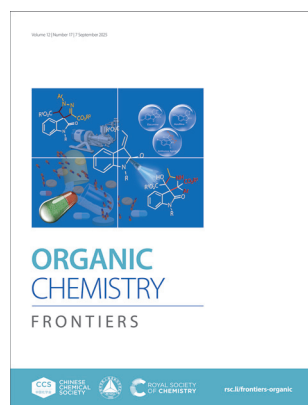


### IN THIS ISSUE

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



#### Cover

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

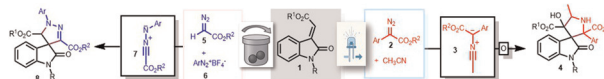
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### RESEARCH ARTICLES

4698

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

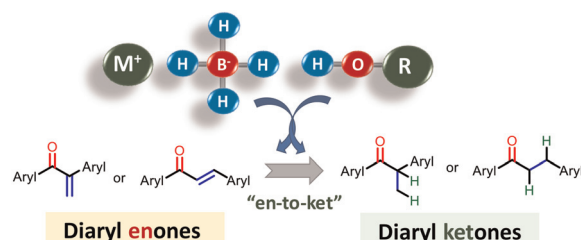
Shweta Singh, Roopam Pandey, Varun Christopher, Mahesh Kumar Ravva, Rakesh Ganguly and Subhabrata Sen\*



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\*



- ✓ >99% alkene selectivity
- ✓ Few minutes reaction
- ✓ Different diaryl enone patterns
- ✓ Counteranion/solvent control



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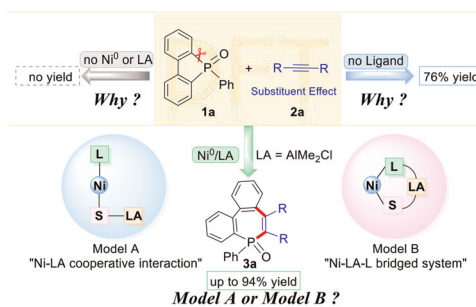
[rsc.li/icm](https://rsc.li/icm)

## RESEARCH ARTICLES

4722

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

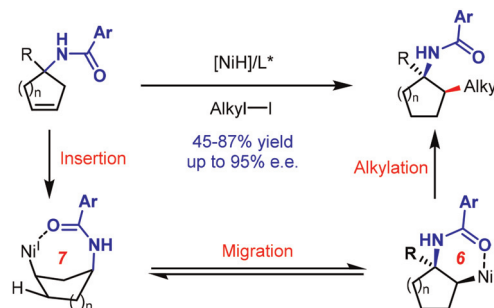
Congcong Huang, Yishi Li and Juan Li\*



4743

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

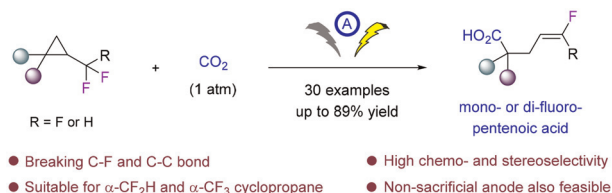
Ludi Li, Bo Chen, Wenxu Cao, G. V. Surendra Babu, Weike Liao, Pengli Zhang\* and Guoqin Xia\*



4750

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

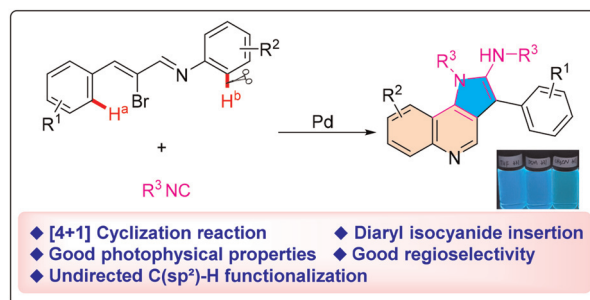
Nan Feng, Mengmeng Jiang, Huimin Wang, Yuqing Zhong, Ying Sun, Deyong Yang and Feng Zhou\*



4757

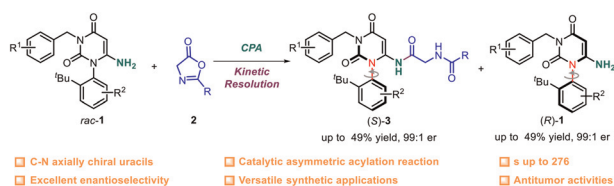
### Synthesis of quinoline derivatives by palladium-catalyzed isocyanide insertion/undirected $\text{C}(\text{sp}^2)\text{-H}$ functionalization/[4 + 1] cyclization reactions involving aryl isocyanide

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

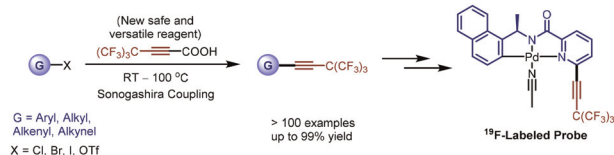
4764



### 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\*

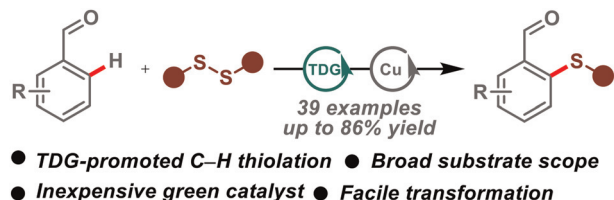
4773



### 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

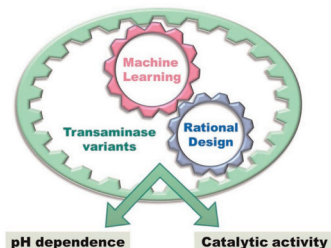


### Copper-catalyzed aryl *ortho*-C–H thiolation of aldehydes *via* a transient directing group strategy

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\*

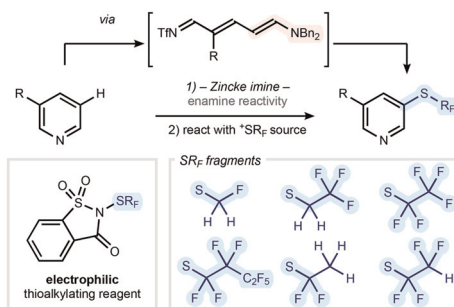


## RESEARCH ARTICLES

4794

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

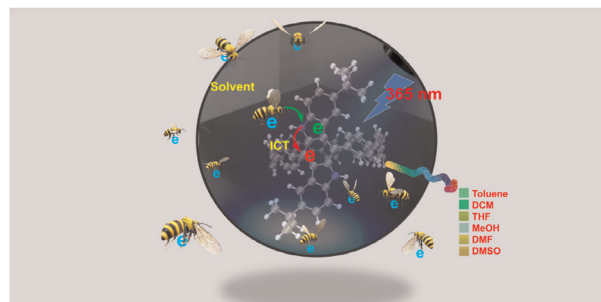
Will C. Hartley,\* Arnau Huerta, Júlia C. Negrodo and Omar Boutureira\*



4800

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

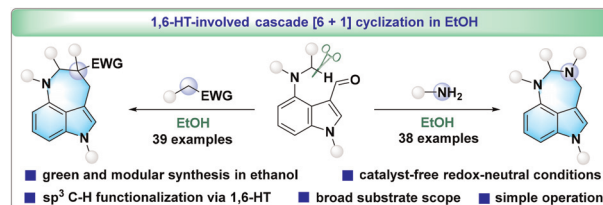
Wanchun Duan,\* Dongming Chen, Dang Zheng, Shidong He, Wanqun Hu, Lvyuan Hao and Xin Xu



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**

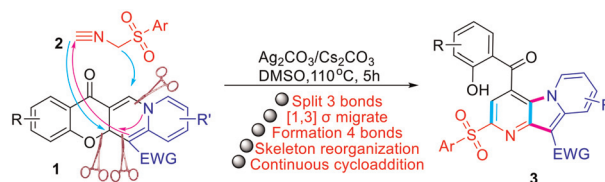
Qian-Hao Zhuang, Xiao-Lin Wang, Wei Gao, Bin Qiu, Xiao-De An, Houchen Wang, Yao-Bin Shen\* and Jian Xiao\*



4818

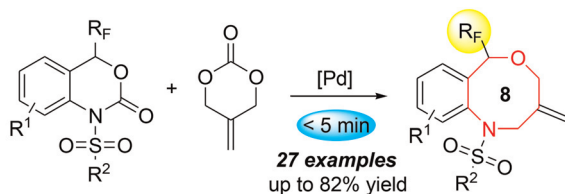
**Continuous 1,4/1,6- and 1,2-addition reactions combined with the skeletal rearrangement of 5a*H*,13*H*-chromeno[2,3-*b*]quinolizin-13-ones with isocyanides to enable the synthesis of pyrido[2,3-*b*]indolizines**

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



## RESEARCH ARTICLES

4825



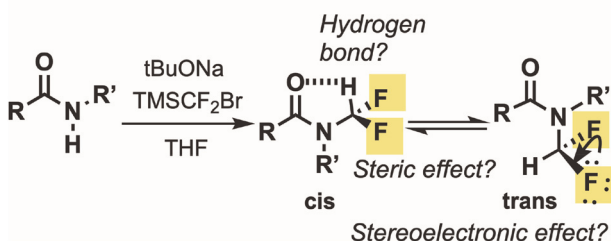
◆ short reaction times ◆ valuable products ◆ DFT calculations

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

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

4834

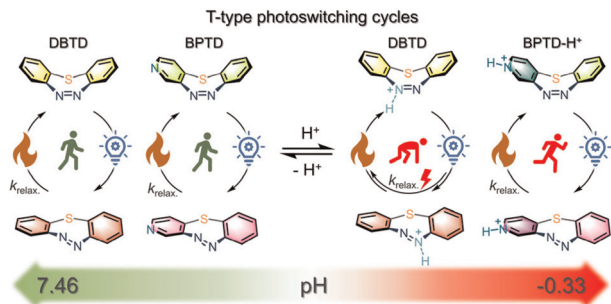
Is  $\text{CF}_2\text{H}$  similar to OH or isopropyl?



### 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

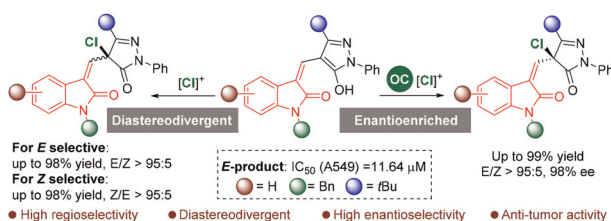
4842



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

Fengying Lan, Cefei Zhang, Zhihao Liu, Sitong Li, Jinneng 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

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

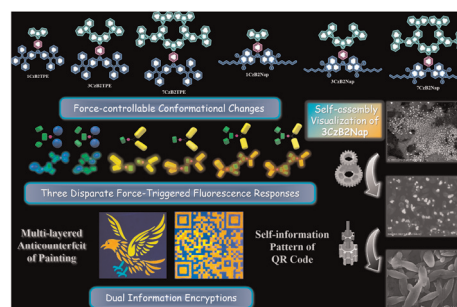


## RESEARCH ARTICLES

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\*

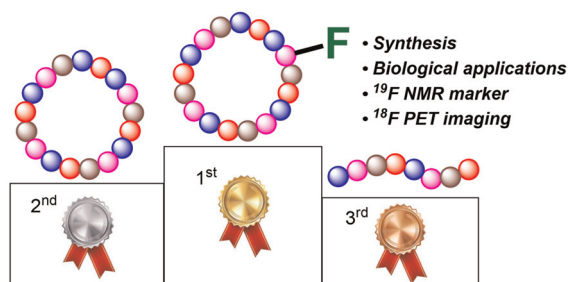


## REVIEW

4871

### Fluorine-containing macrocyclic peptides and peptidomimetics

Neshat Rozatian\* and Stefan Roesner\*



*Fluorinated macrocyclic peptides show enhanced properties*

