendra Babu, Weike Liao, Pengli Zhang\* and Guoqin Xia\*



4750

### Electrochemical carboxylation of $\alpha$ -fluoroalkyl cyclopropane with $\text{CO}_2$ to mono- or difluoropentenoic acid

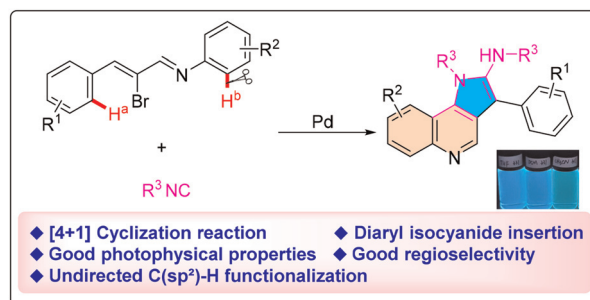
Nan Feng, Mengmeng Jiang, Huimin Wang, Yuqing Zhong, Ying Sun, Deyong Yang and Feng Zhou\*



4757

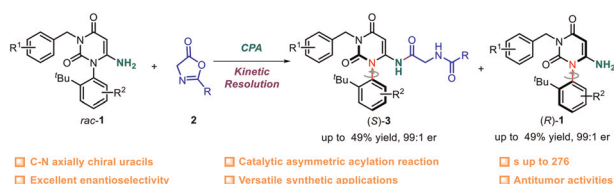
### Synthesis of quinoline derivatives by palladium-catalyzed isocyanide insertion/undirected $\text{C}(\text{sp}^2)\text{-H}$ functionalization/[4 + 1] cyclization reactions involving aryl isocyanide

Shan-Shan Liu, Yong-Jie Wu, Jiang-Nan Zheng, Zhi-Lin Ren,\* Shao-Jie Jiang, Jun Wu, Ke-Ji Li, Ping He\* and Long Wang\*



## RESEARCH ARTICLES

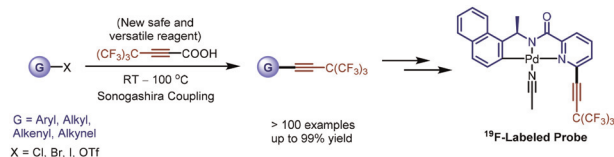
4764



### Chiral phosphoric acid catalyzed asymmetric synthesis of C–N axially chiral uracils with antitumor activity through kinetic resolution strategy

Jiawei Xu, Haisong Xu, Yunyi Xu, Zhongqi Peng, Wei Zhang\* and Xin Li\*

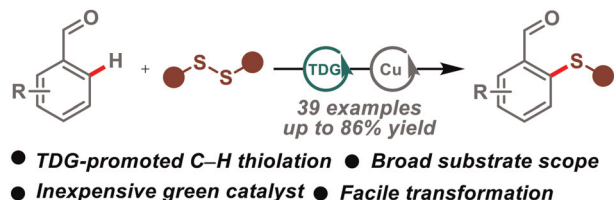
4773



### A general protocol for efficient construction of perfluoro-*tert*-butyl alkynes with (perfluoro-*tert*-butyl)propionic acid

Zhiqiang Wei, Guangxing Gu, Wei Zhang, Yanchuan Zhao\* and Jinbo Hu\*

4780

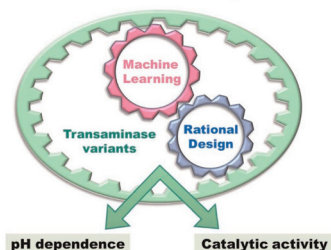


### Copper-catalyzed aryl *ortho*-C–H thiolation of aldehydes *via* a transient directing group strategy

Mingshun Mei, Dongsheng Yi, Fanyi Meng, Junhao Tang and Yanghui Zhang\*

4788

ML-guided protein engineering to improve catalytic activity of transaminases under neutral pH conditions



### Machine learning-guided protein engineering to improve the catalytic activity of transaminases under neutral pH conditions

Si-Han Liu, Ligai Bai,\* Xu-Dong Wang, Qi-Qiang Wang, De-Xian Wang, Uwe T. Bornscheuer and Yu-Fei Ao\*



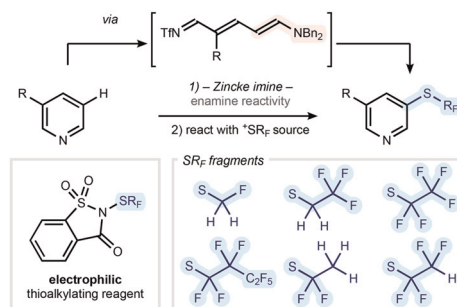


## RESEARCH ARTICLES

4794

**meta-Selective thiofluoroalkylation of substituted pyridines via Zincke imines**

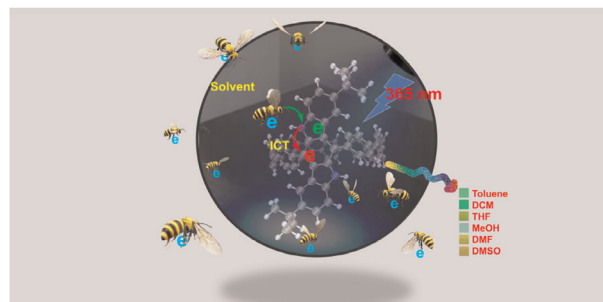
Will C. Hartley,\* Arnau Huerta, Júlia C. Negredo and Omar Boutureira\*



4800

**Bis-Fischer indole[3,2-*b*]carbazole modification of [10]cycloparaphenylenes: tuning optical properties through rigid substitution**

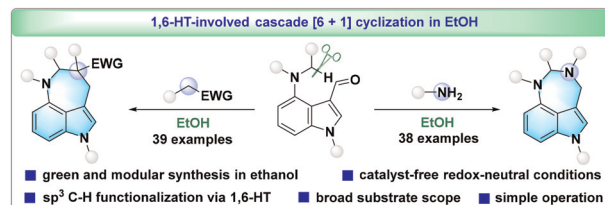
Wanchun Duan,\* Dongming Chen, Dang Zheng, Shidong He, Wanqun Hu, Lvyuan Hao and Xin Xu



4808

**Green and modular synthesis of azepino[4,3,2-*cd*]indoles and diazepino[6,5,4-*cd*]indoles via hydride transfer-involved cascade cyclization in ethanol**

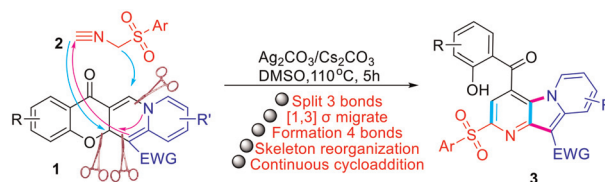
Qian-Hao Zhuang, Xiao-Lin Wang, Wei Gao, Bin Qiu, Xiao-De An, Houchen Wang, Yao-Bin Shen\* and Jian Xiao\*



4818

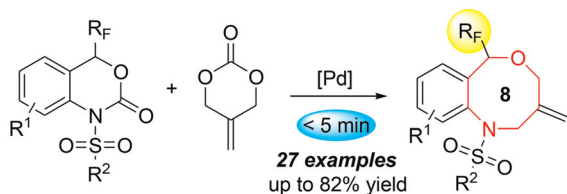
**Continuous 1,4/1,6- and 1,2-addition reactions combined with the skeletal rearrangement of 5a*H*,13*H*-chromeno[2,3-*b*]quinolizin-13-ones with isocyanides to enable the synthesis of pyrido[2,3-*b*]indolizines**

Bi-Na Shao, Jia-Ming Yang, Li Chen, Wei-Min Zhang, Long-Kun Chen and Sheng-Jiao Yan\*



## RESEARCH ARTICLES

4825



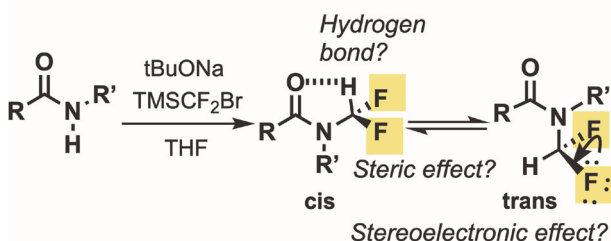
♦ short reaction times ♦ valuable products ♦ DFT calculations

### Synthesis of 8-membered trifluoromethyl benzoxazocines via a Pd-catalyzed ring-expansion reaction of trifluoromethyl benzoxazinones with 2-methylidenetrimethylene carbonate and mechanistic investigations

Bo Yang, Peng-Fei Sun, Xue Ma, Zhouyang Long\* and Li-Ming Zhao\*

4834

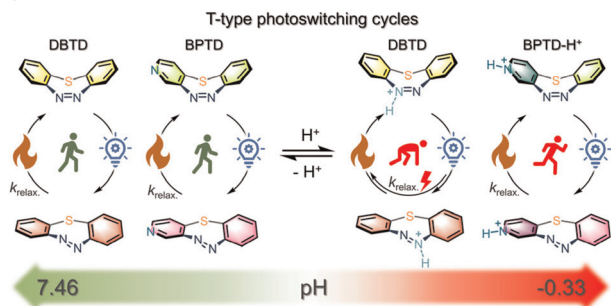
Is  $\text{CF}_2\text{H}$  similar to OH or isopropyl?



### Conformational preference of *N*-difluoromethylated amides: contributions of hydrogen-bonding, steric, and stereoelectronic effects

Ryu Yamasaki,\* Ami Tashiro, Chisaki Sato, Ai Ito and Iwao Okamoto

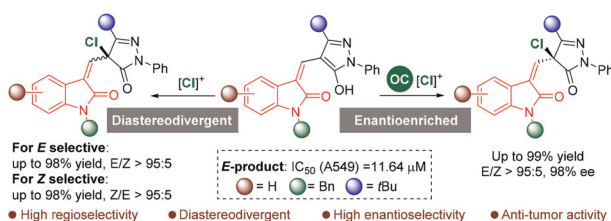
4842



### Acidic pH-modulated photoswitching of sulfur-bridged seven-membered cyclic azopyridines

Fengying Lan, Cefei Zhang, Zhihao Liu, Sitong Li, Jinmeng Yan, Xiaohu Zhao,\* Changwei Hu, Zhishan Su,\* Pengchi Deng and Zhipeng Yu\*

4852



### Enantioselective and diastereodivergent construction of oxindole–pyrazolone conjugates bearing an alkenyl substituted quaternary chlorinated stereogenic centre

Jiawei Chen, Xusheng Duan, Mengyuan Wu, Guishun Bai, Jianwei Chen, Xuanrong Sun, Jean Rodriguez, Damien Bonne,\* Hong Wang\* and Xiaozhe Bao\*

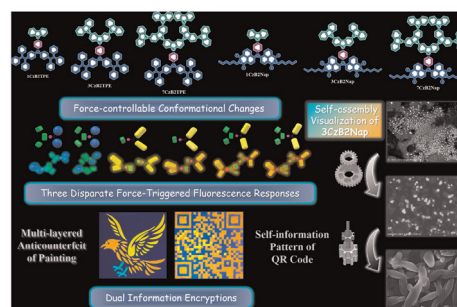


## RESEARCH ARTICLES

4862

# Tetraphenylethylene or naphthalimide-functionalized dendritic carbazole AIEgens: self-assembly visualization, three disparate force-triggered fluorescence responses, and advanced anticounterfeiting applications

Yijie Zou, Zhao Chen,\* Fei Zhao, Ya Yin, Kaixin He, Xingru Liang, Hai-feng He,\* Zhijian Li\* and Sheng Hua Liu\*

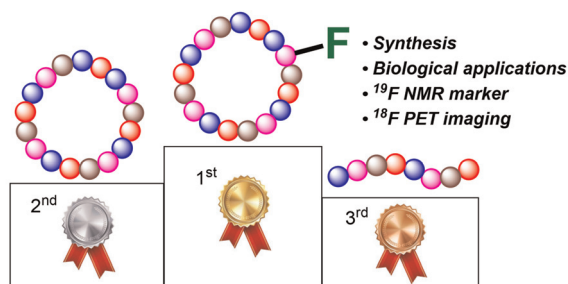


## REVIEW

4871

# Fluorine-containing macrocyclic peptides and peptidomimetics

Neshat Rozatian\* and Stefan Roesner\*



**Fluorinated macrocyclic peptides show enhanced properties**

